

UIC- I - __005__

ANNUAL REPORT

2016

Annual Class I Well Report for 2015

June 1st , 2016

Agua Moss, LLC

PO Box 600

Farmington, NM 87499

Permit UICI-005

API 30-045-28653

Submitted By:

Philana Thompson

Regulatory Compliance Specialist

Merrion Oil & Gas

610 Reilly Ave

Farmington, NM 87401

505-486-1171 cell

pthompson@merrion.bz

Summary of Operations

The annual MIT and Fall off Test was performed 4/28/2015.

Agua Moss, LLC in summer of 2012 began closure process of NM1-009 surface waste facilities. The surface waste facilities have now been closed and the area reclaimed. The landfarm, NM1-009, is still in the process of closure.

Appendices

Appendix A

Monthly Injection/disposal volumes
MAX and Average injection PSI

Appendix B

Quarterly Chemical Analyses Data

Appendix C

MIT
BH Test
FOT

Appendix D

2015 Monthly Injection Report

Appendix E

AOR

Appendix F

C138

Appendix A

UICI-5-0
Agua Moss, LLC
Sunco Disposal #1 30-045-28653

2015
Quarterly
Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maxium Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	Total Cumulative Volume (barrels)	
													Previous year	13471572	
Jan-2015	1674.545	1750	1600	18.70277778	32.2875	4.725	0	0	0	641.2381	1107	162	13466	13485038	
Feb-2015	1678.5	1750	1600	15.855	26.36666667	7.2041667	0	0	0	543.6	904	247	10872	13495910	
Mar-2015	1638.636	1750	1600	17.79034091	32.725	5.075	0	0	0	609.9545	1122	174	13419	13509329	
													Previous Quarter	13509329	
Apr-2015	1628.409	1950	1400	25.46736111	98.29166667	2.5375	0	0	0	873.1667	3370	87	15717	13525046	
May-2015	1696.429	1800	1600	21.32520833	37.24583333	8.6041667	0	0	0	731.15	1277	295	14623	13539669	
Jun-2015	1775	2000	1700	26.69384058	72.39166667	7.8166667	0	0	0	915.2174	2482	268	21050	13560719	
													Previous Quarter	13560719	
Jul-15	1775	1900	1600	20.55742754	53.31666667	7.6416667	0	0	0	704.8261	1828	262	16211	13576930	
Aug-15	1739.13	2200	1600	30.89041667	79.04166667	4.55	0	0	0	1059.1	2710	156	21182	13598112	
Sep-15	1800	2000	1750	25.57536232	51.85833333	12.104167	0	0	0	876.8696	1778	415	20168	13618280	
													Previous Quarter	13618280	
Oct-2015	1814.13	2200	1750	41.66944444	79.68333333	8.1666667	0	0	0	1428.667	2732	280	34288	13652568	
Nov-2015	1947.917	2100	1750	70.05401235	92.60416667	43.458333	0	0	0	2401.852	3175	1490	64850	13717418	
Dec-2015	2044.231	2250	1900	66.63257576	85.225	32.1125	0	0	0	2284.545	2922	1101	50260	13767678	
												Total for year	296106	14063784	Life Of well injected

Appendix B



April 23, 2015

Number: 07117-0027

Ms. Philana Thompson
Regulatory Compliance
Agua Moss
P.O. Box 600
Farmington, New Mexico 87499

Phone: (505) 324-5336

RE: FIRST QUARTER INJECTED FLUIDS SAMPLING AND ANALYTICAL RESULTS, AGUA MOSS, SAN JUAN COUNTY, NEW MEXICO

Dear Ms. Thompson:

Enclosed please find the Table 1, Summary of Analytical Results, analytical results, and field notes for the injected fluids located at the Agua Moss Facility in Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico. Activities included sample collection and analysis, documentation and reporting, in alignment with the analyses and procedures that were in accordance with the Agua Moss, LLC Sunco Disposal Well No. 1 Discharge Permit UICI-005.

If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,
ENVIROTECH, INC.

A handwritten signature in blue ink, appearing to read 'Greg Crabtree', is written over a horizontal line.

Greg Crabtree, PE
Environmental Manager
gcrabtree@envirotech-inc.com

Enclosures: Table 1, Summary of Analytical Results
Analytical Results
Field Notes

Cc: Client File Number: 07117

Table 1, Summary of Analytical Results
First Quarter Injected Fluids Sampling
Agua Moss
San Juan County, New Mexico
Project No. 07117-0027

Contaminant of Concern	Units	Sample Location
		Injection Fluid (4/10/15)
pH*	(s.u.)	6.9
ORP*	mV	-121.4
Specific Conductance*	mS	35.41
Temperature*	°F	65.75
Specific Gravity	ratio	1.003
Conductivity @ 25 °C	umhos/cm	34000
Total Dissolved Solids @ 180 °C	mg/L	21800
Sodium Absorption Ratio	ratio	61.5
Total Alkalinity as CaCO3	mg/L	2900
Total Hardness as CaCO3	mg/L	7833
Bicarbonate as CaCO3	mg/L	2900
Carbonate as CaCO3	mg/L	<10
Hydroxide as CaCO3	mg/L	<10
Nitrate Nitrogen	mg/L	<10
Nitrite Nitrogen	mg/L	<10
Chloride	mg/L	13300
Fluoride	mg/L	<10
Phosphate	mg/L	<50
Sulfate	mg/L	<100
Iron	mg/L	0.18
Calcium	mg/L	133
Magnesium	mg/L	34.6
Potassium	mg/L	46.2
Sodium	mg/L	3080
Bromide	mg/L	27.6
* Field Measurement		

Table 1, Summary of Analytical Results
First Quarter Injected Fluids Sampling
Agua Moss
San Juan County, New Mexico
Project No. 07117-0027

Contaminant of Concern	Units	Sample Location
		Injection Fluid (4/10/15)
Flash Point	°C	>95
Reactivity		negative
Arsenic	mg/L	<0.01
Barium	mg/L	21.2
Cadmium	mg/L	<0.01
Chromium	mg/L	<0.01
Lead	mg/L	<0.01
Mercury	mg/L	<0.0002
Selenium	mg/L	<0.01
Silver	mg/L	<0.01
Benzene	mg/L	7.67
Carbon Tetrachloride	mg/L	<0.05
Chlorobenzene	mg/L	<0.05
1,2-Dichloroethane	mg/L	<0.25
1,1-Dichloroethene	mg/L	<0.05
2-Butanone (MEK)	mg/L	<0.5
Tetrachloroethene	mg/L	<0.05
Trichloroethene	mg/L	<0.05
Vinyl Chloride	mg/L	<0.05
1,4-Dichlorobenzene	mg/L	<0.1
2,4-Dinitrotoluene	mg/L	<0.1
Hexachlorobenzene	mg/L	<0.1
Hexachloro-1,3-butadiene	mg/L	<0.1
Hexachloroethane	mg/L	<0.1
Nitrobenzene	mg/L	<0.1
Pyridine	mg/L	<0.1
3&4-Methyl Phenol	mg/L	<0.1
2-Methylphenol	mg/L	0.13
Pentachlorophenol	mg/L	<0.1
2,4,5-Trichlorophenol	mg/L	<0.1
2,4,6-Trichlorophenol	mg/L	<0.1



Analytical Report

Report Summary

Client: Agua Moss LLC

Chain Of Custody Number:

Samples Received: 4/10/2015 2:36:00PM

Job Number: 07117-0027

Work Order: P504035

Project Name/Location: 1st Quarter Injection Fluid

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Tim Cain, Laboratory Manager

Date: 4/16/15

Supplement to analytical report generated on: 4/16/15 3:05 pm

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 1st Quarter Injection Fluid
Project Number: 07117-0027
Project Manager: Isaac Garcia

Reported:
16-Apr-15 15:07

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Injection Fluid	P504035-01A	Aqueous	04/10/15	04/10/15	Amber, 1L
	P504035-01B	Aqueous	04/10/15	04/10/15	Amber, 1L
	P504035-01C	Aqueous	04/10/15	04/10/15	Poly, 1000mL
	P504035-01D	Aqueous	04/10/15	04/10/15	Poly, 1000mL
	P504035-01E	Aqueous	04/10/15	04/10/15	Poly 125mL
	P504035-01F	Aqueous	04/10/15	04/10/15	Poly 500mL
	P504035-01G	Aqueous	04/10/15	04/10/15	Voa vial, 40mL, HCl
	P504035-01H	Aqueous	04/10/15	04/10/15	Voa vial, 40mL, HCl
	P504035-01I	Aqueous	04/10/15	04/10/15	Voa vial, 40mL, HCl
	P504035-01J	Aqueous	04/10/15	04/10/15	Poly 250mL; HNO3

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 1st Quarter Injection Fluid
Project Number: 07117-0027
Project Manager: Isaac Garcia

Reported:
16-Apr-15 15:07

Injection Fluid
P504035-01 (Water)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
TCLP Metals									
Arsenic	ND	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Barium	21.2	0.05	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Cadmium	ND	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Chromium	ND	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Lead	ND	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Selenium	ND	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Silver	ND	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Cation/Anion Analysis									
pH @7.6°C	7.08		pH Units	1	1516003	04/13/15 10:55	04/13/15 10:55	150.1/4500H	H1
Electrical Conductivity	34000		umhos/cm	1	1516003	04/13/15 10:55	04/13/15 10:55	EPA 120.1	H1
Total Dissolved Solids	21800	10.0	mg/L	1	1516005	04/13/15	04/13/15	160.1/2540C	
Sodium Absorption Ratio	61.5		N/A	1	1516020	04/15/15	04/15/15	[CALC]	
Total Alkalinity as CaCO3	2900	10.0	mg/L	1	1516008	04/13/15	04/13/15	Hach Method 8203	
Bicarbonate as CaCO3	2900	10.0	mg/L	1	1516008	04/13/15	04/13/15	Hach Method 8203	
Carbonate as CaCO3	ND	10.0	mg/L	1	1516008	04/13/15	04/13/15	Hach Method 8203	
Hydroxide as CaCO3	ND	10.0	mg/L	1	1516008	04/13/15	04/13/15	Hach Method 8203	
Nitrate-N	ND	10.0	mg/L	100	1516004	04/13/15 11:07	04/13/15 13:34	EPA 300.0	H2
Nitrite-N	ND	10.0	mg/L	100	1516004	04/13/15 11:07	04/13/15 13:34	EPA 300.0	H2
Bromide	27.6	10.0	mg/L	100	1516004	04/13/15	04/13/15	EPA 300.0	
Chloride	13300	100	mg/L	100	1516004	04/13/15	04/13/15	EPA 300.0	
Fluoride	ND	10.0	mg/L	100	1516004	04/13/15	04/13/15	EPA 300.0	
o-Phosphate	ND	50.0	mg/L	100	1516004	04/13/15 11:07	04/13/15 13:34	EPA 300.0	H2
Sulfate	ND	100	mg/L	100	1516004	04/13/15	04/13/15	EPA 300.0	
Iron	0.18	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Calcium	133	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Magnesium	34.6	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Potassium	46.2	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	
Sodium	3080	0.01	mg/L	1	1516016	04/15/15	04/15/15	EPA 6010C	

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 1st Quarter Injection Fluid
Project Number: 07117-0027
Project Manager: Isaac Garcia

Reported:
16-Apr-15 15:07

Injection Fluid
P504035-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Waste Characteristic									
Flash Point	>95		°C	1	1516027	04/16/15	04/16/15	ASTM D93-10a	
Reactivity	Negative		N/A	1	1516027	04/16/15	04/16/15		
Wet Chemistry									
Specific Gravity	1.003		N/A	1	1516009	04/13/15	04/13/15	STD Meth 2710F	
TCLP Mercury by EPA 7470A									
Mercury	ND	0.0002	mg/L	1	1516019	04/15/15	04/16/15	EPA 7470A	

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 1st Quarter Injection Fluid
Project Number: 07117-0027
Project Manager: Isaac Garcia

Reported:
16-Apr-15 15:07

TCLP Metals - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1516016 - Metal Water/TCLP (EPA 1311) Digestion EPA 3015A

Blank (1516016-BLK1)

Prepared & Analyzed: 15-Apr-15

Arsenic	ND	0.01	mg/L
Barium	ND	0.05	"
Cadmium	ND	0.01	"
Chromium	ND	0.01	"
Lead	ND	0.01	"
Selenium	ND	0.01	"
Silver	ND	0.01	"

Duplicate (1516016-DUP1)

Source: P504038-01

Prepared & Analyzed: 15-Apr-15

Arsenic	ND	0.01	mg/L	ND			30
Barium	65.9	0.05	"	65.6		0.389	30
Cadmium	ND	0.01	"	ND			30
Chromium	0.02	0.01	"	0.02		8.04	30
Lead	ND	0.01	"	ND			30
Selenium	ND	0.01	"	ND			30
Silver	ND	0.01	"	ND			30

Matrix Spike (1516016-MS1)

Source: P504038-01

Prepared & Analyzed: 15-Apr-15

Arsenic	0.27		mg/L	0.250	0.007	103	75-125
Barium	60.8		"	5.00	56.1	94.3	75-125
Cadmium	0.23		"	0.250	0.00009	91.6	75-125
Chromium	0.47		"	0.500	0.02	90.2	75-125
Lead	0.44		"	0.500	0.003	87.7	75-125
Selenium	0.10		"	0.100	0.006	92.8	75-125
Silver	0.09		"	0.100	0.0002	88.4	75-125

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 1st Quarter Injection Fluid
Project Number: 07117-0027
Project Manager: Isaac Garcia

Reported:
16-Apr-15 15:07

Cation/Anion Analysis - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1516004 - Anion Extraction EPA 300.0

Blank (1516004-BLK1)

Prepared & Analyzed: 13-Apr-15

Nitrate-N	ND	0.10	mg/L
Nitrite-N	ND	0.10	"
Bromide	ND	0.10	"
Chloride	ND	1.00	"
Fluoride	ND	0.10	"
o-Phosphate	ND	0.50	"
Sulfate	ND	1.00	"

LCS (1516004-BS1)

Prepared & Analyzed: 13-Apr-15

Nitrate-N	4.79	0.10	mg/L	5.00	95.8	90-110
Nitrite-N	5.05	0.10	"	5.00	101	90-110
Bromide	4.75	0.10	"	5.00	95.0	90-110
Chloride	50.9	1.00	"	50.0	102	90-110
Fluoride	5.06	0.10	"	5.00	101	90-110
o-Phosphate	24.1	0.50	"	25.0	96.5	90-110
Sulfate	49.8	1.00	"	50.0	99.6	90-110

Matrix Spike (1516004-MS1)

Source: P504035-01

Prepared & Analyzed: 13-Apr-15

Nitrate-N	483	10.0	mg/L	500	ND	96.5	80-120
Nitrite-N	503	10.0	"	500	ND	101	80-120
Bromide	512	10.0	"	500	27.6	97.0	80-120
Chloride	18400	100	"	5000	13300	103	80-120
Fluoride	517	10.0	"	500	ND	103	80-120
o-Phosphate	2440	50.0	"	2500	ND	97.5	80-120
Sulfate	5040	100	"	5000	ND	101	80-120

Matrix Spike Dup (1516004-MSD1)

Source: P504035-01

Prepared & Analyzed: 13-Apr-15

Nitrate-N	484	10.0	mg/L	500	ND	96.8	80-120	0.290	20
Nitrite-N	505	10.0	"	500	ND	101	80-120	0.516	20
Bromide	512	10.0	"	500	27.6	96.8	80-120	0.117	20
Chloride	18300	100	"	5000	13300	99.4	80-120	0.862	20
Fluoride	517	10.0	"	500	ND	103	80-120	0.0387	20
o-Phosphate	2440	50.0	"	2500	ND	97.7	80-120	0.254	20
Sulfate	5050	100	"	5000	ND	101	80-120	0.238	20

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Farmington NM, 87499

Project Name: 1st Quarter Injection Fluid
Project Number: 07117-0027
Project Manager: Isaac Garcia

Reported:
16-Apr-15 15:07

TCLP Mercury by EPA 7470A - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1516019 - Mercury Water/TCLP Digestion KMNO4										
Blank (1516019-BLK1)				Prepared: 15-Apr-15 Analyzed: 16-Apr-15						
Mercury	ND	0.0002	mg/L							
LCS (1516019-BS1)				Prepared: 15-Apr-15 Analyzed: 16-Apr-15						
Mercury	0.002	0.0002	mg/L	0.00229		103	80-120			
Matrix Spike (1516019-MS1)				Source: P504035-01 Prepared: 15-Apr-15 Analyzed: 16-Apr-15						
Mercury	ND	0.0002	mg/L	0.00229	ND		75-125			SPK1
Matrix Spike Dup (1516019-MSD1)				Source: P504035-01 Prepared: 15-Apr-15 Analyzed: 16-Apr-15						
Mercury	ND	0.0002	mg/L	0.00229	ND		75-125	15		SPK1

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 1st Quarter Injection Fluid
Project Number: 07117-0027
Project Manager: Isaac Garcia

Reported:
16-Apr-15 15:07

Notes and Definitions

SPK1 The spike recovery is outside of quality control limits.

H2 Sample was analyzed after regulatory hold-time exceeded for target analyte.

H1 Sample was received after regulatory hold-time exceeded for target analyte.

FP1 >95

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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April 15, 2015

EnviroTech- NM

Sample Delivery Group: L758699
Samples Received: 04/11/2015
Project Number: 07117-0027
Description: 1st Quarter Injection Fluid Sampling
Site: P504035
Report To: Lynn Cook
5796 US. Highway 64
Farmington, NM 87401

Entire Report Reviewed By:



Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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ONE LAB. NATIONWIDE.



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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

INJECTION FLUID L758699-01 WW

Collected by
I. Garcia

Collected date/time
04/10/15 13:40

Received date/time
04/11/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Preparation by Method 1311	WG781700	1	04/13/15 11:49	04/13/15 15:06	LJN
Preparation by Method 1311	WG781701	1	04/13/15 11:38	04/13/15 15:06	LJN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG781730	1	04/14/15 17:32	04/15/15 07:42	ADF
Volatile Organic Compounds (GC/MS) by Method 8260B	WG781992	1	04/14/15 12:42	04/14/15 12:42	MCB
Wet Chemistry by Method 9012B/SW846 7.3.2	WG781589	1	04/14/15 11:35	04/14/15 14:26	MCG
Wet Chemistry by Method 9034/9030B	WG781590	1	04/14/15 11:40	04/14/15 14:59	AS

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

CASE NARRATIVE

ONE LAB. NATIONWIDE.



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		4/13/2015 11:38:19 AM	WG781701
TCLP ZHE Extraction	-		4/13/2015 11:49:23 AM	WG781700

Wet Chemistry by Method 9012B/SW846 7.3.2

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive CN (SW846 7.3.3.2)	ND		0.125	1	04/14/2015 14:26	WG781589

Wet Chemistry by Method 9034/9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulf. (SW846 7.3.4.1)	ND		25.0	1	04/14/2015 14:59	WG781590

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Benzene	7.67	V	0.0500	0.50	1	04/14/2015 12:42	WG781992
Carbon tetrachloride	ND		0.0500	0.50	1	04/14/2015 12:42	WG781992
Chlorobenzene	ND		0.0500	100	1	04/14/2015 12:42	WG781992
Chloroform	ND		0.250	6	1	04/14/2015 12:42	WG781992
1,2-Dichloroethane	ND		0.0500	0.50	1	04/14/2015 12:42	WG781992
1,1-Dichloroethene	ND		0.0500	0.70	1	04/14/2015 12:42	WG781992
2-Butanone (MEK)	ND	J4	0.500	200	1	04/14/2015 12:42	WG781992
Tetrachloroethene	ND		0.0500	0.70	1	04/14/2015 12:42	WG781992
Trichloroethene	ND		0.0500	0.50	1	04/14/2015 12:42	WG781992
Vinyl chloride	ND		0.0500	0.20	1	04/14/2015 12:42	WG781992
(S) Toluene-d8	104		88.5-111	114		04/14/2015 12:42	WG781992
(S) Dibromofluoromethane	102		78.3-121	125		04/14/2015 12:42	WG781992
(S) α,α,α-Trifluorotoluene	103		85.0-114	114		04/14/2015 12:42	WG781992
(S) 4-Bromofluorobenzene	99.7		71.0-126	128		04/14/2015 12:42	WG781992

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.100	7.50	1	04/15/2015 07:42	WG781730
2,4-Dinitrotoluene	ND		0.100	0.13	1	04/15/2015 07:42	WG781730
Hexachlorobenzene	ND		0.100	0.13	1	04/15/2015 07:42	WG781730
Hexachloro-1,3-butadiene	ND		0.100	0.50	1	04/15/2015 07:42	WG781730
Hexachloroethane	ND		0.100	3	1	04/15/2015 07:42	WG781730
Nitrobenzene	ND		0.100	2	1	04/15/2015 07:42	WG781730
Pyridine	ND		0.100	5	1	04/15/2015 07:42	WG781730
3&4-Methyl Phenol	ND		0.100	400	1	04/15/2015 07:42	WG781730
2-Methylphenol	0.130		0.100	200	1	04/15/2015 07:42	WG781730
Pentachlorophenol	ND		0.100	100	1	04/15/2015 07:42	WG781730
2,4,5-Trichlorophenol	ND		0.100	400	1	04/15/2015 07:42	WG781730
2,4,6-Trichlorophenol	ND		0.100	2	1	04/15/2015 07:42	WG781730
(S) 2-Fluorophenol	34.7		10.0-77.9	87		04/15/2015 07:42	WG781730
(S) Phenol-d5	27.9		5.00-70.1	67		04/15/2015 07:42	WG781730
(S) Nitrobenzene-d5	60.0		21.8-123	120		04/15/2015 07:42	WG781730
(S) 2-Fluorobiphenyl	73.8		29.5-131	122		04/15/2015 07:42	WG781730
(S) 2,4,6-Tribromophenol	74.2		11.2-130	148		04/15/2015 07:42	WG781730
(S) p-Terphenyl-d14	79.0		29.3-137	149		04/15/2015 07:42	WG781730

Method Blank (MB)

(MB) 04/14/15 14:21

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Reactive CN (SW846 7.3.3.2)	ND		0.125

L758628-01 Original Sample (OS) • Duplicate (DUP)

(OS) 04/14/15 14:22 • (DUP) 04/14/15 14:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive CN (SW846 7.3.3.2)	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 04/14/15 13:50 • (LCSD) 04/14/15 13:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Reactive CN (SW846 7.3.3.2)	0.100	0.104	0.100	104	100	90.0-110			3.92	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) 04/14/15 14:59

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Reactive Sulf.(SW846 7.3.4.1)	ND		25.0

L758628-01 Original Sample (OS) • Duplicate (DUP)

(OS) 04/14/15 14:59 • (DUP) 04/14/15 14:59

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Sulf.(SW846 7.3.4.1)	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 04/14/15 14:59 • (LCSD) 04/14/15 14:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Reactive Sulf.(SW846 7.3.4.1)	100	93.9	99.9	94.0	99.9	70.0-130			6.19	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) 04/14/15 10:51

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.0500
Carbon tetrachloride	ND		0.0500
Chlorobenzene	ND		0.0500
Chloroform	ND		0.250
1,2-Dichloroethane	ND		0.0500
1,1-Dichloroethene	ND		0.0500
2-Butanone (MEK)	ND		0.500
Tetrachloroethene	ND		0.0500
Trichloroethene	ND		0.0500
Vinyl chloride	ND		0.0500
(S) Toluene-d8	106		88.5-111
(S) Dibromofluoromethane	107		78.3-121
(S) a,a-Trifluorotoluene	104		85.0-114
(S) 4-Bromofluorobenzene	98.5		71.0-126

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 04/14/15 09:38 • (LCSD) 04/14/15 09:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0247	0.0260	98.6	104	74.8-121			5.47	20
Carbon tetrachloride	0.0250	0.0259	0.0287	104	115	70.2-123			10.2	20
Chlorobenzene	0.0250	0.0217	0.0238	87.0	95.1	78.1-119			8.90	20
Chloroform	0.0250	0.0253	0.0269	101	108	76.0-121			6.19	20
1,2-Dichloroethane	0.0250	0.0277	0.0299	111	120	68.8-124			7.63	20
1,1-Dichloroethene	0.0250	0.0268	0.0284	107	114	67.8-129			5.90	20
2-Butanone (MEK)	0.125	0.195	0.194	156	155	55.0-149	J4	J4	0.420	20
Tetrachloroethene	0.0250	0.0216	0.0230	86.5	92.0	72.6-126			6.12	20
Trichloroethene	0.0250	0.0234	0.0250	93.8	100	77.7-118			6.48	20
Vinyl chloride	0.0250	0.0234	0.0262	93.5	105	65.9-128			11.6	20
(S) Toluene-d8				109	100	88.5-111				
(S) Dibromofluoromethane				107	109	78.3-121				
(S) a,a-Trifluorotoluene				105	101	85.0-114				
(S) 4-Bromofluorobenzene				96.5	104	71.0-126				

L758699-01

L757979-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 04/14/15 12:24 • (MS) 04/14/15 13:00 • (MSD) 04/14/15 13:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.25	ND	1.30	1.25	104	99.8	1	54.3-133			4.34	20
Carbon tetrachloride	1.25	ND	1.41	1.36	113	109	1	55.7-134			3.99	20
Chlorobenzene	1.25	ND	1.13	1.13	90.4	90.7	1	67.0-125			0.400	20.3
Chloroform	1.25	ND	1.32	1.30	106	104	1	63.0-129			1.80	20
1,2-Dichloroethane	1.25	ND	1.38	1.37	111	110	1	60.0-126			0.650	20
1,1-Dichloroethene	1.25	ND	1.43	1.40	115	112	1	51.1-140			2.56	20.2
2-Butanone (MEK)	6.25	ND	7.21	7.06	115	113	1	22.4-138			2.06	27
Tetrachloroethene	1.25	ND	1.10	1.12	87.9	89.4	1	53.0-139			1.68	20
Trichloroethene	1.25	ND	1.20	1.21	95.8	96.6	1	44.1-149			0.750	20
Vinyl chloride	1.25	ND	1.42	1.39	114	111	1	47.8-137			2.07	20
(S) Toluene-d8					107	105		88.5-111				
(S) Dibromofluoromethane					112	109		78.3-121				
(S) a,a,-Trifluorotoluene					102	106		85.0-114				
(S) 4-Bromofluorobenzene					98.6	99.7		71.0-126				

L758699-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 04/14/15 12:42 • (MS) 04/14/15 13:37 • (MSD) 04/14/15 13:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.25	7.67	8.95	8.32	102	52.3	1	54.3-133		V	7.24	20
Carbon tetrachloride	1.25	ND	1.35	1.35	108	108	1	55.7-134			0.160	20
Chlorobenzene	1.25	ND	1.15	1.12	91.8	89.4	1	67.0-125			2.68	20.3
Chloroform	1.25	ND	1.29	1.33	103	107	1	63.0-129			3.21	20
1,2-Dichloroethane	1.25	ND	1.37	1.40	110	112	1	60.0-126			1.94	20
1,1-Dichloroethene	1.25	ND	1.35	1.35	108	108	1	51.1-140			0.280	20.2
2-Butanone (MEK)	6.25	ND	7.00	7.00	112	112	1	22.4-138			0.0800	27
Tetrachloroethene	1.25	ND	1.20	1.15	95.6	92.2	1	53.0-139			3.61	20
Trichloroethene	1.25	ND	1.22	1.18	97.6	94.5	1	44.1-149			3.27	20
Vinyl chloride	1.25	ND	1.38	1.36	111	109	1	47.8-137			1.88	20
(S) Toluene-d8					103	107		88.5-111				
(S) Dibromofluoromethane					103	107		78.3-121				
(S) a,a,-Trifluorotoluene					104	103		85.0-114				
(S) 4-Bromofluorobenzene					99.9	97.1		71.0-126				

Method Blank (MB)

(MB) 04/15/15 02:37

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
1,4-Dichlorobenzene	ND	0.100	0.100
2,4-Dinitrotoluene	ND	0.100	0.100
Hexachlorobenzene	ND	0.100	0.100
Hexachloro-1,3-butadiene	ND	0.100	0.100
Hexachloroethane	ND	0.100	0.100
Nitrobenzene	ND	0.100	0.100
Pyridine	ND	0.100	0.100
2-Methylphenol	ND	0.100	0.100
3&4-Methyl Phenol	ND	0.100	0.100
Pentachlorophenol	ND	0.100	0.100
2,4,5-Trichlorophenol	ND	0.100	0.100
2,4,6-Trichlorophenol	ND	0.100	0.100
(S) Nitrobenzene-d5	48.6		21.8-123
(S) 2-Fluorobiphenyl	59.0		29.5-131
(S) p-Terphenyl-d14	66.4		29.3-137
(S) Phenol-d5	29.3		5.00-70.1
(S) 2-Fluorophenol	38.2		10.0-77.9
(S) 2,4,6-Tribromophenol	70.8		11.2-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 04/15/15 01:27 • (LCSD) 04/15/15 01:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.0250	0.0132	0.0133	52.9	53.3	21.0-89.4	0.710	0.710	32.6	32.6
2,4-Dinitrotoluene	0.0250	0.0187	0.0186	74.9	74.6	31.2-105	0.440	0.440	22	22
Hexachlorobenzene	0.0250	0.0183	0.0190	73.4	76.1	38.5-116	3.62	3.62	20.1	20.1
Hexachloro-1,3-butadiene	0.0250	0.0138	0.0154	55.2	61.7	16.1-104	11.2	11.2	31.2	31.2
Hexachloroethane	0.0250	0.0128	0.0133	51.3	53.1	16.5-89.8	3.50	3.50	30.7	30.7
Nitrobenzene	0.0250	0.0152	0.0146	60.9	58.4	31.4-106	4.11	4.11	25.7	25.7
Pyridine	0.0250	0.00604	0.00811	24.2	32.4	13.5-58.9	29.3	29.3	32.5	32.5
2-Methylphenol	0.0250	0.0130	0.0132	51.9	52.9	26.4-86.9	1.91	1.91	26.5	26.5
3&4-Methyl Phenol	0.0250	0.0141	0.0132	56.3	52.9	27.9-92.0	6.31	6.31	27	27
Pentachlorophenol	0.0250	0.00925	0.00811	37.0	32.4	10.0-97.4	13.1	13.1	35.1	35.1
2,4,5-Trichlorophenol	0.0250	0.0189	0.0179	75.7	71.6	34.9-112	5.51	5.51	23.9	23.9
2,4,6-Trichlorophenol	0.0250	0.0181	0.0176	72.4	70.3	29.8-107	3.01	3.01	24.1	24.1
(S) Nitrobenzene-d5				55.2	59.4	21.8-123				
(S) 2-Fluorobiphenyl				72.0	65.0	29.5-131				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 04/15/15 01:27 • (LCSD) 04/15/15 01:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) p-Terphenyl-d14			65.7	66.8	29.3-137					
(S) Phenol-d5			28.9	25.5	5.00-70.1					
(S) 2-Fluorophenol			38.2	31.1	10.0-77.9					
(S) 2,4,6-Tribromophenol			73.7	77.0	11.2-130					

L757979-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 04/15/15 04:35 • (MS) 04/15/15 04:58 • (MSD) 04/15/15 05:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.250	ND	0.154	0.134	61.5	53.7	1	14.0-104			13.6	36.4
2,4-Dinitrotoluene	0.250	ND	0.198	0.191	79.3	76.4	1	16.2-135			3.74	20.6
Hexachlorobenzene	0.250	ND	0.202	0.202	80.8	80.8	1	31.9-135			0.0500	20
Hexachloro-1,3-butadiene	0.250	ND	0.167	0.149	66.6	59.6	1	15.7-109			11.1	37.6
Hexachloroethane	0.250	ND	0.138	0.131	55.0	52.5	1	10.4-105			4.74	40
Nitrobenzene	0.250	ND	0.166	0.152	66.4	60.9	1	23.1-121			8.56	29
Pyridine	0.250	ND	0.0886	0.0826	35.4	33.0	1	10.0-77.8			6.93	38.8
2-Methylphenol	0.250	ND	0.140	0.130	56.2	52.1	1	10.0-133			7.47	40
3&4-Methyl Phenol	0.250	ND	0.144	0.136	57.6	54.4	1	17.4-100			5.86	27.7
Pentachlorophenol	0.250	ND	0.114	0.125	45.5	50.1	1	10.0-108			9.59	40
2,4,5-Trichlorophenol	0.250	ND	0.186	0.180	74.2	72.0	1	30.6-120			2.99	33.8
2,4,6-Trichlorophenol	0.250	ND	0.177	0.167	70.6	66.8	1	19.1-114			5.60	29.9
(S) Nitrobenzene-d5					62.0	55.8		21.8-123				
(S) 2-Fluorobiphenyl					70.6	66.3		29.5-131				
(S) p-Terphenyl-d14					72.6	68.8		29.3-137				
(S) Phenol-d5					30.7	28.6		5.00-70.1				
(S) 2-Fluorophenol					44.1	43.4		10.0-77.9				
(S) 2,4,6-Tribromophenol					87.2	79.1		11.2-130				



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier Description

J4	The associated batch QC was outside the established quality control range for accuracy.
V	The sample concentration is too high to evaluate accurate spike recoveries.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey-NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio-VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ^{1,4}	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

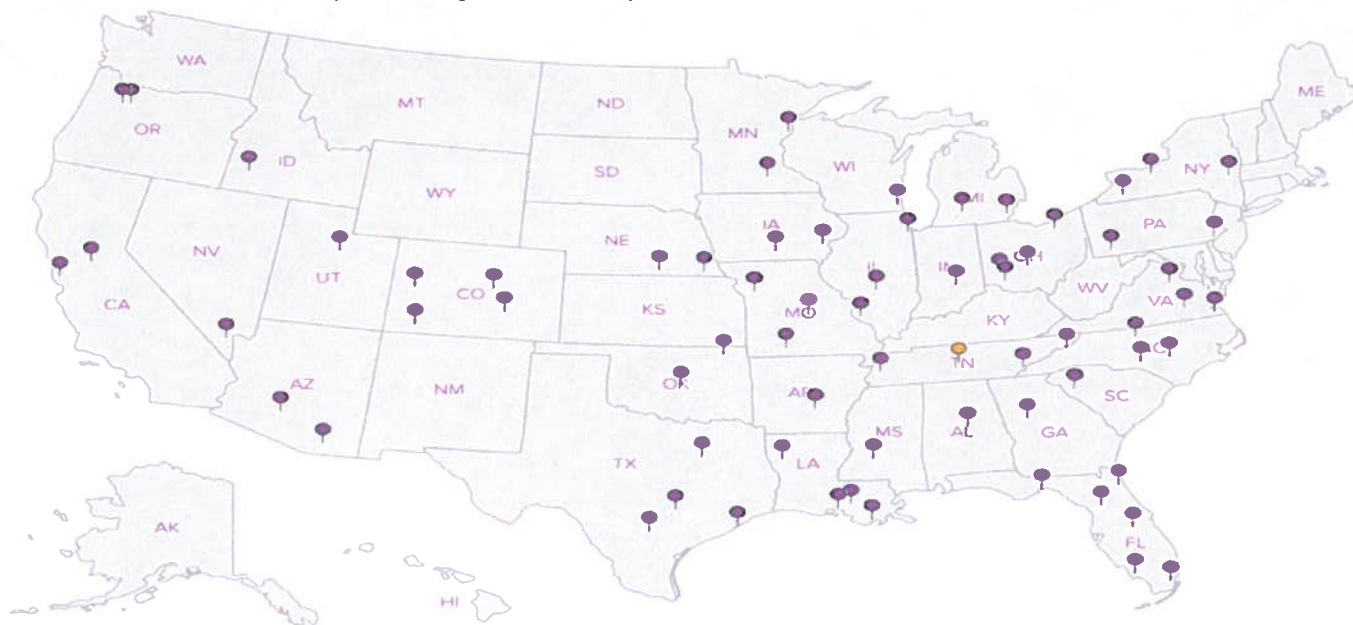
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Accreditation not applicable

Third Party & Federal Accreditations

A2LA - ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA-Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.





July 23, 2015

Number: 07117-0029

Ms. Philana Thompson
Regulatory Compliance
Agua Moss
P.O. Box 600
Farmington, New Mexico 87499

Phone: (505) 324-5336

RE: SECOND QUARTER INJECTED FLUIDS SAMPLING AND ANALYTICAL RESULTS, AGUA MOSS, SAN JUAN COUNTY, NEW MEXICO

Dear Ms. Thompson:

Enclosed please find the Table 1, Summary of Analytical Results, analytical results, and field notes for the injected fluids located at the Agua Moss Facility in Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico. Activities included sample collection and analysis, documentation and reporting, in alignment with the analyses and procedures that were in accordance with the Agua Moss, LLC Sunco Disposal Well No. 1 Discharge Permit UICI-005.

If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,
ENVIROTECH, INC.

A handwritten signature in blue ink, appearing to read 'Isaac Garcia', is written over a horizontal line.

Isaac Garcia
Environmental Field Technician
igarcia@envirotech-inc.com

Enclosures: Table 1, Summary of Analytical Results
Analytical Results
Field Notes

Cc: Client File Number: 07117

Table 1, Summary of Analytical Results
Second Quarter Injected Fluids Sampling
Agua Moss
San Juan County, New Mexico
Project No. 07117-0029

Contaminant of Concern	Units	Sample Location Description
		Injection Fluid (4/10/15)
pH*	(s.u.)	7.11
ORP*	mV	-124.2
Specific Conductance*	mS	49.54
Temperature*	°F	71.46
Specific Gravity	ratio	1.017
Conductivity @ 25 °C	umhos/cm	40500
Total Dissolved Solids @ 180 °C	mg/L	30900
Sodium Absorption Ratio	ratio	79.7
Total Alkalinity as CaCO ₃	mg/L	3000
Total Hardness as CaCO ₃	mg/L	1050
Bicarbonate as CaCO ₃	mg/L	3000
Carbonate as CaCO ₃	mg/L	<10
Hydroxide as CaCO ₃	mg/L	<10
Nitrate Nitrogen	mg/L	<10
Nitrite Nitrogen	mg/L	<10
Chloride	mg/L	19600
Fluoride	mg/L	<10
Phosphate	mg/L	<50
Sulfate	mg/L	121
Iron	mg/L	9.49
Calcium	mg/L	250
Magnesium	mg/L	104.0
Potassium	mg/L	102
Sodium	mg/L	5940
Bromide	mg/L	33.7
* Field Measurement		

Table 1, Summary of Analytical Results
Second Quarter Injected Fluids Sampling
Agua Moss
San Juan County, New Mexico
Project No. 07117-0029

Contaminant of Concern	Units	Sample Location Description
		Injection Fluid (4/10/15)
Flash Point	°C	>95
Reactivity		negative
Arsenic	mg/L	<0.01
Barium	mg/L	4.29
Cadmium	mg/L	<0.01
Chromium	mg/L	0.01
Lead	mg/L	<0.01
Mercury	mg/L	<0.0002
Selenium	mg/L	<0.01
Silver	mg/L	<0.01
Benzene	mg/L	0.486
Carbon Tetrachloride	mg/L	<0.05
Chlorobenzene	mg/L	<0.05
1,2-Dichloroethane	mg/L	<0.25
1,1-Dichloroethene	mg/L	<0.05
2-Butanone (MEK)	mg/L	<0.5
Tetrachloroethene	mg/L	<0.05
Trichloroethene	mg/L	<0.05
Vinyl Chloride	mg/L	<0.05
1,4-Dichlorobenzene	mg/L	<0.1
2,4-Dinitrotoluene	mg/L	<0.1
Hexachlorobenzene	mg/L	<0.1
Hexachloro-1,3-butadiene	mg/L	<0.1
Hexachloroethane	mg/L	<0.1
Nitrobenzene	mg/L	<0.1
Pyridine	mg/L	<0.1
3&4-Methyl Phenol	mg/L	<0.1
2-Methylphenol	mg/L	<0.1
Pentachlorophenol	mg/L	<0.1
2,4,5-Trichlorophenol	mg/L	<0.1
2,4,6-Trichlorophenol	mg/L	<0.1



Analytical Report

Report Summary

Client: Agua Moss LLC

Chain Of Custody Number:

Samples Received: 5/21/2015 9:25:00AM

Job Number: 07117-0029

Work Order: P505058

Project Name/Location: 2nd Qtr Injected Fluids
Sampling

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Tim Cain, Laboratory Manager

Date: 6/10/15

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

Agua Moss LLC
 PO Box 600
 Farmington NM, 87499

Project Name: 2nd Qtr Injected Fluids Sampling
 Project Number: 07117-0029
 Project Manager: Isaac Garcia

Reported:
 10-Jun-15 07:32

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Injection Fluids	P505058-01A	Aqueous	05/20/15	05/21/15	Amber, 1L
	P505058-01B	Aqueous	05/20/15	05/21/15	Amber, 1L
	P505058-01C	Aqueous	05/20/15	05/21/15	Poly 500mL
	P505058-01D	Aqueous	05/20/15	05/21/15	Poly 500mL
	P505058-01E	Aqueous	05/20/15	05/21/15	Poly 500mL
	P505058-01F	Aqueous	05/20/15	05/21/15	Poly 500mL
	P505058-01G	Aqueous	05/20/15	05/21/15	Poly 500mL
	P505058-01H	Aqueous	05/20/15	05/21/15	Poly 250mL; HNO ₃
	P505058-01I	Aqueous	05/20/15	05/21/15	Poly 125mL
	P505058-01J	Aqueous	05/20/15	05/21/15	Voa vial, 40mL, HCl
	P505058-01K	Aqueous	05/20/15	05/21/15	Voa vial, 40mL, HCl
	P505058-01L	Aqueous	05/20/15	05/21/15	Voa vial, 40mL, HCl

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Agua Moss LLC
 PO Box 600
 Farmington NM, 87499

 Project Name: 2nd Qtr Injected Fluids Sampling
 Project Number: 07117-0029
 Project Manager: Isaac Garcia

 Reported:
 10-Jun-15 07:32

Injection Fluids
P505058-01 (Water)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
TCLP Metals									
Arsenic	ND	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Barium	4.29	0.05	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Cadmium	ND	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Chromium	0.01	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	B
Lead	ND	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Selenium	ND	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Silver	ND	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Cation/Anion Analysis									
pH @13.5°C	7.20		pH Units	1	1521024	05/21/15 13:14	05/21/15 13:15	150.1/4500H	H1
Electrical Conductivity	40500		umhos/cm	1	1521024	05/21/15 13:14	05/21/15 13:15	EPA 120.1	H1
Total Dissolved Solids	30900	10.0	mg/L	1	1521026	05/21/15	05/21/15	160.1/2540C	
Sodium Absorption Ratio	79.7		N/A	1	1524013	06/09/15	06/09/15	[CALC]	
Total Alkalinity as CaCO3	3000	10.0	mg/L	1	1523006	06/01/15	06/01/15	Hach Method 8203	
Total Hardness as CaCO3	1050	0.07	mg/L		[CALC]	05/21/15	05/31/15	[CALC]	
Bicarbonate as CaCO3	3000	10.0	mg/L	1	1523006	06/01/15	06/01/15	Hach Method 8203	
Carbonate as CaCO3	ND	10.0	mg/L	1	1523006	06/01/15	06/01/15	Hach Method 8203	
Hydroxide as CaCO3	ND	10.0	mg/L	1	1523006	06/01/15	06/01/15	Hach Method 8203	
Nitrate-N	ND	10.0	mg/L	100	1521025	05/21/15 13:19	05/21/15 15:45	EPA 300.0	
Nitrite-N	ND	10.0	mg/L	100	1521025	05/21/15 13:19	05/21/15 15:45	EPA 300.0	
Bromide	33.7	10.0	mg/L	100	1521025	05/21/15	05/21/15	EPA 300.0	
Chloride	19600	100	mg/L	100	1521025	05/21/15	05/21/15	EPA 300.0	
Fluoride	ND	10.0	mg/L	100	1521025	05/21/15	05/21/15	EPA 300.0	
o-Phosphate	ND	50.0	mg/L	100	1521025	05/21/15 13:19	05/21/15 15:45	EPA 300.0	
Sulfate	121	100	mg/L	100	1521025	05/21/15	05/21/15	EPA 300.0	
Iron	9.49	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Calcium	250	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Magnesium	104	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Potassium	102	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	
Sodium	5940	0.01	mg/L	1	1521023	05/21/15	05/31/15	EPA 6010C	

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Agua Moss LLC
 PO Box 600
 Farmington NM, 87499

Project Name: 2nd Qtr Injected Fluids Sampling
 Project Number: 07117-0029
 Project Manager: Isaac Garcia

Reported:
 10-Jun-15 07:32

Injection Fluids
P505058-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Waste Characteristic									
Flash Point	>95		°C	1	1523010	06/01/15	06/01/15	ASTM D93-10a	
Reactivity	Negative		N/A	1	1523010	06/01/15	06/01/15		
Wet Chemistry									
Specific Gravity	1.017		N/A	1	1523009	06/01/15	06/01/15	STD Meth 2710F	

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Project Name: 2nd Qtr Injected Fluids Sampling
Project Number: 07117-0029
Project Manager: Isaac Garcia

Reported:
10-Jun-15 07:32

Injection Fluids
P505058-01 (Water)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
TCLP Mercury by EPA 7470A										
Mercury	ND	0.0002		mg/L	1	1524004	05/22/15	06/09/15	EPA 7470A	

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 2nd Qtr Injected Fluids Sampling
Project Number: 07117-0029
Project Manager: Isaac Garcia

Reported:
10-Jun-15 07:32

TCLP Metals - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1521023 - Metal Water/TCLP (EPA 1311) Digestion EPA 3015A

Blank (1521023-BLK1)

Prepared: 21-May-15 Analyzed: 31-May-15

Arsenic	ND	0.01	mg/L
Barium	ND	0.05	"
Cadmium	ND	0.01	"
Chromium	0.01	0.01	"
Lead	ND	0.01	"
Selenium	0.02	0.01	"
Silver	ND	0.01	"

Duplicate (1521023-DUP1)

Source: P505005-13

Prepared: 21-May-15 Analyzed: 31-May-15

Arsenic	0.03	0.01	mg/L	0.03	1.49	30
Barium	0.35	0.05	"	0.45	26.3	30
Cadmium	ND	0.01	"	ND		30
Chromium	ND	0.01	"	ND		30
Lead	1.36	0.01	"	1.30	4.52	30
Selenium	ND	0.01	"	ND		30
Silver	ND	0.01	"	ND		30

Matrix Spike (1521023-MS1)

Source: P505005-13

Prepared: 21-May-15 Analyzed: 31-May-15

Arsenic	0.30	mg/L	0.250	0.03	109	75-125
Barium	5.52	"	5.00	0.39	103	75-125
Cadmium	0.25	"	0.250	0.004	98.7	75-125
Chromium	0.51	"	0.500	0.006	100	75-125
Lead	1.59	"	0.500	1.11	95.7	75-125
Selenium	0.11	"	0.100	0.0004	112	75-125
Silver	0.10	"	0.100	-0.002	97.5	75-125

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Agua Moss LLC
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Farmington NM, 87499

Project Name: 2nd Qtr Injected Fluids Sampling
Project Number: 07117-0029
Project Manager: Isaac Garcia

Reported:
10-Jun-15 07:32

Cation/Anion Analysis - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1521025 - Anion Extraction EPA 300.0

Blank (1521025-BLK1)

Prepared & Analyzed: 21-May-15

Nitrate-N	ND	0.10	mg/L
Nitrite-N	ND	0.10	"
Bromide	ND	0.10	"
Chloride	ND	1.00	"
Fluoride	ND	0.10	"
o-Phosphate	ND	0.50	"
Sulfate	ND	1.00	"

LCS (1521025-BS1)

Prepared & Analyzed: 21-May-15

Nitrate-N	5.15	0.10	mg/L	5.00	103	90-110
Nitrite-N	5.29	0.10	"	5.00	106	90-110
Bromide	5.07	0.10	"	5.00	101	90-110
Chloride	51.8	1.00	"	50.0	104	90-110
Fluoride	5.29	0.10	"	5.00	106	90-110
o-Phosphate	25.6	0.50	"	25.0	102	90-110
Sulfate	51.6	1.00	"	50.0	103	90-110

Matrix Spike (1521025-MS1)

Source: P505058-01

Prepared & Analyzed: 21-May-15

Nitrate-N	519	10.0	mg/L	500	ND	104	80-120
Nitrite-N	522	10.0	"	500	ND	104	80-120
Bromide	558	10.0	"	500	33.7	105	80-120
Chloride	24300	100	"	5000	19600	93.8	80-120
Fluoride	527	10.0	"	500	ND	105	80-120
o-Phosphate	2600	50.0	"	2500	ND	104	80-120
Sulfate	5280	100	"	5000	121	103	80-120

Matrix Spike Dup (1521025-MSD1)

Source: P505058-01

Prepared & Analyzed: 21-May-15

Nitrate-N	522	10.0	mg/L	500	ND	104	80-120	0.538	20
Nitrite-N	531	10.0	"	500	ND	106	80-120	1.63	20
Bromide	560	10.0	"	500	33.7	105	80-120	0.286	20
Chloride	24300	100	"	5000	19600	93.2	80-120	0.120	20
Fluoride	529	10.0	"	500	ND	106	80-120	0.493	20
o-Phosphate	2610	50.0	"	2500	ND	104	80-120	0.572	20
Sulfate	5310	100	"	5000	121	104	80-120	0.425	20

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 2nd Qtr Injected Fluids Sampling
Project Number: 07117-0029
Project Manager: Isaac Garcia

Reported:
10-Jun-15 07:32

TCLP Mercury by EPA 7470A - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1524004 - Mercury Water/TCLP Digestion KMNO4										
Blank (1524004-BLK1)				Prepared: 08-Jun-15 Analyzed: 09-Jun-15						
Mercury	ND	0.0002	mg/L							
LCS (1524004-BS1)				Prepared: 08-Jun-15 Analyzed: 09-Jun-15						
Mercury	0.002	0.0002	mg/L	0.00229		105	80-120			
Matrix Spike (1524004-MS1)				Source: P506026-01 Prepared: 08-Jun-15 Analyzed: 09-Jun-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	103	75-125			
Matrix Spike Dup (1524004-MSD1)				Source: P506026-01 Prepared: 08-Jun-15 Analyzed: 09-Jun-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	104	75-125	0.731	15	

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Agua Moss LLC
PO Box 600
Farmington NM, 87499

Project Name: 2nd Qtr Injected Fluids Sampling
Project Number: 07117-0029
Project Manager: Isaac Garcia

Reported:
10-Jun-15 07:32

Notes and Definitions

H1 Sample was received after regulatory hold-time exceeded for target analyte.

FPI >95

E Analyte was present at a concentration greater than the calibration curve upper limit.

B Analyte is found in the associated blank.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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May 29, 2015

EnviroTech- NM

Sample Delivery Group: L766893
Samples Received: 05/22/2015
Project Number: 07117-0029
Description: 2nd QTR Injection Fluid Sampling
Site: P505058
Report To: Lynn Cook
5796 US. Highway 64
Farmington, NM 87401

Entire Report Reviewed By:



T. Alan Harvill

Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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ONE LAB. NATIONWIDE.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



INJECTION FLUIDS L766893-01 Solid

						Collected by	Collected date/time	Received date/time	
						I. Garcia	05/20/15 15:18	05/22/15 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst				
Preparation by Method 1311	WG791292	1	05/26/15 15:37	05/26/15 15:38	LJN				
Preparation by Method 1311	WG791495	1	05/27/15 14:12	05/27/15 14:24	BG				
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG791572	1	05/27/15 10:17	05/28/15 03:05	ADF				
Volatile Organic Compounds (GC/MS) by Method 8260B	WG791948	1	05/29/15 12:26	05/29/15 12:26	MCB				
Wet Chemistry by Method 9012B/SW846 7.3.2	WG791501	1	05/27/15 14:19	05/28/15 01:15	ASK				
Wet Chemistry by Method 9034/9030B	WG791500	1	05/27/15 17:41	05/28/15 13:56	AS				

¹ Cp

² Tc

Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

CASE NARRATIVE

ONE LAB. NATIONWIDE.



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

T. Alan Harvill
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cr

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

INJECTION FLUIDS

Collected date/time: 05/20/15 15:18

SAMPLE RESULTS - 01

L766893

ONE LAB. NATIONWIDE.



Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		5/26/2015 3:37:45 PM	WG791292
TCLP ZHE Extraction	-		5/27/2015 2:12:13 PM	WG791495

Wet Chemistry by Method 9012B/SW846 7.3.2

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive CN (SW846 7.3.3.2)	ND		0.125	1	05/28/2015 01:15	WG791501

Wet Chemistry by Method 9034/9030B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Sulf. (SW846 7.3.4.1)	ND		25.0	1	05/28/2015 13:56	WG791500

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.486		0.0500	1	05/29/2015 12:26	WG791948
Carbon tetrachloride	ND		0.0500	1	05/29/2015 12:26	WG791948
Chlorobenzene	ND		0.0500	1	05/29/2015 12:26	WG791948
Chloroform	ND		0.250	1	05/29/2015 12:26	WG791948
1,2-Dichloroethane	ND		0.0500	1	05/29/2015 12:26	WG791948
1,1-Dichloroethene	ND		0.0500	1	05/29/2015 12:26	WG791948
2-Butanone (MEK)	ND		0.500	1	05/29/2015 12:26	WG791948
Tetrachloroethene	ND		0.0500	1	05/29/2015 12:26	WG791948
Trichloroethene	ND		0.0500	1	05/29/2015 12:26	WG791948
Vinyl chloride	ND		0.0500	1	05/29/2015 12:26	WG791948
(S) Toluene-d8	97.2		90.0-115		05/29/2015 12:26	WG791948
(S) Dibromofluoromethane	89.1		79.0-121		05/29/2015 12:26	WG791948
(S) o,a,a-Trifluorotoluene	102		90.4-116		05/29/2015 12:26	WG791948
(S) 4-Bromofluorobenzene	102		80.1-120		05/29/2015 12:26	WG791948

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.100	7.50	1	05/28/2015 03:05	WG791572
2,4-Dinitrotoluene	ND		0.100	0.13	1	05/28/2015 03:05	WG791572
Hexachlorobenzene	ND		0.100	0.13	1	05/28/2015 03:05	WG791572
Hexachloro-1,3-butadiene	ND		0.100	0.50	1	05/28/2015 03:05	WG791572
Hexachloroethane	ND		0.100	3	1	05/28/2015 03:05	WG791572
Nitrobenzene	ND		0.100	2	1	05/28/2015 03:05	WG791572
Pyridine	ND		0.100	5	1	05/28/2015 03:05	WG791572
3&4-Methyl Phenol	ND		0.100	400	1	05/28/2015 03:05	WG791572
2-Methylphenol	ND		0.100	200	1	05/28/2015 03:05	WG791572
Pentachlorophenol	ND		0.100	100	1	05/28/2015 03:05	WG791572
2,4,5-Trichlorophenol	ND		0.100	400	1	05/28/2015 03:05	WG791572
2,4,6-Trichlorophenol	ND		0.100	2	1	05/28/2015 03:05	WG791572
(S) 2-Fluorophenol	45.2		10.0-77.9	87		05/28/2015 03:05	WG791572
(S) Phenol-d5	31.5		5.00-70.1	67		05/28/2015 03:05	WG791572
(S) Nitrobenzene-d5	64.1		21.8-123	120		05/28/2015 03:05	WG791572
(S) 2-Fluorobiphenyl	56.7		29.5-131	122		05/28/2015 03:05	WG791572
(S) 2,4,6-Tribromophenol	114		11.2-130	148		05/28/2015 03:05	WG791572
(S) p-Terphenyl-d14	69.9		29.3-137	149		05/28/2015 03:05	WG791572

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) 05/28/15 01:09

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Reactive CN (SW846 7.3.3.2)	ND		0.125

L766893-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/28/15 01:15 • (DUP) 05/28/15 01:16

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive CN (SW846 7.3.3.2)	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/28/15 00:31 • (LCSD) 05/28/15 00:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Reactive CN (SW846 7.3.3.2)	0.100	0.105	0.103	105	0.000	90.0-110			1.92	20



Method Blank (MB)

(MB) 05/28/15 13:56

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Reactive Sulf.(SW846 7.3.4.1)	ND		25.0

L766893-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/28/15 13:56 • (DUP) 05/28/15 13:56

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Sulf.(SW846 7.3.4.1)	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/28/15 13:56 • (LCSD) 05/28/15 13:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Reactive Sulf.(SW846 7.3.4.1)	100	95.0	95.0	95.0	95.0	70.0-130			0.000	20



Method Blank (MB)

(MB) 05/28/15 12:18

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.0500
Carbon tetrachloride	ND		0.0500
Chlorobenzene	ND		0.0500
Chloroform	ND		0.250
1,2-Dichloroethane	ND		0.0500
1,1-Dichloroethene	ND		0.0500
2-Butanone (MEK)	ND		0.500
Tetrachloroethene	ND		0.0500
Trichloroethene	ND		0.0500
Vinyl chloride	ND		0.0500
(S) Toluene-d8	99.6		90.0-115
(S) Dibromofluoromethane	82.1		79.0-121
(S) o,a,o-Trifluorotoluene	101		90.4-116
(S) 4-Bromofluorobenzene	109		80.1-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/28/15 06:30 • (LCSD) 05/28/15 06:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0238	0.0236	95.1	94.3	73.0-122			0.910	20
Carbon tetrachloride	0.0250	0.0191	0.0190	76.3	76.0	70.9-129			0.470	20
Chlorobenzene	0.0250	0.0259	0.0252	104	101	79.7-122			2.65	20
Chloroform	0.0250	0.0209	0.0206	83.4	82.3	73.2-125			1.35	20
1,2-Dichloroethane	0.0250	0.0210	0.0211	83.9	84.4	65.3-126			0.540	20
1,1-Dichloroethene	0.0250	0.0227	0.0224	90.8	89.7	60.6-133			1.17	20
2-Butanone (MEK)	0.125	0.0948	0.0991	75.9	79.3	46.4-155			4.39	20
Tetrachloroethene	0.0250	0.0243	0.0239	97.1	95.4	73.5-130			1.75	20
Trichloroethene	0.0250	0.0232	0.0226	92.6	90.3	79.5-121			2.51	20
Vinyl chloride	0.0250	0.0228	0.0224	91.2	89.4	61.5-134			1.91	20
(S) Toluene-d8				100	99.2	90.0-115				
(S) Dibromofluoromethane				84.7	86.3	79.0-121				
(S) o,a,o-Trifluorotoluene				101	100	90.4-116				
(S) 4-Bromofluorobenzene				103	102	80.1-120				

L766303-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/28/15 13:19 • (MS) 05/28/15 14:00 • (MSD) 05/28/15 14:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.25	0.00560	1.20	1.26	95.8	101	1	58.6-133			4.82	20
Carbon tetrachloride	1.25	ND	0.970	1.02	77.6	81.5	1	60.6-139			4.86	20
Chlorobenzene	1.25	ND	1.32	1.36	105	109	1	70.1-130			3.48	20
Chloroform	1.25	ND	1.05	1.10	84.1	88.0	1	66.1-133			4.58	20
1,2-Dichloroethane	1.25	ND	1.05	1.12	83.9	89.6	1	60.7-132			6.49	20
1,1-Dichloroethene	1.25	ND	1.15	1.18	91.7	94.3	1	48.8-144			2.76	20
2-Butanone (MEK)	6.25	ND	4.00	4.65	64.0	74.5	1	45.0-156			15.1	20.8
Tetrachloroethene	1.25	ND	1.27	1.31	101	105	1	57.4-141			3.24	20
Trichloroethene	1.25	ND	1.16	1.21	93.1	96.7	1	48.9-148			3.85	20
Vinyl chloride	1.25	ND	1.07	1.12	85.4	89.8	1	44.3-143			5.06	20
(S) Toluene-d8					99.0	99.1		90.0-115				
(S) Dibromofluoromethane					83.9	84.8		79.0-121				
(S) o,o,a-Trifluorotoluene					101	102		90.4-116				
(S) 4-Bromofluorobenzene					102	99.9		80.1-120				

L766604-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/28/15 13:39 • (MS) 05/28/15 14:40 • (MSD) 05/28/15 15:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.25	1.47	2.53	2.57	84.9	87.8	1	58.6-133			1.44	20
Carbon tetrachloride	1.25	ND	0.968	0.987	77.5	79.0	1	60.6-139			1.90	20
Chlorobenzene	1.25	ND	1.32	1.36	105	109	1	70.1-130			3.33	20
Chloroform	1.25	ND	1.05	1.07	83.8	85.5	1	66.1-133			2.03	20
1,2-Dichloroethane	1.25	ND	1.06	1.07	85.2	85.7	1	60.7-132			0.590	20
1,1-Dichloroethene	1.25	ND	1.12	1.14	89.4	91.0	1	48.8-144			1.77	20
2-Butanone (MEK)	6.25	0.0330	5.06	5.11	80.5	81.2	1	45.0-156			0.890	20.8
Tetrachloroethene	1.25	ND	1.24	1.29	98.9	103	1	57.4-141			4.20	20
Trichloroethene	1.25	ND	1.17	1.18	93.3	94.6	1	48.9-148			1.41	20
Vinyl chloride	1.25	ND	1.08	1.08	86.2	86.8	1	44.3-143			0.710	20
(S) Toluene-d8					99.4	99.7		90.0-115				
(S) Dibromofluoromethane					84.0	83.0		79.0-121				
(S) o,o,a-Trifluorotoluene					102	102		90.4-116				
(S) 4-Bromofluorobenzene					101	102		80.1-120				

Method Blank (MB)

(MB) 05/27/15 18:54

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
1,4-Dichlorobenzene	ND	0.100	0.100
2,4-Dinitrotoluene	ND	0.100	0.100
Hexachlorobenzene	ND	0.100	0.100
Hexachloro-1,3-butadiene	ND	0.100	0.100
Hexachloroethane	ND	0.100	0.100
Nitrobenzene	ND	0.100	0.100
Pyridine	ND	0.100	0.100
2-Methylphenol	ND	0.100	0.100
3,4-Methyl Phenol	ND	0.100	0.100
Pentachlorophenol	ND	0.100	0.100
2,4,5-Trichlorophenol	ND	0.100	0.100
2,4,6-Trichlorophenol	ND	0.100	0.100
(S) Nitrobenzene-d5	63.3	218-123	
(S) 2-Fluorobiphenyl	67.7	29.5-131	
(S) p-Terphenyl-d14	69.2	29.3-137	
(S) Phenol-d5	33.0	5.00-70.1	
(S) 2-Fluorophenol	50.6	10.0-77.9	
(S) 2,4,6-Tribromophenol	62.9	11.2-130	

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/27/15 17:44 • (LCSD) 05/27/15 18:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.0500	0.0282	0.0295	56.4	59.0	210-89.4			4.51	32.6
2,4-Dinitrotoluene	0.0500	0.0429	0.0422	85.8	84.3	312-105			1.68	22
Hexachlorobenzene	0.0500	0.0403	0.0390	80.6	77.9	38.5-116			3.37	20.1
Hexachloro-1,3-butadiene	0.0500	0.0285	0.0314	57.0	62.8	16.1-104			9.62	31.2
Hexachloroethane	0.0500	0.0273	0.0294	54.6	58.9	16.5-89.8			7.56	30.7
Nitrobenzene	0.0500	0.0364	0.0354	72.8	70.8	31.4-106			2.86	25.7
Pyridine	0.0500	0.0127	0.0132	25.4	26.4	13.5-58.9			3.69	32.5
2-Methylphenol	0.0500	0.0322	0.0307	64.3	61.3	26.4-86.9			4.77	26.5
3,4-Methyl Phenol	0.0500	0.0348	0.0339	69.7	67.8	27.9-92.0			2.76	27
Pentachlorophenol	0.0500	0.0389	0.0378	77.7	75.6	10.0-97.4			2.84	35.1
2,4,5-Trichlorophenol	0.0500	0.0407	0.0390	81.5	78.0	34.9-112			4.38	23.9
2,4,6-Trichlorophenol	0.0500	0.0404	0.0387	80.9	77.5	29.8-107			4.30	24.1
(S) Nitrobenzene-d5				70.1	66.7	21.8-123				
(S) 2-Fluorobiphenyl				70.5	68.6	29.5-131				

L766893-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/27/15 17:44 • (LCSD) 05/27/15 18:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) p-Terphenyl-d14		65.1	65.0	29.3-137						
(S) Phenol-d5		38.7	31.9	5.00-70.1						
(S) 2-Fluorophenol		53.8	38.5	10.0-77.9						
(S) 2,4,6-Tribromophenol		84.8	85.6	11.2-130						

L766758-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/28/15 01:55 • (MS) 05/28/15 02:18 • (MSD) 05/28/15 02:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.500	ND	0.283	0.318	56.7	63.6	1	14.0-104			11.5	36.4
2,4-Dinitrotoluene	0.500	ND	0.456	0.434	91.2	86.8	1	16.2-135			4.93	20.6
Hexachlorobenzene	0.500	ND	0.396	0.417	79.1	83.3	1	31.9-135			5.18	20
Hexachloro-1,3-butadiene	0.500	ND	0.303	0.337	60.6	67.5	1	15.7-109			10.7	37.6
Hexachloroethane	0.500	ND	0.297	0.323	59.4	64.7	1	10.4-105			8.42	40
Nitrobenzene	0.500	ND	0.349	0.373	69.8	74.5	1	23.1-121			6.51	29
Pyridine	0.500	ND	0.0777	0.0875	15.5	17.5	1	10.0-77.8			12.0	38.8
2-Methylphenol	0.500	0.0804	0.385	0.420	60.9	68.0	1	10.0-133			8.87	40
3&4-Methyl Phenol	0.500	0.118	0.463	0.493	68.9	74.9	1	17.4-100			6.29	27.7
Pentachlorophenol	0.500	ND	0.413	0.430	82.7	85.9	1	10.0-108			3.85	40
2,4,5-Trichlorophenol	0.500	ND	0.430	0.423	85.9	84.6	1	30.6-120			1.60	33.8
2,4,6-Trichlorophenol	0.500	ND	0.414	0.406	82.7	81.2	1	19.1-114			1.84	29.9
(S) Nitrobenzene-d5					68.9	72.3		218-123				
(S) 2-Fluorobiphenyl					72.8	72.1		29.5-131				
(S) p-Terphenyl-d14					84.1	43.7		29.3-137				
(S) Phenol-d5					33.9	38.7		5.00-70.1				
(S) 2-Fluorophenol					47.8	54.7		10.0-77.9				
(S) 2,4,6-Tribromophenol					89.3	89.1		11.2-130				



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
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The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

5 Qc

Gl

8 Al

9 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey--NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio--VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ¹⁴ Accreditation not applicable

Third Party & Federal Accreditations

A2LA - ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA-Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**





October 22, 2015

Agua Moss
c/o Merrion Oil & Gas Corp.
610 Reilly Avenue
Farmington, New Mexico 87401

Attn: Ms. Shacie Murray
P: (505) 324-5324
E: shacie@merrion.bz

Re: Analytical Results
NM1-9 Injection Well
SWNW S2, T29N, R12W
Crouch Mesa Road
San Juan County, New Mexico
Terracon Project No. 66157040

Dear Ms. Murray;

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit analytical results for the third quarter 2015 quarterly sampling of the injection well located at the above-referenced site. A sample was collected from the injection well for laboratory analysis and field measurements on October 1, 2015. The results of analyses are presented in the attached Table 1. A copy of the laboratory analytical report is also provided as an attachment.

We appreciate the opportunity to provide environmental services for you. If you should have any questions or comments regarding this data, please contact Mark Hillier at (505) 222-5593.

Sincerely,
Terracon Consultants, Inc.

Mark R. Hillier, P.G. (TX)
Office Manager

Attachment – Table 1 – NM1-9 Injection Well Analytical Results
Laboratory Analytical Report



TABLE 1 NM1-9 INJECTION WELL ANALYTICAL RESULTS Agua Moss Disposal Facility Crouch Mesa Road San Juan County, New Mexico		
Contaminant of Concern	Units	Sample Location
		NM1-9 IW (10/01/2015)
pH*	ratio	4.9
ORP*	mV ¹	-92
Specific Conductance*	mS/cm ²	18.27
Temperature*	°C ³	26.8
Specific Gravity	ratio	1.009
Conductivity @ 25° C	µmhos/cm ⁴	22,000
Total Dissolved Solids @ 180° C	mg/L ⁵	15,400 D ⁶
Sodium Absorption Ratio	ratio	33
Total Alkalinity as CaCO ₃	mg/L	222.4
Total Hardness as CaCO ₃	mg/L	2,400
Bicarbonate as CaCO ₃	mg/L	222.4
Carbonate as CaCO ₃	mg/L	<2.0
Hydroxide as CaCO ₃	mg/L	<2.0
Nitrate Nitrogen	mg/L	18
Nitrite Nitrogen	mg/L	<0.5
Chloride	mg/L	4,400
Fluoride	mg/L	160
Phosphate	mg/L	3.0 H ⁷
Sulfate	mg/L	3,700
Iron	mg/L	24
Calcium	mg/L	880
Magnesium	mg/L	39
Potassium	mg/L	210
Sodium	mg/L	3,700
Bromide	mg/L	7.3

* - Filed Measurement

1 - mV - millivolts

2 - mS - millisiemen per centimeter

3 - °C - degrees Celsius

4 - µmhos/cm - micromhos per centimeter

4 - mg/L - milligrams per liter

6 - D - Sample diluted due to matrix

7 - H - Holding time for preparation or analysis exceeded



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 20, 2015

Mark Hillier

Terracon

4905 Hawkins, NE

Albuquerque, NM 87109

TEL: (505) 715-0375

FAX (505) 797-4288

RE: NM1-9 IW

OrderNo.: 1510070

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/1/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510070

Date Reported: 10/20/2015

CLIENT: Terracon

Client Sample ID: NM1-9 IW

Project: NM1-9 IW

Collection Date: 10/1/2015 1:00:00 PM

Lab ID: 1510070-001

Matrix: AQUEOUS

Received Date: 10/1/2015 4:36:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: MED
Hardness (As CaCO ₃)	2400	6.6		mg/L	1	10/16/2015 11:15:00 AM	R29600
SODIUM ADSORPTION RATIO							Analyst: MED
Calcium	880	1.0		mg/L	1	10/16/2015 11:15:00 AM	R29600
Magnesium	39	1.0		mg/L	1	10/16/2015 11:15:00 AM	R29600
Sodium	3700	1.0		mg/L	1	10/16/2015 11:15:00 AM	R29600
Sodium Adsorption Ratio	33	0			1	10/16/2015 11:15:00 AM	R29600
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.009	0			1	10/7/2015 2:57:00 PM	R29369
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	160	5.0	*	mg/L	50	10/8/2015 6:27:04 PM	R29418
Chloride	4400	250		mg/L	500	10/8/2015 6:39:28 PM	R29418
Bromide	7.3	0.50		mg/L	5	10/2/2015 8:22:45 PM	R29291
Phosphorus, Orthophosphate (As P)	3.0	2.5	H	mg/L	5	10/17/2015 2:13:37 AM	R29627
Sulfate	3700	250		mg/L	500	10/8/2015 6:39:28 PM	R29418
Nitrate+Nitrite as N	18	1.0	*	mg/L	5	10/13/2015 11:01:46 AM	R29566
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	22000	0.050		µmhos/cm	5	10/8/2015 4:47:50 PM	R29409
SM2320B: ALKALINITY							Analyst: JRR
Alkalinity, Hydroxide (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	10/8/2015 4:19:21 PM	R29409
Bicarbonate (As CaCO ₃)	222.4	20.00		mg/L CaCO ₃	1	10/8/2015 4:19:21 PM	R29409
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	10/8/2015 4:19:21 PM	R29409
Total Alkalinity (as CaCO ₃)	222.4	20.00		mg/L CaCO ₃	1	10/8/2015 4:19:21 PM	R29409
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	15400	200	*D	mg/L	1	10/7/2015 7:00:00 PM	21689
EPA METHOD 6010B: DISSOLVED METALS							Analyst: MED
Calcium	880	10		mg/L	10	10/16/2015 2:29:46 PM	A29600
Iron	24	2.0		mg/L	100	10/16/2015 2:27:56 PM	A29600
Magnesium	39	1.0		mg/L	1	10/16/2015 1:11:17 PM	A29600
Potassium	210	10		mg/L	10	10/16/2015 2:29:46 PM	A29600
Sodium	3700	100		mg/L	100	10/16/2015 2:27:56 PM	A29600

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510070

20-Oct-15

Client: Terracon
Project: NM1-9 IW

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R29291		RunNo: 29291							
Prep Date:	Analysis Date: 10/2/2015		SeqNo: 890215		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	0.10								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R29291		RunNo: 29291							
Prep Date:	Analysis Date: 10/2/2015		SeqNo: 890216		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.5	0.10	2.500	0	98.4	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R29418		RunNo: 29418							
Prep Date:	Analysis Date: 10/8/2015		SeqNo: 894857		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R29418		RunNo: 29418							
Prep Date:	Analysis Date: 10/8/2015		SeqNo: 894858		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.3	90	110			
Chloride	4.9	0.50	5.000	0	97.7	90	110			
Sulfate	9.8	0.50	10.00	0	98.3	90	110			

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R29566		RunNo: 29566							
Prep Date:	Analysis Date: 10/13/2015		SeqNo: 899882		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R29566		RunNo: 29566							
Prep Date:	Analysis Date: 10/13/2015		SeqNo: 899883		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.5	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510070

20-Oct-15

Client: Terracon
Project: NM1-9 IW

Sample ID MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R29627			RunNo: 29627						
Prep Date:	Analysis Date: 10/16/2015			SeqNo: 902085		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: R29627			RunNo: 29627						
Prep Date:	Analysis Date: 10/16/2015			SeqNo: 902086		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.5	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510070

20-Oct-15

Client: Terracon

Project: NM1-9 IW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 6010B: Dissolved Metals					
Client ID:	PBW	Batch ID:	A29600	RunNo:	29600					
Prep Date:		Analysis Date:	10/16/2015	SeqNo:	901066	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510070

20-Oct-15

Client: Terracon
Project: NM1-9 IW

Sample ID mb-1	SampType: MBLK			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R29409			RunNo: 29409						
Prep Date:	Analysis Date: 10/8/2015			SeqNo: 894449		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-1	SampType: LCS			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R29409			RunNo: 29409						
Prep Date:	Analysis Date: 10/8/2015			SeqNo: 894450		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.52	20.00	80.00	0	99.4	90	110			

Sample ID mb-2	SampType: MBLK			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R29409			RunNo: 29409						
Prep Date:	Analysis Date: 10/8/2015			SeqNo: 894473		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-2	SampType: LCS			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R29409			RunNo: 29409						
Prep Date:	Analysis Date: 10/8/2015			SeqNo: 894474		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.32	20.00	80.00	0	100	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510070

20-Oct-15

Client: Terracon
Project: NM1-9 IW

Sample ID	MB-21689		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW		Batch ID: 21689		RunNo: 29378					
Prep Date:	10/6/2015		Analysis Date: 10/7/2015		SeqNo: 893278		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-21689		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 21689		RunNo: 29378					
Prep Date:	10/6/2015		Analysis Date: 10/7/2015		SeqNo: 893279		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: TER-Alb

Work Order Number: 1510070

RcptNo: 1

Received by/date:

CS 10/01/15

Logged By: Lindsay Mangin

10/1/2015 4:36:00 PM

[Signature]

Completed By: Lindsay Mangin

10/2/2015 10:42:48 AM

[Signature]

Reviewed By:

[Signature] 10/02/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Client ☐

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☐ No ☒ NA ☐
Samples were collected the same day and chilled.
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☒ *CS 10/02/15*
9. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
of preserved bottles checked for pH: *2*
(<2 or >12 unless noted)
Adjusted? *yes*
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
Checked by: *CS*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks: For metals analysis, added 1ml HNO_3 for acceptable pH. Held for 24 hours prior to analysis. CS 10/02/15

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	11.6	Good	Not Present			

[illegible]

Relinquished by:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. His serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

December 30, 2015

Agua Moss
c/o Merrion Oil & Gas Corp.
610 Reilly Avenue
Farmington, New Mexico 87401

Attn: Ms. Shacie Murray
P: (505) 324-5324
E: shacie@merrion.bz

Re: Analytical Results
NM1-9 Injection Well
SWNW S2, T29N, R12W
Crouch Mesa Road
San Juan County, New Mexico
Terracon Project No. 66157040

Dear Ms. Murray;

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit analytical results for the fourth quarter 2015 quarterly sampling of the injection well located at the above-referenced site. A sample was collected from the injection well port at the east end of the aboveground storage tanks for laboratory analysis and field measurements on December 7, 2015. The results of analyses are presented in the attached Table 1. A copy of the laboratory analytical report is also provided as an attachment.

We appreciate the opportunity to provide environmental services for you. If you should have any questions or comments regarding this data, please contact Mark Hillier at (505) 222-5593.

Sincerely,
Terracon Consultants, Inc.



Mark R. Hillier, P.G. (TX)
Office Manager

Attachment – Table 1 – NM1-9 Injection Well Analytical Results
Laboratory Analytical Report



TABLE 1
NM1-9 INJECTION WELL ANALYTICAL RESULTS
 Agua Moss Disposal Facility
 Crouch Mesa Road
 San Juan County, New Mexico

Contaminant of Concern	Units	Sample Location
		NM1-9 IW (12/07/2015)
pH*	ratio	7.92
ORP*	mV ¹	85
Specific Conductance*	mS/cm ²	14.15
Temperature*	°C ³	9.9
Specific Gravity	ratio	1.01
Conductivity @ 25° C	µmhos/cm ⁴	19,000
Total Dissolved Solids @ 180° C	mg/L ⁵	9,860
Sodium Absorption Ratio	ratio	50
Total Alkalinity as CaCO ₃	mg/L	388.8
Total Hardness as CaCO ₃	mg/L	770
Bicarbonate as CaCO ₃	mg/L	388.8
Carbonate as CaCO ₃	mg/L	<2.000
Hydroxide as CaCO ₃	mg/L	<2.000
Nitrate Nitrogen	mg/L	3.7
Nitrite Nitrogen	mg/L	<2.0
Chloride	mg/L	5,000
Fluoride	mg/L	2.1
Phosphate	mg/L	<2.5
Sulfate	mg/L	620
Iron	mg/L	6.1
Calcium	mg/L	230
Magnesium	mg/L	46
Potassium	mg/L	61
Sodium	mg/L	3,200
Bromide	mg/L	8.2

* - Filed Measurement

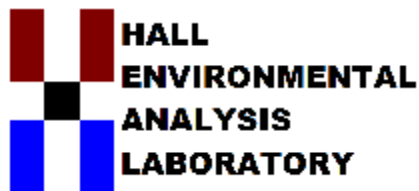
1 - mV - millivolts

2 - mS - millisiemen per centimeter

3 - °C - degrees Celsius

4 - µmhos/cm - micromhos per centimeter

5 - mg/L - milligrams per liter



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 30, 2015

Mark Hillier

Terracon

4905 Hawkins, NE

Albuquerque, NM 87109

TEL: (505) 715-0375

FAX (505) 797-4288

RE: Agua Moss

OrderNo.: 1512322

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/7/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 23, 2015.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C1(36")

Project: Agua Moss

Collection Date: 12/7/2015 10:30:00 AM

Lab ID: 1512322-001

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	12/10/2015	22703
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	26	6.0		mg/Kg	20	12/11/2015 5:24:57 PM	22775
Chloride	230	30		mg/Kg	20	12/11/2015 5:24:57 PM	22775
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/11/2015 5:12:33 PM	22775
Nitrogen, Nitrate (As N)	0.88	0.30		mg/Kg	1	12/11/2015 5:12:33 PM	22775
Sulfate	410	30		mg/Kg	20	12/11/2015 5:24:57 PM	22775
EPA METHOD 7471: MERCURY							Analyst: pmf
Mercury	ND	0.033		mg/Kg	1	12/9/2015 3:26:17 PM	22709
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	4.1	2.5		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Barium	140	0.099		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Cadmium	ND	0.099		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Calcium	55000	2500		mg/Kg	100	12/9/2015 12:08:53 PM	22688
Chromium	7.3	0.30		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Copper	7.0	0.30		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Iron	12000	250		mg/Kg	100	12/9/2015 12:08:53 PM	22688
Lead	2.4	0.25		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Magnesium	5400	49		mg/Kg	2	12/9/2015 11:18:55 AM	22688
Manganese	140	0.099		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Potassium	1800	99		mg/Kg	2	12/9/2015 11:18:55 AM	22688
Selenium	ND	2.5		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Silver	ND	0.25		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Sodium	810	49		mg/Kg	2	12/9/2015 11:18:55 AM	22688
Uranium	ND	4.9		mg/Kg	1	12/9/2015 11:17:16 AM	22688
Zinc	25	2.5		mg/Kg	1	12/9/2015 11:17:16 AM	22688
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/10/2015 4:32:41 PM	22675
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/10/2015 4:32:41 PM	22675
Surr: DNOP	110	70-130		%REC	1	12/10/2015 4:32:41 PM	22675
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2015 2:14:33 PM	22678
Surr: BFB	91.6	66.2-112		%REC	1	12/9/2015 2:14:33 PM	22678
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	12/9/2015 2:14:33 PM	22678
Toluene	ND	0.048		mg/Kg	1	12/9/2015 2:14:33 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C1(36")

Project: Agua Moss

Collection Date: 12/7/2015 10:30:00 AM

Lab ID: 1512322-001

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: NSB	
Ethylbenzene	ND	0.048		mg/Kg	1	12/9/2015 2:14:33 PM	22678
Xylenes, Total	ND	0.095		mg/Kg	1	12/9/2015 2:14:33 PM	22678
Surr: 4-Bromofluorobenzene	119	80-120		%REC	1	12/9/2015 2:14:33 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C2S(36")

Project: Agua Moss

Collection Date: 12/7/2015 10:50:00 AM

Lab ID: 1512322-002

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	12/10/2015	22703
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	2.0	0.30		mg/Kg	1	12/11/2015 6:27:01 PM	22775
Chloride	140	30		mg/Kg	20	12/11/2015 6:39:26 PM	22775
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/11/2015 6:27:01 PM	22775
Nitrogen, Nitrate (As N)	ND	0.30		mg/Kg	1	12/11/2015 6:27:01 PM	22775
Sulfate	160	30		mg/Kg	20	12/11/2015 6:39:26 PM	22775
EPA METHOD 7471: MERCURY							Analyst: pmf
Mercury	ND	0.032		mg/Kg	1	12/9/2015 3:28:11 PM	22709
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	2.8	2.5		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Barium	110	0.10		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Cadmium	ND	0.10		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Calcium	11000	130		mg/Kg	5	12/9/2015 12:00:59 PM	22688
Chromium	2.2	0.30		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Copper	2.5	0.30		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Iron	6300	250		mg/Kg	100	12/9/2015 12:10:18 PM	22688
Lead	2.3	0.25		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Magnesium	2800	25		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Manganese	160	0.10		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Potassium	500	50		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Selenium	ND	2.5		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Silver	ND	0.25		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Sodium	360	25		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Uranium	ND	5.0		mg/Kg	1	12/9/2015 11:25:31 AM	22688
Zinc	13	2.5		mg/Kg	1	12/9/2015 11:25:31 AM	22688
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/10/2015 4:54:25 PM	22675
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/10/2015 4:54:25 PM	22675
Surr: DNOP	103	70-130		%REC	1	12/10/2015 4:54:25 PM	22675
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2015 3:28:05 PM	22678
Surr: BFB	90.8	66.2-112		%REC	1	12/9/2015 3:28:05 PM	22678
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	12/9/2015 3:28:05 PM	22678
Toluene	ND	0.049		mg/Kg	1	12/9/2015 3:28:05 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C2S(36")

Project: Agua Moss

Collection Date: 12/7/2015 10:50:00 AM

Lab ID: 1512322-002

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: NSB	
Ethylbenzene	ND	0.049		mg/Kg	1	12/9/2015 3:28:05 PM	22678
Xylenes, Total	ND	0.098		mg/Kg	1	12/9/2015 3:28:05 PM	22678
Surr: 4-Bromofluorobenzene	119	80-120		%REC	1	12/9/2015 3:28:05 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C2N(36")

Project: Agua Moss

Collection Date: 12/7/2015 11:20:00 AM

Lab ID: 1512322-003

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	12/10/2015	22703
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	1.1	0.30		mg/Kg	1	12/11/2015 6:51:51 PM	22775
Chloride	270	30		mg/Kg	20	12/11/2015 7:04:15 PM	22775
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/11/2015 6:51:51 PM	22775
Nitrogen, Nitrate (As N)	8.8	0.30		mg/Kg	1	12/11/2015 6:51:51 PM	22775
Sulfate	660	30		mg/Kg	20	12/11/2015 7:04:15 PM	22775
EPA METHOD 7471: MERCURY							Analyst: pmf
Mercury	ND	0.032		mg/Kg	1	12/9/2015 3:30:00 PM	22709
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	2.4		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Barium	170	0.098		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Cadmium	ND	0.098		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Calcium	37000	240		mg/Kg	10	12/9/2015 12:02:23 PM	22688
Chromium	6.1	0.29		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Copper	5.9	0.29		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Iron	11000	240		mg/Kg	100	12/9/2015 12:11:57 PM	22688
Lead	3.7	0.24		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Magnesium	4500	49		mg/Kg	2	12/9/2015 11:30:06 AM	22688
Manganese	180	0.098		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Potassium	1500	98		mg/Kg	2	12/9/2015 11:30:06 AM	22688
Selenium	ND	2.4		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Silver	ND	0.24		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Sodium	470	49		mg/Kg	2	12/9/2015 11:30:06 AM	22688
Uranium	ND	4.9		mg/Kg	1	12/9/2015 11:28:27 AM	22688
Zinc	23	2.4		mg/Kg	1	12/9/2015 11:28:27 AM	22688
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/10/2015 5:16:11 PM	22675
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/10/2015 5:16:11 PM	22675
Surr: DNOP	102	70-130		%REC	1	12/10/2015 5:16:11 PM	22675
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2015 3:52:41 PM	22678
Surr: BFB	94.5	66.2-112		%REC	1	12/9/2015 3:52:41 PM	22678
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	12/9/2015 3:52:41 PM	22678
Toluene	ND	0.048		mg/Kg	1	12/9/2015 3:52:41 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C2N(36")

Project: Agua Moss

Collection Date: 12/7/2015 11:20:00 AM

Lab ID: 1512322-003

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: NSB	
Ethylbenzene	ND	0.048		mg/Kg	1	12/9/2015 3:52:41 PM	22678
Xylenes, Total	ND	0.097		mg/Kg	1	12/9/2015 3:52:41 PM	22678
Surr: 4-Bromofluorobenzene	126	80-120	S	%REC	1	12/9/2015 3:52:41 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C2S(6")

Project: Agua Moss

Collection Date: 12/7/2015 12:20:00 PM

Lab ID: 1512322-004

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	6600	200		mg/Kg	10	12/10/2015	22703
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	680	30		mg/Kg	20	12/11/2015 7:29:05 PM	22775
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	390	94		mg/Kg	10	12/10/2015 5:37:53 PM	22675
Motor Oil Range Organics (MRO)	2800	470		mg/Kg	10	12/10/2015 5:37:53 PM	22675
Surr: DNOP	0	70-130	S	%REC	10	12/10/2015 5:37:53 PM	22675
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2015 4:17:14 PM	22678
Surr: BFB	91.8	66.2-112		%REC	1	12/9/2015 4:17:14 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C2N(6")

Project: Agua Moss

Collection Date: 12/7/2015 12:10:00 PM

Lab ID: 1512322-005

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	8400	200		mg/Kg	10	12/10/2015	22703
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	390	30		mg/Kg	20	12/11/2015 7:53:53 PM	22775
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	370	97		mg/Kg	10	12/10/2015 5:59:42 PM	22675
Motor Oil Range Organics (MRO)	3300	480		mg/Kg	10	12/10/2015 5:59:42 PM	22675
Surr: DNOP	0	70-130	S	%REC	10	12/10/2015 5:59:42 PM	22675
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2015 4:41:46 PM	22678
Surr: BFB	91.2	66.2-112		%REC	1	12/9/2015 4:41:46 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: C1(6")

Project: Agua Moss

Collection Date: 12/7/2015 11:40:00 AM

Lab ID: 1512322-006

Matrix: SOIL

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	5000	200		mg/Kg	10	12/10/2015	22703
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	19	1.5		mg/Kg	1	12/11/2015 8:31:06 PM	22775
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	230	100		mg/Kg	10	12/11/2015 9:24:57 AM	22675
Motor Oil Range Organics (MRO)	1500	500		mg/Kg	10	12/11/2015 9:24:57 AM	22675
Surr: DNOP	0	70-130	S	%REC	10	12/11/2015 9:24:57 AM	22675
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2015 5:06:17 PM	22678
Surr: BFB	87.5	66.2-112		%REC	1	12/9/2015 5:06:17 PM	22678

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1512322

Date Reported: 12/30/2015

CLIENT: Terracon

Client Sample ID: NM1-9 IW1504

Project: Agua Moss

Collection Date: 12/7/2015 12:40:00 PM

Lab ID: 1512322-007

Matrix: AQUEOUS

Received Date: 12/7/2015 4:33:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	770	6.6		mg/L	1	12/15/2015 10:30:00 AM	R30843
SODIUM ADSORPTION RATIO							Analyst: ELS
Sodium Adsorption Ratio	50	0			1	12/16/2015 1:12:00 PM	R30889
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.010	0			1	12/8/2015 11:54:00 AM	R30692
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	2.1	0.50		mg/L	5	12/8/2015 2:54:23 PM	R30715
Chloride	5000	250	*	mg/L	500	12/12/2015 2:48:35 AM	A30806
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	12/8/2015 3:06:47 PM	R30715
Bromide	8.2	0.50		mg/L	5	12/8/2015 2:54:23 PM	R30715
Nitrogen, Nitrate (As N)	3.7	0.50		mg/L	5	12/8/2015 2:54:23 PM	R30715
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	12/8/2015 2:54:23 PM	R30715
Sulfate	620	10	*	mg/L	20	12/8/2015 3:06:47 PM	R30715
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	19000	0.050		µmhos/cm	5	12/12/2015 12:01:56 AM	R30810
SM2320B: ALKALINITY							Analyst: JRR
Alkalinity, Hydroxide (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	12/10/2015 1:35:23 PM	R30782
Bicarbonate (As CaCO ₃)	388.8	20.00		mg/L CaCO ₃	1	12/10/2015 1:35:23 PM	R30782
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	12/10/2015 1:35:23 PM	R30782
Total Alkalinity (as CaCO ₃)	388.8	20.00		mg/L CaCO ₃	1	12/10/2015 1:35:23 PM	R30782
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	9860	200	*D	mg/L	1	12/16/2015 11:04:00 AM	22799
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	230	5.0		mg/L	5	12/15/2015 1:27:17 PM	22725
Iron	6.1	1.0	*	mg/L	50	12/16/2015 2:11:44 PM	22713
Magnesium	46	1.0		mg/L	1	12/15/2015 1:25:32 PM	22725
Potassium	61	1.0		mg/L	1	12/15/2015 1:25:32 PM	22725
Sodium	3200	50		mg/L	50	12/16/2015 2:11:44 PM	22713

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID	MB-22725	SampType: MBLK			TestCode: EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID: 22725			RunNo: 30843					
Prep Date:	12/9/2015	Analysis Date: 12/15/2015			SeqNo: 942392		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID	LCS-22725		SampType: LCS		TestCode: EPA Method 200.7: Metals					
Client ID:	LCSW		Batch ID: 22725		RunNo: 30843					
Prep Date:	12/9/2015		Analysis Date: 12/15/2015		SeqNo: 942393		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.8	85	115			
Magnesium	49	1.0	50.00	0	98.6	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			

Sample ID	LLLCS-22725	SampType: LCSLL			TestCode: EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID: 22725			RunNo: 30843					
Prep Date:	12/9/2015	Analysis Date: 12/15/2015			SeqNo: 942394		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	101	50	150			
Magnesium	ND	1.0	0.5000	0	101	50	150			
Potassium	ND	1.0	0.5000	0	108	50	150			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID	MB-22775		SampType: MBLK		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 22775		RunNo: 30809					
Prep Date:	12/14/2015		Analysis Date: 12/11/2015		SeqNo: 941358		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrite (As N)	ND	0.30								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID	LCS-22775		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 22775		RunNo: 30809					
Prep Date:	12/14/2015		Analysis Date: 12/11/2015		SeqNo: 941359		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	103	90	110			
Chloride	14	1.5	15.00	0	93.8	90	110			
Nitrogen, Nitrite (As N)	2.8	0.30	3.000	0	94.6	90	110			
Nitrogen, Nitrate (As N)	7.3	0.30	7.500	0	96.8	90	110			
Sulfate	29	1.5	30.00	0	95.5	90	110			

Sample ID	1512322-001AMS		SampType: MS		TestCode: EPA Method 300.0: Anions					
Client ID:	C1(36")		Batch ID: 22775		RunNo: 30809					
Prep Date:	12/14/2015		Analysis Date: 12/11/2015		SeqNo: 941393		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	2.4	0.30	3.000	0	81.5	84.9	108			S
Nitrogen, Nitrate (As N)	8.3	0.30	7.500	0.8800	98.9	87.6	109			

Sample ID	1512322-001AMSD		SampType: MSD		TestCode: EPA Method 300.0: Anions					
Client ID:	C1(36")		Batch ID: 22775		RunNo: 30809					
Prep Date:	12/14/2015		Analysis Date: 12/11/2015		SeqNo: 941394		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	2.5	0.30	3.000	0	81.9	84.9	108	0.456	20	S
Nitrogen, Nitrate (As N)	8.3	0.30	7.500	0.8800	98.5	87.6	109	0.361	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R30715		RunNo: 30715							
Prep Date:	Analysis Date: 12/8/2015		SeqNo: 938175		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R30715		RunNo: 30715							
Prep Date:	Analysis Date: 12/8/2015		SeqNo: 938176		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	105	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.6	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.1	90	110			
Sulfate	9.8	0.50	10.00	0	97.9	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A30806		RunNo: 30806							
Prep Date:	Analysis Date: 12/12/2015		SeqNo: 941286		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: A30806		RunNo: 30806							
Prep Date:	Analysis Date: 12/12/2015		SeqNo: 941287		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.6	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID	MB-22703		SampType: MBLK		TestCode: EPA Method 418.1: TPH					
Client ID:	PBS		Batch ID: 22703		RunNo: 30759					
Prep Date:	12/9/2015		Analysis Date: 12/10/2015		SeqNo: 939490		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-22703		SampType: LCS		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS		Batch ID: 22703		RunNo: 30759					
Prep Date:	12/9/2015		Analysis Date: 12/10/2015		SeqNo: 939491		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	101	83.6	116			

Sample ID	LCSD-22703		SampType: LCSD		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS02		Batch ID: 22703		RunNo: 30759					
Prep Date:	12/9/2015		Analysis Date: 12/10/2015		SeqNo: 939492		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	104	83.6	116	2.64	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID	MB-22675		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 22675		RunNo: 30744					
Prep Date:	12/9/2015		Analysis Date: 12/10/2015		SeqNo: 939460		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	70	130			

Sample ID	LCS-22675		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 22675		RunNo: 30744					
Prep Date:	12/9/2015		Analysis Date: 12/10/2015		SeqNo: 939461		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	57.4	139			
Surr: DNOP	5.6		5.000		112	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID MB-22678	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 22678			RunNo: 30727						
Prep Date: 12/8/2015	Analysis Date: 12/9/2015			SeqNo: 938888		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.4	66.2	112			

Sample ID LCS-22678	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 22678			RunNo: 30727						
Prep Date: 12/8/2015	Analysis Date: 12/9/2015			SeqNo: 938889		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	83.6	79.6	122			
Surr: BFB	1100		1000		107	66.2	112			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID MB-22678	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 22678		RunNo: 30727							
Prep Date: 12/8/2015	Analysis Date: 12/9/2015		SeqNo: 938921		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sample ID LCS-22678	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 22678		RunNo: 30727							
Prep Date: 12/8/2015	Analysis Date: 12/9/2015		SeqNo: 938922		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.050	1.000	0	87.8	80	120			
Toluene	0.88	0.050	1.000	0	88.5	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.2	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		134	80	120			S

Sample ID 1512322-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: C1(36")	Batch ID: 22678		RunNo: 30727							
Prep Date: 12/8/2015	Analysis Date: 12/9/2015		SeqNo: 938924		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.047	0.9470	0	105	69.6	136			
Toluene	1.0	0.047	0.9470	0	108	76.2	134			
Ethylbenzene	1.1	0.047	0.9470	0	117	75.8	137			
Xylenes, Total	3.2	0.095	2.841	0	112	78.9	133			
Surr: 4-Bromofluorobenzene	1.3		0.9470		138	80	120			S

Sample ID 1512322-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: C1(36")	Batch ID: 22678		RunNo: 30727							
Prep Date: 12/8/2015	Analysis Date: 12/9/2015		SeqNo: 938925		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.047	0.9479	0	113	69.6	136	7.10	20	
Toluene	1.1	0.047	0.9479	0	112	76.2	134	4.61	20	
Ethylbenzene	1.2	0.047	0.9479	0	122	75.8	137	4.15	20	
Xylenes, Total	3.3	0.095	2.844	0	118	78.9	133	5.39	20	
Surr: 4-Bromofluorobenzene	1.3		0.9479		139	80	120	0	0	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID	MB-22709		SampType: MBLK		TestCode: EPA Method 7471: Mercury					
Client ID:	PBS		Batch ID: 22709		RunNo: 30733					
Prep Date:	12/9/2015		Analysis Date: 12/9/2015		SeqNo: 938623		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	ND	0.033								

Sample ID	LCS-22709		SampType: LCS		TestCode: EPA Method 7471: Mercury					
Client ID:	LCSS		Batch ID: 22709		RunNo: 30733					
Prep Date:	12/9/2015		Analysis Date: 12/9/2015		SeqNo: 938624		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	105	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID MB-22688	SampType: MBLK		TestCode: EPA Method 6010B: Soil Metals							
Client ID: PBS	Batch ID: 22688		RunNo: 30722							
Prep Date: 12/8/2015	Analysis Date: 12/9/2015		SeqNo: 938366		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Calcium	ND	25								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	2.5								
Lead	ND	0.25								
Magnesium	ND	25								
Manganese	ND	0.10								
Potassium	ND	50								
Selenium	ND	2.5								
Silver	ND	0.25								
Sodium	ND	25								
Uranium	ND	5.0								
Zinc	ND	2.5								

Sample ID LCS-22688	SampType: LCS		TestCode: EPA Method 6010B: Soil Metals							
Client ID: LCSS	Batch ID: 22688		RunNo: 30722							
Prep Date: 12/8/2015	Analysis Date: 12/9/2015		SeqNo: 938367		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	28	2.5	25.00	0	110	80	120			
Barium	25	0.10	25.00	0	102	80	120			
Cadmium	25	0.10	25.00	0	102	80	120			
Calcium	2600	25	2500	0	103	80	120			
Chromium	25	0.30	25.00	0	100	80	120			
Copper	26	0.30	25.00	0	104	80	120			
Iron	26	2.5	25.00	0	103	80	120			
Lead	25	0.25	25.00	0	99.2	80	120			
Magnesium	2500	25	2500	0	102	80	120			
Manganese	25	0.10	25.00	0	101	80	120			
Potassium	2500	50	2500	0	99.3	80	120			
Selenium	27	2.5	25.00	0	108	80	120			
Silver	5.1	0.25	5.000	0	102	80	120			
Sodium	2500	25	2500	0	100	80	120			
Uranium	26	5.0	25.00	0	104	80	120			
Zinc	26	2.5	25.00	0	103	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

Sample ID mb-1	SampType: MBLK			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R30782			RunNo: 30782						
Prep Date:	Analysis Date: 12/10/2015			SeqNo: 940209		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-1	SampType: LCS			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R30782			RunNo: 30782						
Prep Date:	Analysis Date: 12/10/2015			SeqNo: 940210		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.28	20.00	80.00	0	96.6	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512322

30-Dec-15

Client: Terracon
Project: Agua Moss

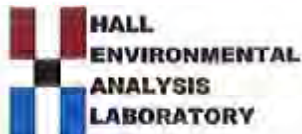
Sample ID	MB-22799		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW		Batch ID: 22799		RunNo: 30873					
Prep Date:	12/14/2015		Analysis Date: 12/16/2015		SeqNo: 943604		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-22799		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 22799		RunNo: 30873					
Prep Date:	12/14/2015		Analysis Date: 12/16/2015		SeqNo: 943605		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	996	20.0	1000	0	99.6	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-Alb

Work Order Number: 1512322

ReptNo: 1

Received by/date: CS 12/07/15

Logged By: Celina Sessa 12/7/2015 4:33:00 PM Celina Sessa

Completed By: Celina Sessa 12/7/2015 4:50:18 PM Celina Sessa

Reviewed By: [Signature] 12/08/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: 2
(≤ 2) or >12 unless noted)
Adjusted? NO
Checked by: [Signature]

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.6	Good	Not Present			

Appendix C



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 4-28-15 Operator Agua Moss API # 30-0 45-28653

Property Name Sunco Disposal Well # 1 Location: Unit Sec 2 Twn 29 Rge 12

Land Type:

State
Federal
Private
Indian

Well Type:

Water Injection
Salt Water Disposal
Gas Injection
Producing Oil/Gas
Pressure observation

OIL CONS. DIV DIST. 3
APR 28 2015

Temporarily Abandoned Well (Y/N) TA Expires:

Casing Pres. 0 Tbg. SI Pres. Max. Inj. Pres.
Bradenhead Pres. 0 Tbg. Inj. Pres.
Tubing Pres. 1349
Int. Casing Pres. 71A

Pressured annulus up to 390 psi. for 3 mins. Test passed/failed

REMARKS:

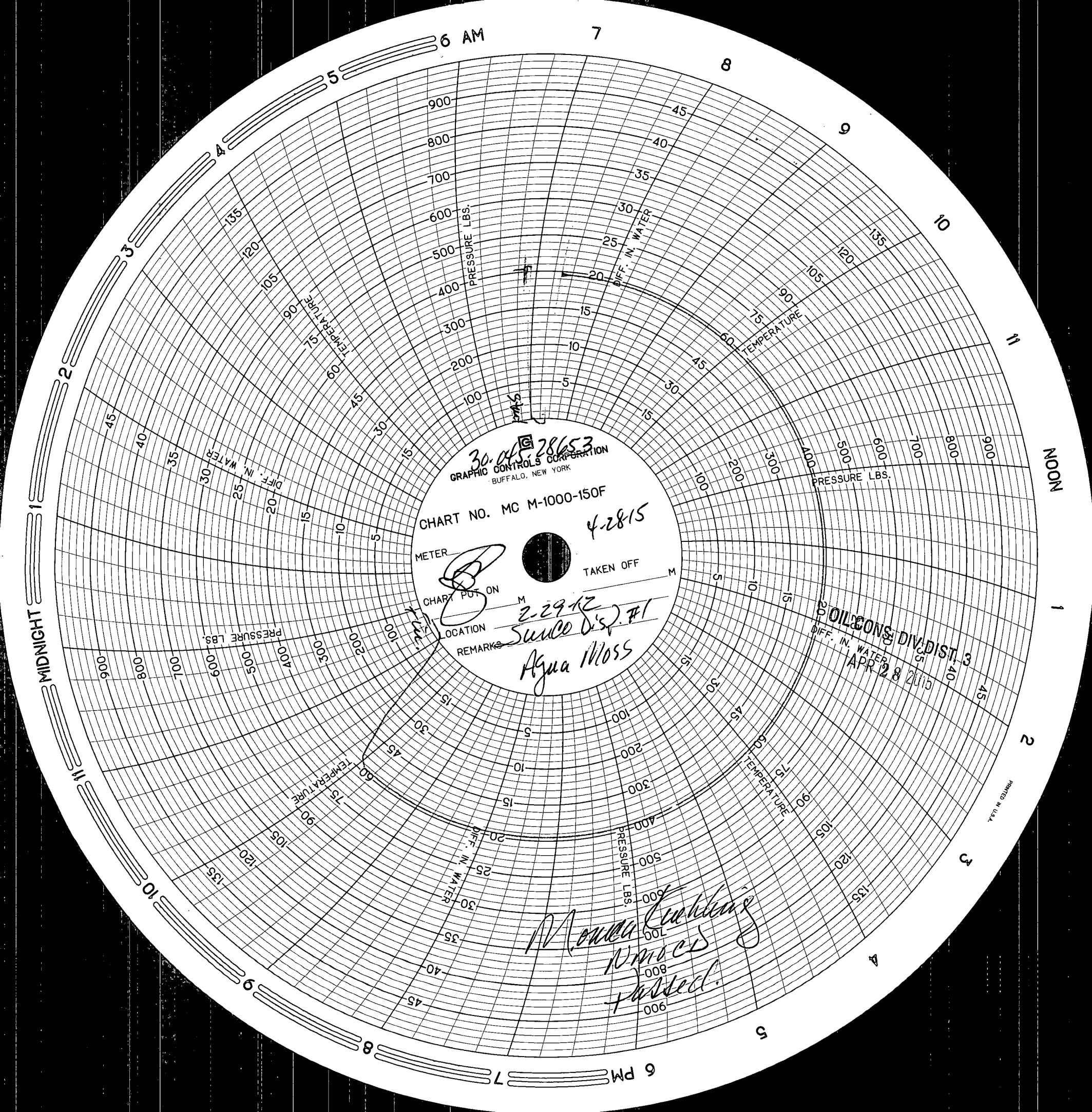
packer 4282
top of 4350

By
(Operator Representative)

Witness Monica Cuchling
(NMOCD)

Manager
(Position)

Revised 02-11-02



Sunco SWD #1
30-045-28653
Class I Disposal: UICI-5-0
2015 Falloff Test

Agua Moss, LLC
P.O Box 600
Farmington, NM 87499
ORGID 247130

Report Components:

1. Facility Operator Information
 - a. Agua Moss, LLC
 - b. PO Box 600 Farmington, NM 87499
 - c. OGRID 247130
2. Well Information:
 - a. UIC Permit # UICI-5-0
 - b. Class I
 - c. Sunco Disposal #1
 - d. 30-045-28653
 - e. UL E, Sec 2, T29N, R12W 1595 FNL & 1005 FWL San Juan County
3. Current Wellbore Diagram: **Attached** (page 4)
4. Copy of Electronic Log: **Previously submitted 1992** (page 5)
5. Copy of Porosity Log: **Previously submitted 1992** (page 6)
6. See attached Fall off Test analysis
 - a. FOT Procedure (page 7)
 - b. Analysis (page 7)
 - c. Results (page 9)
 - d. Summary (page 9)
7. Results Comparison attached (page 10)
8. The raw test data will be kept on file for a period of 3-year and will be made available to the NMOCD upon written request. (page 11)
9. Conclusions (page 11)
10. Any pressure or temperature anomaly: **None seen**
11. See Falloff Test Calculations (page 12)
12. Plots attached
 - a. Pressure and Rate (fig 6) (page 13)
 - b. Injection Rate vs Time (fig 7) (page 14)
 - c. Pressure and Rate (fig 8) (page 15)
 - d. Elapsed Time (fig 9) (page 16)
 - e. Derivative Plot (fig 10) (page 17)
 - f. Horner Plot (fig 11) (page 18)
 - g. Elapsed Gauge Time (fig 12) (page 19)
 - h. Injection Volumes and Surface Pressure (fig13) (page 20)
13. NO PVT data necessary, injected fluid is fresh-to-slightly saline water. No significant hydrocarbons present that would alter the density, compressibility and/or viscosity of the fluid.
14. The Agua Moss, LLC internal Daily Injection Reports were used to determine the appropriate injection history to use for the analysis. A summary of those reports (November 2013 through January 2014) are attached. (page 21- 26)
15. The Sunco Disposal #1 has injected approximately 13,547,086 bbls into the point lookout formation from 1994 through March 2015 (see attached). The offset well McGrath SWD #4 API 30-045-25923 was plugged 7/25/2013. Cumulative injection 1994-7/2013 27,746,479 bbls.

16. 1 Mile AOR:
 - a. AOR 1 mile (page 27)
 - b. AOR 1 mile well data (page 28)
 - c. The McGrath #4 was the only offset well that was injecting into the Point Lookout formation within 1 mile. This well was plugged 7/25/2013.
17. Geological information was provided in the last Permit renewal submitted and approved in 2012.
18. Offset Wells: One offset well that was completed in the same injection interval was the McGrath #4. This well was plugged 7/2013 and therefore was not impacted.
19. Chronological listing of the daily, testing activities (operations log) attached (pages 30-45)
 - a. Date of Test: **4/28/15 thru 5/4/2015**
 - b. Time of the injection period: **50 hours**
 - c. Type of injection fluid: **Produced water**
 - d. Final injection pressure & temp prior to shutting in in the well: **3764.43 psi, 69.42 °F**
 - e. Total shut-in time: **90.5 hours**
 - f. Final static pressure & temp at the end of the fall-off portion of the test: **3349.84 psi, 88.14 °F**
20. Location of the shut in valve: **A wing valve located on the well's Christmas Tree was closed to begin the FOT**
21. Pressure Gauges: (see attached)
 - a. SP-2000 Memory Pressure Gauge (page 46)
 - b. Pressure range: **0-5000 psig** (page 47)
 - c. Last Calibration: **2/4/14** (page 47)

Wellbore Schematic:

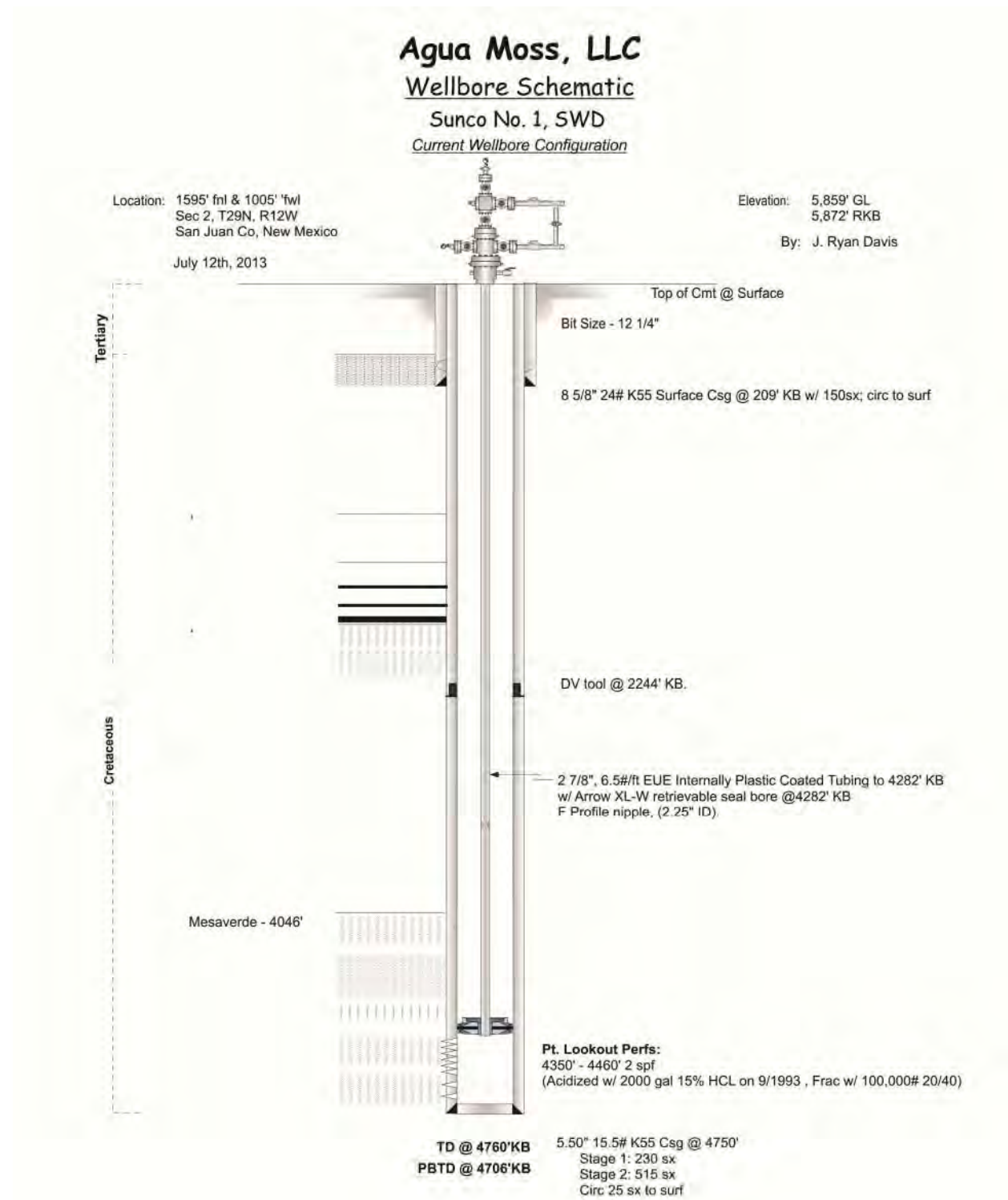
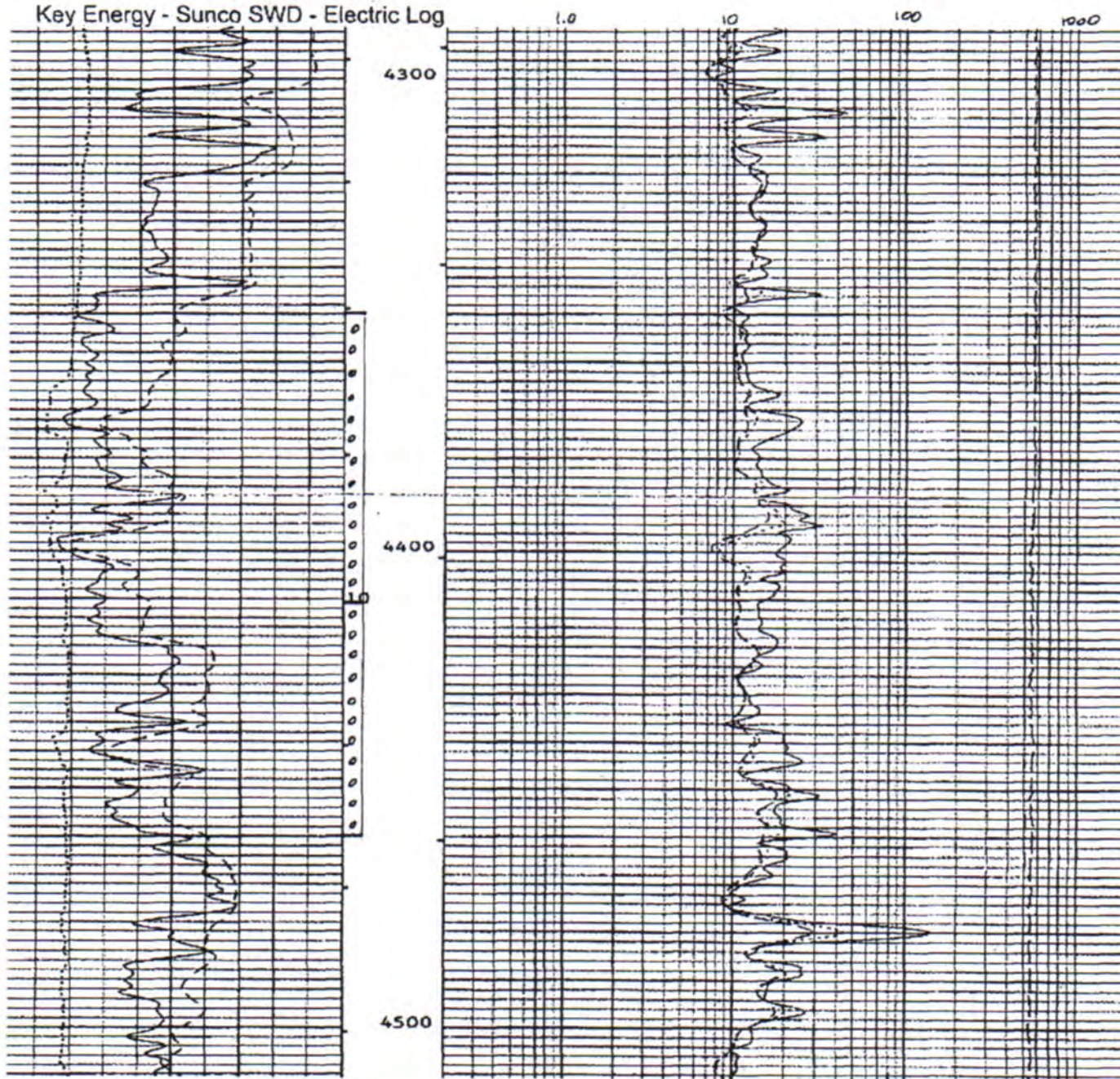


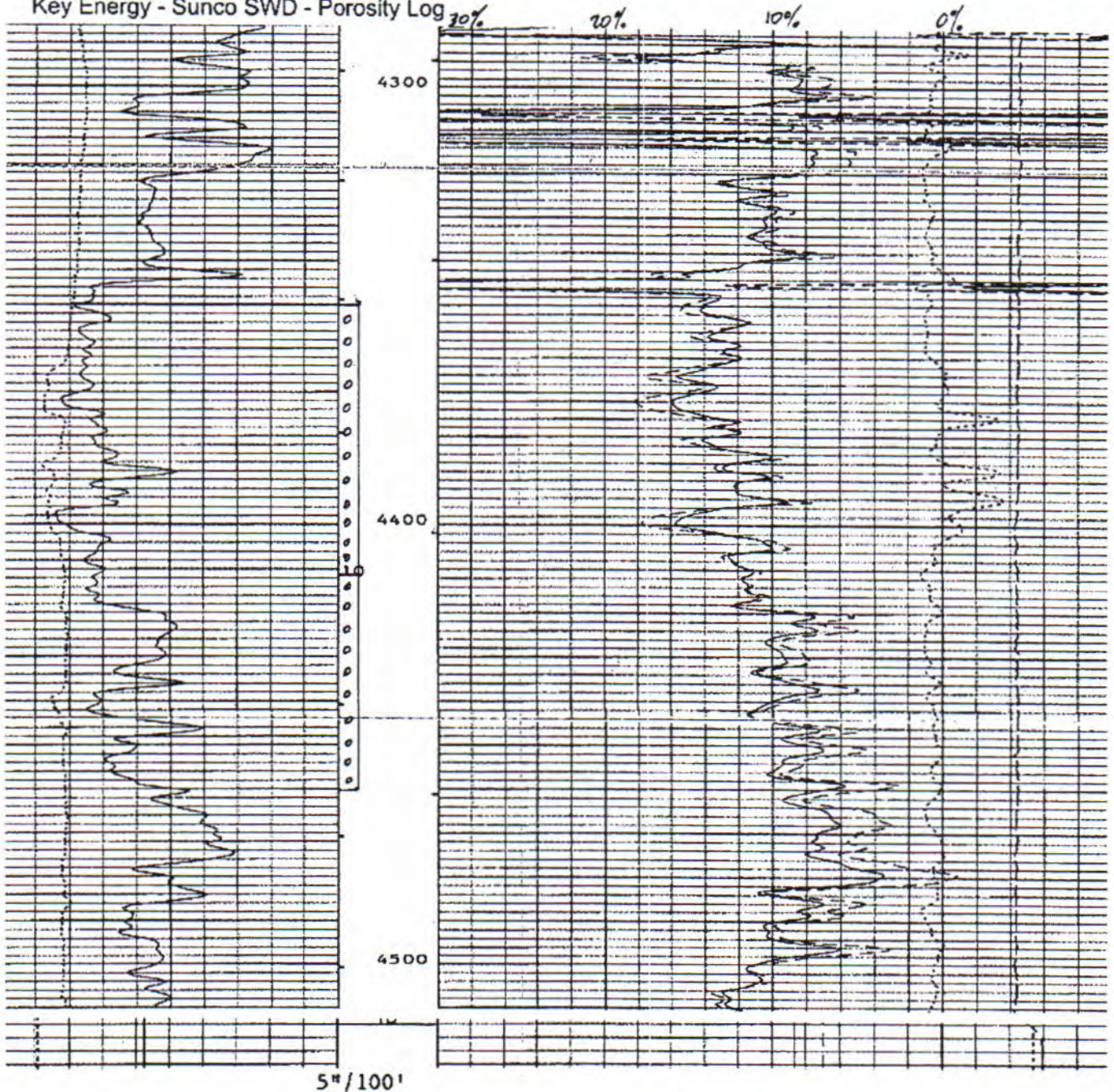
Figure 1: Wellbore Schematic

Key Energy - Sunco SWD - Electric Log



		TENS(LBF)	
		10000	0.0
CAL(I(N)		SFLU(OHMM)	
3.0000	16.000	20000	2000.0
GR(GAP)		ILD(OHMM)	
3.0	200.00	20000	2000.0
SP(MV)		ILM(OHMM)	
80.00	20.000	20000	2000.0

Key Energy - Sunco SWD - Porosity Log



5"/100'

CP 32.6

FILE 6

01-FEB-1992 20:21

(UP)

CALI (IN.)		RHO (G/C3)	
5.0000	16.000	2500	25000
GR (GAPI)		TENS (LBF)	
0.0	200.00	10000	0.0
		RHO B (G/C3)	
		2.0000	3.0000
		DPH (V/V)	
		30000	1.000

At the request of the NMOCD, a Falloff Test (FOT) was performed on the Sunco SWD #1 Class I injection well (UICI-5-0) on **04/28/2015**. Below is the summary of findings from the 2015 FOT.

Procedure:

Tandem electronic gauges were run in the subject well. The initial BHP was 3243 psi at a depth of 4405'. The injection period started at 12:30 pm on 04/28/2015, with a total of 7002 bbls injected over 50 hours, and an average injection rate of 3361 bpd (98 gpm). The final bottom hole injection pressure was 3764 psi. Injection was shut down and the well was shut in at the wellhead. The bottom hole pressures were monitored for 90 hours of pressure falloff. The final BHP was 3350 psi.

Analysis:

The data was compiled in excel and analyzed. A Cartesian plot of pressure and temperature versus time was created see Figure 2 below..

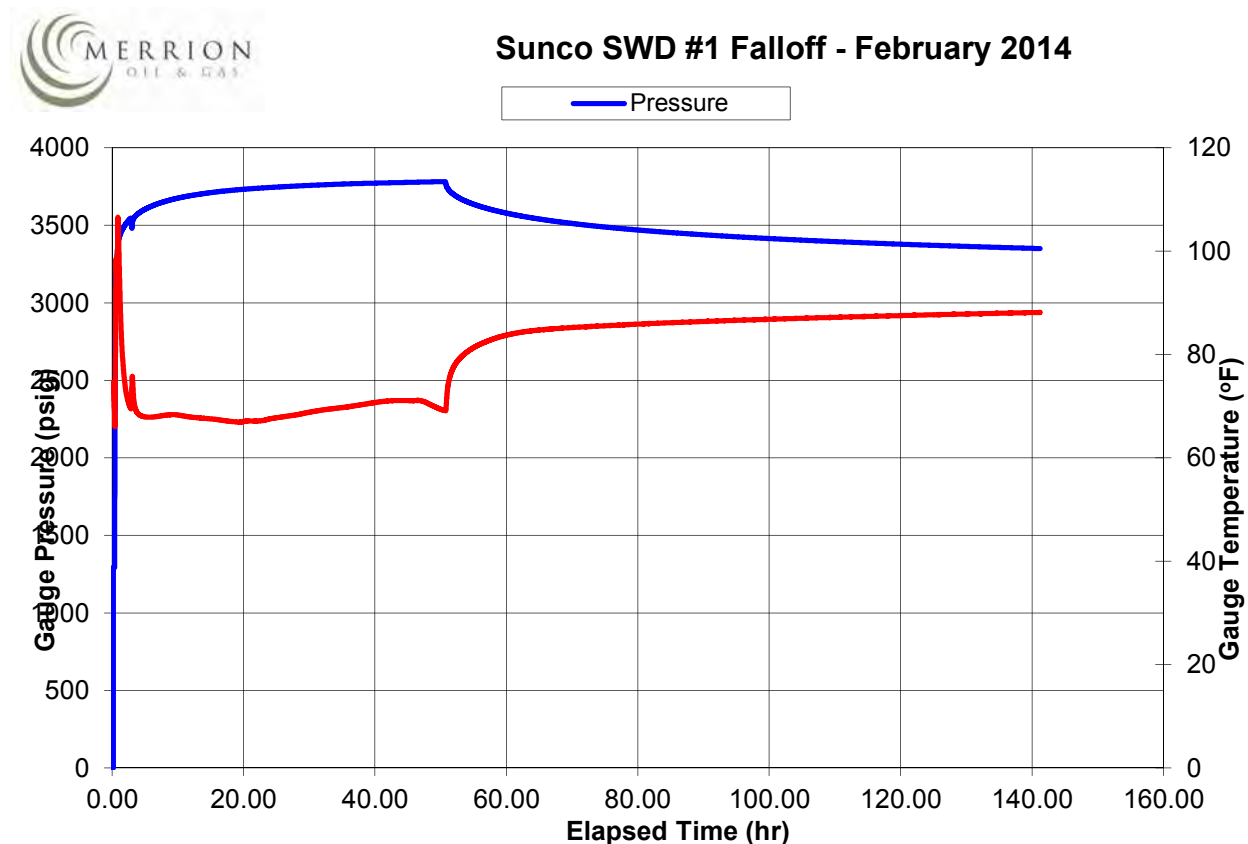


Figure 2: Cart Pressure/Temp vs. Time

The stabilization of pressure was confirmed prior to shut-in. The plot was reviewed for anomalous data, none found.

A log-log plot of pressure and the derivative was created to identify the radial flow period. Figure 3 below shows the log-log plot used for the analysis with the radial flow period identified.

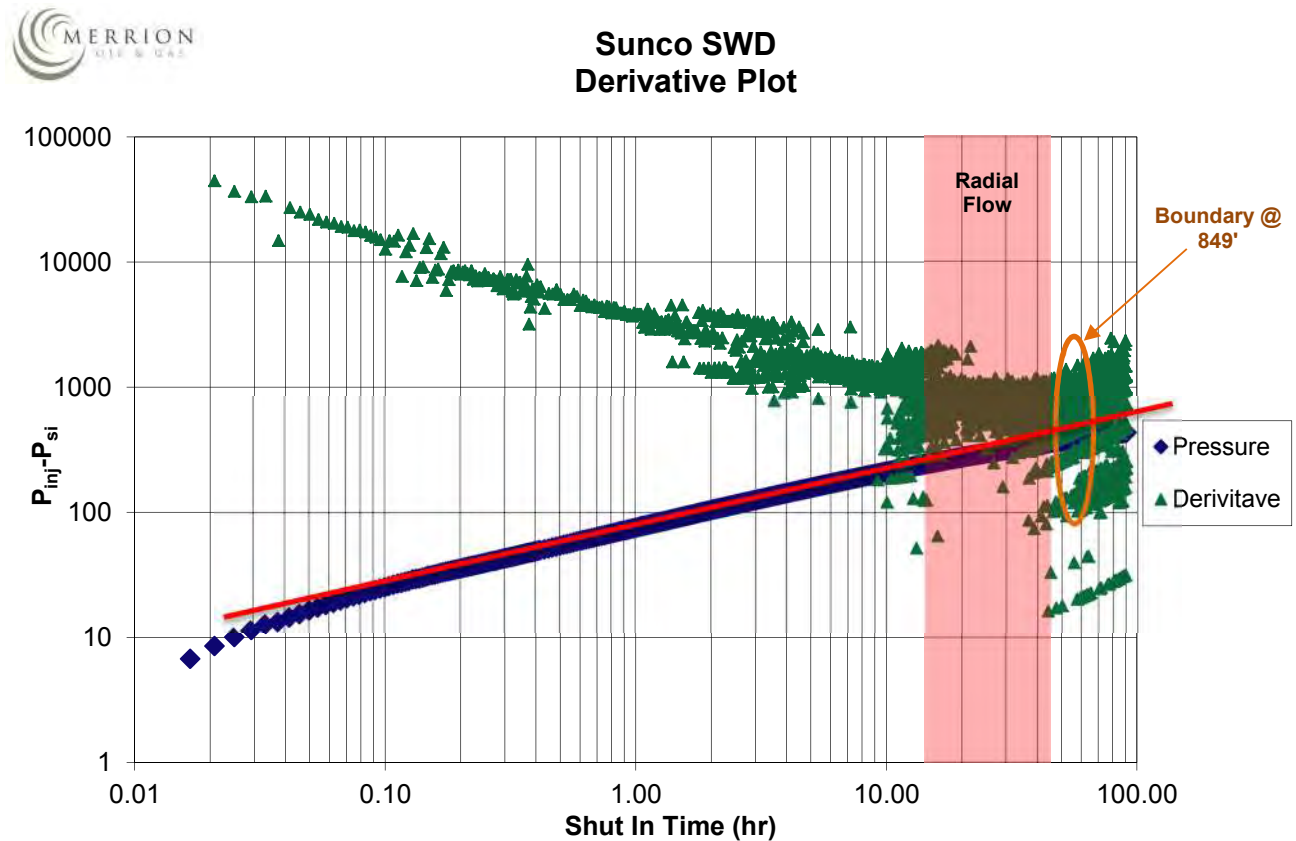


Figure 3: Derivative Plot

From Figure 3 above you can also see the change in the derivative at a shut-in time of approximately 55 hours, indicating a boundary at approximately 849 feet.

The radial flow interval was used to draw a straight line of best fit on the Horner Plot within the equivalent time interval. The slope m , P^* and P_{1hr} were determined from the straight line on the Horner Plot, Figure 4 below.



Sunco Disposal Well Horner Plot

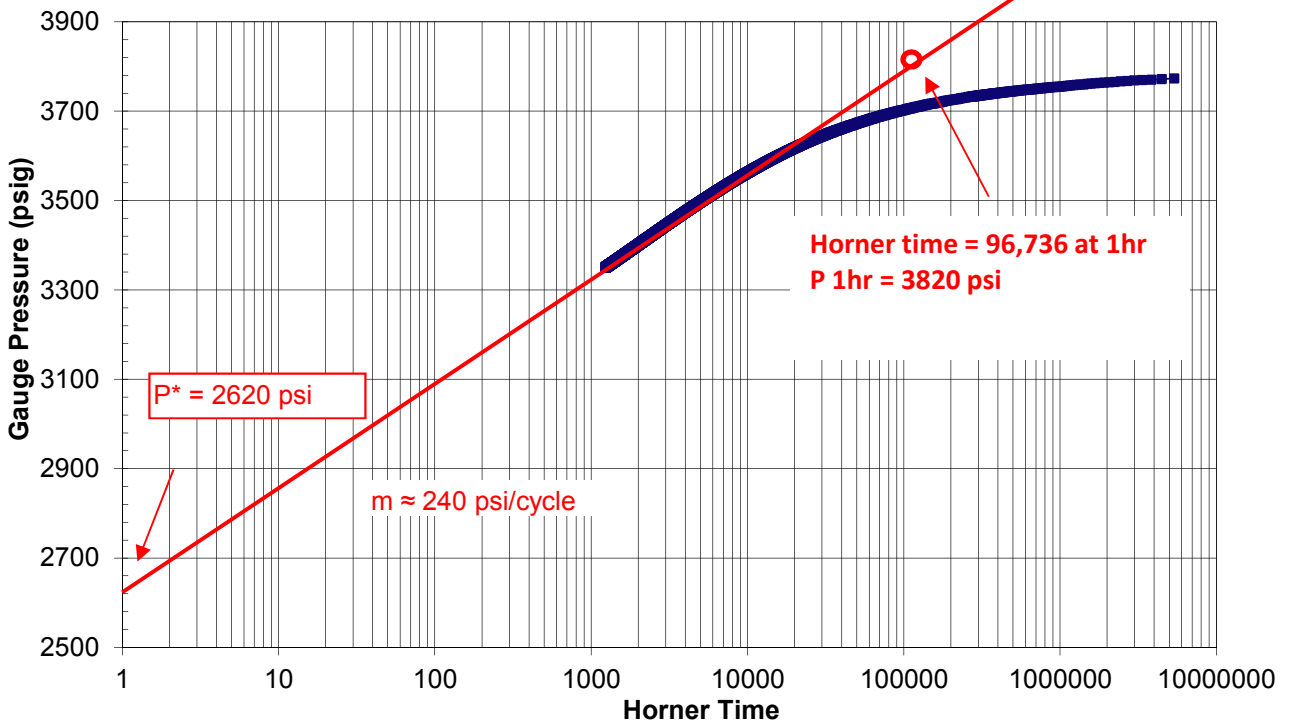


Figure 4: Horner Plot

Using the parameters identified, as described above, the reservoir and completion parameter were calculated. Calculations can be found in Figure 5 below.

Results:

1. $P^* = 2620 \text{ psi}$
2. $K = 20.7 \text{ md}$
3. $S = -5.5$
4. Radius of Investigation = 1,089 feet
5. Boundary seen at approximately 849 feet

Summary:

The data from the FOT indicated a hydraulically fractured injection interval with a Fracture half-length of 383 feet. The P^* value calculated from the data was 2620 psi, being somewhat lower than previous values. The injection volumes into the Mesa Verde interval in this area have been on a decline over the last eight years, can be seen in Figure 13. The reduced injection volumes are attributable to less water being received at the Sunco SWD Facility and the P&A of the offset McGrath SWD 4. The lower P^* value

is an indication of pressure dissipation into the reservoir, which is good. Although there has been boundaries seen in the past FOT's and one seen on this analysis, the reservoir is not being constrained by the boundaries. You can also see in Figure 13 a decreasing trend with the surface pressures, which again is evidence of pressure dissipation in the reservoir. As long as the surface pressure limitations keep us below fracture pressure, injecting into the well at the current injection rates will not damage the reservoir or migrate into other zones. The injection interval overall looks healthy and suitable for waste water disposal.

Comparison with past Falloff Tests:

The results from the 2015 FOT were compiled with previous FOT results from the facility and are shown below in Table 1.

Table 1: Results Comparison

	<u>2015</u>	<u>2014</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Rate (bbl/day)	3340	739	4500			
P* (psi)	2620	3135	3231	3242	3176	3258
K (md)	20.6	3.4	13.6	10.2	20.7	
S	-5.6	-4.1	-7.18	-7.23	-6.79	
Radius of Inv (ft)	1,085	336	1450	1250	1750	1620
Frac ½ Length (ft)	378	336	893	926	596	688
Boundary	846	None	648, 1520	755	987	none

Agua Moss did not conduct the prior tests and is relying on the 2010 report submitted by Key Energy, the prior operator, for the prior results. In comparing the results, there are a number of observations to make:

1. Pressure transient analysis is not an exact science, and the results are non-unique. All the calculated parameters vary significantly from year to year. One interpretation sees a boundary, the next one sees TWO boundaries, and one sees no boundary. The bottom line is that two different interpreters may come up with different results looking at the same data set, and even the same interpreter will come up with different results as data sets vary from year to year. Therefore, to a great extent, one must make qualitative conclusions from the analysis, without putting too much weight into the absolute numbers.
2. The slightly lower P* suggests that there has been some pressure dissipation in the reservoir due to less injection activity in the injection interval. That is a good sign, indicating the disposal zone has a lot of capacity to accept fluids.

3. The injection rate in the 2010 test was 4500 BPD, while we were only able to inject 739 BPD during the 2014 test, because of facility constraints. Since the injection rate drives the calculations, the **calculated** permeability was less and the **calculated** skin factor was greater than in past tests. All **calculated** radius are driven by the permeability used in the equation. Because the permeability used in the 2014 analysis was significantly less than prior analysis, **the calculated** radius of investigation and **fracture** half-length both come up significantly lower.
4. The radius of investigation for 2015 was adequate enough to see out beyond all but one of the previously seen boundaries. In fact a boundary was identified at approximately 846 feet.
Note: *On 2010 results seems peculiar to have a boundary beyond the Radius of Investigation.*
5. The parameters calculated compare well enough with previous FOT parameter to validate the 2015 FOT results. The only major variance is the P* which is easily justified by reduced injection and pressure dissipation.

Data:

The raw test data obtained during the 2015 falloff test and used for the analysis will be kept on file for a period of three (3) years and will be available upon request.

Conclusions:

Based on the above analysis and results comparison, Agua Moss believes the Sunco SWD #1 2015 FOT was successfully completed and doesn't show any indications of concern to continue the current waste injection operations. If the division is in agreement with the successful completion of the FOT, Agua Moss would like to propose conducting the next FOT on or before 04/2020.

Falloff Test Calculations				BHP	3,782		
Lease Name	Sunco SWD						
Field Name	Mesaverde					1.6E+07	
Test Date	04/28/15						
Cum Injection	7,002	BBls					
Injection Period	50	hours					
Ave Inj Rate	3,361	BWD	Cum Inj	1.35E+07	Bbl		
Water specific gravity	1.00		Rate	3,361	Bbl/day		
			Inj Time	96,736	hrs	Average pres	3,201 psi
			Water vis	1.0000	cp	Drainage radius	2,980 ft
			Bw	1.00000	RB/ surf bbl		
Reservoir temp	173	°F					
Acres	640				Compressibility wate	3.00E-06	
I. Calculation of kh (md-ft) and k (md)					Compress formation	3.65E-06	
Slope (psi/cycle)	240	(1)			System Comp.	0.000007	
Pwf	3,782	psi	KH	2277.080	md-ft		
Pressure star	2,620	psi	Kw	20.701	md		
Net thickness	110	ft	KH/u	2,277			
II. Calculation of Skin Effect and Pressure Loss Due to Skin							
Porosity	0.200	frac					
Well bore radius	0.33	ft	Skin	-5.49	LN(rwa/rw)		
P one hour	3,820	(2)	Pseudo skin	(1,146)	psi		
Water saturation	1.00	frac	Flow Efficiency	199%	(Pwf-Dpskin - Pstatic)/(Pwf-Pstatic)		
Injection Time	50	hr					
Time to Reach Radial	0.000	hr	(200000+12000*S)*Ct/(kh/u)				
Radius of Investigation	809	ft	0.029*(kt/Por*u*Ct)^.5				
Shut In Time	90.5	hr			Time to Reach Boundary	55	hr
Time to Reach Radial	0.00023	hr	170000*Ct*exp^(.14*S)/(kh/u)		Time to Reach Radial	0.0002302	hr
adius of Investigation	1,089	ft	0.029*(kt/Por*u*Ct)^.5		Distance	849	ft
ime to end of Frac Flow	11.2	hr					
Frac Half Length	383		0.029*(kt/Por*u*Ct)^.5				
Horner straight line starts 11 hours							
Finite Conductivity Fracture of approximately 383' half length							

Figure 5: FOT Calculations

Pressure and Rate

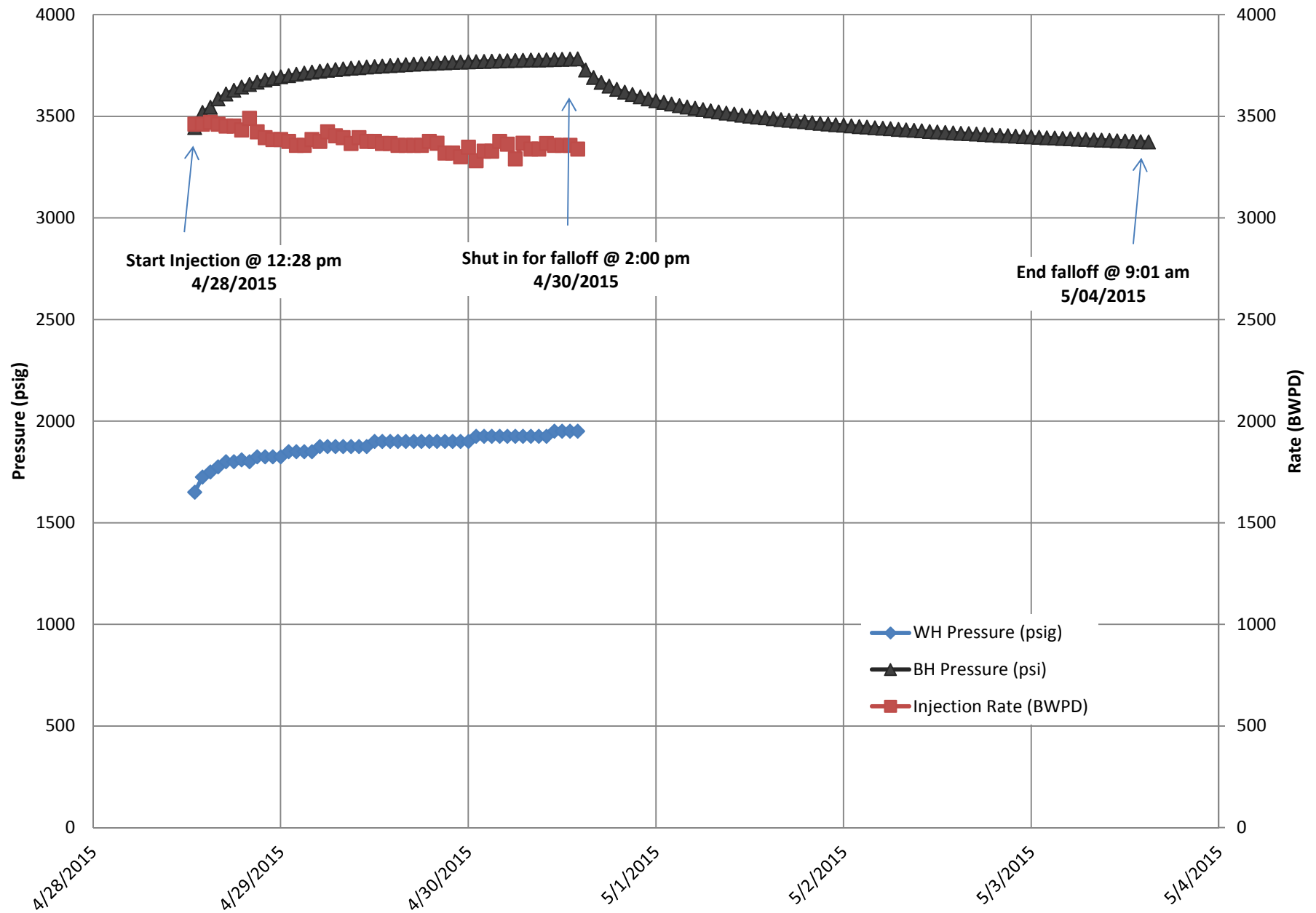


Figure 6



Figure 7

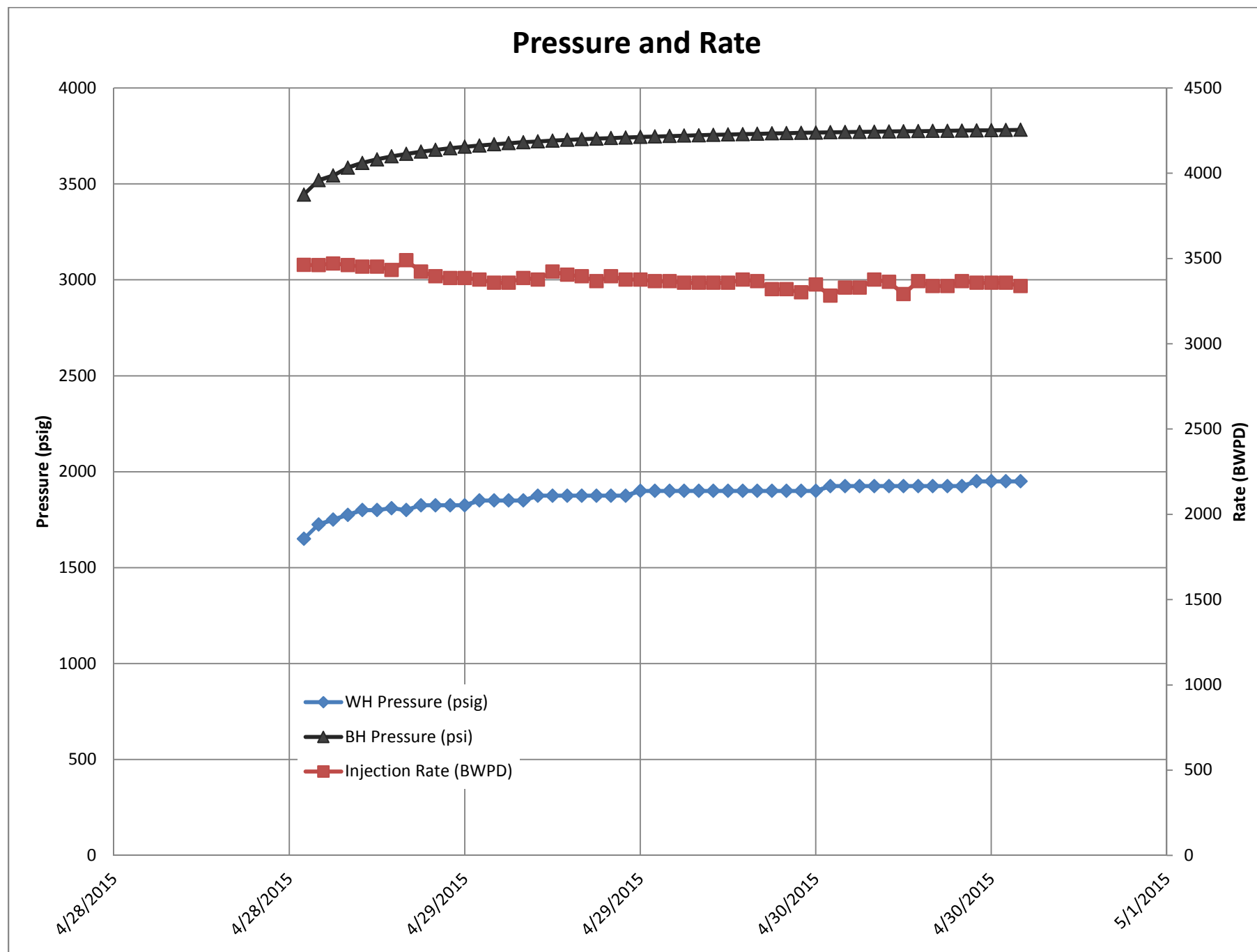


Figure 8



Sunco SWD #1 Falloff - April 2015

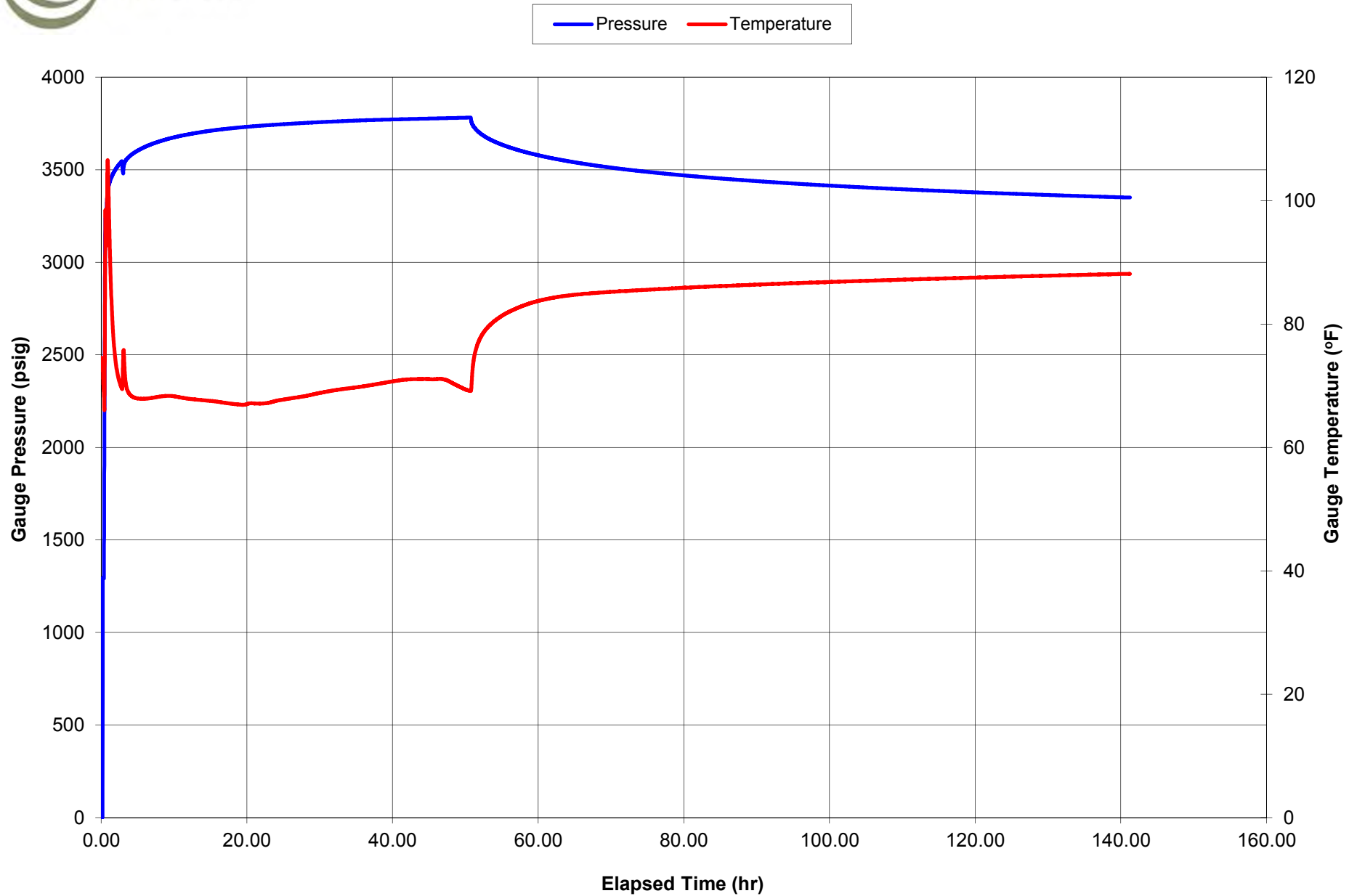


Figure 9

Sunco SWD Derivative Plot

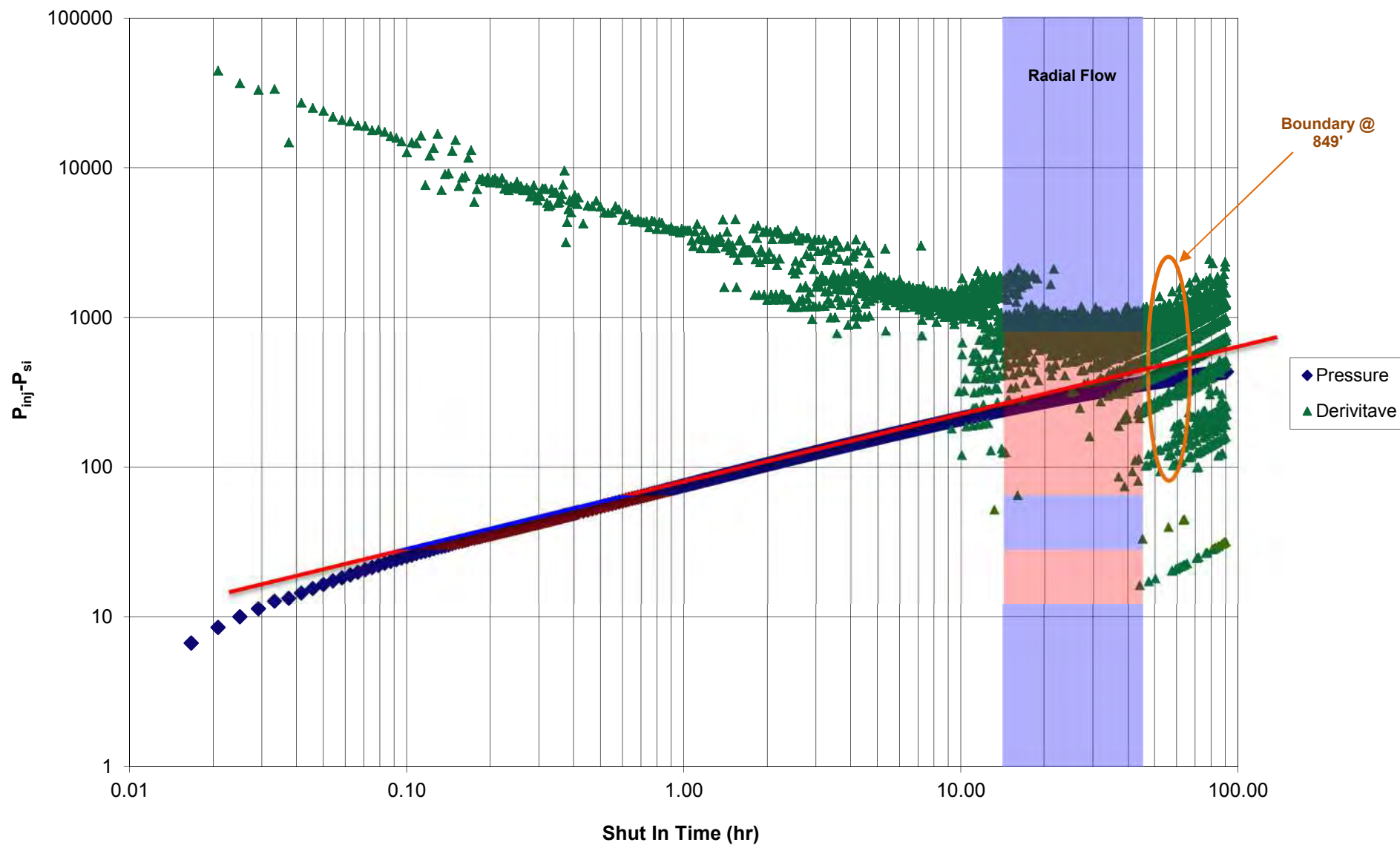


Figure 10



Sunco Disposal Well Horner Plot

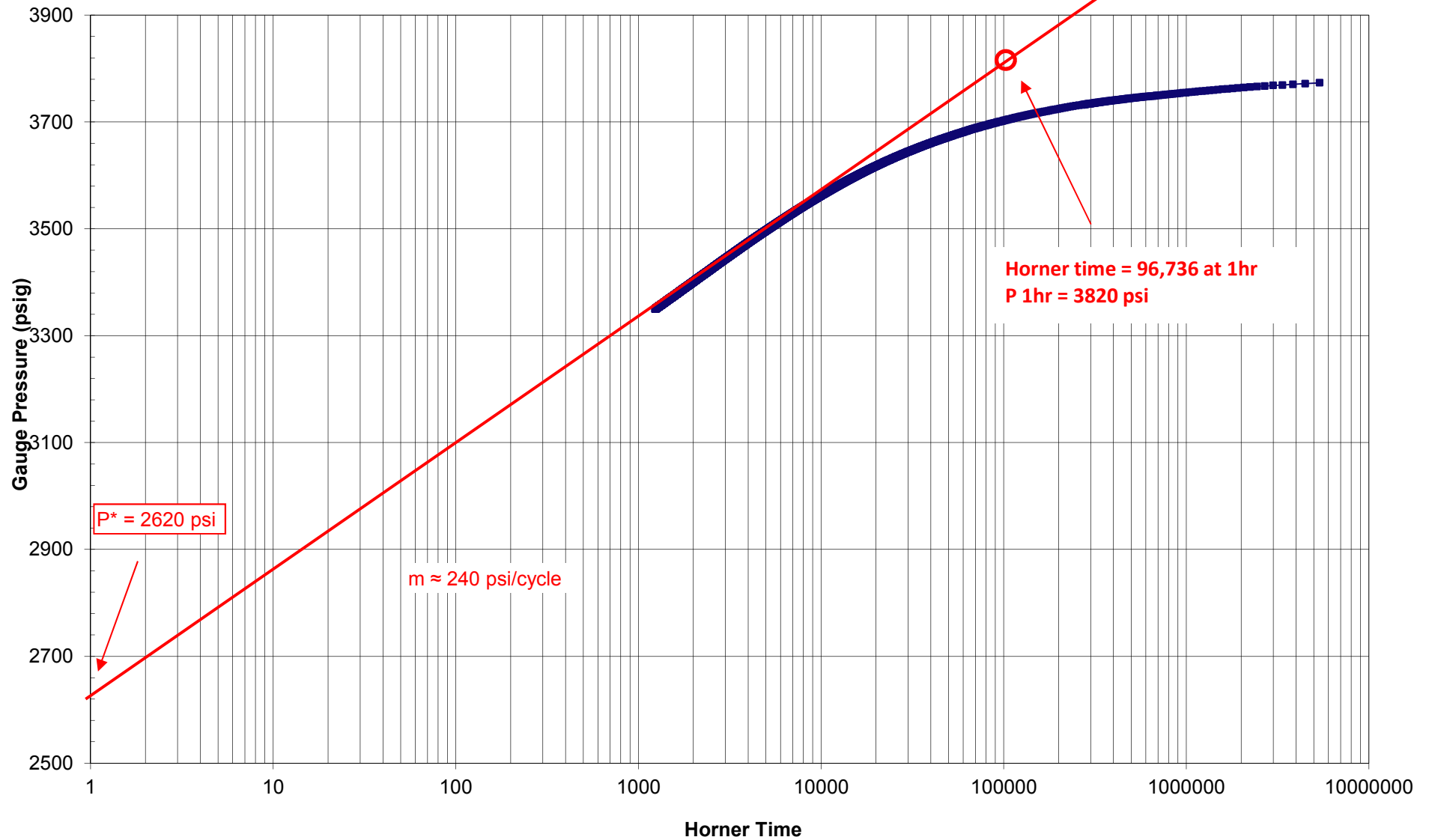


Figure 11

Sunco SWD #1 Falloff - February 2014

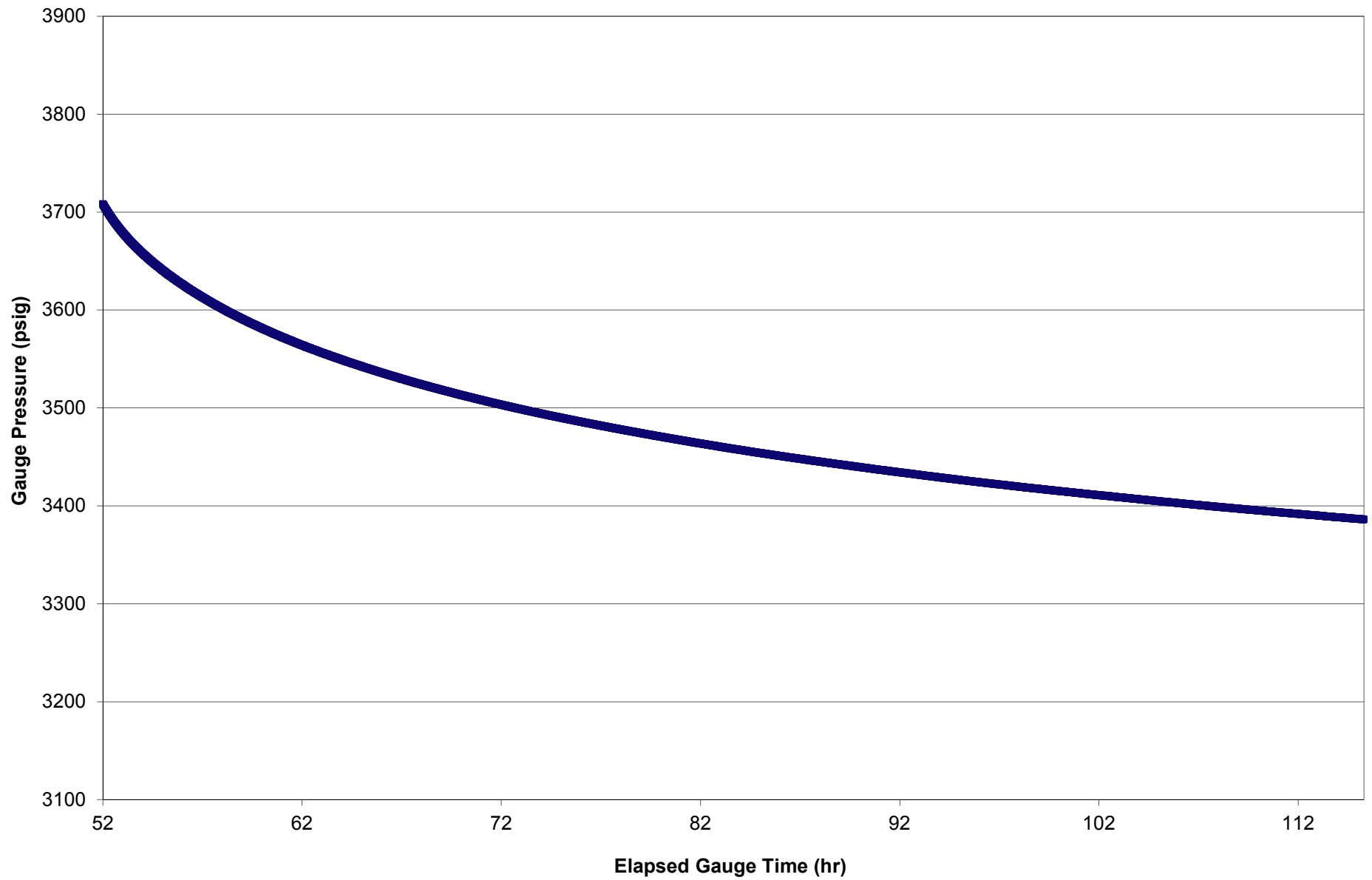


Figure 12

2015
 Quarterly
 Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maxium Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	Total Cumulative Volume (barrels)	
													Previous year	13471572	
Jan-2015	1674.545	1750	1600	18.70277778	32.2875	4.725	0	0	0	641.2381	1107	162	13466	13485038	
Feb-2015	1678.5	1750	1600	15.855	26.36666667	7.2041667	0	0	0	543.6	904	247	10872	13495910	
Mar-2015	1638.636	1750	1600	17.79034091	32.725	5.075	0	0	0	609.9545	1122	174	13419	13509329	
													Previous Quarter	13509329	
Apr-2015	#DIV/0!	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	13509329	
May-2015	#DIV/0!	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	13509329	
Jun-2015	#DIV/0!	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	13509329	
													Previous Quarter	13509329	
Jul-15	#DIV/0!	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	13509329	
Aug-15	#DIV/0!	0	0	0	0	0	0	0	0	#DIV/0!	0	0	0	13509329	
Sep-15	#DIV/0!	0	0	0	0	0	0	0	0	#DIV/0!	0	0	0	13509329	
													Previous Quarter	13509329	
Oct-2015	#DIV/0!	0	0	0	0	0	0	0	0	#DIV/0!	0	0	0	13509329	
Nov-2015	#DIV/0!	0	0	0	0	0	0	0	0	#DIV/0!	0	0	0	13509329	
Dec-2015	#DIV/0!	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	13509329	
											Total for year		37757	13547086	Life Of well injected

	WH	AP	
1/1/15	1650		
1/2/15	1650		
1/3/15			
1/4/15			
1/5/15	1750		
1/6/15	1650		
1/7/15	1600		
1/8/15	1650		
1/9/15	1600		
1/10/15			
1/11/15			
1/12/15	1650		
1/13/15	1740		
1/14/15	1600		
1/15/15	1600		
1/16/15	1600		
1/17/15			
1/18/15			
1/19/15	1600		
1/20/15	1750		
1/21/15	1700		
1/22/15	1750		
1/23/15	1750		
1/24/15			
1/25/15			
1/26/15	1700		
1/27/15	1750		
1/28/15	1700		
1/29/15	1750		
1/30/15	1650		
1/31/15			
	1674.545	0	AVG
	1600	0	MIN
	1750	0	MAX

	WH	AP	
2/1/15			
2/2/15	1750		
2/3/15	1750		
2/4/15	1650		
2/5/15	1650		
2/6/15	1700		
2/7/15			
2/8/15			
2/9/15	1600		
2/10/15	1650		
2/11/15	1650		
2/12/15	1700		
2/13/15	1700		
2/14/15			
2/15/15			
2/16/15	1700		
2/17/15	1750		
2/18/15	1650		
2/19/15	1700		
2/20/15	1700		
2/21/15			
2/22/15			
2/23/15	1600		
2/24/15	1600		
2/25/15	1750		
2/26/15	1600		
2/27/15	1720		
2/28/15			
	1678.5	0	AVG
	1600	0	MIN
	1750	0	MAX

	WH	AP	
3/1/15			
3/2/15	1600		
3/3/15	1750		
3/4/15	1700		
3/5/15	1750		
3/6/15	1600		
3/7/15			
3/8/15			
3/9/15	1750		
3/10/15	1650		
3/11/15	1600		
3/12/15	1600		
3/13/15	1600		
3/14/15			
3/15/15			
3/16/15	1650		
3/17/15	1700		
3/18/15	1600		
3/19/15	1650		
3/20/15	1600		
3/21/15			
3/22/15			
3/23/15	1600		
3/24/15	1600		
3/25/15	1650		
3/26/15	1600		
3/27/15	1600		
3/28/15			
3/29/15			
3/30/15	1600		
3/31/15	1600		
	1638.636	0	AVG
	1600	0	MIN
	1750	0	MAX

Total Injected	Avg Vol	Avg Flow		Avg Vol	Avg Flow		Avg Vol	Avg Flow
1/1/2015	381	11.1125	2/1/2015			3/1/2015		
1/2/2015	275	8.020833333	2/2/2015	888	25.9	3/2/2015	238	6.941666667
1/3/2015			2/3/2015	400	11.66666667	3/3/2015	649	18.92916667
1/4/2015			2/4/2015	769	22.42916667	3/4/2015	879	25.6375
1/5/2015	713	20.79583333	2/5/2015	396	11.55	3/5/2015	1122	32.725
1/6/2015	400	11.66666667	2/6/2015	904	26.36666667	3/6/2015	609	17.7625
1/7/2015	270	7.875	2/7/2015			3/7/2015		
1/8/2015	404	11.78333333	2/8/2015			3/8/2015		
1/9/2015	162	4.725	2/9/2015	247	7.204166667	3/9/2015	1051	30.65416667
1/10/2015			2/10/2015	426	12.425	3/10/2015	737	21.49583333
1/11/2015			2/11/2015	564	16.45	3/11/2015	598	17.44166667
1/12/2015	937	27.32916667	2/12/2015	351	10.2375	3/12/2015	548	15.98333333
1/13/2015	1064	31.03333333	2/13/2015	574	16.74166667	3/13/2015	513	14.9625
1/14/2015	267	7.7875	2/14/2015			3/14/2015		
1/15/2015	412	12.01666667	2/15/2015			3/15/2015		
1/16/2015	675	19.6875	2/16/2015	454	13.24166667	3/16/2015	546	15.925
1/17/2015			2/17/2015	829	24.17916667	3/17/2015	608	17.73333333
1/18/2015			2/18/2015	263	7.670833333	3/18/2015	741	21.6125
1/19/2015	327	9.5375	2/19/2015	509	14.84583333	3/19/2015	237	6.9125
1/20/2015	1100	32.08333333	2/20/2015	609	17.7625	3/20/2015	407	11.87083333
1/21/2015	490	14.29166667	2/21/2015			3/21/2015		
1/22/2015	923	26.92083333	2/22/2015			3/22/2015		
1/23/2015	1091	31.82083333	2/23/2015	311	9.070833333	3/23/2015	567	16.5375
1/24/2015			2/24/2015	396	11.55	3/24/2015	174	5.075
1/25/2015			2/25/2015	785	22.89583333	3/25/2015	992	28.93333333
1/26/2015	1107	32.2875	2/26/2015	474	13.825	3/26/2015	576	16.8
1/27/2015	700	20.41666667	2/27/2015	723	21.0875	3/27/2015	551	16.07083333
1/28/2015	676	19.71666667	2/28/2015			3/28/2015		
1/29/2015	1092	31.85				3/29/2015		
1/30/2015						3/30/2015	399	11.6375
1/31/2015						3/31/2015	677	19.74583333

AVG	641.2381	18.70277778		543.6	15.855		609.9545	17.79034091
MAX	1107	32.2875		904	26.36666667		1122	32.725
MIN	162	4.725		247	7.20416667		174	5.075
Total for month	13466			10872			13419	

2014
 Quarterly
 Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maxium Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	Total Cumulative Volume (barrels)	
													Previous year	13214274	
Jan-2014	1278.261	1400	550	0.91875	1.079167	0.7583333	250	250	250	31.5	37	26	63	13214337	
Feb-2014	1407.059	1850	420	18.31991	33.54167	2.5083333	33.33333	50	25	628.1111	1150	86	5653	13219990	
Mar-2014	1785.714	1950	1550	21.06222	32.375	1.1375	120	250	50	722.1333	1110	39	10832	13230822	
													Previous Quarter	13230822	
Apr-2014	1701.136	1875	1400	19.4473	35.81667	1.7791667	400	600	200	666.7647	1228	61	11335	13242157	
May-2014	1622.727	2150	1400	19.3213	31.00417	5.4833333	200	200	200	662.4444	1063	188	11924	13254081	
Jun-2014	1632.143	1800	1500	17.99	36.89583	2.7708333	300	300	300	616.8	1265	95	12336	13266417	
													Previous Quarter	13266417	
Jul-14	1632.143	1800	1550	17.29451	38.15	3.9375	300	300	300	592.9545	1308	135	13045	13279462	
Aug-14	1655.435	1750	1400	15.74079	32.9875	7.5833333	0	0	0	539.6842	1131	260	10254	13289716	
Sep-14	1613.095	1800	1400	20.7725	35.875	4.2	0	0	0	712.2	1230	144	14244	13303960	
													Previous Quarter	13303960	
Oct-2014	1630.682	1800	1400	17.97588	35.55417	8.6625	0	0	0	616.3158	1219	297	11710	13315670	
Nov-2014	1580.435	1750	1450	20.83047	46.1125	3.4416667	0	0	0	714.1875	1581	118	11427	13327097	
Dec-2014	1610.952	1800	1500	24.2943	38.7625	9.8291667	0	0	0	832.9474	1329	337	15826	13342923	
											Total for year		128649	13471572	Life Of well injected

Total Injected	Avg Vol	Avg Flow	Avg Vol	Avg Flow	Avg Vol	Avg Flow	Avg Vol	Avg Flow	Avg Vol	Avg Flow	Avg Vol	Avg Flow	Avg Vol	Avg Flow	Avg Vol	Avg Flow	
1/1/2014			2/1/2014		3/1/2014		4/1/2014	624	18.2	5/1/2014	671	19.57083333	6/1/2014				
1/2/2014			2/2/2014		3/2/2014		4/2/2014	500	14.58333333	5/2/2014			6/2/2014	1025	29.89583333		
1/3/2014			2/3/2014		3/3/2014	878	25.60833333	4/3/2014	785	22.89583333	5/3/2014			6/3/2014	447	13.0375	
1/4/2014			2/4/2014		3/4/2014	696	20.3	4/4/2014			5/4/2014			6/4/2014	784	22.86666667	
1/5/2014			2/5/2014		3/5/2014		4/5/2014			5/5/2014	584	17.03333333	6/5/2014	1265	36.89583333		
1/6/2014			2/6/2014		3/6/2014	893	26.04583333	4/6/2014			5/6/2014	413	12.04583333	6/6/2014	388	11.31666667	
1/7/2014			2/7/2014	86	2.508333333	3/7/2014	730	21.29166667	4/7/2014	417	12.1625	5/7/2014	512	14.93333333	6/7/2014		
1/8/2014			2/8/2014		3/8/2014		4/8/2014	699	20.3875	5/8/2014	593	17.29583333	6/8/2014				
1/9/2014			2/9/2014		3/9/2014		4/9/2014	848	24.73333333	5/9/2014	1050	30.625	6/9/2014	434	12.65833333		
1/10/2014			2/10/2014	308	8.983333333	3/10/2014	644	18.78333333	4/10/2014			5/10/2014			6/10/2014	482	14.05833333
1/11/2014			2/11/2014	532	15.51666667	3/11/2014			4/11/2014	758	22.10833333	5/11/2014			6/11/2014	976	28.46666667
1/12/2014			2/12/2014	292	8.516666667	3/12/2014	640	18.66666667	4/12/2014			5/12/2014	957	27.9125	6/12/2014		
1/13/2014			2/13/2014		3/13/2014	1110	32.375	4/13/2014			5/13/2014	578	16.85833333	6/13/2014	435	12.6875	
1/14/2014			2/14/2014		3/14/2014		4/14/2014	855	24.9375	5/14/2014	1004	29.28333333	6/14/2014				
1/15/2014			2/15/2014		3/15/2014		4/15/2014			5/15/2014	1007	29.37083333	6/15/2014				
1/16/2014			2/16/2014		3/16/2014		4/16/2014	643	18.75416667	5/16/2014			6/16/2014	563	16.42083333		
1/17/2014			2/17/2014		3/17/2014	974	28.40833333	4/17/2014	750	21.875	5/17/2014			6/17/2014	500	14.58333333	
1/18/2014			2/18/2014		3/18/2014	730	21.29166667	4/18/2014			5/18/2014			6/18/2014	431	12.57083333	
1/19/2014			2/19/2014	918	26.775	3/19/2014		4/19/2014			5/19/2014			6/19/2014	751	21.90416667	
1/20/2014			2/20/2014	1042	30.39166667	3/20/2014	821	23.94583333	4/20/2014			5/20/2014			6/20/2014	723	21.0875
1/21/2014	26	0.7583333333	2/21/2014	1002	29.225	3/21/2014		4/21/2014	61	1.779166667	5/21/2014	188	5.483333333	6/21/2014			
1/22/2014	37	1.079166667	2/22/2014		3/22/2014		4/22/2014	864	25.2	5/22/2014	386	11.25833333	6/22/2014				
1/23/2014			2/23/2014		3/23/2014		4/23/2014	532	15.51666667	5/23/2014	399	11.6375	6/23/2014	876	25.55		
1/24/2014			2/24/2014		3/24/2014	880	25.66666667	4/24/2014	1228	35.81666667	5/24/2014			6/24/2014	609	17.7625	
1/25/2014			2/25/2014		3/25/2014	427	12.45416667	4/25/2014	654	19.075	5/25/2014			6/25/2014	495	14.4375	
1/26/2014			2/26/2014	323	9.420833333	3/26/2014	640	18.66666667	4/26/2014			5/26/2014	580	16.91666667	6/26/2014	527	15.37083333
1/27/2014			2/27/2014	1150	33.54166667	3/27/2014	730	21.29166667	4/27/2014			5/27/2014	569	16.59583333	6/27/2014	95	2.770833333
1/28/2014			2/28/2014		3/28/2014		4/28/2014			5/28/2014	1063	31.00416667	6/28/2014				
1/29/2014					3/29/2014		4/29/2014	418	12.19166667	5/29/2014	795	23.1875	6/29/2014				
1/30/2014					3/30/2014		4/30/2014	699	20.3875	5/30/2014	575	16.77083333	6/30/2014	530	15.45833333		
1/31/2014					3/31/2014	39	1.1375			5/31/2014							
AVG	31.5	0.91875		628.1111	18.31990741		722.1333	21.06222222		666.7647	19.44730392		662.4444	19.3212963		616.8	17.99
MAX	37	1.079166667		1150	33.54166667		1110	32.375		1228	35.81666667		1063	31.00416667		1265	36.89583333
Total for month	63			5653			10832			11335			11924			12336	

Avg Vol		Avg Flow															
7/1/2014	507	14.7875	8/1/2014	631	18.40416667	9/1/2014	144	4.2	10/1/2014	414	12.075	11/1/2014			12/1/2014	1216	35.46666667
7/2/2014	464	13.53333333	8/2/2014			9/2/2014	848	24.73333333	10/2/2014	448	13.06666667	11/2/2014			12/2/2014	1015	29.60416667
7/3/2014	498	14.525	8/3/2014			9/3/2014	470	13.70833333	10/3/2014	461	13.44583333	11/3/2014	243	7.0875	12/3/2014	549	16.0125
7/4/2014			8/4/2014	521	15.19583333	9/4/2014			10/4/2014			11/4/2014	656	19.13333333	12/4/2014	921	26.8625
7/5/2014			8/5/2014	665	19.39583333	9/5/2014	250	7.291666667	10/5/2014			11/5/2014	674	19.65833333	12/5/2014	783	22.8375
7/6/2014			8/6/2014	391	11.40416667	9/6/2014			10/6/2014			11/6/2014	193	5.629166667	12/6/2014		
7/7/2014	424	12.36666667	8/7/2014			9/7/2014			10/7/2014	473	13.79583333	11/7/2014	936	27.3	12/7/2014		
7/8/2014	537	15.6625	8/8/2014	467	13.62083333	9/8/2014	473	13.79583333	10/8/2014	1010	29.45833333	11/8/2014			12/8/2014	1040	30.33333333
7/9/2014	760	22.16666667	8/9/2014			9/9/2014	566	16.50833333	10/9/2014	566	16.50833333	11/9/2014			12/9/2014	748	21.81666667
7/10/2014	950	27.70833333	8/10/2014			9/10/2014	849	24.7625	10/10/2014			11/10/2014			12/10/2014		
7/11/2014	135	3.9375	8/11/2014	451	13.15416667	9/11/2014	712	20.76666667	10/11/2014			11/11/2014	776	22.63333333	12/11/2014	498	14.525
7/12/2014			8/12/2014			9/12/2014	990	28.875	10/12/2014			11/12/2014	962	28.05833333	12/12/2014	508	14.81666667
7/13/2014			8/13/2014	977	28.49583333	9/13/2014			10/13/2014	887	25.87083333	11/13/2014	440	12.83333333	12/13/2014		
7/14/2014	1176	34.3	8/14/2014	346	10.09166667	9/14/2014			10/14/2014	608	17.73333333	11/14/2014	1287	37.5375	12/14/2014		
7/15/2014	1308	38.15	8/15/2014	699	20.3875	9/15/2014	260	7.583333333	10/15/2014	297	8.6625	11/15/2014			12/15/2014	1052	30.68333333
7/16/2014	562	16.39166667	8/16/2014			9/16/2014	966	28.175	10/16/2014	325	9.479166667	11/16/2014			12/16/2014	1182	34.475
7/17/2014	285	8.3125	8/17/2014			9/17/2014	526	15.34166667	10/17/2014	672	19.6	11/17/2014	1581	46.1125	12/17/2014	849	24.7625
7/18/2014	497	14.49583333	8/18/2014	549	16.0125	9/18/2014	1151	33.57083333	10/18/2014			11/18/2014	118	3.441666667	12/18/2014		
7/19/2014			8/19/2014	260	7.583333333	9/19/2014	1230	35.875	10/19/2014			11/19/2014			12/19/2014	924	26.95
7/20/2014			8/20/2014	297	8.6625	9/20/2014			10/20/2014	911	26.57083333	11/20/2014			12/20/2014		
7/21/2014	532	15.51666667	8/21/2014	641	18.69583333	9/21/2014			10/21/2014	572	16.68333333	11/21/2014	684	19.95	12/21/2014		
7/22/2014	519	15.1375	8/22/2014	548	15.98333333	9/22/2014	380	11.08333333	10/22/2014	570	16.625	11/22/2014			12/22/2014	1329	38.7625
7/23/2014	582	16.975	8/23/2014			9/23/2014	1228	35.81666667	10/23/2014			11/23/2014			12/23/2014	766	22.34166667
7/24/2014	160	4.666666667	8/24/2014			9/24/2014	1143	33.3375	10/24/2014	345	10.0625	11/24/2014	776	22.63333333	12/24/2014	1154	33.65833333
7/25/2014	480	14	8/25/2014	277	8.079166667	9/25/2014	495	14.4375	10/25/2014			11/25/2014	980	28.58333333	12/25/2014		
7/26/2014			8/26/2014	492	14.35	9/26/2014	840	24.5	10/26/2014			11/26/2014	894	26.075	12/26/2014		
7/27/2014			8/27/2014	1131	32.9875	9/27/2014			10/27/2014	401	11.69583333	11/27/2014	227	6.620833333	12/27/2014		
7/28/2014	530	15.45833333	8/28/2014	520	15.16666667	9/28/2014			10/28/2014	540	15.75	11/28/2014			12/28/2014		
7/29/2014	760	22.16666667	8/29/2014	391	11.40416667	9/29/2014	723	21.0875	10/29/2014	1219	35.55416667	11/29/2014			12/29/2014	337	9.829166667
7/30/2014	1089	31.7625	8/30/2014			9/30/2014			10/30/2014	991	28.90416667	11/30/2014			12/30/2014	481	14.02916667
7/31/2014	290	8.458333333	8/31/2014						10/31/2014						12/31/2014	474	13.825
592.9545		17.29450758	539.6842		15.74078947	712.2		20.7725	616.3158		17.97587719	714.1875		20.83046875	832.9474		24.29429825
1308		38.15	1131		32.9875	1230		35.875	1219		35.55416667	1581		46.1125	1329		38.7625
13045			10254			14244			11710			11427			15826		

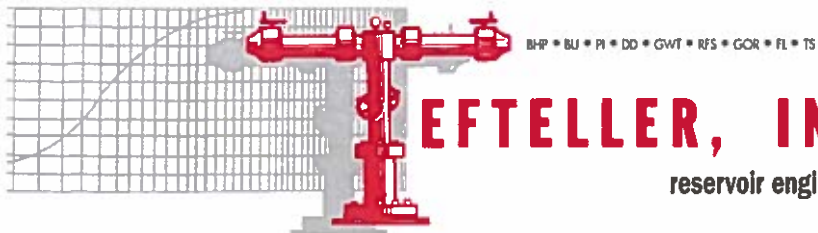
2014 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 1-MILE AOR

Sec	TWN	RNG	UL	
1	29N	12W	DELM	
2	29N	12W	ALL	
3	29N	12W	ABCFGHIJKOP	
10	29N	12W	AB	
11	29N	12W	ABCDEF	
34	30N	12W	AGHIJKNOP	
35	30N	12W	DEFGHIJKLMNOP	
36	30N	12W	LM	

**All tracts within the AOR were reviewed for activity that
had ensued since 2013 Annual Report.**

API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC	Perfs	Packer	PLUGGED
30-045-08851	ALLEN A	#001	BP America	Gas	Private	Active	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		
30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
30-045-32346	CORNELL	#002R	Energen Resources	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
30-045-32241	BECK	#001R	Burlington	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
30-045-33811	BECK	#001S	Burlington	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
30-045-31580	CORNELL COM	#500	Burlington	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
30-045-08714	CORNELL SRC	#007	Burlington	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
30-045-08704	MCGRATH B	#001	Burlington	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
30-045-08839	YOUNG	#001	Burlington	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
30-045-33580	MCGRATH	#003S	Burlington	Gas	Private	Active	3	29N	12W	B	7/13/2007	2432	7	218	150 surf				4.5	2112	289 surf	1692-1904		
30-045-08712	MCGRATH A	#001	Burlington	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
30-045-32931	WALKER	#100S	Burlington	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		NOI to PA 5/2014
30-045-23889	BECK A	#001E	Burlington	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		
30-045-30381	CORNELL	#100	Burlington	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1800	1744	
30-045-08615	CORNELL	#006	Thompson Engr & Prod	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
30-045-31581	CORNELL	#101	Burlington	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
30-045-26141	DUFF GAS COM	#001E	Burlington	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04" RC to FC 1492-1870		TA'd 3/5/14
30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
30-045-11770	HUDSON J	#003	Burlington	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01" RC to FC 1784-1994		
30-045-28177	FC STATE COM	#024	Burlington	Gas	State	Plugged	36	30N	12W	M	10/9/1990	6608	8.625	316	250 surf				4.5	6609	6000 surf	1492-1870		3/26/2013

30-045-08345	McGRATH C	#001	Burlington	Gas	Federal	Plugged	34	30n	12W	p	2/7/1963	6637	8.625	323	225 surf				4.5	6637	925 surf	6367-6576		4/29/2009
30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136	13 & 10.75	550 & 864	2 sx mud 4 sx mud	8.625	1526	5 sx mud	5.50 & 3.50	2020 2136	12 sx mud 140 surf	2020-2136 2012-2078		1998
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125											2/23/1984	
30-045-30486	McGRATH SRC	#001R	Burlington	Gas	Private	Plugged, Not Released	2	29N	12W	J	3/23/2001	2235	8.625	53	12 surf				2.875	2228	425 surf	2010-2157		5/25/2010
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125											3/16/1948	
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996	8.625	97	75 surf				5.5	1950	100 surf	1711-1936		9/15/2005
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050	16	21	20 surf	5.5	1930		3.5	2050	175 surf	1938-1974		10/12/2009
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940											11/10/1964	
30-045-23758	Pre-Ongard		Southland	Gas	Federal	Plugged	10	29N	12W	A	12/19/1980	1870											2/10/1984	
30-045-08950	HUDSON	2	Burlington	Gas	Federal	Plugged	34	30N	12W	P	7/17/1946	2137	15.5	38	20 surf	10 & 8.625	1219 1618	99 surf	5.5	1961	40 surf	1728-1938 1962-2008	2128	9/26/2008
30-045-08955	Pre-Ongard		Artec O&G	Gas	Private	Plugged	34	30N	12W	N	11/1/1944	1965											10/29/1977	
30-045-20140	Pre-Ongard		Southland	Gas	Federal	Plugged	35	30N	12W	L	9/7/1967	OH											6/9/1982	
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08709	McGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040	13.375	675	2 surf	8.625 INT 1 5.5 INT 2	1460 1928	4 surf 58 surf	3.5	2011	110 surf	1872-1912 1922-1937	1871-1876	3/1/2013



FARMINGTON, NEW MEXICO/
GRAND JUNCTION, COLORADO

P. O. Box 1198
Farmington, New Mexico 87499
(505) 325-1731
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AGUA MOSS, LLC

SUNCO SWD NO. 1

APRIL 28 – MAY 4, 2015

Serving the Rocky Mountains and the Western Slope

Customer AGUA MOSS, LLC
Street P.O. BOX 600
City/State..... FARMINGTON, NNM 87499
Country USA
Service Company TEFTELLER, INC.

Well Name SUNCO SWD NO. 1
Well Location SAN JUAN COUNTY, NEW MEXICO
Field / Pool
Status (Oil, Gas, Other) INJECTING

Test Type INJECTION & FALL-OFF TESTS
Date of Test 4-28-15
Producing Interval 4350' - 4460'
Recorder Depth 4405'
Recorder Position 4405'
Shut In Date Start: 4-28-2015
Stop: 5-4-2015
Duration: 144 HRS. TANDEM ELEC. MEMORY INST. TIME
Bottom Hole Temperature

Gauge Identification

Gauge Manufacturer MICRO-SMART SYSTEMS
Serial Number 162
Model Number SP2000
Pressure Range
Battery Type
Calibration I.D.
Last Calibration 2/ 4/14

Gauge Setup Parameters

Probe Set Up Time 4/28/15 11:46: 0
Time Delay to First Reading
Test Type Selection INJECTION & FALL-OFF TESTS
Test Duration Selection 144 HRS. TANDEM ELEC. MEMORY INST. TIME

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmmmm.mmmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
04/28	11:46:00	.0000	.01	74.55		
04/28	11:57:45	11.7500	18.35	73.25	18.34	PRESSURED UP LUBRICATOR
04/28	11:58:00	12.0000	161.16	73.15	142.80	
04/28	11:58:15	12.2500	737.58	73.06	576.42	
04/28	11:58:30	12.5000	960.07	72.97	222.49	
04/28	11:58:45	12.7500	1296.91	72.88	336.84	
04/28	12:05:00	19.0000	1292.04	69.82	-4.87	
04/28	12:08:15	22.2500	1300.13	68.92	8.08	SURFACE STOP
04/28	12:08:30	22.5000	1322.87	68.86	22.74	R.I.H. W/TANDEM ELEC. MEMORY INST.
04/28	12:08:45	22.7500	1371.00	68.80	48.14	
04/28	12:09:00	23.0000	1398.16	68.74	27.15	
04/28	12:09:15	23.2500	1437.83	68.51	39.68	
04/28	12:09:30	23.5000	1475.58	68.28	37.74	
04/28	12:09:45	23.7500	1520.18	68.06	44.61	
04/28	12:10:00	24.0000	1570.52	67.83	50.33	
04/28	12:10:15	24.2500	1621.24	67.61	50.72	
04/28	12:10:30	24.5000	1670.42	67.38	49.19	
04/28	12:10:45	24.7500	1720.78	67.16	50.35	
04/28	12:11:00	25.0000	1772.83	66.94	52.05	
04/28	12:11:15	25.2500	1815.43	66.71	42.60	
04/28	12:11:30	25.5000	1858.16	66.49	42.73	
04/28	12:11:45	25.7500	1902.73	66.26	44.57	
04/28	12:12:00	26.0000	1947.70	66.03	44.97	
04/28	12:12:15	26.2500	1992.81	66.07	45.11	
04/28	12:12:30	26.5000	2037.91	66.58	45.09	
04/28	12:12:45	26.7500	2083.00	67.09	45.09	
04/28	12:13:00	27.0000	2129.11	67.61	46.11	
04/28	12:13:15	27.2500	2177.06	68.11	47.95	
04/28	12:13:30	27.5000	2226.92	68.63	49.86	
04/28	12:13:45	27.7500	2274.33	69.14	47.41	
04/28	12:14:00	28.0000	2324.46	69.65	50.13	
04/28	12:14:15	28.2500	2380.94	70.16	56.48	
04/28	12:14:30	28.5000	2435.60	70.67	54.66	
04/28	12:14:45	28.7500	2478.97	71.18	43.36	
04/28	12:15:00	29.0000	2523.09	71.70	44.12	
04/28	12:15:15	29.2500	2566.34	72.71	43.25	
04/28	12:15:30	29.5000	2608.81	73.98	42.46	
04/28	12:15:45	29.7500	2650.09	75.25	41.29	
04/28	12:16:00	30.0000	2692.40	76.52	42.31	
04/28	12:16:15	30.2500	2734.58	77.79	42.17	
04/28	12:16:30	30.5000	2778.43	79.06	43.85	
04/28	12:16:45	30.7500	2823.17	80.33	44.74	
04/28	12:17:00	31.0000	2867.13	81.60	43.96	
04/28	12:17:15	31.2500	2913.53	82.87	46.41	
04/28	12:17:30	31.5000	2958.61	84.15	45.08	
04/28	12:17:45	31.7500	3003.31	85.42	44.70	
04/28	12:18:00	32.0000	3036.97	86.70	33.66	
04/28	12:18:15	32.2500	3067.91	88.07	30.93	
04/28	12:18:30	32.5000	3093.53	89.01	25.62	
04/28	12:18:45	32.7500	3119.28	89.95	25.75	
04/28	12:19:00	33.0000	3147.74	90.89	28.46	
04/28	12:19:15	33.2500	3178.78	91.83	31.04	
04/28	12:19:30	33.5000	3204.38	92.77	25.60	
04/28	12:19:45	33.7500	3220.54	93.71	16.16	
04/28	12:20:00	34.0000	3232.43	94.65	11.89	
04/28	12:21:00	35.0000	3236.45	98.42	4.02	
04/28	12:25:45	39.7500	3243.96	95.35	7.51	TANDEM ELEC. MEMORY INST. @ 4405'
04/28	12:29:45	43.7500	3242.80	92.89	-1.16	
04/28	12:30:00	44.0000	3270.61	92.76	27.82	BEGAN INJECTING
04/28	12:30:15	44.2500	3284.35	92.66	13.73	
04/28	12:30:30	44.5000	3291.84	93.00	7.50	
04/28	12:31:30	45.5000	3310.25	94.32	18.40	
04/28	12:31:45	45.7500	3313.23	94.65	2.98	
04/28	12:33:15	47.2500	3329.93	97.08	16.71	
04/28	12:33:30	47.5000	3332.46	97.71	2.53	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
04/28	12:34:45	48.7500	3344.50	100.85	12.03	
04/28	12:36:00	50.0000	3355.03	103.98	10.53	
04/28	12:38:15	52.2500	3373.37	105.95	18.34	
04/28	12:38:30	52.5000	3374.76	106.14	1.39	
04/28	12:42:00	56.0000	3392.83	105.63	18.06	
04/28	12:42:15	56.2500	3393.92	105.46	1.10	
04/28	12:46:00	60.0000	3408.25	102.36	14.33	
04/28	12:49:15	63.2500	3417.95	99.33	9.70	
04/28	12:52:45	66.7500	3426.26	96.13	8.31	
04/28	12:56:30	70.5000	3434.25	92.95	7.99	
04/28	13:01:00	75.0000	3442.61	89.59	8.35	
04/28	13:06:00	80.0000	3451.80	86.42	9.19	
04/28	13:12:00	86.0000	3461.44	83.25	9.64	
04/28	13:20:00	94.0000	3473.25	79.96	11.81	
04/28	13:30:00	104.0000	3485.97	76.95	12.72	
04/28	13:45:00	119.0000	3502.48	73.91	16.50	
04/28	14:03:00	137.0000	3519.98	71.69	17.50	
04/28	14:21:00	155.0000	3534.80	70.36	14.82	
04/28	14:39:00	173.0000	3535.49	69.48	.69	
04/28	14:40:15	174.2500	3518.05	69.85	-17.44	
04/28	14:40:30	174.5000	3515.66	69.95	-2.39	
04/28	14:43:30	177.5000	3497.23	71.73	-18.43	
04/28	14:43:45	177.7500	3495.97	71.93	-1.26	
04/28	14:48:00	182.0000	3479.75	75.09	-16.23	
04/28	14:48:30	182.5000	3494.28	75.30	14.54	
04/28	14:48:45	182.7500	3498.75	75.35	4.46	
04/28	14:51:00	185.0000	3517.19	75.81	18.44	
04/28	14:51:15	185.2500	3518.43	75.77	1.24	
04/28	14:57:45	191.7500	3536.87	73.15	18.44	
04/28	14:58:00	192.0000	3537.43	73.05	.56	
04/28	15:11:30	205.5000	3553.41	70.05	15.98	
04/28	15:29:00	223.0000	3566.12	68.95	12.71	
04/28	15:47:00	241.0000	3576.81	68.47	10.69	
04/28	16:05:00	259.0000	3586.06	68.21	9.25	
04/28	16:23:00	277.0000	3594.36	68.04	8.30	
04/28	16:41:00	295.0000	3601.32	67.94	6.96	
04/28	16:59:00	313.0000	3607.83	67.90	6.51	
04/28	17:17:00	331.0000	3614.09	67.88	6.26	
04/28	17:35:00	349.0000	3619.82	67.88	5.73	
04/28	17:53:00	367.0000	3625.30	67.89	5.48	
04/28	18:11:00	385.0000	3630.61	67.94	5.31	
04/28	18:29:00	403.0000	3635.48	67.98	4.88	
04/28	18:47:00	421.0000	3639.96	68.04	4.48	
04/28	19:05:00	439.0000	3644.40	68.09	4.44	
04/28	19:23:00	457.0000	3648.20	68.16	3.80	
04/28	19:41:00	475.0000	3652.08	68.22	3.88	
04/28	19:59:00	493.0000	3656.06	68.27	3.98	
04/28	20:17:00	511.0000	3659.63	68.32	3.57	
04/28	20:35:00	529.0000	3662.92	68.34	3.29	
04/28	20:53:00	547.0000	3666.23	68.35	3.31	
04/28	21:11:00	565.0000	3669.45	68.36	3.22	
04/28	21:29:00	583.0000	3672.43	68.34	2.98	
04/28	21:47:00	601.0000	3675.25	68.29	2.82	
04/28	22:05:00	619.0000	3677.97	68.23	2.72	
04/28	22:23:00	637.0000	3680.68	68.16	2.71	
04/28	22:41:00	655.0000	3683.26	68.09	2.59	
04/28	22:59:00	673.0000	3685.68	68.04	2.42	
04/28	23:17:00	691.0000	3687.93	67.97	2.25	
04/28	23:35:00	709.0000	3690.33	67.92	2.40	
04/28	23:53:00	727.0000	3692.36	67.87	2.03	
04/29	00:11:00	745.0000	3694.43	67.83	2.06	
04/29	00:29:00	763.0000	3696.53	67.80	2.10	
04/29	00:47:00	781.0000	3698.51	67.76	1.98	
04/29	01:05:00	799.0000	3700.51	67.72	2.00	
04/29	01:23:00	817.0000	3702.46	67.70	1.94	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
04/29	01:41:00	835.0000	3704.39	67.66	1.94	
04/29	01:59:00	853.0000	3706.14	67.62	1.75	
04/29	02:17:00	871.0000	3707.90	67.59	1.75	
04/29	02:35:00	889.0000	3709.68	67.56	1.78	
04/29	02:53:00	907.0000	3711.24	67.53	1.56	
04/29	03:11:00	925.0000	3712.79	67.49	1.55	
04/29	03:29:00	943.0000	3714.44	67.45	1.65	
04/29	03:47:00	961.0000	3715.97	67.40	1.53	
04/29	04:05:00	979.0000	3717.38	67.35	1.41	
04/29	04:23:00	997.0000	3718.75	67.29	1.38	
04/29	04:41:00	1015.0000	3720.09	67.24	1.33	
04/29	04:59:00	1033.0000	3721.31	67.19	1.23	
04/29	05:17:00	1051.0000	3722.57	67.14	1.26	
04/29	05:35:00	1069.0000	3723.83	67.09	1.26	
04/29	05:53:00	1087.0000	3725.03	67.04	1.20	
04/29	06:11:00	1105.0000	3726.26	67.01	1.23	
04/29	06:29:00	1123.0000	3727.43	66.98	1.17	
04/29	06:47:00	1141.0000	3728.63	66.95	1.20	
04/29	07:05:00	1159.0000	3729.73	66.90	1.10	
04/29	07:23:00	1177.0000	3730.70	66.91	.97	
04/29	07:41:00	1195.0000	3731.66	66.99	.96	
04/29	07:59:00	1213.0000	3732.70	67.10	1.05	
04/29	08:17:00	1231.0000	3733.72	67.16	1.02	
04/29	08:35:00	1249.0000	3734.74	67.15	1.02	
04/29	08:53:00	1267.0000	3735.65	67.13	.92	
04/29	09:11:00	1285.0000	3736.55	67.11	.90	
04/29	09:29:00	1303.0000	3737.48	67.10	.93	
04/29	09:47:00	1321.0000	3738.38	67.10	.90	
04/29	10:05:00	1339.0000	3739.19	67.13	.81	
04/29	10:23:00	1357.0000	3740.02	67.17	.82	
04/29	10:41:00	1375.0000	3740.85	67.22	.84	
04/29	10:59:00	1393.0000	3741.64	67.30	.79	
04/29	11:17:00	1411.0000	3742.40	67.40	.76	
04/29	11:35:00	1429.0000	3743.18	67.49	.79	
04/29	11:53:00	1447.0000	3743.94	67.58	.75	
04/29	12:11:00	1465.0000	3744.73	67.65	.79	
04/29	12:29:00	1483.0000	3745.46	67.70	.73	
04/29	12:47:00	1501.0000	3746.15	67.76	.70	
04/29	13:05:00	1519.0000	3746.89	67.81	.74	
04/29	13:23:00	1537.0000	3747.61	67.87	.73	
04/29	13:41:00	1555.0000	3748.27	67.93	.66	
04/29	13:59:00	1573.0000	3748.94	68.00	.67	
04/29	14:17:00	1591.0000	3749.63	68.04	.69	
04/29	14:35:00	1609.0000	3750.38	68.09	.75	
04/29	14:53:00	1627.0000	3751.05	68.15	.67	
04/29	15:11:00	1645.0000	3751.71	68.21	.66	
04/29	15:29:00	1663.0000	3752.40	68.26	.69	
04/29	15:47:00	1681.0000	3753.10	68.32	.71	
04/29	16:05:00	1699.0000	3753.67	68.39	.57	
04/29	16:23:00	1717.0000	3754.31	68.47	.64	
04/29	16:41:00	1735.0000	3754.96	68.55	.66	
04/29	16:59:00	1753.0000	3755.54	68.64	.57	
04/29	17:17:00	1771.0000	3756.18	68.70	.64	
04/29	17:35:00	1789.0000	3756.71	68.78	.53	
04/29	17:53:00	1807.0000	3757.28	68.84	.56	
04/29	18:11:00	1825.0000	3757.83	68.92	.55	
04/29	18:29:00	1843.0000	3758.36	68.99	.53	
04/29	18:47:00	1861.0000	3758.93	69.05	.57	
04/29	19:05:00	1879.0000	3759.43	69.11	.50	
04/29	19:23:00	1897.0000	3759.97	69.18	.55	
04/29	19:41:00	1915.0000	3760.50	69.24	.53	
04/29	19:59:00	1933.0000	3760.96	69.29	.46	
04/29	20:17:00	1951.0000	3761.50	69.35	.54	
04/29	20:35:00	1969.0000	3762.05	69.41	.55	
04/29	20:53:00	1987.0000	3762.62	69.45	.57	

COMPANY: AGUA MOSS, LLC

PAGE 4 OF 10

WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
04/29	21:11:00	2005.0000	3763.17	69.50	.54	
04/29	21:29:00	2023.0000	3763.71	69.55	.54	
04/29	21:47:00	2041.0000	3764.24	69.58	.53	
04/29	22:05:00	2059.0000	3764.70	69.63	.45	
04/29	22:23:00	2077.0000	3765.13	69.68	.43	
04/29	22:41:00	2095.0000	3765.57	69.71	.44	
04/29	22:59:00	2113.0000	3766.01	69.77	.44	
04/29	23:17:00	2131.0000	3766.43	69.82	.42	
04/29	23:35:00	2149.0000	3766.90	69.86	.47	
04/29	23:53:00	2167.0000	3767.29	69.92	.39	
04/30	00:11:00	2185.0000	3767.72	69.98	.43	
04/30	00:29:00	2203.0000	3768.08	70.04	.36	
04/30	00:47:00	2221.0000	3768.48	70.10	.40	
04/30	01:05:00	2239.0000	3768.85	70.15	.37	
04/30	01:23:00	2257.0000	3769.18	70.22	.32	
04/30	01:41:00	2275.0000	3769.53	70.28	.36	
04/30	01:59:00	2293.0000	3769.86	70.33	.32	
04/30	02:17:00	2311.0000	3770.21	70.39	.36	
04/30	02:35:00	2329.0000	3770.55	70.46	.34	
04/30	02:53:00	2347.0000	3770.92	70.52	.37	
04/30	03:11:00	2365.0000	3771.15	70.58	.23	
04/30	03:29:00	2383.0000	3771.40	70.65	.26	
04/30	03:47:00	2401.0000	3771.73	70.70	.32	
04/30	04:05:00	2419.0000	3771.99	70.77	.26	
04/30	04:23:00	2437.0000	3772.31	70.81	.32	
04/30	04:41:00	2455.0000	3772.63	70.86	.32	
04/30	04:59:00	2473.0000	3772.89	70.91	.25	
04/30	05:17:00	2491.0000	3773.16	70.95	.28	
04/30	05:35:00	2509.0000	3773.48	70.99	.31	
04/30	05:53:00	2527.0000	3773.76	71.02	.29	
04/30	06:11:00	2545.0000	3774.11	71.04	.35	
04/30	06:29:00	2563.0000	3774.30	71.06	.19	
04/30	06:47:00	2581.0000	3774.61	71.08	.32	
04/30	07:05:00	2599.0000	3774.91	71.08	.30	
04/30	07:23:00	2617.0000	3775.25	71.08	.34	
04/30	07:41:00	2635.0000	3775.53	71.08	.29	
04/30	07:59:00	2653.0000	3775.83	71.08	.30	
04/30	08:17:00	2671.0000	3776.08	71.08	.25	
04/30	08:35:00	2689.0000	3776.34	71.09	.25	
04/30	08:53:00	2707.0000	3776.68	71.06	.35	
04/30	09:11:00	2725.0000	3776.99	71.04	.31	
04/30	09:29:00	2743.0000	3777.26	71.05	.27	
04/30	09:47:00	2761.0000	3777.58	71.07	.32	
04/30	10:05:00	2779.0000	3777.81	71.11	.23	
04/30	10:23:00	2797.0000	3778.12	71.12	.31	
04/30	10:41:00	2815.0000	3778.41	71.06	.29	
04/30	10:59:00	2833.0000	3778.74	70.97	.33	
04/30	11:17:00	2851.0000	3778.98	70.86	.24	
04/30	11:35:00	2869.0000	3779.22	70.70	.24	
04/30	11:53:00	2887.0000	3779.57	70.49	.35	
04/30	12:11:00	2905.0000	3779.84	70.30	.27	
04/30	12:29:00	2923.0000	3780.09	70.13	.25	
04/30	12:47:00	2941.0000	3780.40	69.95	.30	
04/30	13:05:00	2959.0000	3780.76	69.78	.36	
04/30	13:23:00	2977.0000	3780.96	69.60	.20	
04/30	13:41:00	2995.0000	3781.28	69.45	.33	
04/30	13:59:00	3013.0000	3781.60	69.30	.31	
04/30	14:17:00	3031.0000	3781.67	69.20	.07	
04/30	14:34:15	3048.2500	3764.43	69.42	-17.24	END INJECTING
04/30	14:43:15	3057.2500	3745.84	72.12	-18.59	BEGAN FALL-OFF
04/30	14:43:30	3057.5000	3745.49	72.18	-.35	
04/30	15:01:00	3075.0000	3727.47	74.89	-18.02	
04/30	15:19:00	3093.0000	3714.04	76.28	-13.43	
04/30	15:37:00	3111.0000	3703.08	77.23	-10.96	
04/30	15:55:00	3129.0000	3693.70	77.96	-9.38	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
04/30	16:13:00	3147.0000	3685.34	78.54	-8.35	
04/30	16:31:00	3165.0000	3677.81	79.03	-7.53	
04/30	16:49:00	3183.0000	3670.76	79.45	-7.05	
04/30	17:07:00	3201.0000	3664.44	79.81	-6.32	
04/30	17:25:00	3219.0000	3658.71	80.13	-5.73	
04/30	17:43:00	3237.0000	3652.98	80.43	-5.74	
04/30	18:01:00	3255.0000	3647.72	80.71	-5.25	
04/30	18:19:00	3273.0000	3643.07	80.96	-4.65	
04/30	18:37:00	3291.0000	3638.06	81.20	-5.01	
04/30	18:55:00	3309.0000	3633.80	81.43	-4.26	
04/30	19:13:00	3327.0000	3629.37	81.64	-4.43	
04/30	19:31:00	3345.0000	3625.31	81.82	-4.06	
04/30	19:49:00	3363.0000	3621.23	82.01	-4.08	
04/30	20:07:00	3381.0000	3617.36	82.18	-3.86	
04/30	20:25:00	3399.0000	3613.58	82.34	-3.78	
04/30	20:43:00	3417.0000	3609.99	82.50	-3.59	
04/30	21:01:00	3435.0000	3606.42	82.66	-3.57	
04/30	21:19:00	3453.0000	3603.01	82.80	-3.40	
04/30	21:37:00	3471.0000	3599.70	82.94	-3.31	
04/30	21:55:00	3489.0000	3596.52	83.06	-3.19	
04/30	22:13:00	3507.0000	3593.39	83.19	-3.13	
04/30	22:31:00	3525.0000	3590.35	83.32	-3.03	
04/30	22:49:00	3543.0000	3587.34	83.43	-3.01	
04/30	23:07:00	3561.0000	3584.50	83.53	-2.84	
04/30	23:25:00	3579.0000	3581.67	83.63	-2.83	
04/30	23:43:00	3597.0000	3578.87	83.73	-2.80	
05/01	00:01:00	3615.0000	3576.19	83.81	-2.67	
05/01	00:19:00	3633.0000	3573.65	83.89	-2.55	
05/01	00:37:00	3651.0000	3571.08	83.97	-2.56	
05/01	00:55:00	3669.0000	3568.48	84.05	-2.61	
05/01	01:13:00	3687.0000	3565.99	84.13	-2.49	
05/01	01:31:00	3705.0000	3563.63	84.20	-2.35	
05/01	01:49:00	3723.0000	3561.34	84.26	-2.30	
05/01	02:07:00	3741.0000	3559.06	84.32	-2.27	
05/01	02:25:00	3759.0000	3556.69	84.38	-2.37	
05/01	02:43:00	3777.0000	3554.49	84.44	-2.20	
05/01	03:01:00	3795.0000	3552.33	84.49	-2.16	
05/01	03:19:00	3813.0000	3550.25	84.54	-2.07	
05/01	03:37:00	3831.0000	3548.05	84.57	-2.20	
05/01	03:55:00	3849.0000	3546.08	84.63	-1.98	
05/01	04:13:00	3867.0000	3543.93	84.67	-2.15	
05/01	04:31:00	3885.0000	3541.95	84.71	-1.98	
05/01	04:49:00	3903.0000	3540.04	84.75	-1.90	
05/01	05:07:00	3921.0000	3538.14	84.78	-1.90	
05/01	05:25:00	3939.0000	3536.18	84.79	-1.96	
05/01	05:43:00	3957.0000	3534.35	84.85	-1.82	
05/01	06:01:00	3975.0000	3532.43	84.90	-1.92	
05/01	06:19:00	3993.0000	3530.67	84.92	-1.76	
05/01	06:37:00	4011.0000	3528.89	84.92	-1.78	
05/01	06:55:00	4029.0000	3527.08	84.97	-1.81	
05/01	07:13:00	4047.0000	3525.33	85.02	-1.75	
05/01	07:31:00	4065.0000	3523.59	85.02	-1.74	
05/01	07:49:00	4083.0000	3522.02	85.04	-1.57	
05/01	08:07:00	4101.0000	3520.28	85.09	-1.74	
05/01	08:25:00	4119.0000	3518.67	85.11	-1.61	
05/01	08:43:00	4137.0000	3517.11	85.12	-1.57	
05/01	09:01:00	4155.0000	3515.47	85.14	-1.64	
05/01	09:19:00	4173.0000	3513.88	85.18	-1.59	
05/01	09:37:00	4191.0000	3512.32	85.20	-1.55	
05/01	09:55:00	4209.0000	3510.79	85.23	-1.53	
05/01	10:13:00	4227.0000	3509.31	85.25	-1.49	
05/01	10:31:00	4245.0000	3507.78	85.27	-1.53	
05/01	10:49:00	4263.0000	3506.31	85.30	-1.47	
05/01	11:07:00	4281.0000	3504.87	85.33	-1.44	
05/01	11:25:00	4299.0000	3503.48	85.34	-1.39	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
05/01	11:43:00	4317.0000	3502.06	85.35	-1.42	
05/01	12:01:00	4335.0000	3500.65	85.35	-1.42	
05/01	12:19:00	4353.0000	3499.25	85.39	-1.40	
05/01	12:37:00	4371.0000	3497.95	85.42	-1.30	
05/01	12:55:00	4389.0000	3496.59	85.44	-1.36	
05/01	13:13:00	4407.0000	3495.26	85.46	-1.33	
05/01	13:31:00	4425.0000	3493.94	85.49	-1.32	
05/01	13:49:00	4443.0000	3492.65	85.49	-1.28	
05/01	14:07:00	4461.0000	3491.36	85.51	-1.29	
05/01	14:25:00	4479.0000	3490.12	85.53	-1.25	
05/01	14:43:00	4497.0000	3488.86	85.55	-1.25	
05/01	15:01:00	4515.0000	3487.64	85.56	-1.22	
05/01	15:19:00	4533.0000	3486.42	85.59	-1.22	
05/01	15:37:00	4551.0000	3485.22	85.60	-1.21	
05/01	15:55:00	4569.0000	3483.99	85.63	-1.22	
05/01	16:13:00	4587.0000	3482.82	85.64	-1.17	
05/01	16:31:00	4605.0000	3481.63	85.67	-1.19	
05/01	16:49:00	4623.0000	3480.49	85.67	-1.14	
05/01	17:07:00	4641.0000	3479.31	85.69	-1.18	
05/01	17:25:00	4659.0000	3478.14	85.72	-1.17	
05/01	17:43:00	4677.0000	3477.04	85.73	-1.10	
05/01	18:01:00	4695.0000	3475.89	85.76	-1.15	
05/01	18:19:00	4713.0000	3474.80	85.79	-1.09	
05/01	18:37:00	4731.0000	3473.71	85.80	-1.09	
05/01	18:55:00	4749.0000	3472.61	85.82	-1.10	
05/01	19:13:00	4767.0000	3471.52	85.85	-1.09	
05/01	19:31:00	4785.0000	3470.39	85.88	-1.12	
05/01	19:49:00	4803.0000	3469.33	85.89	-1.06	
05/01	20:07:00	4821.0000	3468.29	85.89	-1.04	
05/01	20:25:00	4839.0000	3467.27	85.90	-1.02	
05/01	20:43:00	4857.0000	3466.21	85.92	-1.06	
05/01	21:01:00	4875.0000	3465.23	85.93	-.98	
05/01	21:19:00	4893.0000	3464.13	85.97	-1.09	
05/01	21:37:00	4911.0000	3463.10	85.99	-1.03	
05/01	21:55:00	4929.0000	3462.12	86.00	-.99	
05/01	22:13:00	4947.0000	3461.16	86.00	-.96	
05/01	22:31:00	4965.0000	3460.13	86.02	-1.02	
05/01	22:49:00	4983.0000	3459.12	86.05	-1.01	
05/01	23:07:00	5001.0000	3458.16	86.07	-.96	
05/01	23:25:00	5019.0000	3457.21	86.08	-.95	
05/01	23:43:00	5037.0000	3456.27	86.09	-.94	
05/02	00:01:00	5055.0000	3455.33	86.10	-.94	
05/02	00:19:00	5073.0000	3454.33	86.12	-.99	
05/02	00:37:00	5091.0000	3453.45	86.14	-.89	
05/02	00:55:00	5109.0000	3452.56	86.15	-.89	
05/02	01:13:00	5127.0000	3451.66	86.16	-.89	
05/02	01:31:00	5145.0000	3450.75	86.18	-.92	
05/02	01:49:00	5163.0000	3449.80	86.20	-.95	
05/02	02:07:00	5181.0000	3449.00	86.21	-.80	
05/02	02:25:00	5199.0000	3448.06	86.23	-.94	
05/02	02:43:00	5217.0000	3447.21	86.23	-.85	
05/02	03:01:00	5235.0000	3446.34	86.25	-.87	
05/02	03:19:00	5253.0000	3445.50	86.26	-.84	
05/02	03:37:00	5271.0000	3444.66	86.28	-.84	
05/02	03:55:00	5289.0000	3443.80	86.30	-.86	
05/02	04:13:00	5307.0000	3442.99	86.30	-.81	
05/02	04:31:00	5325.0000	3442.12	86.32	-.87	
05/02	04:49:00	5343.0000	3441.32	86.33	-.80	
05/02	05:07:00	5361.0000	3440.52	86.35	-.79	
05/02	05:25:00	5379.0000	3439.65	86.37	-.87	
05/02	05:43:00	5397.0000	3438.91	86.38	-.74	
05/02	06:01:00	5415.0000	3438.04	86.39	-.87	
05/02	06:19:00	5433.0000	3437.22	86.41	-.82	
05/02	06:37:00	5451.0000	3436.43	86.42	-.79	
05/02	06:55:00	5469.0000	3435.61	86.44	-.82	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmmmm.mmmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
05/02	07:13:00	5487.0000	3434.86	86.46	-.76	
05/02	07:31:00	5505.0000	3434.04	86.47	-.82	
05/02	07:49:00	5523.0000	3433.27	86.49	-.77	
05/02	08:07:00	5541.0000	3432.52	86.49	-.75	
05/02	08:25:00	5559.0000	3431.70	86.51	-.82	
05/02	08:43:00	5577.0000	3430.92	86.51	-.79	
05/02	09:01:00	5595.0000	3430.21	86.53	-.71	
05/02	09:19:00	5613.0000	3429.40	86.55	-.81	
05/02	09:37:00	5631.0000	3428.63	86.56	-.77	
05/02	09:55:00	5649.0000	3427.91	86.57	-.72	
05/02	10:13:00	5667.0000	3427.18	86.58	-.73	
05/02	10:31:00	5685.0000	3426.41	86.60	-.77	
05/02	10:49:00	5703.0000	3425.69	86.62	-.72	
05/02	11:07:00	5721.0000	3424.96	86.63	-.73	
05/02	11:25:00	5739.0000	3424.24	86.63	-.72	
05/02	11:43:00	5757.0000	3423.56	86.65	-.68	
05/02	12:01:00	5775.0000	3422.79	86.67	-.77	
05/02	12:19:00	5793.0000	3422.10	86.68	-.69	
05/02	12:37:00	5811.0000	3421.44	86.68	-.66	
05/02	12:55:00	5829.0000	3420.71	86.70	-.73	
05/02	13:13:00	5847.0000	3420.07	86.72	-.64	
05/02	13:31:00	5865.0000	3419.38	86.72	-.69	
05/02	13:49:00	5883.0000	3418.67	86.72	-.70	
05/02	14:07:00	5901.0000	3418.02	86.75	-.66	
05/02	14:25:00	5919.0000	3417.41	86.75	-.60	
05/02	14:43:00	5937.0000	3416.72	86.77	-.70	
05/02	15:01:00	5955.0000	3416.08	86.77	-.64	
05/02	15:19:00	5973.0000	3415.43	86.79	-.65	
05/02	15:37:00	5991.0000	3414.75	86.81	-.68	
05/02	15:55:00	6009.0000	3414.13	86.82	-.62	
05/02	16:13:00	6027.0000	3413.52	86.83	-.61	
05/02	16:31:00	6045.0000	3412.89	86.84	-.63	
05/02	16:49:00	6063.0000	3412.24	86.84	-.65	
05/02	17:07:00	6081.0000	3411.60	86.86	-.64	
05/02	17:25:00	6099.0000	3410.96	86.88	-.64	
05/02	17:43:00	6117.0000	3410.38	86.89	-.58	
05/02	18:01:00	6135.0000	3409.77	86.89	-.61	
05/02	18:19:00	6153.0000	3409.10	86.91	-.67	
05/02	18:37:00	6171.0000	3408.48	86.91	-.62	
05/02	18:55:00	6189.0000	3407.91	86.93	-.57	
05/02	19:13:00	6207.0000	3407.25	86.95	-.66	
05/02	19:31:00	6225.0000	3406.66	86.96	-.60	
05/02	19:49:00	6243.0000	3406.06	86.96	-.59	
05/02	20:07:00	6261.0000	3405.44	86.98	-.62	
05/02	20:25:00	6279.0000	3404.84	87.00	-.60	
05/02	20:43:00	6297.0000	3404.24	87.00	-.60	
05/02	21:01:00	6315.0000	3403.65	87.00	-.59	
05/02	21:19:00	6333.0000	3403.05	87.03	-.60	
05/02	21:37:00	6351.0000	3402.41	87.04	-.63	
05/02	21:55:00	6369.0000	3401.84	87.05	-.57	
05/02	22:13:00	6387.0000	3401.26	87.05	-.58	
05/02	22:31:00	6405.0000	3400.71	87.07	-.55	
05/02	22:49:00	6423.0000	3400.14	87.08	-.57	
05/02	23:07:00	6441.0000	3399.53	87.10	-.61	
05/02	23:25:00	6459.0000	3398.97	87.11	-.56	
05/02	23:43:00	6477.0000	3398.45	87.12	-.52	
05/03	00:01:00	6495.0000	3397.90	87.12	-.56	
05/03	00:19:00	6513.0000	3397.32	87.13	-.58	
05/03	00:37:00	6531.0000	3396.74	87.14	-.57	
05/03	00:55:00	6549.0000	3396.17	87.15	-.57	
05/03	01:13:00	6567.0000	3395.66	87.17	-.51	
05/03	01:31:00	6585.0000	3395.13	87.18	-.53	
05/03	01:49:00	6603.0000	3394.58	87.19	-.54	
05/03	02:07:00	6621.0000	3394.06	87.20	-.52	
05/03	02:25:00	6639.0000	3393.54	87.21	-.52	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
05/03	02:43:00	6657.0000	3393.00	87.22	-.55	
05/03	03:01:00	6675.0000	3392.51	87.23	-.48	
05/03	03:19:00	6693.0000	3391.96	87.25	-.56	
05/03	03:37:00	6711.0000	3391.43	87.25	-.53	
05/03	03:55:00	6729.0000	3390.91	87.27	-.52	
05/03	04:13:00	6747.0000	3390.42	87.27	-.49	
05/03	04:31:00	6765.0000	3389.91	87.29	-.51	
05/03	04:49:00	6783.0000	3389.37	87.30	-.54	
05/03	05:07:00	6801.0000	3388.90	87.30	-.47	
05/03	05:25:00	6819.0000	3388.39	87.31	-.50	
05/03	05:43:00	6837.0000	3387.90	87.32	-.50	
05/03	06:01:00	6855.0000	3387.39	87.34	-.51	
05/03	06:19:00	6873.0000	3386.89	87.34	-.50	
05/03	06:37:00	6891.0000	3386.36	87.36	-.53	
05/03	06:55:00	6909.0000	3385.85	87.36	-.51	
05/03	07:13:00	6927.0000	3385.38	87.37	-.47	
05/03	07:31:00	6945.0000	3384.84	87.38	-.53	
05/03	07:49:00	6963.0000	3384.36	87.40	-.49	
05/03	08:07:00	6981.0000	3383.88	87.40	-.48	
05/03	08:25:00	6999.0000	3383.35	87.42	-.53	
05/03	08:43:00	7017.0000	3382.86	87.43	-.49	
05/03	09:01:00	7035.0000	3382.38	87.43	-.48	
05/03	09:19:00	7053.0000	3381.88	87.45	-.50	
05/03	09:37:00	7071.0000	3381.40	87.45	-.48	
05/03	09:55:00	7089.0000	3380.89	87.47	-.51	
05/03	10:13:00	7107.0000	3380.41	87.48	-.48	
05/03	10:31:00	7125.0000	3379.91	87.49	-.50	
05/03	10:49:00	7143.0000	3379.47	87.49	-.44	
05/03	11:07:00	7161.0000	3378.98	87.50	-.49	
05/03	11:25:00	7179.0000	3378.49	87.52	-.50	
05/03	11:43:00	7197.0000	3378.03	87.52	-.46	
05/03	12:01:00	7215.0000	3377.55	87.54	-.48	
05/03	12:19:00	7233.0000	3377.16	87.54	-.39	
05/03	12:37:00	7251.0000	3376.70	87.54	-.46	
05/03	12:55:00	7269.0000	3376.17	87.57	-.53	
05/03	13:13:00	7287.0000	3375.73	87.58	-.44	
05/03	13:31:00	7305.0000	3375.33	87.59	-.40	
05/03	13:49:00	7323.0000	3374.89	87.59	-.44	
05/03	14:07:00	7341.0000	3374.41	87.60	-.48	
05/03	14:25:00	7359.0000	3373.95	87.61	-.46	
05/03	14:43:00	7377.0000	3373.53	87.61	-.42	
05/03	15:01:00	7395.0000	3373.12	87.63	-.41	
05/03	15:19:00	7413.0000	3372.71	87.64	-.41	
05/03	15:37:00	7431.0000	3372.27	87.65	-.44	
05/03	15:55:00	7449.0000	3371.83	87.66	-.44	
05/03	16:13:00	7467.0000	3371.42	87.67	-.41	
05/03	16:31:00	7485.0000	3371.04	87.68	-.38	
05/03	16:49:00	7503.0000	3370.60	87.69	-.44	
05/03	17:07:00	7521.0000	3370.20	87.69	-.40	
05/03	17:25:00	7539.0000	3369.82	87.70	-.38	
05/03	17:43:00	7557.0000	3369.38	87.71	-.44	
05/03	18:01:00	7575.0000	3368.96	87.71	-.41	
05/03	18:19:00	7593.0000	3368.57	87.73	-.40	
05/03	18:37:00	7611.0000	3368.09	87.74	-.47	
05/03	18:55:00	7629.0000	3367.75	87.75	-.35	
05/03	19:13:00	7647.0000	3367.35	87.75	-.39	
05/03	19:31:00	7665.0000	3366.91	87.76	-.44	
05/03	19:49:00	7683.0000	3366.51	87.77	-.40	
05/03	20:07:00	7701.0000	3366.06	87.78	-.45	
05/03	20:25:00	7719.0000	3365.64	87.79	-.43	
05/03	20:43:00	7737.0000	3365.27	87.80	-.37	
05/03	21:01:00	7755.0000	3364.82	87.82	-.45	
05/03	21:19:00	7773.0000	3364.41	87.82	-.41	
05/03	21:37:00	7791.0000	3364.04	87.83	-.37	
05/03	21:55:00	7809.0000	3363.59	87.84	-.45	

WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/03	22:13:00	7827.0000	3363.17	87.85	-.42	
05/03	22:31:00	7845.0000	3362.81	87.85	-.36	
05/03	22:49:00	7863.0000	3362.41	87.85	-.40	
05/03	23:07:00	7881.0000	3361.98	87.87	-.43	
05/03	23:25:00	7899.0000	3361.59	87.87	-.40	
05/03	23:43:00	7917.0000	3361.17	87.89	-.42	
05/04	00:01:00	7935.0000	3360.82	87.90	-.35	
05/04	00:19:00	7953.0000	3360.39	87.91	-.43	
05/04	00:37:00	7971.0000	3359.99	87.92	-.40	
05/04	00:55:00	7989.0000	3359.61	87.93	-.38	
05/04	01:13:00	8007.0000	3359.25	87.92	-.36	
05/04	01:31:00	8025.0000	3358.89	87.94	-.36	
05/04	01:49:00	8043.0000	3358.53	87.94	-.36	
05/04	02:07:00	8061.0000	3358.11	87.96	-.42	
05/04	02:25:00	8079.0000	3357.76	87.96	-.36	
05/04	02:43:00	8097.0000	3357.38	87.97	-.37	
05/04	03:01:00	8115.0000	3356.97	87.99	-.41	
05/04	03:19:00	8133.0000	3356.62	87.99	-.35	
05/04	03:37:00	8151.0000	3356.29	87.99	-.33	
05/04	03:55:00	8169.0000	3355.89	88.00	-.41	
05/04	04:13:00	8187.0000	3355.51	88.01	-.38	
05/04	04:31:00	8205.0000	3355.21	88.02	-.30	
05/04	04:49:00	8223.0000	3354.80	88.03	-.40	
05/04	05:07:00	8241.0000	3354.44	88.04	-.37	
05/04	05:25:00	8259.0000	3354.08	88.04	-.36	
05/04	05:43:00	8277.0000	3353.74	88.05	-.34	
05/04	06:01:00	8295.0000	3353.40	88.06	-.34	
05/04	06:19:00	8313.0000	3353.00	88.07	-.40	
05/04	06:37:00	8331.0000	3352.64	88.08	-.37	
05/04	06:55:00	8349.0000	3352.27	88.09	-.37	
05/04	07:13:00	8367.0000	3351.94	88.10	-.33	
05/04	07:31:00	8385.0000	3351.57	88.11	-.37	
05/04	07:49:00	8403.0000	3351.23	88.11	-.34	
05/04	08:07:00	8421.0000	3350.88	88.12	-.34	
05/04	08:25:00	8439.0000	3350.51	88.12	-.37	
05/04	08:43:00	8457.0000	3350.16	88.14	-.35	
05/04	09:01:00	8475.0000	3349.84	88.14	-.31	END FALL-OFF (90.5 HRS.)
05/04	09:02:00	8476.0000	3225.90	88.36	-123.94	TANDEM ELEC. MEMORY INST. OFF BOTTOM
05/04	09:02:15	8476.2500	3180.01	88.74	-45.90	
05/04	09:03:15	8477.2500	3165.05	92.23	-14.95	
05/04	09:04:15	8478.2500	3164.00	95.71	-1.05	ARRIVED @ 4000'
05/04	09:05:15	8479.2500	3164.63	99.22	.63	
05/04	09:06:30	8480.5000	3166.81	102.67	2.18	
05/04	09:07:45	8481.7500	3168.38	106.14	1.57	
05/04	09:09:30	8483.5000	3170.66	109.19	2.28	
05/04	09:10:30	8484.5000	3171.65	110.67	.98	STOP @ 4000'
05/04	09:10:45	8484.7500	3151.34	111.04	-20.30	
05/04	09:11:00	8485.0000	3107.32	111.41	-44.03	
05/04	09:11:15	8485.2500	3063.60	111.66	-43.72	
05/04	09:11:30	8485.5000	3019.38	111.63	-44.22	
05/04	09:11:45	8485.7500	2975.30	111.59	-44.08	
05/04	09:12:00	8486.0000	2930.33	111.55	-44.97	
05/04	09:12:15	8486.2500	2885.10	111.51	-45.23	
05/04	09:12:30	8486.5000	2839.61	111.48	-45.49	
05/04	09:12:45	8486.7500	2798.14	111.43	-41.48	
05/04	09:13:00	8487.0000	2783.00	111.40	-15.14	
05/04	09:13:15	8487.2500	2768.01	111.36	-14.99	
05/04	09:13:30	8487.5000	2750.44	111.32	-17.56	
05/04	09:13:45	8487.7500	2742.90	111.29	-7.55	
05/04	09:16:45	8490.7500	2743.48	108.15	.58	
05/04	09:20:30	8494.5000	2741.74	105.20	-1.74	STOP @ 3000'
05/04	09:20:45	8494.7500	2722.52	104.98	-19.21	
05/04	09:21:00	8495.0000	2683.78	104.77	-38.74	
05/04	09:21:15	8495.2500	2644.40	104.56	-39.39	
05/04	09:21:30	8495.5000	2604.62	104.35	-39.77	

COMPANY: AGUA MOSS, LLC

PAGE 10 OF 10

WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

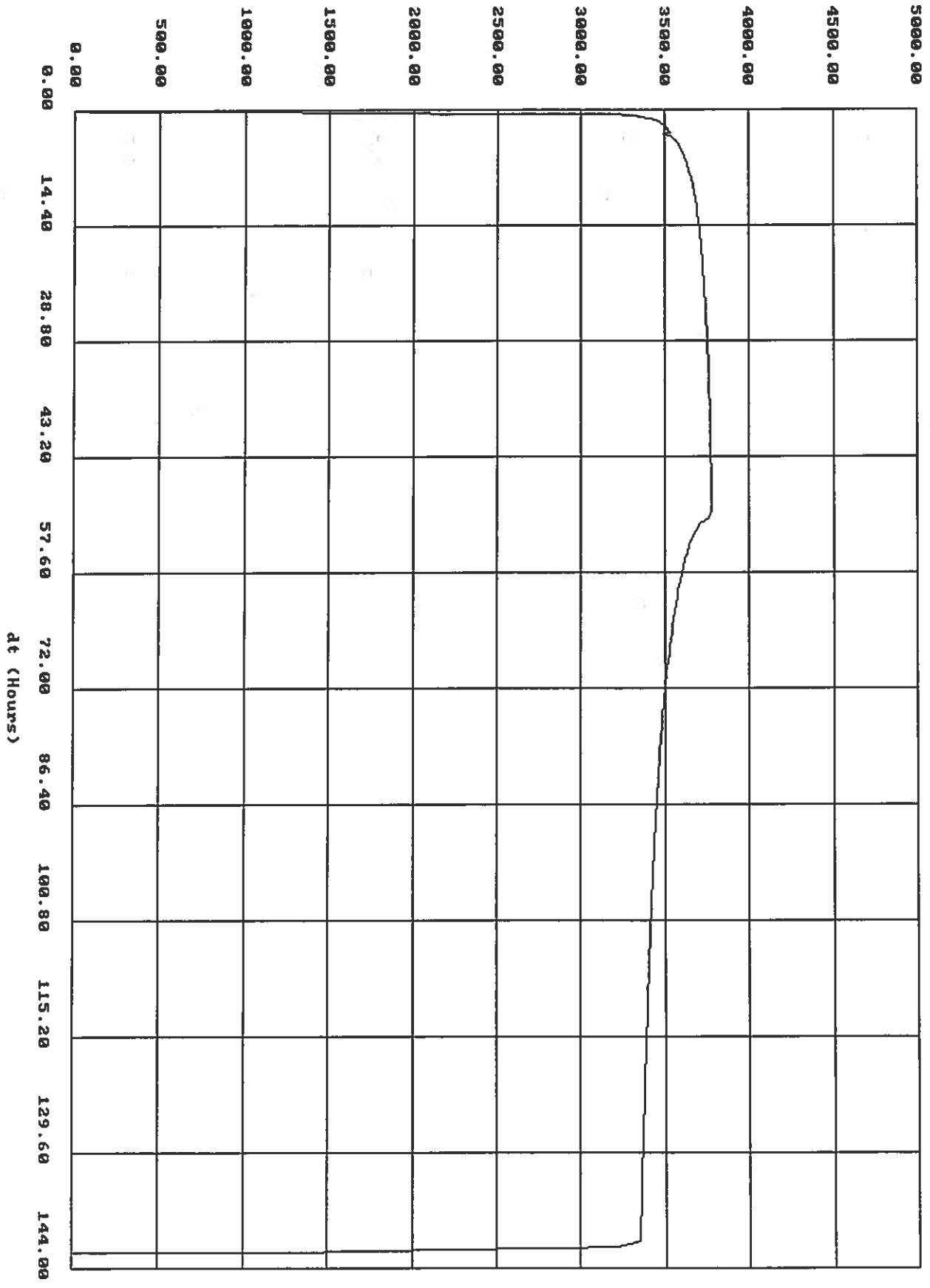
Date MM/DD	Time hh:mm:ss	Test Time mmmmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/04	09:21:45	8495.7500	2560.10	104.13	-44.53	
05/04	09:22:00	8496.0000	2512.99	103.92	-47.11	
05/04	09:22:15	8496.2500	2472.05	103.71	-40.93	
05/04	09:22:30	8496.5000	2431.89	103.50	-40.16	
05/04	09:22:45	8496.7500	2399.99	103.28	-31.91	
05/04	09:23:00	8497.0000	2361.76	103.07	-38.23	
05/04	09:23:15	8497.2500	2328.99	102.61	-32.77	
05/04	09:23:30	8497.5000	2309.97	102.06	-19.01	
05/04	09:25:00	8499.0000	2309.50	98.72	-.47	
05/04	09:26:30	8500.5000	2308.55	95.61	-.95	
05/04	09:28:30	8502.5000	2306.52	92.54	-2.04	
05/04	09:30:45	8504.7500	2296.84	90.03	-9.68	STOP @ 2000'
05/04	09:31:00	8505.0000	2269.89	89.79	-26.94	
05/04	09:31:15	8505.2500	2242.84	89.55	-27.05	
05/04	09:31:30	8505.5000	2213.45	89.31	-29.39	
05/04	09:31:45	8505.7500	2180.71	89.07	-32.75	
05/04	09:32:00	8506.0000	2147.44	88.83	-33.27	
05/04	09:32:15	8506.2500	2104.77	88.47	-42.67	
05/04	09:32:30	8506.5000	2061.63	87.87	-43.14	
05/04	09:32:45	8506.7500	2018.11	87.26	-43.52	
05/04	09:33:00	8507.0000	1974.31	86.66	-43.80	
05/04	09:33:15	8507.2500	1930.12	86.06	-44.19	
05/04	09:33:30	8507.5000	1885.40	85.46	-44.72	
05/04	09:34:45	8508.7500	1872.98	82.45	-12.42	
05/04	09:36:15	8510.2500	1872.10	78.92	-.89	
05/04	09:37:45	8511.7500	1871.08	75.56	-1.01	
05/04	09:40:00	8514.0000	1869.15	72.33	-1.94	STOP @ 1000'
05/04	09:40:45	8514.7500	1855.79	71.38	-13.36	
05/04	09:41:00	8515.0000	1822.78	71.06	-33.01	
05/04	09:41:15	8515.2500	1779.44	70.81	-43.34	
05/04	09:41:30	8515.5000	1734.53	70.47	-44.91	
05/04	09:41:45	8515.7500	1689.63	70.12	-44.90	
05/04	09:42:00	8516.0000	1652.88	69.78	-36.75	
05/04	09:42:15	8516.2500	1618.21	69.43	-34.67	
05/04	09:42:30	8516.5000	1583.53	69.09	-34.68	
05/04	09:42:45	8516.7500	1547.55	68.75	-35.98	
05/04	09:43:00	8517.0000	1515.85	68.40	-31.70	
05/04	09:43:15	8517.2500	1482.34	68.06	-33.51	
05/04	09:43:30	8517.5000	1459.05	67.72	-23.29	
05/04	09:43:45	8517.7500	1439.67	67.37	-19.39	
05/04	09:52:00	8526.0000	1421.79	68.45	-17.88	SURFACE STOP
05/04	09:53:00	8527.0000	.01	68.93	-1421.78	
05/04	10:03:15	8537.2500	.01	71.93	.00	
05/04	10:15:00	8549.0000	.01	74.95	.00	

SUNCO SMD NO. 1
SAN JUAN COUNTY, NEM MEXICO
F162504.REB

AGUA MOSS, LLC
Pressure vs dt

TEFTELLER, INC.
4-28-15
INJECTION & FALL-OFF TESTS

Pressure (Psig)



 *
 * EVENT SUMMARY *
 *

COMPANY : AGUA MOSS, LLC

PAGE : B1

WELL NAME : SUNCO SWD NO. 1

DATE : 05/05/15

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162504.RED

Date	Time	Test Time	Key Event	Pressure	Temp
MM/DD	hh:mm:ss	mmmmmm.mmmmm		Psig	Deg F
04/28	11:57:45	11.7500	PRESSURED UP LUBRICATOR	18.35	73.25
04/28	12:08:15	22.2500	SURFACE STOP	1300.13	68.92
04/28	12:08:30	22.5000	R.I.H. W/TANDEM ELEC. MEMORY INST.	1322.87	68.86
04/28	12:25:45	39.7500	TANDEM ELEC. MEMORY INST. @ 4405'	3243.96	95.35
04/28	12:30:00	44.0000	BEGAN INJECTING	3270.61	92.76
04/30	14:34:15	3048.2500	END INJECTING	3764.43	69.42
04/30	14:43:15	3057.2500	BEGAN FALL-OFF	3745.84	72.12
05/04	09:01:00	8475.0000	END FALL-OFF (90.5 HRS,)	3349.84	88.14
05/04	09:02:00	8476.0000	TANDEM ELEC. MEMORY INST. OFF BOTTOM	3225.90	88.36
05/04	09:04:15	8478.2500	ARRIVED @ 4000'	3164.00	95.71
05/04	09:10:30	8484.5000	STOP @ 4000'	3171.65	110.67
05/04	09:20:30	8494.5000	STOP @ 3000'	2741.74	105.20
05/04	09:30:45	8504.7500	STOP @ 2000'	2296.84	90.03
05/04	09:40:00	8514.0000	STOP @ 1000'	1869.15	72.33
05/04	09:52:00	8526.0000	SURFACE STOP	1421.79	68.45

Company: AGUA MOSS, LLC
Well: SUNCO SWD NO. 1
Field:
Engineer: NEIL TEFTELLER
Gauge Type: ELECTRONIC MEMORY
Gauge Range: 0 - 5000
Gauge Depth: 4405 ft
Serial No.: 162

County: SAN JUAN
State: NEW MEXICO
Date: 04/28/2015
Well Type: INJECTING
Test Type: GRADIENT
Status:
File Name: 66123

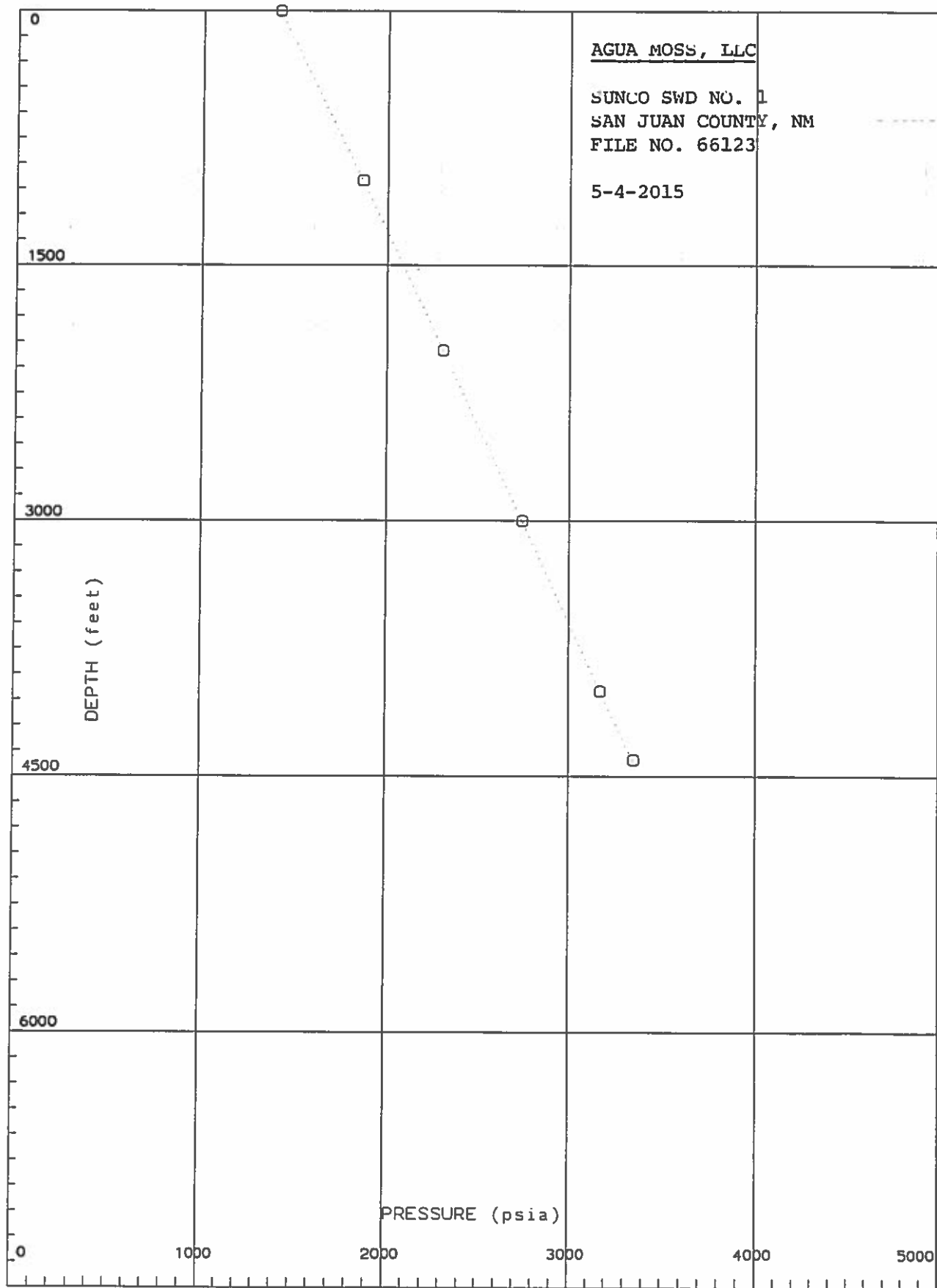
Tubing: 2-7/8" TO 4282'
Tubing: TO
Casing: TO
Perfs.: 4350' - 4460'

Packer Depth 4282 ft

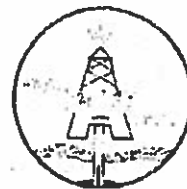
Oil Level
H2O Level

[Tefteller Incorporated]

#	MD	TVD	PRESSURE	PSI/ft
1	4405	4405	3350.00	
2	4000	4000	3172.00	0.440
3	3000	3000	2742.00	0.430
4	2000	2000	2305.00	0.437
5	1000	1000	1869.00	0.436
6	0	0	1422.00	0.447



SP-2000



Downhole Memory Pressure Gauge

The SP-2000 downhole memory pressure gauge is controlled by an internal microprocessor and powerful software.

The SP-2000 can stay downhole and collect data for hours or days; depending on your application. It is slimline and operates fully from battery power.

The microprocessor is capable of detecting the correct pressure and temperature and adjust the sampling rate automatically (once programmed for the test application).

The SP-2000 is tough, dependable, simple, and intelligent. If your job requires gauges that are reliable yet rugged and simple to use, the SP-2000 memory gauge, with its Hybrid-Quartz sensor is the one for you. It is so simple that a paper clip can be used to program it by changing the switch settings for the Type and Duration of test.

With the use of our simple, menu driven software, you can retrieve and report the gauge data (using a compatible computer and printer) from the tool once it is removed from the well.

Advanced reporting features are available such as data printouts, gradient reports, gradient plots and most of the standard time vs. pressure/temperature plot formats.

Micro-Smart Systems offers complete Well Test Interpretation, utilizing Fekete's "F.A.S.T. Well Test"™ software. This powerful state-of-the-art software includes data preparation, various analysis methods, analytical reservoir modeling and deliverability.

Micro-Smart Systems is the *SMART* choice for cutting-edge technology and superior customer support. We can save you time, money, and help you keep your customers satisfied.

SMART Features:

The technological features of the SP-2000 are:

- Dual EEPROM Memory
- Tool performs internal tests and delivers audible signal to confirm operation
- Multiple-run data storage capability
- User friendly software
- Convert from memory to SRO gauge with simple module change
- Compatible with Micro-Smart's production logging tools
- Standard ASCII data storage format
- Switch selectable programming without the use of a computer
- Selectable switches for duration in *DAYS* and *TYPE* of *TEST*
- Custom computer programming
 - up to 15 time periods
 - specify time interval, sampling rate, and ΔP switching.



"SMART AND SIMPLE"

SPECIFICATIONS:

Memory Capacity: 48,000 data sets (main memory)	Pressure Ranges: 2,500 psi (17,000 KPA)
2,000 data sets (backup memory)	5,000 psi (34,000 KPA)
(time, pressure, temp)	10,000 psi (68,000 KPA)
Sampling Intervals: 1.875 seconds to 64 minutes	15,000 psi (102,000 KPA)
(in binary multiples)	20,000 psi (136,000 KPA)
Diameter: 1.25 inch (31.2 mm)	Weight: 13 lbs (5.9 Kg)
Resolution: Pressure .01 psi	Operating Temp.: 32° F to 325° F
Temp. .04° F	(0° C to 160° C)
Accuracy: Pressure $\pm .05\%$ Full Scale	Power: 11.5v (9 "C" cell Alkaline)
Temp. $\pm 1^\circ F$	14.4v (4 "C" cell Lithium)
Time $\pm .05\%$	Length: 53 in. (1.3 m) plus battery pack
	24 in. (.6 m) for 9 cell pack
	16 in. (.4 m) for 4 cell pack



ACCURACY VERIFICATION

5-February-2014

Gauge Model SP-2000
Gauge S/N 162

Pressure Range 5 K
Accuracy 0.05% Full Scale

Applied Pressure psig	Recorded Pressure psig	Difference	
		psi	Percent (%)
0.01	0.71	0.70	0.0139%
774.08	774.96	0.88	0.0177%
1498.24	1499.12	0.88	0.0176%
2222.36	2222.99	0.63	0.0126%
2946.53	2947.04	0.51	0.0102%
3670.66	3671.23	0.57	0.0113%
4394.87	4395.53	0.66	0.0133%
5119.00	5119.94	0.94	0.0187%
4394.87	4396.16	1.29	0.0258%
3670.66	3671.99	1.33	0.0265%
2946.53	2947.97	1.44	0.0287%
2222.36	2223.84	1.48	0.0296%
1498.24	1499.73	1.49	0.0299%
774.08	775.18	1.10	0.0220%
0.01	0.25	0.24	0.0049%

Oven Temperature: 144.7 °F

Probe Temperature: 144.7 °F

Smart Gauge Calibration accuracy is confirmed.

Calibrated with RUSKA Pressure Standard, model # 2451-700-00

Serial #26618, Mass Set Serial #25608

Compensated to local acceleration due to gravity

Verified by: CM



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emnr.state.nm.us/ocd/District III/3district.htm](http://emnr.state.nm.us/ocd/District%20III/3district.htm)

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 4-28-15 Operator Agua Nueva API #30-0 45 28653
Property Name Suncor D.S. Well No. 1 Location: Unit Section 2 Township 29 Range 12
Well Status(Shut-In or Producing) Initial PSI: Tubing 1350 Intermediate N/A Casing 0 Bradenhead 0

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

PRESSURE

Testing	Bradenhead			INTERM	
	BH	Int	Csg	Int	Csg
TIME					
5 min	0		0		
10 min	0		0		
15 min	0		0		
20 min					
25 min					
30 min					

FLOW CHARACTERISTICS

BRADENHEAD INTERMEDIATE

Steady Flow	
Surges	
Down to Nothing	☒
Nothing	
Gas	
Gas & Water	
Water	

OIL CONS. DIV DIST. 3
APR 28 2015

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR FRESH SALTY SULFUR BLACK

5 MINUTE SHUT-IN PRESSURE

BRADENHEAD 0

INTERMEDIATE N/A

REMARKS:

Vacuum when opened

By [Signature]
Manager
(Position)

Witness Monica Tuckling

E-mail address

Appendix D

Appendix E

2015 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 1-MILE AOR

Sec	TWN	RNG	UL	
1	29N	12W	DELM	
2	29N	12W	ALL	
3	29N	12W	ABCFGHIJKOP	
10	29N	12W	AB	
11	29N	12W	ABCDEF	
34	30N	12W	AGHIJKNOP	
35	30N	12W	DEFGHIJKLMNOP	
36	30N	12W	LM	

**All tracts within the AOR were reviewed for activity that
had ensued since 2013 Annual Report.**

													Surface Casing			INT Casing			Production Casing						
	API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC	Perfs	Packer	PLUGGED
x	30-045-08851	ALLEN A	#001	BP America	Gas	Private	Active	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		
x	30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
x	30-045-32346	CORNELL	#002R	Energen Resources	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
x	30-045-32241	BECK	#001R	Burlington	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
x	30-045-33811	BECK	#001S	Burlington	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
x	30-045-31580	CORNELL COM	#500	Burlington	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
x	30-045-08714	CORNELL SRC	#007	Burlington	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
x	30-045-08704	MCGRATH B	#001	Burlington	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
	30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
x	30-045-08839	YOUNG	#001	Burlington	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
x	30-045-33580	MCGRATH	#003S	Burlington	Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf				4.5	2112	289 surf	1692-1904		
x	30-045-08712	MCGRATH A	#001	Burlington	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
x	30-045-32931	WALKER	#100S	Burlington	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		NOI to PA 5/2014
x	30-045-23889	BECK A	#001E	Burlington	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		
x	30-045-30381	CORNELL	#100	Burlington	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1744-1800		
x	30-045-08615	CORNELL	#006	Thompson Engr & Prod	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
x	30-045-31581	CORNELL	#101	Burlington	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
x	30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
x	30-045-26141	DUFF GAS COM	#001E	Burlington	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04'RC to FC 1492-1870		TA'd 3/5/14
x	30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
x	30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
x	30-045-11770	HUDSON J	#003	Burlington	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01' RC to FC 1784-1994		
	30-045-28177	FC STATE COM	#024	Burlington	Gas	State	Plugged	36	30N	12W	M	10/9/1990	6608	8.625	316	250 surf				4.5	6609	6000 surf	1492-1870		3/26/2013
	30-045-08945	MCGRATH C	#001	Burlington	Gas	Federal	Plugged	34	30n	12W	p	2/7/1963	6637	8.625	323	225 surf				4.5	6637	925 surf	6367-6576		4/29/2009

30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136	13 & 10.75	550 & 864	2 sx mud 4 sx mud	8.625	1526	5 sx mud	5.50 & 3.50	2020 2136	12 sx mud 140 surf	2020-2136 2012-2078		1998
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125											2/23/1984	
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged, Not Released	2	29N	12W	J	3/23/2001	2235	8.625	53	12 surf				2.875	2228	425 surf	2010-2157		6/25/2010
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125											3/16/1948	
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996	8.625	97	75 surf				5.5	1950	100 surf	1711-1936		9/15/2005
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050	16	21	20 surf	5.5	1930		3.5	2050	175 surf	1938-1974		10/12/2009
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940											11/10/1964	
30-045-23758	Pre-Ongard		Southland	Gas	Federal	Plugged	10	29N	12W	A	12/19/1980	1870											2/10/1984	
30-045-08950	HUDSON	2	Burlington	Gas	Federal	Plugged	34	30N	12W	P	7/17/1946	2137	15.5	38	20 surf	10 & 8.625	1217 1618	99 surf	5.5	1961	40 surf	1728-1938 1962-2008	2128	9/26/2008
30-045-08955	Pre-Ongard		Aztec O&G	Gas	Private	Plugged	34	30N	12W	N	11/1/1944	1965											10/29/1977	
30-045-20140	Pre-Ongard		Southland	Gas	Federal	Plugged	35	30N	12W	L	9/7/1967	DH											6/9/1982	
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08709	MCGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040	13.375	675	2 surf	8.625 INT 1 5.5 INT 2	1460 1928	4 surf 58 surf	3.5	2011	110 surf	1872-1912 1922-1937	1871-1876	3/1/2013

Appendix F

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

16215MK

Form C-138
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Western Refining Southwest, Inc. 50 CR 4990, Bloomfield, NM, 87413
2. Originating Site: Western Refining Southwest, Inc. Bloomfield Terminal – NESE27, T29N, R11W, San Juan County, NM
3. Location of Material (Street Address, City, State or ULSTR): Same as originating site
4. Source and Description of Waste: Treated non-hazardous water from the Bloomfield Terminal.
Estimated Volume _____ bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd ³ / bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <u>Matthew Krakow</u>  , representative or authorized agent for <u>Western Refining Southwest, Inc.</u> do hereby PRINT & SIGN NAME COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) ☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load ☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) ☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4) GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <u>N/A</u> , representative for <u>N/A</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss Permit # UICI-005

Address of Facility: 345 Rd 350 Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

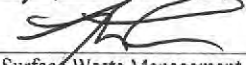
☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

TITLE: Operator

DATE: 12/31/15

SIGNATURE: 
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 334-6186

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NMD089416416		Manifest Document No. BLM -		2. Page 1 of 1	
3. Generator's Name and Mailing Address WESTERN REFINING SOUTHWEST, INC. 50 CR 4990 BLOOMFIELD, NM 87413							
4. Generator's Phone (888) 658 - 8006							
5. Transporter 1 Company Name		6. US EPA ID Number		A. State Transporter's ID			
				B. Transporter 1 Phone			
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID			
				D. Transporter 2 Phone			
9. Designated Facility Name and Site Address AGUA MOSS CLASS I WELL #345 CR 850 FARMINGTON, NM 87401		10. US EPA ID Number		E. State Facility's ID			
				F. Facility's Phone (505) 334-6186			
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
				No. Type			
a. NON-HAZARDOUS, NON-D.O.T REGULATED LIQUID (TREATED WATER) - NON-EXEMPT WATER				1 TRUCK		BBL	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
						Date	
Printed/Typed Name				Signature		Month Day Year	
17. Transporter 1 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name				Signature		Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.						Date	
Printed/Typed Name				Signature		Month Day Year	

NON-HAZARDOUS WASTE

NR

TRANSPORTER FACILITY

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Chaco Plant

3. Location of Material (Street Address, City, State or ULSTR):

UL M Section 16, T26N, R12W; 36.482905, -108.119193

4. Source and Description of Waste:

Source:

Description: Hydrocarbon impacted soil associated blow down pit.

Estimated Volume 1300 yd³ (bbls) Known Volume (to be entered by the operator at the end of the haul) 1640 yd³ (bbls)

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, 9-14-15, representative for Enterprise Products Operating authorize Agua Moss, LLC to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

SIGNATURE: _____

Surface Waste Management Facility Authorized Agent

TITLE: Operator

TELEPHONE NO.: (505) 334-6186

DATE: 12/30/15



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 09, 2015

Thomas Long
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Chaco Plant NE Water Tank (Frac Tanks)

OrderNo.: 1509192

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/4/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Sample Log-In Check List

Client Name: Enterprise

Work Order Number: 1509192

RcptNo: 1

Received by/date:

LM

09/04/15

Logged By: Celina Sessa

9/4/2015 7:00:00 AM

Celina Sessa

Completed By: Celina Sessa

9/4/2015 8:47:57 AM

Celina Sessa

Reviewed By:

LO

09/10/15

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ?

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☒

No ☐

No VOA Vials ☐

11. Were any sample containers received broken?

Yes ☐

No ☒

of preserved
bottles checked
for pH:

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

(<2 or >12 unless noted)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

Adjusted?

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

Checked by:

(If no, notify customer for authorization)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 251458

Project: Chaco Plant NE Water Tank (Frac Tanks)

Collection Date: 9/3/2015 12:25:00 PM

Lab ID: 1509192-001

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	460	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Toluene	940	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Ethylbenzene	53	25	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Methyl tert-butyl ether (MTBE)	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2,4-Trimethylbenzene	53	25	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,3,5-Trimethylbenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2-Dichloroethane (EDC)	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2-Dibromoethane (EDB)	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Naphthalene	ND	100	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
2-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Acetone	ND	500	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Bromobenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Bromodichloromethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Bromoform	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Bromomethane	ND	150	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
2-Butanone	ND	500	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Carbon disulfide	ND	500	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Carbon Tetrachloride	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Chlorobenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Chloroethane	ND	100	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Chloroform	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Chloromethane	ND	150	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
2-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
4-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
cis-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
cis-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2-Dibromo-3-chloropropane	ND	100	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Dibromochloromethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Dibromomethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,3-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,4-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Dichlorodifluoromethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,1-Dichloroethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,1-Dichloroethene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,3-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
2,2-Dichloropropane	ND	100	D	µg/L	50	9/4/2015 10:56:29 AM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 251458

Project: Chaco Plant NE Water Tank (Frac Tanks

Collection Date: 9/3/2015 12:25:00 PM

Lab ID: 1509192-001

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Hexachlorobutadiene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
2-Hexanone	ND	500	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Isopropylbenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
4-Isopropyltoluene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
4-Methyl-2-pentanone	ND	500	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Methylene Chloride	ND	150	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
n-Butylbenzene	ND	150	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
n-Propylbenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
sec-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Styrene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
tert-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,1,1,2-Tetrachloroethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,1,2,2-Tetrachloroethane	ND	100	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Tetrachloroethene (PCE)	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
trans-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
trans-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2,3-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2,4-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,1,1-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,1,2-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Trichloroethene (TCE)	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Trichlorofluoromethane	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
1,2,3-Trichloropropane	ND	100	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Vinyl chloride	ND	50	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Xylenes, Total	540	75	D	µg/L	50	9/4/2015 10:56:29 AM	R28669
Surr: 1,2-Dichloroethane-d4	92.9	70-130	D	%REC	50	9/4/2015 10:56:29 AM	R28669
Surr: 4-Bromofluorobenzene	104	70-130	D	%REC	50	9/4/2015 10:56:29 AM	R28669
Surr: Dibromofluoromethane	105	70-130	D	%REC	50	9/4/2015 10:56:29 AM	R28669
Surr: Toluene-d8	98.5	70-130	D	%REC	50	9/4/2015 10:56:29 AM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 259452

Project: Chaco Plant NE Water Tank (Frac Tanks

Collection Date: 9/3/2015 12:45:00 PM

Lab ID: 1509192-002

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	370	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Toluene	770	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Ethylbenzene	41	25	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Methyl tert-butyl ether (MTBE)	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2,4-Trimethylbenzene	38	25	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,3,5-Trimethylbenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2-Dichloroethane (EDC)	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2-Dibromoethane (EDB)	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Naphthalene	ND	100	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
2-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Acetone	ND	500	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Bromobenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Bromodichloromethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Bromoform	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Bromomethane	ND	150	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
2-Butanone	ND	500	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Carbon disulfide	ND	500	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Carbon Tetrachloride	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Chlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Chloroethane	ND	100	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Chloroform	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Chloromethane	ND	150	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
2-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
4-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
cis-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
cis-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2-Dibromo-3-chloropropane	ND	100	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Dibromochloromethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Dibromomethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,3-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,4-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Dichlorodifluoromethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,1-Dichloroethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,1-Dichloroethene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,3-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
2,2-Dichloropropane	ND	100	D	µg/L	50	9/4/2015 11:25:56 AM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 259452

Project: Chaco Plant NE Water Tank (Frac Tanks

Collection Date: 9/3/2015 12:45:00 PM

Lab ID: 1509192-002

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Hexachlorobutadiene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
2-Hexanone	ND	500	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Isopropylbenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
4-Isopropyltoluene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
4-Methyl-2-pentanone	ND	500	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Methylene Chloride	ND	150	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
n-Butylbenzene	ND	150	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
n-Propylbenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
sec-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Styrene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
tert-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,1,1,2-Tetrachloroethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,1,2,2-Tetrachloroethane	ND	100	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Tetrachloroethene (PCE)	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
trans-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
trans-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2,3-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2,4-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,1,1-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,1,2-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Trichloroethene (TCE)	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Trichlorofluoromethane	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
1,2,3-Trichloropropane	ND	100	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Vinyl chloride	ND	50	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Xylenes, Total	430	75	D	µg/L	50	9/4/2015 11:25:56 AM	R28669
Surr: 1,2-Dichloroethane-d4	89.1	70-130	D	%REC	50	9/4/2015 11:25:56 AM	R28669
Surr: 4-Bromofluorobenzene	102	70-130	D	%REC	50	9/4/2015 11:25:56 AM	R28669
Surr: Dibromofluoromethane	100	70-130	D	%REC	50	9/4/2015 11:25:56 AM	R28669
Surr: Toluene-d8	103	70-130	D	%REC	50	9/4/2015 11:25:56 AM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 252013

Project: Chaco Plant NE Water Tank (Frac Tanks)

Collection Date: 9/3/2015 12:57:00 PM

Lab ID: 1509192-003

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	370	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Toluene	760	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Ethylbenzene	42	25	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Methyl tert-butyl ether (MTBE)	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2,4-Trimethylbenzene	48	25	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,3,5-Trimethylbenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2-Dichloroethane (EDC)	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2-Dibromoethane (EDB)	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Naphthalene	ND	100	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
2-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Acetone	ND	500	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Bromobenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Bromodichloromethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Bromoform	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Bromomethane	ND	150	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
2-Butanone	ND	500	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Carbon disulfide	ND	500	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Carbon Tetrachloride	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Chlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Chloroethane	ND	100	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Chloroform	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Chloromethane	ND	150	D	µg/L	50	9/4/2015 11:55:28 AM	R23669
2-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
4-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
cis-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
cis-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2-Dibromo-3-chloropropane	ND	100	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Dibromochloromethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Dibromomethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,3-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,4-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Dichlorodifluoromethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,1-Dichloroethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,1-Dichloroethene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,3-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
2,2-Dichloropropane	ND	100	D	µg/L	50	9/4/2015 11:55:28 AM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 252013

Project: Chaco Plant NE Water Tank (Frac Tanks

Collection Date: 9/3/2015 12:57:00 PM

Lab ID: 1509192-003

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Hexachlorobutadiene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
2-Hexanone	ND	500	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Isopropylbenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
4-Isopropyltoluene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
4-Methyl-2-pentanone	ND	500	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Methylene Chloride	ND	150	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
n-Butylbenzene	ND	150	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
n-Propylbenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
sec-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Styrene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
tert-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,1,1,2-Tetrachloroethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,1,2,2-Tetrachloroethane	ND	100	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Tetrachloroethene (PCE)	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
trans-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
trans-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2,3-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2,4-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,1,1-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,1,2-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Trichloroethene (TCE)	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Trichlorofluoromethane	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
1,2,3-Trichloropropane	ND	100	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Vinyl chloride	ND	50	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Xylenes, Total	450	75	D	µg/L	50	9/4/2015 11:55:28 AM	R28669
Surr: 1,2-Dichloroethane-d4	93.2	70-130	D	%REC	50	9/4/2015 11:55:28 AM	R28669
Surr: 4-Bromofluorobenzene	103	70-130	D	%REC	50	9/4/2015 11:55:28 AM	R28669
Surr: Dibromofluoromethane	103	70-130	D	%REC	50	9/4/2015 11:55:28 AM	R28669
Surr: Toluene-d8	98.6	70-130	D	%REC	50	9/4/2015 11:55:28 AM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 251749

Project: Chaco Plant NE Water Tank (Frac Tanks)

Collection Date: 9/3/2015 1:20:00 PM

Lab ID: 1509192-004

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	490	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Toluene	940	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Ethylbenzene	51	25	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Methyl tert-butyl ether (MTBE)	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2,4-Trimethylbenzene	47	25	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,3,5-Trimethylbenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2-Dichloroethane (EDC)	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2-Dibromoethane (EDB)	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Naphthalene	ND	100	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
2-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Acetone	ND	500	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Bromobenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Bromodichloromethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Bromoform	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Bromomethane	ND	150	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
2-Butanone	ND	500	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Carbon disulfide	ND	500	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Carbon Tetrachloride	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Chlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Chloroethane	ND	100	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Chloroform	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Chloromethane	ND	150	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
2-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
4-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
cis-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
cis-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2-Dibromo-3-chloropropane	ND	100	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Dibromochloromethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Dibromomethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,3-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,4-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Dichlorodifluoromethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,1-Dichloroethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,1-Dichloroethene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,3-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
2,2-Dichloropropane	ND	100	D	µg/L	50	9/4/2015 12:24:30 PM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 251749

Project: Chaco Plant NE Water Tank (Frac Tanks

Collection Date: 9/3/2015 1:20:00 PM

Lab ID: 1509192-004

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Hexachlorobutadiene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
2-Hexanone	ND	500	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Isopropylbenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
4-Isopropyltoluene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
4-Methyl-2-pentanone	ND	500	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Methylene Chloride	ND	150	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
n-Butylbenzene	ND	150	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
n-Propylbenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
sec-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Styrene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
tert-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,1,1,2-Tetrachloroethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,1,2,2-Tetrachloroethane	ND	100	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Tetrachloroethene (PCE)	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
trans-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
trans-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2,3-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2,4-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,1,1-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,1,2-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Trichloroethene (TCE)	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Trichlorofluoromethane	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
1,2,3-Trichloropropane	ND	100	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Vinyl chloride	ND	50	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Xylenes, Total	490	75	D	µg/L	50	9/4/2015 12:24:30 PM	R28669
Surr: 1,2-Dichloroethane-d4	91.8	70-130	D	%REC	50	9/4/2015 12:24:30 PM	R28669
Surr: 4-Bromofluorobenzene	102	70-130	D	%REC	50	9/4/2015 12:24:30 PM	R28669
Surr: Dibromofluoromethane	96.7	70-130	D	%REC	50	9/4/2015 12:24:30 PM	R28669
Surr: Toluene-d8	101	70-130	D	%REC	50	9/4/2015 12:24:30 PM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 259792

Project: Chaco Plant NE Water Tank (Frac Tanks)

Collection Date: 9/3/2015 2:25:00 PM

Lab ID: 1509192-005

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	2500	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Toluene	2900	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Ethylbenzene	98	25	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Methyl tert-butyl ether (MTBE)	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2,4-Trimethylbenzene	60	25	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,3,5-Trimethylbenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2-Dichloroethane (EDC)	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2-Dibromoethane (EDB)	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Naphthalene	ND	100	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
2-Methylnaphthalene	ND	200	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Acetone	ND	500	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Bromobenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Bromodichloromethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Bromoform	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Bromomethane	ND	150	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
2-Butanone	ND	500	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Carbon disulfide	ND	500	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Carbon Tetrachloride	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Chlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Chloroethane	ND	100	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Chloroform	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Chloromethane	ND	150	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
2-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
4-Chlorotoluene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
cis-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
cis-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2-Dibromo-3-chloropropane	ND	100	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Dibromochloromethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Dibromomethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,3-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,4-Dichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Dichlorodifluoromethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,1-Dichloroethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,1-Dichloroethene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,3-Dichloropropane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
2,2-Dichloropropane	ND	100	D	µg/L	50	9/4/2015 12:53:25 PM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509192

Date Reported: 9/9/2015

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 259792

Project: Chaco Plant NE Water Tank (Frac Tanks

Collection Date: 9/3/2015 2:25:00 PM

Lab ID: 1509192-005

Matrix: AQUEOUS

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Hexachlorobutadiene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
2-Hexanone	ND	500	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Isopropylbenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
4-Isopropyltoluene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
4-Methyl-2-pentanone	ND	500	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Methylene Chloride	ND	150	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
n-Butylbenzene	ND	150	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
n-Propylbenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
sec-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Styrene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
tert-Butylbenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,1,1,2-Tetrachloroethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,1,2,2-Tetrachloroethane	ND	100	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Tetrachloroethene (PCE)	59	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
trans-1,2-DCE	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
trans-1,3-Dichloropropene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2,3-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2,4-Trichlorobenzene	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,1,1-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,1,2-Trichloroethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Trichloroethene (TCE)	60	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Trichlorofluoromethane	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
1,2,3-Trichloropropane	ND	100	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Vinyl chloride	ND	50	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Xylenes, Total	890	75	D	µg/L	50	9/4/2015 12:53:25 PM	R28669
Surr: 1,2-Dichloroethane-d4	96.4	70-130	D	%REC	50	9/4/2015 12:53:25 PM	R28669
Surr: 4-Bromofluorobenzene	108	70-130	D	%REC	50	9/4/2015 12:53:25 PM	R28669
Surr: Dibromofluoromethane	98.0	70-130	D	%REC	50	9/4/2015 12:53:25 PM	R28669
Surr: Toluene-d8	104	70-130	D	%REC	50	9/4/2015 12:53:25 PM	R28669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509192

09-Sep-15

Client: Enterprise Field Services
Project: Chaco Plant NE Water Tank (Frac Tanks)

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R28669		RunNo: 28669							
Prep Date:	Analysis Date: 9/4/2015		SeqNo: 868277		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.9	70	130			
Toluene	20	1.0	20.00	0	99.3	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	92.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.8	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R28669		RunNo: 28669							
Prep Date:	Analysis Date: 9/4/2015		SeqNo: 868283		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509192

09-Sep-15

Client: Enterprise Field Services
Project: Chaco Plant NE Water Tank (Frac Tanks)

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28669	RunNo:	28669					
Prep Date:		Analysis Date:	9/4/2015	SeqNo:	868283	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509192

09-Sep-15

Client: Enterprise Field Services

Project: Chaco Plant NE Water Tank (Frac Tanks)

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R28669			RunNo: 28669					
Prep Date:		Analysis Date: 9/4/2015			SeqNo: 868283		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	70	130			

Sample ID	1509192-001a ms	SampType: MS	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	Tank# 251458	Batch ID: R28669	RunNo: 28669							
Prep Date:	Analysis Date: 9/4/2015		SeqNo: 869597		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1500	50	1000	458.6	99.2	70	130			
Toluene	2000	50	1000	940.4	105	70	130			
Chlorobenzene	1100	50	1000	0	108	70	130			
1,1-Dichloroethene	1200	50	1000	0	117	70	130			
Trichloroethene (TCE)	910	50	1000	0	91.2	70	130			
Surr: 1,2-Dichloroethane-d4	470		500.0		93.5	70	130			
Surr: 4-Bromofluorobenzene	500		500.0		100	70	130			
Surr: Dibromofluoromethane	490		500.0		97.3	70	130			
Surr: Toluene-d8	520		500.0		105	70	130			

Sample ID	1509192-001a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	Tank# 251458	Batch ID: R28669	RunNo: 28669							
Prep Date:	Analysis Date: 9/4/2015	SeqNo: 869598	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1400	50	1000	458.6	95.6	70	130	2.52	20	
Toluene	2000	50	1000	940.4	101	70	130	1.77	20	
Chlorobenzene	1100	50	1000	0	106	70	130	2.18	20	
1,1-Dichloroethene	1100	50	1000	0	109	70	130	7.00	20	
Trichloroethene (TCE)	890	50	1000	0	88.7	70	130	2.77	20	
Surr: 1,2-Dichloroethane-d4	470		500.0		93.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	510		500.0		102	70	130	0	0	
Surr: Dibromofluoromethane	470		500.0		93.3	70	130	0	0	
Surr: Toluene-d8	520		500.0		103	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509328

Date Reported:

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 251749

Project: Chaco Plant NE Frac Tanks

Collection Date: 9/8/2015 11:32:00 AM

Lab ID: 1509328-004

Matrix: AQUEOUS

Received Date: 9/9/2015 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.020		mg/L	1	9/10/2015 5:36:17 PM	21232
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: JLF
Arsenic	ND	5.0		mg/L	1	9/11/2015 10:22:23 AM	21231
Barium	ND	100		mg/L	1	9/11/2015 10:22:23 AM	21231
Cadmium	ND	1.0		mg/L	1	9/11/2015 10:22:23 AM	21231
Chromium	ND	5.0		mg/L	1	9/11/2015 10:22:23 AM	21231
Lead	ND	5.0		mg/L	1	9/11/2015 10:22:23 AM	21231
Selenium	ND	1.0		mg/L	1	9/11/2015 10:22:23 AM	21231
Silver	ND	5.0		mg/L	1	9/11/2015 10:22:23 AM	21231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1509328

Date Reported:

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Enterprise Field Services**Client Sample ID:** Tank# 252013**Project:** Chaco Plant NE Frac Tanks**Collection Date:** 9/8/2015 11:30:00 AM**Lab ID:** 1509328-003**Matrix:** AQUEOUS**Received Date:** 9/9/2015 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.020		mg/L	1	9/10/2015 5:48:43 PM	21232
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: JLF
Arsenic	ND	5.0		mg/L	1	9/11/2015 10:20:30 AM	21231
Barium	ND	100		mg/L	1	9/11/2015 10:20:30 AM	21231
Cadmium	ND	1.0		mg/L	1	9/11/2015 10:20:30 AM	21231
Chromium	ND	5.0		mg/L	1	9/11/2015 10:20:30 AM	21231
Lead	ND	5.0		mg/L	1	9/11/2015 10:20:30 AM	21231
Selenium	ND	1.0		mg/L	1	9/11/2015 10:20:30 AM	21231
Silver	ND	5.0		mg/L	1	9/11/2015 10:20:30 AM	21231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 0
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509328

Date Reported:

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 259452

Project: Chaco Plant NE Frac Tanks

Collection Date: 9/8/2015 11:28:00 AM

Lab ID: 1509328-002

Matrix: AQUEOUS

Received Date: 9/9/2015 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.020		mg/L	1	9/10/2015 5:28:06 PM	21232
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: JLF
Arsenic	ND	5.0		mg/L	1	9/11/2015 10:18:36 AM	21231
Barium	ND	100		mg/L	1	9/11/2015 10:18:36 AM	21231
Cadmium	ND	1.0		mg/L	1	9/11/2015 10:18:36 AM	21231
Chromium	ND	5.0		mg/L	1	9/11/2015 10:18:36 AM	21231
Lead	ND	5.0		mg/L	1	9/11/2015 10:18:36 AM	21231
Selenium	ND	1.0		mg/L	1	9/11/2015 10:18:36 AM	21231
Silver	ND	5.0		mg/L	1	9/11/2015 10:18:36 AM	21231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 0
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509328

Date Reported:

CLIENT: Enterprise Field Services

Client Sample ID: Tank# 251458

Project: Chaco Plant NE Frac Tanks

Collection Date: 9/8/2015 11:25:00 AM

Lab ID: 1509328-001

Matrix: AQUEOUS

Received Date: 9/9/2015 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.020		mg/L	1	9/10/2015 5:25:58 PM	21232
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: JLF
Arsenic	ND	5.0		mg/L	1	9/11/2015 10:16:51 AM	21231
Barium	ND	100		mg/L	1	9/11/2015 10:16:51 AM	21231
Cadmium	ND	1.0		mg/L	1	9/11/2015 10:16:51 AM	21231
Chromium	ND	5.0		mg/L	1	9/11/2015 10:16:51 AM	21231
Lead	ND	5.0		mg/L	1	9/11/2015 10:16:51 AM	21231
Selenium	ND	1.0		mg/L	1	9/11/2015 10:16:51 AM	21231
Silver	ND	5.0		mg/L	1	9/11/2015 10:16:51 AM	21231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 0
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix			

District I 12/2/15
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. Originating Site: Chaco Plant
3. Location of Material (Street Address, City, State or ULSTR): UL M Section 16, T26N, R12W; 36.482905, -108.119193
4. Source and Description of Waste: Source: Description: Hydrocarbon impacted soil associated blow down pit. Estimated Volume 500 yd ³ / bbls Known Volume (to be entered by the operator at the end of the haul) 320 yd ³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency** ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long* 9-14-15, representative for Enterprise Products Operating authorize Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, Inc. do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. Transporter: D-Trix

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009
Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: CHRIS MORGAN
SIGNATURE: *Chris Morgan*
Surface Waste Management Facility Authorized Agent

TITLE: LEAD TECH DATE: 2 DEC 15
TELEPHONE NO.: 632-3640

Analytical Report

Lab Order 1511A47

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Non Exempt Water - Frac Tank

Project: Enterprise Chaco Natural Gas Plant

Collection Date: 11/23/2015 1:19:00 PM

Lab ID: 1511A47-001

Matrix: AQUEOUS

Received Date: 11/24/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8310: PAHS						Analyst: SCC
Naphthalene	ND	10		µg/L	1	11/25/2015 8:17:00 AM
1-Methylnaphthalene	ND	10		µg/L	1	11/25/2015 8:17:00 AM
2-Methylnaphthalene	ND	10		µg/L	1	11/25/2015 8:17:00 AM
Acenaphthylene	ND	12		µg/L	1	11/25/2015 8:17:00 AM
Acenaphthene	ND	10		µg/L	1	11/25/2015 8:17:00 AM
Fluorene	ND	4.0		µg/L	1	11/25/2015 8:17:00 AM
Phenanthrene	ND	3.0		µg/L	1	11/25/2015 8:17:00 AM
Anthracene	ND	3.0		µg/L	1	11/25/2015 8:17:00 AM
Fluoranthene	ND	1.5		µg/L	1	11/25/2015 8:17:00 AM
Pyrene	ND	1.5		µg/L	1	11/25/2015 8:17:00 AM
Benz(a)anthracene	ND	0.35		µg/L	1	11/25/2015 8:17:00 AM
Chrysene	ND	1.0		µg/L	1	11/25/2015 8:17:00 AM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	11/25/2015 8:17:00 AM
Benzo(k)fluoranthene	ND	0.35		µg/L	1	11/25/2015 8:17:00 AM
Benzo(a)pyrene	ND	0.35		µg/L	1	11/25/2015 8:17:00 AM
Dibenz(a,h)anthracene	ND	0.88		µg/L	1	11/25/2015 8:17:00 AM
Benzo(g,h,i)perylene	ND	0.62		µg/L	1	11/25/2015 8:17:00 AM
Indeno(1,2,3-cd)pyrene	ND	1.2		µg/L	1	11/25/2015 8:17:00 AM
Surr: Benzo(e)pyrene	38.8	33.4-129		%REC	1	11/25/2015 8:17:00 AM
EPA METHOD 7470: MERCURY						Analyst: DBD
Mercury	0.00098	0.00020		mg/L	1	12/1/2015 1:25:43 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: MED
Arsenic	ND	0.020		mg/L	1	12/1/2015 10:27:25 AM
Barium	0.11	0.020		mg/L	1	12/1/2015 10:27:25 AM
Cadmium	0.0096	0.0020		mg/L	1	12/1/2015 10:27:25 AM
Chromium	0.047	0.0060		mg/L	1	12/1/2015 10:27:25 AM
Lead	0.034	0.0050		mg/L	1	12/1/2015 10:27:25 AM
Selenium	ND	0.050		mg/L	1	12/1/2015 10:27:25 AM
Silver	ND	0.0050		mg/L	1	12/1/2015 10:27:25 AM
EPA METHOD 8260B: VOLATILES						Analyst: AG
Benzene	440	10		µg/L	10	11/24/2015 12:56:55 PM
Toluene	970	100		µg/L	100	11/24/2015 2:52:00 PM
Ethylbenzene	50	10		µg/L	10	11/24/2015 12:56:55 PM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2,4-Trimethylbenzene	40	10		µg/L	10	11/24/2015 12:56:55 PM
1,3,5-Trimethylbenzene	20	10		µg/L	10	11/24/2015 12:56:55 PM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/24/2015 12:56:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1511A47

Date Reported:

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** Non Exempt Water - Frac Tank**Project:** Enterprise Chaco Natural Gas Plant**Collection Date:** 11/23/2015 1:19:00 PM**Lab ID:** 1511A47-001**Matrix:** AQUEOUS**Received Date:** 11/24/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: AG
n-Propylbenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
sec-Butylbenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Styrene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
tert-Butylbenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/24/2015 12:56:55 PM
Tetrachloroethene (PCE)	55	10		µg/L	10	11/24/2015 12:56:55 PM
trans-1,2-DCE	ND	10		µg/L	10	11/24/2015 12:56:55 PM
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,1,1-Trichloroethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,1,2-Trichloroethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Trichloroethene (TCE)	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Trichlorofluoromethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2,3-Trichloropropane	ND	20		µg/L	10	11/24/2015 12:56:55 PM
Vinyl chloride	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Xylenes, Total	450	15		µg/L	10	11/24/2015 12:56:55 PM
Surr: 1,2-Dichloroethane-d4	89.7	70-130		%REC	10	11/24/2015 12:56:55 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%REC	10	11/24/2015 12:56:55 PM
Surr: Dibromofluoromethane	90.3	70-130		%REC	10	11/24/2015 12:56:55 PM
Surr: Toluene-d8	105	70-130		%REC	10	11/24/2015 12:56:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 3 of 0
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1511A47

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Non Exempt Water - Frac Tank

Project: Enterprise Chaco Natural Gas Plant

Collection Date: 11/23/2015 1:19:00 PM

Lab ID: 1511A47-001

Matrix: AQUEOUS

Received Date: 11/24/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: AG
Naphthalene	ND	20		µg/L	10	11/24/2015 12:56:55 PM
1-Methylnaphthalene	ND	40		µg/L	10	11/24/2015 12:56:55 PM
2-Methylnaphthalene	ND	40		µg/L	10	11/24/2015 12:56:55 PM
Acetone	500	100		µg/L	10	11/24/2015 12:56:55 PM
Bromobenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Bromodichloromethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Bromoform	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Bromomethane	ND	30		µg/L	10	11/24/2015 12:56:55 PM
2-Butanone	810	100		µg/L	10	11/24/2015 12:56:55 PM
Carbon disulfide	ND	100		µg/L	10	11/24/2015 12:56:55 PM
Carbon Tetrachloride	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Chlorobenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Chloroethane	ND	20		µg/L	10	11/24/2015 12:56:55 PM
Chloroform	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Chloromethane	ND	30		µg/L	10	11/24/2015 12:56:55 PM
2-Chlorotoluene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
4-Chlorotoluene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
cis-1,2-DCE	ND	10		µg/L	10	11/24/2015 12:56:55 PM
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/24/2015 12:56:55 PM
Dibromochloromethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Dibromomethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2-Dichlorobenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,3-Dichlorobenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,4-Dichlorobenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Dichlorodifluoromethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,1-Dichloroethane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,1-Dichloroethene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,2-Dichloropropane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
1,3-Dichloropropane	ND	10		µg/L	10	11/24/2015 12:56:55 PM
2,2-Dichloropropane	ND	20		µg/L	10	11/24/2015 12:56:55 PM
1,1-Dichloropropene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
Hexachlorobutadiene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
2-Hexanone	ND	100		µg/L	10	11/24/2015 12:56:55 PM
Isopropylbenzene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
4-Isopropyltoluene	ND	10		µg/L	10	11/24/2015 12:56:55 PM
4-Methyl-2-pentanone	ND	100		µg/L	10	11/24/2015 12:56:55 PM
Methylene Chloride	ND	30		µg/L	10	11/24/2015 12:56:55 PM
n-Butylbenzene	ND	30		µg/L	10	11/24/2015 12:56:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OPEN 2015

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Kinder Morgan CO2, 17801 Hwy 491, Cortez, CO 81321

2. Originating Site:

McElmo Dome and Doe Canyon CO2 Fields

3. Location of Material (Street Address, City, State or ULSTR):

Montezuma and Dolores Counties, Colorado

4. Source and Description of Waste: Drilling Waste Fluids, Cementitious Fluids

Estimated Volume 1000 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Dani C. Knight, representative or authorized agent for Kinder Morgan CO2 do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency** ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Dani C. Knight, representative for Kinder Morgan CO2 authorize JFJ/IEI to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for _____ do hereby certify that

Representative/Agent Signature

Representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: RW Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Aqua Mass LLC permit # VICT-005

Address of Facility: # 345 CR 350, Aztec, N.M. 87410 Santa Juan Co
Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED**

☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: BARRY HIGGINS

TITLE: Superintendent DATE: 2-21-15

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 334-6186



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 20, 2015

Tami Knight
Kinder Morgan
17801 Hwy 491
Cortez, CO 81321
TEL: (970) 882-5520
FAX

RE: Aqua Moss Water

OrderNo.: 1502269

Dear Tami Knight:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/6/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Sample Log-In Check List

Client Name: **KINDER MORGAN CO**

Work Order Number: **1502269**

RcptNo: **1**

Received by/date: AS 02/10/15

Logged By: **Anne Thorne** 2/6/2015 7:50:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 2/6/2015 *Anne Thorne*

Reviewed By: AS JA 02/10/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.6	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502269

20-Feb-15

Client: Kinder Morgan
Project: Aqua Moss Water

Sample ID	MB-17765	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	17765	RunNo:	24390					
Prep Date:	2/16/2015	Analysis Date:	2/18/2015	SeqNo:	718659	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-17765	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	17765	RunNo:	24390					
Prep Date:	2/16/2015	Analysis Date:	2/18/2015	SeqNo:	718660	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	102	80	120			
Barium	0.49	0.020	0.5000	0	97.3	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.1	80	120			
Chromium	0.49	0.0060	0.5000	0	98.7	80	120			
Lead	0.48	0.0050	0.5000	0	96.4	80	120			
Selenium	0.50	0.050	0.5000	0	100	80	120			
Silver	0.11	0.0050	0.1000	0	105	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502269

20-Feb-15

Client: Kinder Morgan
Project: Aqua Moss Water

Sample ID	MB-17736	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	17736	RunNo:	24308					
Prep Date:	2/13/2015	Analysis Date:	2/13/2015	SeqNo:	716384	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-17736		SampType: LCS		TestCode: EPA Method 7470: Mercury					
Client ID:	LCSW		Batch ID: 17736		RunNo: 24308					
Prep Date:	2/13/2015		Analysis Date: 2/13/2015		SeqNo: 716385		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0055	0.00020	0.005000	0	110	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L747923

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 17, 2015

Analyte	Result	Laboratory Blank Units % Rec	Limit	Batch	Date Analyzed
Reactive Sulf.(SW846 7.3.4.1)	< 25	mg/l		WG769788	02/12/15 16:16
Reactive CN (SW846 7.3.3.2)	< .125	mg/l		WG769790	02/12/15 17:34

Analyte	Units	Result	Duplicate Duplicate	RPD	Limit	Ref Samp	Batch
Corrosivity		0.0	0.0	0.0	10	L747923-01	WG769746
Reactive Sulf.(SW846 7.3.4.1)	mg/l	0.0	0.0	0.0	20	L747836-01	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	0.0	0.0	0.0	20	L747836-01	WG769790
Flashpoint	deg F	0.00	0.00	0.00	20	L748722-05	WG770370

Analyte	Units	Laboratory Control Sample Known Val Result	% Rec	Limit	Batch
Corrosivity		5.9	5.85	99.2	98.3-101.7 WG769746
Reactive Sulf.(SW846 7.3.4.1)	mg/l	100	85.0	85.0	70-130 WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	.1	0.105	105.	90-110 WG769790
Flashpoint	deg F	82	82.0	100.	96-104 WG770370

Analyte	Units	Laboratory Control Sample Duplicate Result Ref %Rec	Limit	RPD	Limit	Batch
Corrosivity		5.86 5.85 99.0	98.3-101.7	0.171	10	WG769746
Reactive Sulf.(SW846 7.3.4.1)	mg/l	85.0 85.0 85.0	70-130	0.0	20	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	0.0953 0.105 95.0	90-110	9.69	20	WG769790
Flashpoint	deg F	82.0 82.0 100.	96-104	0.00	7	WG770370

Batch number /Run number / Sample number cross reference

WG769746: R3019321: L747923-01
WG769788: R3019639: L747923-01
WG769790: R3019673: L747923-01
WG770370: R3020153: L747923-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

February 17, 2015

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

Date Received : February 10, 2015
Description :
Sample ID : 1502269-001B TANK #5
Collected By :
Collection Date : 02/05/15 15:00

ESC Sample # : L747923-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Corrosivity	Non-Corrosive			9040C	02/11/15	1
Flashpoint	See Footnote		deg F	D93/1010A	02/15/15	1
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/l	9012B/SW846 7	02/12/15	1
Reactive Sulf. (SW846 7.3.4.1)	BDL	25.	mg/l	9034/9030B	02/12/15	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/17/15 14:49 Printed: 02/17/15 14:49
L747923-01 (FLASHPOINT) - Did Not Flash @ 170 F

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1502269

Date Reported: 2/20/2015

CLIENT: Kinder Morgan

Client Sample ID: Tank #5

Project: Aqua Moss Water

Collection Date: 2/5/2015 10:15:00 AM

Lab ID: 1502269-001

Matrix: AQUEOUS

Received Date: 2/6/2015 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: MMD
Mercury	0.0013	0.00040		mg/L	1	2/13/2015 2:38:39 PM	17736
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: ELS
Arsenic	ND	0.20		mg/L	10	2/19/2015 1:22:28 PM	17765
Barium	0.32	0.10		mg/L	5	2/19/2015 1:19:18 PM	17765
Cadmium	ND	0.010		mg/L	5	2/19/2015 1:19:18 PM	17765
Chromium	3.1	0.030		mg/L	5	2/19/2015 1:19:18 PM	17765
Lead	ND	0.025		mg/L	5	2/19/2015 1:19:18 PM	17765
Selenium	ND	0.25		mg/L	5	2/19/2015 1:19:18 PM	17765
Silver	ND	0.025		mg/L	5	2/19/2015 1:19:18 PM	17765

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 3
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

New Reply | Delete Archive Junk | Keep Move to Category

Search email

Folders

Inbox

Junk

Drafts 40

Sent

Deleted

New folder

C-138


Knight, Tami (Tami_Knight@kindermorgan.com)

To: 'aguamosshiggins@hotmail.com' Cc: Spore...

Outlook.com Active View

AguaMoss C-138 021915.doc (85.2 KB) View online

Download as zip Add to OneDrive

Gary,

Attached is a C-138 for drilling fluids from the KM CO2 fields. I wasn't sure if you needed detailed C-138's for specific wells? I will forward the lab reports tomorrow once they come in. Please let me know if you need any changes to the C-138. I am leaving for vacation and will return March 2, but I am available to help get the paperwork you need.

Thank you,

Tami C. Knight, CHMM

X Description:
Description

Operations Project Manager

17801 Hwy 491, Cortez, CO 81321

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Rpt_1502269_Final_v1.pdf

**Knight, Tami** (Tami_Knight@kindermorgan.com)

To: aguamosghiggins@hotmail.com Cc: Stewar...

[Outlook.com Active View](#)

Loading...

[If it's taking too long, click here](#)[Download all as zip](#) [Add all to OneDrive](#)

Gary attached is the lab report for the water. Our drilling fluid is exempt; however, I believe you need documentation stating that. I am on vacation until March 1. I will work on that when I return.

Tami



**GET UP TO 10%
EXTRA AT
PARTICIPATING
RETAILERS.**

**CLICK FOR
DETAILS**

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Elkhorn Construction, 1700 North 1 st Street, Bloomfield, NM 87413
2. Originating Site: Western Refining - Star Lake Pipeline Station; NWNE Sec 19, T21N, R7W; Sandoval County
3. Location of Material (Street Address, City, State or ULSTR): Same as originating Site
4. Source and Description of Waste: Test water used to hydrotest new facility piping.
Estimated Volume <u>60</u> bbls Known Volume (to be entered by the operator at the end of the haul) <u>70</u> yd ³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <u>Chris Mackey</u> , representative or authorized agent for <u>Elkhorn Construction, Inc.</u> do hereby PRINT & SIGN NAME COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) ☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load ☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) ☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4) GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <u>Chris Mackey</u> , representative for <u>Elkhorn Construction, Inc.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: M&R Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss, LLC Permit # UICI-005 (Class I Non-Hazardous Well)

Address of Facility: 345 CR 350, San Juan County, Aztec NM, 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Garye Higgins

TITLE: Superintendent

DATE: 1/30/15

SIGNATURE: [Signature]

Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 505-486-9425



Analytical Report

Report Summary

Client: Western Refining Southwest, Inc.

Chain Of Custody Number: 16177

Samples Received: 1/30/2015 7:55:00AM

Job Number: 96012-0115

Work Order: P501081

Project Name/Location: Star Lake

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 2/3/15

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Test Water	P501081-01A	Aqueous	01/29/15	01/30/15	Poly 500mL
	P501081-01B	Aqueous	01/29/15	01/30/15	Poly 500mL; HNO3
	P501081-01C	Aqueous	01/29/15	01/30/15	Poly 500mL; NaOH

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laboratory@envirotech-inc.com



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Test Water
P501081-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Metals by 6010									
Arsenic	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Barium	0.09	0.05	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Cadmium	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Chromium	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Lead	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Selenium	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Silver	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Cation/Anion Analysis									
pH @7.3°C	7.51		pH Units	1	1505024	01/30/15 09:50	01/30/15 09:50	150.1/4500H	
Suspected Hazardous Waste									
Flash Point	>95		°C	1	1505027	01/30/15	01/30/15	ASTM D93-10a	
Reactivity	Negative		N/A	1	1505024	01/30/15	01/30/15		
Total Mercury by EPA 7470A									
Mercury	ND	0.0002	mg/L	1	1505028	01/30/15	02/02/15	EPA 7470A	

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Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Total Metals by 6010 - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1505025 - Metal Water/TCLP (EPA 1311) Digestion EPA 3015A

Blank (1505025-BLK1)

Prepared & Analyzed: 30-Jan-15

Arsenic	ND	0.01	mg/L
Barium	ND	0.05	"
Cadmium	ND	0.01	"
Chromium	ND	0.01	"
Lead	ND	0.01	"
Selenium	ND	0.01	"
Silver	ND	0.01	"

Duplicate (1505025-DUP1)

Source: P501081-01

Prepared & Analyzed: 30-Jan-15

Arsenic	ND	0.01	mg/L	ND				30
Barium	0.09	0.05	"	0.09			1.81	30
Cadmium	ND	0.01	"	ND				30
Chromium	ND	0.01	"	ND				30
Lead	ND	0.01	"	ND				30
Selenium	ND	0.01	"	ND				30
Silver	ND	0.01	"	ND				30

Matrix Spike (1505025-MS1)

Source: P501081-01

Prepared & Analyzed: 30-Jan-15

Arsenic	0.24		mg/L	0.250	0.003	96.1	75-125
Barium	5.72		"	5.00	0.08	113	75-125
Cadmium	0.25		"	0.250	0.0005	98.8	75-125
Chromium	0.51		"	0.500	0.002	101	75-125
Lead	0.49		"	0.500	-0.001	97.5	75-125
Selenium	0.09		"	0.100	ND	89.5	75-125
Silver	0.10		"	0.100	-0.0005	96.6	75-125

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Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Total Mercury by EPA 7470A - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505028 - Mercury Water/TCLP Digestion KMNO4										
Blank (1505028-BLK1)				Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	ND	0.0002	mg/L							
LCS (1505028-BS1)				Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229		98.6	80-120			
Matrix Spike (1505028-MS1)				Source: P501081-01 Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	97.7	75-125			
Matrix Spike Dup (1505028-MSD1)				Source: P501081-01 Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	98.1	75-125	0.383	15	

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Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Notes and Definitions

FP1 >95
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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CHAIN OF CUSTODY RECORD

16177

Client: WESTERN PERINING		Project Name / Location: STAR LAKE		ANALYSIS / PARAMETERS																													
Email results to: Kelly.RobinsonCuenr.com		Sampler Name: TERRY HOPKIN		Preservative		No./Volume of Containers		TPH (Method 8015)		BTEX (Method 8021)		VOC (Method 8260)		RCRA 8 Metals - Total		Cation / Anion		RCI		TCLP with H/P		CO Table 910-1		TPH (418.1)		CHLORIDE		lgm/fatality, Consistency		Sample Cool		Sample Intact	
Client Phone No.: (505) 632-4166		Client No.: 96012-0115		HNO ₃ HCl NaOH		1-500mL		X																									
Sample No./ Identification		Sample Date		Sample Time		Lab No.		No./Volume of Containers		HNO ₃ HCl NaOH		1-500mL		X																			
TEST WATER		1/29/15		17:00		P501081-01		1-500mL		X		1-500mL		X																			

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

* Enmar Oil & Gas USA Inc 6584 E MAIN ST FARMINGTON, NM 87402

2. Originating Site:

* Lybrook 0 01-2306-02H

3. Location of Material (Street Address, City, State or ULSTR):

* W/Lot 0 Sect. 01 T 23N R 06W

4. Source and Description of Waste:

* Storm water accumulation voided from E+P Completions
location. Lab analysis completed & attached.

Estimated Volume * 80 yd³/bbls Known Volume (to be entered by the operator at the end of the haul) 80 yd³/bbls

5. Tucker Smith GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Tucker Smith, representative or authorized agent for Enmar Oil & Gas USA Inc do hereby
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

* ☐ MSDS information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. Transporter:

* CND Oilfield Svc.

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss LLC Permit# UICI-005

Address of Facility: 345 CR 350, Aztec, NM 87410, San Juan County

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

TITLE: Operator

DATE: 2-15-15

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 334-6186

Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Rain Water Rinse from Location
Project Number: 11195-0087
Project Manager: Tucker Smith

Reported:
20-Feb-15 15:08

Notes and Definitions

H2 Sample was analyzed after regulatory hold-time exceeded for target analyte.
FPI >95
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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Encana Oil & Gas USA
 370 17th Street
 Denver CO, 80202

Project Name: Rain Water Rinse from Location
 Project Number: 11195-0087
 Project Manager: Tucker Smith

Reported:
 20-Feb-15 15:08

#1

P502065-01 (Water)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

Cation/Anion Analysis

pH @24.6°C	7.66		pH Units	1	1508035	02/19/15 13:57	02/19/15 14:16	150.1/4500H	H2
------------	------	--	----------	---	---------	----------------	----------------	-------------	----

Suspected Hazardous Waste

Flash Point	>95		°C	1	1508029	02/19/15	02/20/15	ASTM D93-10a	
Reactivity	Negative		N/A	1	1508029	02/19/15	02/20/15		

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Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Rain Water Rinse from Location
Project Number: 11195-0087
Project Manager: Tucker Smith

Reported:
20-Feb-15 15:08

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
#1	P502065-01A	Aqueous	02/13/15	02/18/15	Glass Mason Jar 16 oz

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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

* Coastal Chemical

2. Originating Site:

* 1130 Madison Lane, Farmington, NM. 87401

3. Location of Material (Street Address, City, State or ULSTR):

* Same

4. Source and Description of Waste: Wash out hoses & Totes - TEG, Gas/spec, Antifreeze

Estimated Volume * 1000 yd³/bbls Known Volume (to be entered by the operator at the end of the haul) yd³/bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, * Lee Hamm, representative or authorized agent for * Coastal Chemical do hereby
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

* ☒ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. Transporter:

* Key Energy

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss LLC Permit# UICI-005

Address of Facility: 345 CR 350, Aztec, NM 87410, San Juan County

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

TITLE: Operator

DATE: 03/01/15

SIGNATURE: _____
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 334-6186



Analytical Report

Report Summary

Client: Coastal Chemical
Chain Of Custody Number: 15334
Samples Received: 3/26/2013 11:08:00AM
Job Number: 95007-0025
Work Order: P303095
Project Name/Location: Coastal Chemical Plant

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 4/4/13

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Coastal Chemical
PO Box 820
Abbeville LA, 70511-0820

Project Name: Coastal Chemical Plant
Project Number: 95007-0025
Project Manager: Lee Hamm

Reported:
04-Apr-13 15:32

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Waste Water	P303095-01A	Aqueous	03/26/13	03/26/13	Amber, 1L
	P303095-01B	Aqueous	03/26/13	03/26/13	Amber, 1L
	P303095-01C	Aqueous	03/26/13	03/26/13	Amber, 1L
	P303095-01D	Aqueous	03/26/13	03/26/13	Poly, 500mL
	P303095-01E	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01F	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01G	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01H	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01I	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01J	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL

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Coastal Chemical	Project Name:	Coastal Chemical Plant	Reported:
PO Box 820	Project Number:	95007-0025	04-Apr-13 15:32
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	

Waste Water
P303095-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TCLP Volatile Organic Compounds by 8260									
Vinyl chloride	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
2-Butanone	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
1,1-Dichloroethene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Chloroform	ND	0.01	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Carbon Tetrachloride	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Benzene	0.04	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
1,2-Dichloroethane	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Trichloroethene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Tetrachloroethene	0.01	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Chlorobenzene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
1,4-Dichlorobenzene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Surrogate: Fluorobenzene		88.2 %		80-120	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Surrogate: 1,4-Difluorobenzene		85.9 %		80-120	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Surrogate: Bromochlorobenzene		90.7 %		80-120	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
TCLP Base Neutrals by 8270									
Pyridine	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
1,4-Dichlorobenzene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Hexachloroethane	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Nitrobenzene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Hexachlorobutadiene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
2,4-Dinitrotoluene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Hexachlorobenzene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Surrogate: 2-Fluorobiphenyl		64.6 %		10-120	1313034	28-Mar-13	29-Mar-13	EPA 8270D	

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Ph (970) 259-0615 Fx (800) 362-1879

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Coastal Chemical PO Box 820 Abbeville LA, 70511-0820	Project Name: Coastal Chemical Plant Project Number: 95007-0025 Project Manager: Lee Hamm	Reported: 04-Apr-13 15:32
--	---	------------------------------

Waste Water
P303095-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TCLP Phenols by 8270									
o-Cresol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
m,p-Cresols	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
2,4,6-Trichlorophenol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
2,4,5-Trichlorophenol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
Pentachlorophenol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
Surrogate: 2-Fluorophenol		4.23 %		20-120	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01, Surr2
Surrogate: 2,4,6-Tribromophenol		%		20-120	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01, Surr2
TCLP Metals									
Arsenic	0.17	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Barium	ND	0.50	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Cadmium	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Chromium	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Lead	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Mercury	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Selenium	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Silver	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Cation/Anion Analysis									
pH	9.22		pH Units	1	1313025	27-Mar-13	27-Mar-13	EPA 150.1	
Suspected Hazardous Waste									
Flash Point	>95		°C	1	1314012	01-Apr-13	01-Apr-13	ASTM D93-10a	

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Coastal Chemical	Project Name:	Coastal Chemical Plant	Reported:
PO Box 820	Project Number:	95007-0025	04-Apr-13 15:32
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	

TCLP Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1313027 - Purge and Trap EPA 5030A

Blank (1313027-BLK1)

Prepared & Analyzed: 28-Mar-13

Vinyl chloride	ND	0.005	mg/L							
2-Butanone	ND	0.005	"							
1,1-Dichloroethene	ND	0.005	"							
Chloroform	ND	0.01	"							
Carbon Tetrachloride	ND	0.005	"							
Benzene	ND	0.005	"							
1,2-Dichloroethane	ND	0.005	"							
Trichloroethene	ND	0.005	"							
Tetrachloroethene	ND	0.005	"							
Chlorobenzene	ND	0.005	"							
1,4-Dichlorobenzene	ND	0.005	"							
Surrogate: Fluorobenzene	51.5		ug/L	50.0		103	80-120			
Surrogate: 1,4-Difluorobenzene	48.4		"	50.0		96.8	80-120			
Surrogate: Bromochlorobenzene	55.5		"	50.0		111	80-120			

Duplicate (1313027-DUP1)

Source: P303095-01

Prepared & Analyzed: 28-Mar-13

Vinyl chloride	ND	0.005	mg/L		ND				30	
2-Butanone	ND	0.005	"		ND				30	
1,1-Dichloroethene	ND	0.005	"		ND				30	
Chloroform	ND	0.01	"		ND				30	
Carbon Tetrachloride	ND	0.005	"		ND				30	
Benzene	0.05	0.005	"		0.04			13.1	30	
1,2-Dichloroethane	ND	0.005	"		ND				30	
Trichloroethene	ND	0.005	"		ND				30	
Tetrachloroethene	0.01	0.005	"		0.01			0.417	30	
Chlorobenzene	ND	0.005	"		ND				30	
1,4-Dichlorobenzene	ND	0.005	"		ND				30	
Surrogate: Fluorobenzene	48.3		ug/L	50.0		96.6	80-120			
Surrogate: 1,4-Difluorobenzene	44.7		"	50.0		89.4	80-120			
Surrogate: Bromochlorobenzene	49.5		"	50.0		99.0	80-120			

Matrix Spike (1313027-MS1)

Source: P303095-01

Prepared & Analyzed: 28-Mar-13

Vinyl chloride	119		ug/L	100	ND	119	26-163			
2-Butanone	97.9		"	100	ND	97.9	43-143			
1,1-Dichloroethene	102		"	100	ND	102	47-132			
Chloroform	100		"	100	ND	100	49-133			
Carbon Tetrachloride	94.7		"	100	ND	94.7	43-143			

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Coastal Chemical PO Box 820 Abbeville LA, 70511-0820	Project Name: Coastal Chemical Plant Project Number: 95007-0025 Project Manager: Lee Hamm	Reported: 04-Apr-13 15:32
--	---	------------------------------

TCLP Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1313027 - Purge and Trap EPA 5030A

Matrix Spike (1313027-MS1)		Source: P303095-01		Prepared & Analyzed: 28-Mar-13						
Benzene	142		ug/L	100	40.2	102	39-150			
1,2-Dichloroethane	102		"	100	ND	102	51-147			
Trichloroethene	99.1		"	100	ND	99.1	35-146			
Tetrachloroethene	106		"	100	9.58	96.2	26-162			
Chlorobenzene	91.4		"	100	ND	91.4	38-150			
1,4-Dichlorobenzene	92.7		"	100	ND	92.7	42-143			
Surrogate: Fluorobenzene	47.7		"	50.0		95.5	80-120			
Surrogate: 1,4-Difluorobenzene	47.2		"	50.0		94.4	80-120			
Surrogate: Bromochlorobenzene	50.6		"	50.0		101	80-120			

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Coastal Chemical
PO Box 820
Abbeville LA, 70511-0820

Project Name: Coastal Chemical Plant
Project Number: 95007-0025
Project Manager: Lee Hamm

Reported:
04-Apr-13 15:32

TCLP Base Neutrals by 8270 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1313034 - Sep Funnel Liquid-Liquid Extraction EPA 3510C

Blank (1313034-BLK1)

Prepared: 28-Mar-13 Analyzed: 29-Mar-13

Pyridine	ND	0.01	mg/L							
1,4-Dichlorobenzene	ND	0.01	"							
Hexachloroethane	ND	0.01	"							
Nitrobenzene	ND	0.01	"							
Hexachlorobutadiene	ND	0.01	"							
2,4-Dinitrotoluene	ND	0.01	"							
Hexachlorobenzene	ND	0.01	"							
Surrogate: 2-Fluorobiphenyl	85.6		"	222		38.5	10-120			

Duplicate (1313034-DUP1)

Source: P303095-01

Prepared: 28-Mar-13 Analyzed: 29-Mar-13

Pyridine	ND	0.01	mg/L		ND				200	
1,4-Dichlorobenzene	ND	0.01	"		ND				200	
Hexachloroethane	ND	0.01	"		ND				200	
Nitrobenzene	ND	0.01	"		ND				200	
Hexachlorobutadiene	ND	0.01	"		ND				200	
2,4-Dinitrotoluene	ND	0.01	"		ND				200	
Hexachlorobenzene	ND	0.01	"		ND				200	
Surrogate: 2-Fluorobiphenyl	52.4		"	114		46.1	10-120			

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Coastal Chemical
PO Box 820
Abbeville LA, 70511-0820

Project Name: Coastal Chemical Plant
Project Number: 95007-0025
Project Manager: Lee Hamm

Reported:
04-Apr-13 15:32

TCLP Phenols by 8270 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1313035 - Sep Funnel Liquid-Liquid Extraction EPA 3510C

Blank (1313035-BLK1)

Prepared: 28-Mar-13 Analyzed: 29-Mar-13

o-Cresol	ND	0.01	mg/L							
m,p-Cresols	ND	0.01	"							
2,4,6-Trichlorophenol	ND	0.01	"							
2,4,5-Trichlorophenol	ND	0.01	"							
Pentachlorophenol	ND	0.01	"							
Surrogate: 2-Fluorophenol	46.6		"	100		46.6	20-120			
Surrogate: 2,4,6-Tribromophenol	81.5		"	100		81.5	20-120			

Duplicate (1313035-DUP1)

Source: P303095-01

Prepared: 28-Mar-13 Analyzed: 29-Mar-13

o-Cresol	ND	0.01	mg/L		ND			30		A-01
m,p-Cresols	ND	0.01	"		ND			30		A-01
2,4,6-Trichlorophenol	ND	0.01	"		ND			30		A-01
2,4,5-Trichlorophenol	ND	0.01	"		ND			30		A-01
Pentachlorophenol	ND	0.01	"		ND			30		A-01
Surrogate: 2-Fluorophenol	0.00		"	8.89			20-120			A-01, Surr2
Surrogate: 2,4,6-Tribromophenol	0.00		"	8.89			20-120			A-01, Surr2

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Coastal Chemical
PO Box 820
Abbeville LA, 70511-0820

Project Name: Coastal Chemical Plant
Project Number: 95007-0025
Project Manager: Lee Hamm

Reported:
04-Apr-13 15:32

TCLP Metals - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1313043 - Metal Water/TCLP Digestion EPA 3015A

Blank (1313043-BLK1)

Prepared: 29-Mar-13 Analyzed: 01-Apr-13

Arsenic	ND	0.01	mg/L
Barium	ND	0.05	"
Cadmium	ND	0.01	"
Chromium	ND	0.01	"
Lead	ND	0.01	"
Mercury	ND	0.01	"
Selenium	ND	0.01	"
Silver	ND	0.01	"

Duplicate (1313043-DUP1)

Source: P303095-01

Prepared: 29-Mar-13 Analyzed: 01-Apr-13

Arsenic	ND	0.01	mg/L	0.17	30
Barium	ND	0.05	"	ND	30
Cadmium	ND	0.01	"	ND	30
Chromium	ND	0.01	"	ND	30
Lead	ND	0.01	"	ND	30
Mercury	ND	0.01	"	ND	30
Selenium	0.01	0.01	"	ND	30
Silver	ND	0.01	"	ND	30

Matrix Spike (1313043-MS1)

Source: P303095-01

Prepared: 29-Mar-13 Analyzed: 01-Apr-13

Arsenic	33.0	1.00	mg/L	27.8	0.17	118	75-125
Barium	485	5.00	"	556	ND	87.3	75-125
Cadmium	27.4	1.00	"	27.8	ND	98.8	75-125
Chromium	48.5	1.00	"	55.6	ND	87.4	75-125
Lead	52.9	1.00	"	55.6	ND	95.2	75-125
Mercury	10.1	1.00	"	11.1	ND	90.8	75-125
Selenium	12.3	1.00	"	11.1	ND	111	75-125
Silver	10.7	1.00	"	11.1	ND	95.9	75-125

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Coastal Chemical
PO Box 820
Abbeville LA, 70511-0820

Project Name: Coastal Chemical Plant
Project Number: 95007-0025
Project Manager: Lee Hamm

Reported:
04-Apr-13 15:32

Notes and Definitions

Surr2 Surrogate recovery was below acceptable limits.
FP1 >95
A-01 Unable to concentrate sample to desired volume
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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Tax I.D. 62-0814289

Est. 1970

Lynn Berry
EnviroTech- NM
5796 US. Highway 64
Farmington, NM 87401

Report Summary

Thursday April 04, 2013

Report Number: L627434

Samples Received: 03/28/13

Client Project: 95007-0025

Description: Coastal Chemical Plant

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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Est. 1970

REPORT OF ANALYSIS

April 04, 2013

Lynn Berry
EnviroTech- NM
5796 US. Highway 64
Farmington, NM 87401

ESC Sample # : L627434-01

Date Received : March 28, 2013
Description : Coastal Chemical Plant
Sample ID : WASTE WATER-P303095-01

Site ID : 095-01

Collected By : L. Hamm
Collection Date : 03/26/13 09:30

Project # : 95007-0025

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/l	9012B	04/04/13	1
Reactive Sulf. (SW846 7.3.4.1)	BDL	25.	mg/l	9034/9030B	04/02/13	1
Methanol	140	4.0	mg/l	8015M	03/29/13	200
Ethanol	8.6	5.0	mg/l	8015M	03/29/13	50
Volatile Organics						
Acetone	BDL	5.0	mg/l	8260B	03/30/13	100
Acrolein	BDL	5.0	mg/l	8260B	03/30/13	100
Acrylonitrile	BDL	1.0	mg/l	8260B	03/30/13	100
Benzene	BDL	0.10	mg/l	8260B	03/30/13	100
Bromodichloromethane	BDL	0.10	mg/l	8260B	03/30/13	100
Bromoform	BDL	0.10	mg/l	8260B	03/30/13	100
Bromomethane	BDL	0.50	mg/l	8260B	03/30/13	100
Carbon disulfide	BDL	0.10	mg/l	8260B	03/30/13	100
Carbon tetrachloride	BDL	0.10	mg/l	8260B	03/30/13	100
Chlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
Chlorodibromomethane	BDL	0.10	mg/l	8260B	03/30/13	100
Chloroethane	BDL	0.50	mg/l	8260B	03/30/13	100
Chloroform	BDL	0.50	mg/l	8260B	03/30/13	100
Chloromethane	BDL	0.25	mg/l	8260B	03/30/13	100
1,2-Dibromoethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/l	8260B	03/30/13	100
Dibromomethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dichlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
1,3-Dichlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
1,4-Dichlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
Dichlorodifluoromethane	BDL	0.50	mg/l	8260B	03/30/13	100
1,1-Dichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,1-Dichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
cis-1,2-Dichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
trans-1,2-Dichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dichloropropane	BDL	0.10	mg/l	8260B	03/30/13	100
cis-1,3-Dichloropropene	BDL	0.10	mg/l	8260B	03/30/13	100
trans-1,3-Dichloropropene	BDL	0.10	mg/l	8260B	03/30/13	100
Ethylbenzene	1.7	0.10	mg/l	8260B	03/30/13	100
2-Hexanone	BDL	1.0	mg/l	8260B	03/30/13	100
Iodomethane	BDL	1.0	mg/l	8260B	03/30/13	100
2-Butanone (MEK)	BDL	1.0	mg/l	8260B	03/30/13	100
Methylene Chloride	BDL	0.50	mg/l	8260B	03/30/13	100
4-Methyl-2-pentanone (MIBK)	BDL	1.0	mg/l	8260B	03/30/13	100
Pentachloroethane	BDL	0.50	mg/l	8260B	03/30/13	100

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

Lynn Berry
EnviroTech- NM
5796 US. Highway 64
Farmington, NM 87401

April 04, 2013

Date Received : March 28, 2013
Description : Coastal Chemical Plant
Sample ID : WASTE WATER-P303095-01
Collected By : L. Hamm
Collection Date : 03/26/13 09:30

ESC Sample # : L627434-01

Site ID : 095-01

Project # : 95007-0025

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Styrene	BDL	0.10	mg/l	8260B	03/30/13	100
1,1,2,2-Tetrachloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,1,1,2-Tetrachloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
Tetrachloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
Toluene	2.3	0.50	mg/l	8260B	03/30/13	100
1,1,1-Trichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,1,2-Trichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
Trichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
Trichlorofluoromethane	BDL	0.50	mg/l	8260B	03/30/13	100
1,2,3-Trichloropropane	BDL	0.25	mg/l	8260B	03/30/13	100
Vinyl acetate	BDL	1.0	mg/l	8260B	03/30/13	100
Vinyl chloride	BDL	0.10	mg/l	8260B	03/30/13	100
Xylenes, Total	13.	0.30	mg/l	8260B	03/30/13	100
Acetonitrile	BDL	5.0	mg/l	8260B	03/30/13	100
Allyl chloride	BDL	0.50	mg/l	8260B	03/30/13	100
Chloroprene	BDL	5.0	mg/l	8260B	03/30/13	100
trans-1,4-Dichloro-2-butene	BDL	0.25	mg/l	8260B	03/30/13	100
Isobutanol	BDL	10.	mg/l	8260B	03/30/13	100
1,4-Dioxane	BDL	10.	mg/l	8260B	04/01/13	100
Methacrylonitrile	BDL	5.0	mg/l	8260B	03/30/13	100
Methyl methacrylate	BDL	0.50	mg/l	8260B	03/30/13	100
Ethyl methacrylate	BDL	0.50	mg/l	8260B	03/30/13	100
Propionitrile	BDL	5.0	mg/l	8260B	03/30/13	100
Surrogate Recovery						
Toluene-d8	96.8		% Rec.	8260B	03/30/13	100
Dibromofluoromethane	106.		% Rec.	8260B	03/30/13	100
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	03/30/13	100
4-Bromofluorobenzene	99.4		% Rec.	8260B	03/30/13	100
Volatile Organics						
2-propanol	6.3	2.5	mg/l	8260B	04/02/13	100
Surrogate Recovery						

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/04/13 15:32 Printed: 04/04/13 15:46

Page 3 of 12

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L627434-01	WG653691	SAMP	1,2-Dibromo-3-Chloropropane	R2600338	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAP. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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EnviroTech- NM
Lynn Berry
5796 US. Highway 64
Farmington, NM 87401

Quality Assurance Report
Level II

L627434

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

April 04, 2013

Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1,1-Trichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1,2-Trichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1-Dichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1-Dichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
1,2,3-Trichloropropane	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG653691	03/30/13 12:08
1,2-Dibromoethane	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dichlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dichloropropane	< .001	mg/l			WG653691	03/30/13 12:08
1,3-Dichlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
1,4-Dichlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
2-Butanone (MEK)	< .01	mg/l			WG653691	03/30/13 12:08
2-Hexanone	< .01	mg/l			WG653691	03/30/13 12:08
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG653691	03/30/13 12:08
Acetone	< .05	mg/l			WG653691	03/30/13 12:08
Acetonitrile	< .05	mg/l			WG653691	03/30/13 12:08
Acrolein	< .025	mg/l			WG653691	03/30/13 12:08
Acrylonitrile	< .01	mg/l			WG653691	03/30/13 12:08
Allyl chloride	< .005	mg/l			WG653691	03/30/13 12:08
Benzene	< .001	mg/l			WG653691	03/30/13 12:08
Bromodichloromethane	< .001	mg/l			WG653691	03/30/13 12:08
Bromoform	< .001	mg/l			WG653691	03/30/13 12:08
Bromomethane	< .005	mg/l			WG653691	03/30/13 12:08
Carbon disulfide	< .001	mg/l			WG653691	03/30/13 12:08
Carbon tetrachloride	< .001	mg/l			WG653691	03/30/13 12:08
Chlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
Chlorodibromomethane	< .001	mg/l			WG653691	03/30/13 12:08
Chloroethane	< .005	mg/l			WG653691	03/30/13 12:08
Chloroform	< .005	mg/l			WG653691	03/30/13 12:08
Chloromethane	< .0025	mg/l			WG653691	03/30/13 12:08
Chloroprene	< .05	mg/l			WG653691	03/30/13 12:08
cis-1,2-Dichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
cis-1,3-Dichloropropene	< .001	mg/l			WG653691	03/30/13 12:08
Dibromomethane	< .001	mg/l			WG653691	03/30/13 12:08
Dichlorodifluoromethane	< .005	mg/l			WG653691	03/30/13 12:08
Ethyl methacrylate	< .005	mg/l			WG653691	03/30/13 12:08
Ethylbenzene	< .001	mg/l			WG653691	03/30/13 12:08
Iodomethane	< .01	mg/l			WG653691	03/30/13 12:08
Isobutanol	< .1	mg/l			WG653691	03/30/13 12:08
Methacrylonitrile	< .05	mg/l			WG653691	03/30/13 12:08
Methyl methacrylate	< .005	mg/l			WG653691	03/30/13 12:08
Methylene Chloride	< .005	mg/l			WG653691	03/30/13 12:08
Pentachloroethane	< .005	mg/l			WG653691	03/30/13 12:08
Propionitrile	< .05	mg/l			WG653691	03/30/13 12:08
Styrene	< .001	mg/l			WG653691	03/30/13 12:08
Tetrachloroethene	< .001	mg/l			WG653691	03/30/13 12:08
Toluene	< .005	mg/l			WG653691	03/30/13 12:08
trans-1,2-Dichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
trans-1,3-Dichloropropene	< .001	mg/l			WG653691	03/30/13 12:08
trans-1,4-Dichloro-2-butene	< .0025	mg/l			WG653691	03/30/13 12:08
Trichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
Trichlorofluoromethane	< .005	mg/l			WG653691	03/30/13 12:08
Vinyl acetate	< .01	mg/l			WG653691	03/30/13 12:08
Vinyl chloride	< .001	mg/l			WG653691	03/30/13 12:08
Xylenes, Total	< .003	mg/l			WG653691	03/30/13 12:08
4-Bromofluorobenzene		% Rec.	98.44	82-120	WG653691	03/30/13 12:08

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
Dibromofluoromethane		% Rec.	97.22	82-126		03/30/13 12:08
Toluene-d8		% Rec.	93.24	92-112		03/30/13 12:08
a,a,a-Trifluorotoluene		% Rec.	100.3	90-116		03/30/13 12:08
Ethanol	< .1	mg/l			WG653575	03/29/13 10:45
Methanol	< .02	mg/l			WG653575	03/29/13 10:45
Reactive Sulf. (SW846 7.3.4.1)	< 25	mg/l			WG654165	04/02/13 15:26
Reactive CN (SW846 7.3.3.2)	< .125	mg/l			WG654167	04/04/13 13:19

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Reactive Sulf. (SW846 7.3.4.1)	mg/l	0	0	0	20	L627434-01	WG654165
Reactive CN (SW846 7.3.3.2)	mg/l	0	0	0	20	L627434-01	WG654167

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0257	103.	77-128	WG653691
1,1,1-Trichloroethane	mg/l	.025	0.0260	104.	71-126	WG653691
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0261	105.	78-130	WG653691
1,1,2-Trichloroethane	mg/l	.025	0.0246	98.2	81-121	WG653691
1,1-Dichloroethane	mg/l	.025	0.0232	92.9	73-123	WG653691
1,1-Dichloroethene	mg/l	.025	0.0268	107.	54-134	WG653691
1,2,3-Trichloropropane	mg/l	.025	0.0238	95.1	68-130	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0272	109.	55-142	WG653691
1,2-Dibromoethane	mg/l	.025	0.0261	104.	78-124	WG653691
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG653691
1,2-Dichloroethane	mg/l	.025	0.0242	96.8	69-128	WG653691
1,2-Dichloropropane	mg/l	.025	0.0229	91.7	77-121	WG653691
1,3-Dichlorobenzene	mg/l	.025	0.0250	99.9	77-127	WG653691
1,4-Dichlorobenzene	mg/l	.025	0.0239	95.5	79-117	WG653691
2-Butanone (MEK)	mg/l	.125	0.0891	71.3	58-144	WG653691
2-Hexanone	mg/l	.125	0.113	90.3	62-144	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.121	96.9	58-147	WG653691
Acetone	mg/l	.125	0.0785	62.8	49-153	WG653691
Acrolein	mg/l	.125	0.204	163.	10-181	WG653691
Acrylonitrile	mg/l	.125	0.128	102.	53-153	WG653691
Benzene	mg/l	.025	0.0242	96.6	72-119	WG653691
Bromodichloromethane	mg/l	.025	0.0242	96.8	75-127	WG653691
Bromoform	mg/l	.025	0.0264	106.	61-136	WG653691
Bromomethane	mg/l	.025	0.0360	144.	42-172	WG653691
Carbon disulfide	mg/l	.025	0.0252	101.	19-150	WG653691
Carbon tetrachloride	mg/l	.025	0.0272	109.	63-129	WG653691
Chlorobenzene	mg/l	.025	0.0248	99.3	78-123	WG653691
Chlorodibromomethane	mg/l	.025	0.0251	100.	73-128	WG653691
Chloroethane	mg/l	.025	0.0304	122.	52-164	WG653691
Chloroform	mg/l	.025	0.0253	101.	76-122	WG653691
Chloromethane	mg/l	.025	0.0230	92.0	50-141	WG653691
cis-1,2-Dichloroethene	mg/l	.025	0.0252	101.	75-121	WG653691
cis-1,3-Dichloropropane	mg/l	.025	0.0236	94.4	74-124	WG653691
Dibromomethane	mg/l	.025	0.0250	100.	77-124	WG653691
Dichlorodifluoromethane	mg/l	.025	0.0290	116.	33-173	WG653691
Ethylbenzene	mg/l	.025	0.0252	101.	77-124	WG653691

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Analyte	Units	Laboratory Known Val	Control Sample Result	% Rec	Limit	Batch
Iodomethane	mg/l	.125	0.129	103.	54-139	WG653691
Methylene Chloride	mg/l	.025	0.0228	91.3	67-122	WG653691
Styrene	mg/l	.025	0.0249	99.6	69-145	WG653691
Tetrachloroethene	mg/l	.025	0.0270	108.	69-131	WG653691
Toluene	mg/l	.025	0.0237	94.7	75-114	WG653691
trans-1,2-Dichloroethene	mg/l	.025	0.0247	98.9	63-127	WG653691
trans-1,3-Dichloropropene	mg/l	.025	0.0254	102.	69-124	WG653691
trans-1,4-Dichloro-2-butene	mg/l	.025	0.0243	97.0	58-137	WG653691
Trichloroethene	mg/l	.025	0.0252	101.	69-131	WG653691
Trichlorofluoromethane	mg/l	.025	0.0315	126.	53-161	WG653691
Vinyl acetate	mg/l	.125	0.115	92.4	47-161	WG653691
Vinyl chloride	mg/l	.025	0.0255	102.	55-142	WG653691
Xylenes, Total	mg/l	.075	0.0757	101.	77-123	WG653691
4-Bromofluorobenzene				98.69	82-120	WG653691
Dibromofluoromethane				103.3	82-126	WG653691
Toluene-d8				97.76	92-112	WG653691
a,a,a-Trifluorotoluene				103.6	90-116	WG653691
Ethanol	mg/l	.5	0.494	98.7	70-130	WG653575
Methanol	mg/l	.5	0.455	90.9	70-130	WG653575
Reactive Sulf. (SW846 7.3.4.1)	mg/l	100	95.0	95.0	70-130	WG654165

Analyte	Units	Laboratory Result	Control Ref	Sample %Rec	Duplicate	Limit	RPD	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0263	0.0257	105.		77-128	2.52	20	WG653691
1,1,1-Trichloroethane	mg/l	0.0235	0.0260	94.0		71-126	10.3	20	WG653691
1,1,2,2-Tetrachloroethane	mg/l	0.0260	0.0261	104.		78-130	0.540	20	WG653691
1,1,2-Trichloroethane	mg/l	0.0248	0.0246	99.0		81-121	0.840	20	WG653691
1,1-Dichloroethane	mg/l	0.0238	0.0232	95.0		73-123	2.29	20	WG653691
1,1-Dichloroethene	mg/l	0.0273	0.0268	109.		54-134	1.85	20	WG653691
1,2,3-Trichloropropane	mg/l	0.0232	0.0238	93.0		68-130	2.56	20	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0.0272	104.		55-142	5.03	20	WG653691
1,2-Dibromoethane	mg/l	0.0256	0.0261	102.		78-124	1.61	20	WG653691
1,2-Dichlorobenzene	mg/l	0.0244	0.0245	98.0		82-121	0.310	20	WG653691
1,2-Dichloroethane	mg/l	0.0221	0.0242	88.0		69-128	9.01	20	WG653691
1,2-Dichloropropane	mg/l	0.0231	0.0229	92.0		77-121	0.570	20	WG653691
1,3-Dichlorobenzene	mg/l	0.0255	0.0250	102.		77-127	2.12	20	WG653691
1,4-Dichlorobenzene	mg/l	0.0235	0.0239	94.0		79-117	1.74	20	WG653691
2-Butanone (MEK)	mg/l	0.0827	0.0891	66.0		58-144	7.43	20	WG653691
2-Hexanone	mg/l	0.115	0.113	92.0		62-144	1.77	20	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	0.121	0.121	97.0		58-147	0.210	20	WG653691
Acetone	mg/l	0.0750	0.0785	60.0		49-153	4.53	21	WG653691
Acrolein	mg/l	0.195	0.204	156.		10-181	4.04	30	WG653691
Acrylonitrile	mg/l	0.124	0.128	99.0		53-153	3.11	20	WG653691
Benzene	mg/l	0.0229	0.0242	91.0		72-119	5.51	20	WG653691
Bromodichloromethane	mg/l	0.0247	0.0242	99.0		75-127	2.07	20	WG653691
Bromoform	mg/l	0.0257	0.0264	103.		61-136	2.88	20	WG653691
Bromomethane	mg/l	0.0358	0.0360	143.		42-172	0.650	20	WG653691
Carbon disulfide	mg/l	0.0252	0.0252	101.		19-150	0.120	20	WG653691
Carbon tetrachloride	mg/l	0.0246	0.0272	98.0		63-129	10.1	20	WG653691
Chlorobenzene	mg/l	0.0254	0.0248	101.		78-123	2.18	20	WG653691
Chlorodibromomethane	mg/l	0.0257	0.0251	103.		73-128	2.54	20	WG653691
Chloroethane	mg/l	0.0323	0.0304	129.		52-164	6.01	20	WG653691
Chloroform	mg/l	0.0235	0.0253	94.0		76-122	7.24	20	WG653691
Chloromethane	mg/l	0.0254	0.0230	102.		50-141	10.0	20	WG653691

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Analyte	Units	Laboratory Result	Control Ref	Sample %Rec	Duplicate	Limit	RPD	Limit	Batch
cis-1,2-Dichloroethene	mg/l	0.0240	0.0252	96.0		75-121	5.17	20	WG653691
cis-1,3-Dichloropropene	mg/l	0.0237	0.0236	95.0		74-124	0.550	20	WG653691
Dibromomethane	mg/l	0.0242	0.0250	97.0		77-124	3.15	20	WG653691
Dichlorodifluoromethane	mg/l	0.0315	0.0290	126.		33-173	8.15	20	WG653691
Ethylbenzene	mg/l	0.0253	0.0252	101.		77-124	0.190	20	WG653691
Iodomethane	mg/l	0.129	0.129	103.		54-139	0.110	20	WG653691
Methylene Chloride	mg/l	0.0235	0.0228	94.0		67-122	2.68	20	WG653691
Styrene	mg/l	0.0253	0.0249	101.		69-145	1.69	20	WG653691
Tetrachloroethene	mg/l	0.0273	0.0270	109.		69-131	1.11	20	WG653691
Toluene	mg/l	0.0237	0.0237	95.0		75-114	0.0100	20	WG653691
trans-1,2-Dichloroethene	mg/l	0.0246	0.0247	98.0		63-127	0.540	20	WG653691
trans-1,3-Dichloropropene	mg/l	0.0247	0.0254	99.0		69-124	3.07	20	WG653691
trans-1,4-Dichloro-2-butene	mg/l	0.0219	0.0243	88.0		58-137	10.1	20	WG653691
Trichloroethene	mg/l	0.0249	0.0252	100.		69-131	1.23	20	WG653691
Trichlorofluoromethane	mg/l	0.0323	0.0315	129.		53-161	2.72	20	WG653691
Vinyl acetate	mg/l	0.103	0.115	82.0		47-161	11.2	20	WG653691
Vinyl chloride	mg/l	0.0287	0.0255	115.		55-142	11.7	20	WG653691
Xylenes, Total	mg/l	0.0760	0.0757	101.		77-123	0.480	20	WG653691
4-Bromofluorobenzene				99.41		82-120			WG653691
Dibromofluoromethane				97.20		82-126			WG653691
Toluene-d8				98.91		92-112			WG653691
a,a,a-Trifluorotoluene				103.1		90-116			WG653691
Ethanol	mg/l	0.499	0.494	100.		70-130	0.970	20	WG653575
Methanol	mg/l	0.456	0.455	91.0		70-130	0.320	20	WG653575
Reactive Sulf. (SW846 7.3.4.1)	mg/l	110.	95.0	110.		70-130	14.6	20	WG654165

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/l	2.48	0	.025	99.1	71-130	L627434-01	WG653691
1,1,1-Trichloroethane	mg/l	2.39	0	.025	95.5	58-137	L627434-01	WG653691
1,1,2,2-Tetrachloroethane	mg/l	2.17	0	.025	86.7	64-149	L627434-01	WG653691
1,1,2-Trichloroethane	mg/l	2.21	0	.025	88.3	73-128	L627434-01	WG653691
1,1-Dichloroethane	mg/l	2.33	0	.025	93.3	58-133	L627434-01	WG653691
1,1-Dichloroethene	mg/l	2.67	0	.025	107.	32-152	L627434-01	WG653691
1,2,3-Trichloropropane	mg/l	2.02	0	.025	80.6	74-137	L627434-01	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	2.15	0	.025	86.0	55-148	L627434-01	WG653691
1,2-Dibromoethane	mg/l	2.30	0	.025	92.0	71-129	L627434-01	WG653691
1,2-Dichlorobenzene	mg/l	2.35	0	.025	94.2	75-125	L627434-01	WG653691
1,2-Dichloroethane	mg/l	1.94	0	.025	77.5	59-135	L627434-01	WG653691
1,2-Dichloropropane	mg/l	2.11	0	.025	84.5	68-126	L627434-01	WG653691
1,3-Dichlorobenzene	mg/l	2.53	0	.025	101.	69-131	L627434-01	WG653691
1,4-Dichlorobenzene	mg/l	2.33	0	.025	93.2	70-123	L627434-01	WG653691
2-Butanone (MEK)	mg/l	9.02	0	.125	72.2	51-149	L627434-01	WG653691
2-Hexanone	mg/l	11.8	0	.125	94.4	58-148	L627434-01	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	10.6	0	.125	84.6	53-154	L627434-01	WG653691
Acetone	mg/l	8.80	0.335	.125	67.7	34-146	L627434-01	WG653691
Acrolein	mg/l	13.4	0	.125	107.	10-189	L627434-01	WG653691
Acrylonitrile	mg/l	9.56	0	.125	76.4	49-162	L627434-01	WG653691
Benzene	mg/l	2.23	0.0402	.025	87.6	51-134	L627434-01	WG653691
Bromodichloromethane	mg/l	2.13	0	.025	85.2	67-132	L627434-01	WG653691
Bromoform	mg/l	2.26	0	.025	90.4	59-137	L627434-01	WG653691
Bromomethane	mg/l	3.70	0	.025	148.	23-177	L627434-01	WG653691
Carbon disulfide	mg/l	2.75	0	.025	110.	10-165	L627434-01	WG653691
Carbon tetrachloride	mg/l	2.48	0	.025	99.2	49-140	L627434-01	WG653691

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II

L627434

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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

April 04, 2013

Analyte	Units	MS Res	Matrix Spike			% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
Chlorobenzene	mg/l	2.50	0	.025		99.9	69-126	L627434-01	WG653691
Chlorodibromomethane	mg/l	2.32	0	.025		92.7	68-130	L627434-01	WG653691
Chloroethane	mg/l	3.07	0	.025		123.	32-177	L627434-01	WG653691
Chloroform	mg/l	2.26	0.0130	.025		90.1	64-130	L627434-01	WG653691
Chloromethane	mg/l	2.52	0	.025		101.	27-155	L627434-01	WG653691
cis-1,2-Dichloroethene	mg/l	2.25	0	.025		89.8	54-137	L627434-01	WG653691
cis-1,3-Dichloropropene	mg/l	2.16	0	.025		86.3	63-127	L627434-01	WG653691
Dibromomethane	mg/l	2.09	0	.025		83.6	68-131	L627434-01	WG653691
Dichlorodifluoromethane	mg/l	3.36	0	.025		134.	16-188	L627434-01	WG653691
Ethylbenzene	mg/l	4.51	1.66	.025		114.	64-135	L627434-01	WG653691
Iodomethane	mg/l	10.9	0	.125		86.9	38-149	L627434-01	WG653691
Methylene Chloride	mg/l	2.17	0.102	.025		82.6	52-130	L627434-01	WG653691
Styrene	mg/l	2.69	0	.025		108.	58-152	L627434-01	WG653691
Tetrachloroethene	mg/l	2.68	0	.025		107.	56-139	L627434-01	WG653691
Toluene	mg/l	4.93	2.33	.025		104.	61-126	L627434-01	WG653691
trans-1,2-Dichloroethene	mg/l	2.42	0	.025		96.9	45-137	L627434-01	WG653691
trans-1,3-Dichloropropene	mg/l	2.17	0	.025		86.8	59-130	L627434-01	WG653691
trans-1,4-Dichloro-2-butene	mg/l	1.92	0	.025		76.7	51-145	L627434-01	WG653691
Trichloroethene	mg/l	2.34	0	.025		93.4	40-155	L627434-01	WG653691
Trichlorofluoromethane	mg/l	3.35	0	.025		134.	35-177	L627434-01	WG653691
Vinyl acetate	mg/l	10.3	0	.125		82.5	36-186	L627434-01	WG653691
Vinyl chloride	mg/l	2.87	0	.025		115.	32-159	L627434-01	WG653691
Xylenes, Total	mg/l	21.8	12.7	.075		122.	64-133	L627434-01	WG653691
4-Bromofluorobenzene						100.6	82-120		WG653691
Dibromofluoromethane						94.49	82-126		WG653691
Toluene-d8						97.19	92-112		WG653691
a,a,a-Trifluorotoluene						102.6	90-116		WG653691
Ethanol	mg/l	0.560	0.0434	.5		103.	70-130	L626347-05	WG653575
Methanol	mg/l	0.499	0	.5		99.7	70-130	L626347-05	WG653575

Analyte	Units	MSD	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec						
1,1,1,2-Tetrachloroethane	mg/l	2.64	2.48	105.		71-130	6.23	20	L627434-01	WG653691
1,1,1-Trichloroethane	mg/l	2.40	2.39	95.8		58-137	0.340	20	L627434-01	WG653691
1,1,2,2-Tetrachloroethane	mg/l	2.49	2.17	99.8		64-149	14.0	20	L627434-01	WG653691
1,1,2-Trichloroethane	mg/l	2.49	2.21	99.6		73-128	12.0	20	L627434-01	WG653691
1,1-Dichloroethane	mg/l	2.28	2.33	91.2		58-133	2.33	20	L627434-01	WG653691
1,1-Dichloroethene	mg/l	2.83	2.67	113.		32-152	5.65	20	L627434-01	WG653691
1,2,3-Trichloropropane	mg/l	2.29	2.02	91.5		74-137	12.7	20	L627434-01	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	2.71	2.15	108.		55-148	23.0*	22	L627434-01	WG653691
1,2-Dibromoethane	mg/l	2.52	2.30	101.		71-129	9.13	20	L627434-01	WG653691
1,2-Dichlorobenzene	mg/l	2.51	2.35	100.		75-125	6.49	20	L627434-01	WG653691
1,2-Dichloroethane	mg/l	2.20	1.94	87.9		59-135	12.7	20	L627434-01	WG653691
1,2-Dichloropropene	mg/l	2.29	2.11	91.7		68-126	8.17	20	L627434-01	WG653691
1,3-Dichlorobenzene	mg/l	2.61	2.53	104.		69-131	3.01	20	L627434-01	WG653691
1,4-Dichlorobenzene	mg/l	2.46	2.33	98.5		70-123	5.55	20	L627434-01	WG653691
2-Butanone (MEK)	mg/l	11.1	9.02	88.8		51-149	20.7	22	L627434-01	WG653691
2-Hexanone	mg/l	13.3	11.8	106.		58-148	12.1	24	L627434-01	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	12.7	10.6	101.		53-154	17.9	21	L627434-01	WG653691
Acetone	mg/l	9.46	8.80	73.0		34-146	7.21	22	L627434-01	WG653691
Acrolein	mg/l	14.1	13.4	113.		10-189	4.89	30	L627434-01	WG653691
Acrylonitrile	mg/l	11.1	9.56	88.7		49-162	14.8	20	L627434-01	WG653691
Benzene	mg/l	2.32	2.23	91.3		51-134	4.07	20	L627434-01	WG653691
Bromodichloromethane	mg/l	2.34	2.13	93.7		67-132	9.47	20	L627434-01	WG653691
Bromoform	mg/l	2.53	2.26	101.		59-137	11.4	20	L627434-01	WG653691
Bromomethane	mg/l	3.68	3.70	147.		23-177	0.420	21	L627434-01	WG653691

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Carbon disulfide	mg/l	2.90	2.75	116.	10-165	5.20	22	L627434-01	WG653691
Carbon tetrachloride	mg/l	2.51	2.48	100.	49-140	1.29	20	L627434-01	WG653691
Chlorobenzene	mg/l	2.56	2.50	102.	69-126	2.28	20	L627434-01	WG653691
Chlorodibromomethane	mg/l	2.55	2.32	102.	68-130	9.56	20	L627434-01	WG653691
Chloroethane	mg/l	3.15	3.07	126.	32-177	2.46	21	L627434-01	WG653691
Chloroform	mg/l	2.39	2.26	95.0	64-130	5.33	20	L627434-01	WG653691
Chloromethane	mg/l	2.62	2.52	105.	27-155	3.96	20	L627434-01	WG653691
cis-1,2-Dichloroethene	mg/l	2.42	2.25	97.0	54-137	7.66	20	L627434-01	WG653691
cis-1,3-Dichloropropene	mg/l	2.38	2.16	95.1	63-127	9.72	20	L627434-01	WG653691
Dibromomethane	mg/l	2.41	2.09	96.5	68-131	14.3	20	L627434-01	WG653691
Dichlorodifluoromethane	mg/l	3.09	3.36	124.	16-188	8.40	22	L627434-01	WG653691
Ethylbenzene	mg/l	4.50	4.51	113.	64-135	0.220	20	L627434-01	WG653691
Iodomethane	mg/l	11.5	10.9	92.1	38-149	5.79	20	L627434-01	WG653691
Methylene Chloride	mg/l	2.26	2.17	96.2	52-130	4.07	20	L627434-01	WG653691
Styrene	mg/l	2.75	2.69	110.	58-152	2.24	20	L627434-01	WG653691
Tetrachloroethene	mg/l	2.65	2.68	106.	56-139	1.14	20	L627434-01	WG653691
Toluene	mg/l	5.07	4.93	110.	61-126	2.76	20	L627434-01	WG653691
trans-1,2-Dichloroethene	mg/l	2.38	2.42	95.1	45-137	1.87	20	L627434-01	WG653691
trans-1,3-Dichloropropene	mg/l	2.48	2.17	99.1	59-130	13.2	20	L627434-01	WG653691
trans-1,4-Dichloro-2-butene	mg/l	2.19	1.92	87.6	51-145	13.3	24	L627434-01	WG653691
Trichloroethene	mg/l	2.44	2.34	97.6	40-155	4.42	20	L627434-01	WG653691
Trichlorofluoromethane	mg/l	3.41	3.35	136.	35-177	1.60	23	L627434-01	WG653691
Vinyl acetate	mg/l	12.0	10.3	95.9	36-186	15.0	20	L627434-01	WG653691
Vinyl chloride	mg/l	2.79	2.87	111.	32-159	2.78	21	L627434-01	WG653691
Xylenes, Total	mg/l	21.7	21.8	120.	64-133	0.870	20	L627434-01	WG653691
4-Bromofluorobenzene				99.04	82-120				WG653691
Dibromofluoromethane				96.03	82-126				WG653691
Toluene-d8				99.44	92-112				WG653691
a,a,a-Trifluorotoluene				104.2	90-116				WG653691
Ethanol	mg/l	0.489	0.560	89.1	70-130	13.6	20	L626347-05	WG653575
Methanol	mg/l	0.393	0.499	78.5	70-130	23.8*	20	L626347-05	WG653575

Batch number / Run number / Sample number cross reference

WG653691: R2600338: L627434-01
WG653575: R2600458: L627434-01
WG654005: R2600763: L627434-01
WG654165: R2601920: L627434-01
WG654152: R2602197: L627434-01
WG654167: R2603757: L627434-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Project Description: Coastal Chemical Plant		Report to: Lynn Berry		Email: lberry@cmviredri.com		City/State Collected	
Phone:	Client Project #: 95007-0005	ESC Key:		Important in water (V9260A99) Methanol in water (MEETAC) Reactive sulfide Reactive cyanide			
FAX:	Site Facility ID #: 203045-01	PO #: 21477					
Collected by: L. Hamm							
Collected by (signature):	Rush? (Lab MUST Be Notified) ☐ Same Day 200% ☐ Next Day 100% ☐ Two Day 50%		Date Results Needed: Email? ☐ No ☐ Yes FAX? ☐ No ☐ Yes		No of Cnts		
Immediately Packed on Ice ☒ X							
Sample ID	Comp Grab	Matrix*	Depth	Date	Time	5 X X X X 167434-01	
Wastewater - P303045-01		OT		3-26-13	9:30		



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Phone: (615) 758-5858
Fax: (615) 758-5859

CoCode (lab use only)

Template: Prelogn

Shipped Via:

Remarks: Contaminant Sample # (lab only)

1/2 Gpx: SS - Soil Solid GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other **aqueous** pH Temp

Remarks

343555128453

Relinquished by (Signature): Chunam Joe	Date: 3/27/13	Time: 13:57	Received by (Signature):	Samples returned via ☐ UPS ☒ FedEx ☐ Courier	Condition: (lab use only) R
Relinquished by (Signature):	Date:	Time:	Received by (Signature):	Temp: 2.4°C Bottles Received: 5	
Relinquished by (Signature):	Date:	Time:	Received for lab by (Signature): John W. Green	Date: 3/28/13 Time: 0900	pH Checked: X HICF:



NON-CONFORMANCE FORM

Login No.: 627434 M

Date: 3/22/13

Evaluated by: Matt S

Client: ENVIRONMENT

Non-Conformance (check applicable items)

- | | |
|---|---|
| ☐ Parameter(s) past holding time | ☐ Login Clarification Needed |
| ☐ Improper temperature | ☐ Chain of custody is incomplete |
| ☒ Improper container type | ☐ Chain of Custody is missing (see below) |
| ☐ Improper preservation | ☐ Broken container(s) (See below) |
| ☐ Container lid not intact | ☐ Broken container: sufficient sample
volume remains for analysis requested (See below) |

If no COC: Received by _____
Date: _____ Time: _____
Temp: _____ Cont. Rec. _____ pH: _____
☐ Fedex ☐ UPS ☐ SWA ☐ Other _____
Tracking # _____

- ☐ Insufficient packing material around container
- ☐ Insufficient packing material inside cooler
- ☐ Improper handling by carrier (FedEx / UPS / Courier)
- ☐ Sample was frozen

Comments: Reactive cyanide, Reactive Sulfide required in plastic.

Login Instructions: UB

TSR Initials: TK

Client informed by call / email / fax / voice mail date: 3/29 time: 12:00

Client contact: Qualify + proceed w/ improper containers

Material Safety Data Sheet

Triethylene Glycol



1. Product and company identification

Common name : Triethylene Glycol
Supplier : Coastal Chemical Company, LLC
 3520 Veterans Memorial Drive
 Abbeville, LA 70510
 website: www.coastalchem.com
 Non-Emergency Phone Number: 800-535-3862 (8:00AM - 5:00PM CST, Monday - Friday)
Synonym : 2,2' - [ETHANEDIYLBIS(OXY)] BIS-ETHANOL
Trade name : TEG, INDUSTRIAL GRADE
Material uses : Dehydration of natural gas.
Manufacturer : Coastal Chemical Company, LLC
 3520 Veterans Memorial Drive
 Abbeville, LA 70510
 24 HOUR EMERGENCY PHONE: CHEMTREC 1-800-424-9300
Code : 93101
MSDS # : GHS000040
Validation date : 11/8/2006.
Print date : 11/8/2006.
Responsible name : Scott Norton
In case of emergency : IN CASE OF EMERGENCY CALL CHEMTREC (24 HOURS) 800-424-9300

2. Hazards identification

Physical state : Colorless, viscous liquid.
Odor : slight to no odor.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview : Warning!
 HARMFUL IF SWALLOWED. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LIVER, SKIN, EYE, LENS OR CORNEA.
 May cause irritation by all routes of exposure. May cause symptoms of nervous system depression, kidney and liver damage.
Routes of entry : Eye contact. Skin contact. Ingestion. Inhalation.
Potential acute health effects
Eyes : Causes mild to moderate irritation, and transient corneal injury.
Skin : May be absorbed through skin, although not expected to produce toxicity by this route. Brief contact is not irritating.
Inhalation : Exposure to vapor at room temperature is minimal due to low volatility. Vapors or mist, in unusually high concentrations generated from spraying, heating the material, or from exposure in poorly ventilated areas or confined spaces may cause irritation of the nose and throat, headache, nausea, and drowsiness.
Ingestion : Swallowing small amounts incidental to normal handling operations are not likely to cause injury. Swallowing larger amounts may produce symptoms of central nervous system depression including headache, dizziness, nausea, euphoria, loss of equilibrium, drowsiness, visual disturbances, fatigue, unconsciousness and respiratory arrest. May cause abdominal discomfort or diarrhea.

11/8/2006.

GHS000040

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Powered by



Triethylene Glycol**2. Hazards identification**

- Potential chronic health effects** : **CARCINOGENIC EFFECTS** No components at or above 0.1% are listed by IARC, OSHA, NTP or ACGIH as a carcinogen.
MUTAGENIC EFFECTS Refer to Section 11.
TERATOGENIC EFFECTS Refer to Section 11.
 No adverse chronic human health effects have been reported for Triethylene glycol, Diethylene glycol, and Tetraethylene glycol. Repeated or prolonged exposure to Ethylene glycol may result in kidney damage. May produce nervous system depression symptoms including headache, dizziness, nausea, euphoria, loss of equilibrium, drowsiness, visual disturbances, fatigue, unconsciousness, and respiratory arrest.
- Medical conditions aggravated by over-exposure** : Repeated or prolonged exposure to the substance can produce target organs damage. Any pre-existing disorders or diseases of the skin, liver, and/or kidney can be aggravated by exposure to this material.
- Over-exposure signs/symptoms** : Signs and symptoms of overexposure to this material or its components through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system effects (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), pain in abdomen or lower back, acute kidney failure (sudden slowing or stopping of urine production).

See toxicological information (section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Triethylene glycol	112-27-6	>95
Diethylene glycol	111-46-6	<= 5
Tetraethylene glycol	112-60-7	<= 2
Ethylene glycol	107-21-1	<= 1

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation occurs.
- Skin contact** : Remove contaminated clothing and shoes. Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Get medical attention if symptoms appear.
- Ingestion** : GET MEDICAL ATTENTION. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. (If available, give several glasses of milk.) If vomiting occurs spontaneously, keep airway clear and give more water.
- Protection of first-aiders** : Take proper precautions to ensure your own safety before attempting to rescue and provide first aid.
- Notes to physician** : No detoxification information is available. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

Triethylene Glycol**5 . Fire-fighting measures**

Flammability of the product : May be combustible at high temperature.

Products of combustion : These products are carbon oxides (CO, CO₂). Generates toxic and/or irritating gases in a fire.

Extinguishing media

Suitable : Use water spray, fog, or foam. Do not use water jet or direct stream. For small fires, use dry chemicals, CO₂, water spray or alcohol-resistant foam.

Not suitable : Do not direct a solid stream of water or foam into hot, burning pools. This may cause frothing and increase fire intensity. Water spray may be used to flush spills away from exposures and to dilute spills to noncombustible mixtures.

Special exposure hazards : No specific hazard.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Airborne mists from this substance are a moderate fire and explosion hazard. Fine sprays/mists may be combustible at temperatures below normal flashpoint. Avoid sparks, heat, and open flame. Vapors can travel to a source of ignition and flash back. Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from area and let fire burn.

Special remarks on explosion hazards : **WARNING:** Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published as "autoignition" or "ignition" temperatures. Ignition temperatures decrease with vapor volume and vapor/air contact time, and are influenced by pressure changes. Ignition may occur at typical elevated temperature-process conditions.

6 . Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

7 . Handling and storage

Handling : Wash thoroughly after handling. Avoid breathing vapors, spray or mists. Avoid contact with eyes, skin and clothing. Do not eat, drink, or smoke in areas where this material is used. Do not enter storage area unless it is properly ventilated. Metal containers involved in the transfer of these materials should be grounded and bonded. Use only with adequate ventilation.

Storage : Keep container tightly closed and properly labeled. Keep container in a cool, well-ventilated area away from incompatibles and sources of ignition.

Triethylene Glycol**8 . Exposure controls/personal protection****Product name**

Diethylene glycol

Exposure limits

AIHA WEEL (United States, 1/2006).

TWA: 10 mg/m³ 8 hour/hours.**Engineering measures**

- : No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protection**Eyes**

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Wear chemical safety goggles plus full face shield to protect against splashing when appropriate (ANSI Z87.1).

Skin

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory

- : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Suggested material for gloves: neoprene.

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

Physical state	: Colorless, viscous liquid.
Flash point	: 157 °C (315 °F) Pensky-Martins Closed Cup.
Auto-ignition temperature	: 375°C (707 °F).
Flammable limits	: Lower:0.9% Upper: 9.2%
Color	: Colorless.
Odor	: slight to no odor.
Molecular weight	: 150.2 (Triethylene glycol)
Molecular formula	: HOCH ₂ CH ₂ OCH ₂ CH ₂ OCH ₂ CH ₂ OH
pH	: Neutral.
Boiling/condensation point	: 281°C (538 °F)
Melting/freezing point	: May start to solidify at - 7°C (19 °F).
Critical temperature	: The lowest known value is 407.9°C (766.2°F) (2,2'-oxybisethanol).
Relative density	: 1.12 (Water = 1)
Vapor pressure	: > 0.01 mm Hg @ 20 °C.
Vapor density	: 5.2 AIR = 1
Evaporation rate	: The highest known value is <0.01 (2,2'-oxybisethanol) Weighted average: 0 compared with Butyl acetate.
Viscosity	: 48.2 mPa
Dispersibility properties	: See solubility in water, methanol, diethyl ether.
Solubility	: Easily soluble in hot water, methanol. Soluble in cold water. Insoluble in oil, fat, and hydrocarbons. Slightly soluble in ether.

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Triethylene Glycol**9 . Physical and chemical properties**

Physical/chemical properties comments : Bulk density 1.250 lbs/ft³.

10 . Stability and reactivity

- Stability and reactivity** : The product is stable.
- Conditions of instability** : Decomposes with heat. If fluid is heated above the temperature of the onset of initial decomposition (206 C), thermal degradation may result in the formation of volatile organic compounds such as aldehydes including formaldehyde and acetaldehyde, dioxolanes, glycol ethers including ethylene glycol monomethyl ether, and other potentially harmful decomposition products.
- Incompatibility with various substances** : Slightly reactive or incompatible with the following materials: oxidizing materials. Avoid contact with oxidizing agents, strong acids, strong bases, alkalis.
- Hazardous decomposition products** : May form: acetaldehyde, alcohols, aldehydes, carbon dioxide and carbon monoxide, dioxolanes, ethers, ethylene glycol monomethyl ether, formaldehyde.
- Hazardous polymerization** : Will not occur.
- Conditions of reactivity** : Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

11 . Toxicological information**Toxicity data**

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Triethylene glycol	LD50	17000 mg/Kg	Oral	Rat
	LD50	14600 mg/Kg	Oral	Guinea Pig
	LD50	>20 mL/Kg	Dermal	Rabbit
Diethylene glycol	LD50	12000 mg/kg	Oral	Rat
	LD50	12565 mg/kg	Oral	Rat
	LD50	4400 mg/kg	Oral	Rabbit
	LD50	11890 mg/kg	Dermal	Rabbit
	LD50	11900 mg/kg	Dermal	Rabbit
Ethylene glycol	LDLo	0.75 mg/kg	Oral	Human
	LDLo	398 mg/Kg	Oral	Human
	LDLo	786 mg/Kg	Oral	Human
	LD50	4700 mg/Kg	Oral	Rat
	LD50	1650 mg/Kg	Oral	Cat
	LD50	9530 mg/Kg	Dermal	Rabbit
Tetraethylene glycol	LD50	29000 mg/Kg	Oral	Rat

Chronic effects on humans : Contains material which causes damage to the following organs: blood, kidneys, liver, skin, eye, lens or cornea.

Other toxic effects on humans : Not considered to be toxic to humans. The substance appears to be of low toxicity, except for possible mild irritant effects in humans. A high dose may produce central nervous system depression, but there are no reports of adverse health effects from occupational exposure.

Special remarks on toxicity to animals : Oral toxicity LD₅₀ (mg/Kg) If <5 Supertoxic; If 5-50 Extremely toxic; If 50-500 Very Toxic; If 500 - 5000 Moderately Toxic; If >5000 Slightly Toxic.
 Triethylene glycol has not caused carcinogenic or reproductive toxicity in animals. High oral doses (5000 mg/Kg) of Triethylene glycol caused reduced fetal weights in mice. However, other studies in mice and rats show either no developmental toxicity or developmental effects only at exposure levels producing other toxic effects in the adult animal. Triethylene glycol was of very low oral toxicity in acute tests in animals. Single exposure to Triethylene glycol by inhalation to saturated air or to aerosol produced no signs of toxicity and no mortality. Repeated exposures at low concentrations produced reduced body weight and at higher concentrations produced increased mortality.

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Triethylene Glycol**11. Toxicological information****Special remarks on other toxic effects on humans**

: Doses of ethylene glycol that result in high levels of the metabolite glycolic acid induce developmental/teratogenic effects in rats and mice, although at doses greater than those associated with kidney effects in rats. Human exposure is not expected to generate sufficient levels of glycolic acid. Therefore, no developmental effects are expected in humans.

Specific effects**Carcinogenic effects**

: This material is not classified as a carcinogen. Not listed by IARC, NTP, or OSHA.

Mutagenic effects

: Negative for genotoxicity for both in vitro and in vivo tests.

Teratogenicity /**Reproductive toxicity**

: No known significant effects or critical hazards. No evidence of adverse effects on reproductive organs or fertility in rats and rabbits have occurred from ethylene glycol exposure. Mice exposed to doses considerably higher than those associated with developmental effects or kidney effects in rats exhibited reduced number of litters and smaller litters. No reproductive effects from human exposures.

Sensitization**Ingestion**

: No known significant effects or critical hazards.

Inhalation

: No known significant effects or critical hazards.

Eyes

: Causes mild to moderate irritation, and transient corneal injury.

Skin

: No known significant effects or critical hazards.

12. Ecological information**Ecotoxicity data****Product/Ingredient name****Species****Period****Result**

Triethylene glycol

Fathead minnows

96 hour

69800 mg/L

Ethylene glycol

Rainbow trout

96 hour

22810 mg/L

Diethylene glycol

Pimephales promelas (LC50)

96 hour/hours

75200 mg/l

Environmental precautions

: The material is highly soluble in water. Laboratory tests on each of the components of this product indicate no significant toxicity to fish and aquatic invertebrates, although amphibians may be more sensitive. Mammals and birds do not readily metabolize this material and may be more susceptible to toxicity.

Octanol/water partition coefficient

: Kow = -1.75 (Estimated)

Bioconcentration factor

: This material is highly soluble in water and should not bioaccumulate in aquatic or terrestrial organisms.

Biodegradable/OECD

: This material will biodegrade relatively rapidly in both soil and water, and will not persist in the environment. Due care should be taken to avoid accidental release to aquatic or terrestrial systems.

Mobility

: The material is volatile and water soluble. It is not expected to adsorb onto soils or sediments. Expected to have high mobility in soils. Not expected to persist in the environment. Environmental half-life of 0.35 to 24 days in soil, air, surface and ground water. Not expected to undergo hydrolysis.

Products of degradation

: These products are carbon oxides (CO, CO₂) and water.

Toxicity of the products of biodegradation

: The product itself and its products of degradation are not toxic.

Triethylene Glycol**13 . Disposal considerations**

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory Information	UN number	Proper shipping name	Class	PG*	Label	Additional Information
DOT Classification	Not regulated.	Not applicable.	Not applicable.	Not applicable		-
TDG Classification	Not available.	Not available.	Not available.	-		-
Mexico Classification	Not available.	Not available.	Not available.	-		-
ADR/RID Class	Not available.	Not available.	Not available.	-		-
IMDG Class	Not available.	Not available.	Not available.	-		-
IATA-DGR Class	Not available.	Not available.	Not available.	-		-

PG* : Packing group

15 . Regulatory information

HCS Classification : Target organ effects

U.S. Federal regulations : TSCA 8(b) inventory: Triethylene Glycol

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: 2,2'-oxybisethanol; tetraethylene glycol; Triethylene Glycol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2,2'-oxybisethanol: Immediate (acute) health hazard, Delayed (chronic) health hazard;

tetraethylene glycol: Immediate (acute) health hazard, Delayed (chronic) health hazard;

Triethylene Glycol: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

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Triethylene Glycol**15 . Regulatory information****State regulations**

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
 : Pennsylvania RTK: 2,2'-oxybisethanol: (generic environmental hazard); Triethylene Glycol: (generic environmental hazard)
 Minnesota: 2,2'-oxybisethanol

EU regulations**Risk phrases**

: This product is not classified according to EU legislation.

International regulations**International lists**

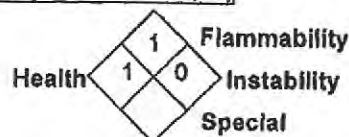
: Australia (NICNAS): 2,2'-oxybisethanol; tetraethylene glycol; Triethylene Glycol
 China: 2,2'-oxybisethanol; tetraethylene glycol; Triethylene Glycol
 Germany water class: 2,2'-oxybisethanol; Triethylene Glycol
 Japan (METI): 2,2'-oxybisethanol; tetraethylene glycol; Triethylene Glycol
 Korea (TCCL): 2,2'-oxybisethanol; tetraethylene glycol; Triethylene Glycol
 Philippines (RA6969): 2,2'-oxybisethanol; tetraethylene glycol; Triethylene Glycol

16 . Other information**Label requirements**

: HARMFUL IF SWALLOWED. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LIVER, SKIN, EYE, LENS OR CORNEA.

Hazardous Material Information System (U.S.A.)

Health	1
Fire hazard	1
Reactivity	0
Personal protection	B

National Fire Protection Association (U.S.A.)**References**

: - Manufacturer's Material Safety Data Sheet.
 -2005/2006 Hazardous Materials, Substances & Wastes Compliance Guide (hazmatpublishing.com)
 ACRONYMS: ACGIH - American Conference of Governmental Industrial Hygienists; AIHA- American Industrial Hygiene Association; C - Celsius; CERCLA - Environmental Response, Compensation, and Liability Act of 1980; CFR - Code of Federal Regulations; DOT - Department of Transportation (U.S.); DSD - Dangerous Substances Directive (Europe); EC50 - Effective concentration for 50% of test species; EINECS - European Inventory of Existing Chemical Substances; EPA - Environmental Protection Agency; F-Fahrenheit; HMIS - Hazardous Material Information System (U.S.); IARC - International Agency for Research on Cancer; LC50 - Lethal concentration for 50% of test species; mg/cu m - milligrams per cubic meter; mg/L - milligrams per liter; mmHg- millimeters of Mercury; mPa - milli Pascals; NIOSH - National Institute for Occupational Safety and Health; NFPA - National Fire Protection Association (U.S.); NTP - National Toxicology Program; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; SARA - Superfund Amendments and Reauthorization Act of 1986; STEL - Short Term Exposure Limit; TSCA - Toxic Substances Control Act (U.S.); TLV - Threshold Limit Value; TWA - Time Weighted Average.

Other special considerations

: Proposition 65 (California): No products were found.

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Triethylene Glycol

16 . Other information

Date of Issue : 11/8/2006.

Date of previous issue : 11/8/2006.

Version : 0.12

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Protective Clothing	NFPA (USA)	WHMIS (Canada)	Transportation
		 B3- Combustible Liquid  E-Corrosive	

Section 1: Identification of the Substance / Preparation and of the Company / Undertaking

Product Name: GAS/SPEC* CS-Plus* Solvent Additive**Product Code:** 29451

Manufacturer: INEOS Oxide
 A division of INEOS Americas LLC
 2925 Briarpark, Suite 870
 Houston TX, 77042

Phone Number: (866) 865-4767**24-hour Emergency:** CHEMTREC: (800) 424-9300

* Indicates a Trademark of INEOS Oxide.

Section 2: Composition / Information on Ingredients

Hazardous Ingredients:

Common Name	Chemical Name	CAS No.	Wt. %
Trade Secret Alkanolamine	Proprietary	HMIRC RN 5384**	95-100

Non-Hazardous Ingredients:

Common Name	Chemical Name	CAS No.	Wt. %
Water	Water	7732-18-5	2-5

Note: **HMIRC (Canada - Hazardous Materials Information Review Commission) January 7, 2005
 See Section 8 of this MSDS for exposure limit data for these ingredients.

MATERIAL SAFETY DATA SHEET

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Section 3: Hazards Identification

Preparation Hazards and Classification:

Harmful in contact with skin and if swallowed. Causes burns.

USA: This product is a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard Communication Evaluation.

Canada: This is a controlled product under WHMIS.

Appearance, Color and Odor:

Colorless, viscous liquid, fish-like amine odor

Primary Route(s) of Exposure:

Inhalation, Ingestion, Eye contact, Skin contact

Potential Health Effects:

ACUTE (short term): see Section 8 for exposure controls

Inhalation: At room temperature, exposures to vapors are minimal due to the physical properties. When heated, vapor concentrations may be generated that may cause adverse effects. Vapors or mists may cause severe irritation to the respiratory tract. Symptoms of exposure may include coughing, wheezing, shortness of breath, difficult breathing, headache, nausea, vomiting and chest pain. High concentrations of vapor or mist may cause burns to the respiratory tract.

Ingestion: Low oral toxicity, but swallowing large amounts can cause severe irritation and burns of the digestive tract with abdominal and chest pain, nausea, vomiting and diarrhea. Due to the corrosive nature of the alkanolamine, any aspiration during ingestion or vomiting could result in lung injury.

Skin: Direct contact with the product causes severe irritation with local discomfort or pain, severe excess redness and swelling with chemical burns, blister formation and possible tissue destruction. Prolonged skin contact may result in the absorption of potentially harmful amounts.

Eyes: Direct contact with product will cause severe eye irritation or chemical burns. Serious damage, even blindness, may result if treatment is delayed.

CHRONIC (long term): see Section 11 for additional toxicological data
Repeated exposures to high concentrations may cause liver and kidney damage. Effects may be delayed.

Inhalation: Prolonged or repeated overexposure to mists or vapors may result in damage to the respiratory tract.

Skin: Chronic dermatitis and eczema may result from repeated or prolonged contact.

Medical Conditions Aggravated by Exposure:

Repeated skin contact may aggravate an existing dermatitis. Repeated inhalation may aggravate respiratory conditions, such as asthma and bronchitis, and inflammatory or fibrotic pulmonary disease.

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Section 4: First Aid Measures**Inhalation:**

Remove from exposure to fresh air immediately. Keep victim at rest. If breathing is difficult, trained personnel may administer oxygen. Do not allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. Quickly transport victim to an emergency care facility.

Eye Contact:

Immediately flush the contaminated eye(s) with lukewarm flowing water for at least 60 minutes while holding the eyelids open. Neutral saline rinsing solution may be used as soon as it is available. Do not interrupt flushing. Take care not to rinse contaminated water into the unaffected eye or the face. Quickly transport victim to an emergency care facility.

Skin Contact:

Immediately flush the affected areas with plenty of flowing water or a safety shower for at least 20 minutes. Remove contaminated clothing and shoes while flushing. Do not interrupt flushing. If necessary, and it can be done safely, continue flushing during transport to emergency care facility.

Ingestion:

DO NOT INDUCE VOMITING. Get immediate medical attention. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration; rinse the mouth. Quickly transport the victim to an emergency care facility. Never give anything by mouth if victim is unconscious, rapidly losing consciousness or convulsing.

Section 5: Fire-Fighting Measures**Flash Point and Method (°C):**

71°C (160°F) PMCC

Flammability Limits (%):

LFL: 1.6%
UFL: 19.6%

Auto Ignition Temperature (°C):

350°C (662°F)

Extinguishing Media:

Water fog or fine spray, carbon dioxide, alcohol-resistant foam or dry chemical. Use water spray to cool fire-exposed containers.

Violent steam generation or eruption may occur upon application of direct water stream.

Unusual Fire and Explosion Hazards:

Sensitivity to mechanical impact: Not applicable
Sensitivity to static discharge: Not applicable

Spills of these organic liquids on hot fibrous insulations may lead to lowering of the auto-ignition temperature possibly resulting in spontaneous combustion.

Fire Fighting Instructions:

Evacuate the area and fight fire from a safe distance or a protected location. Approach the fire from upwind to avoid hazardous vapors. Burning liquids may be extinguished by dilution with water. Do not use direct water stream, it may spread fire. Water spray may be used to flush spills away from ignition sources. Avoid all contact with this material during fire fighting operations. Wear chemical resistant clothing (chemical splash suit) and positive-pressure self-contained breathing apparatus. Contain water run-off if possible.

Hazardous Combustion Products:

During a fire smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: nitrogen oxides, carbon monoxide, carbon dioxide.

Other Flammability Information:

This material can burn if strongly heated.

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Product Name: GAS/SPEC[®] CS-Plus[®] Solvent Additive

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Section 6: Accidental Release Measures**Personal Precautions:**

Wear adequate personal protective equipment.

Air Release:

Evacuate the area. Ventilate the area. Extinguish or remove all ignition sources. Wear adequate personal protective equipment. Notify occupational and environmental authorities.

Land Spill:

Isolate the area; keep people away. Do not touch spilled material. Clean up should be conducted by trained personnel only. Wear adequate personal protective equipment. Ventilate the area. Extinguish or remove all ignition sources. Prevent the material from entering sewers, groundwater or surface water. Contain the spill with earth, sand or suitable absorbent. Do not absorb with sawdust, woodchips or other cellulose materials. Put material in suitable, covered, labeled containers. Contaminated absorbent may pose the same hazards as the spilled product. Flush the area with water. Notify occupational and environmental authorities.

Water Spill:

Not available. Notify occupational and environmental authorities.

Section 7: Handling and Storage**Storage Temperature:**

Store in a cool, dry, well-ventilated area away from sunlight, heat and ignition sources.

Storage Pressure:

Not available

General:

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Ensure that engineering controls are operating and that protective equipment requirements are being followed. Avoid generating vapors and mists.

Inspect containers for leaks before handling. Prevent damage to containers. Keep containers closed when not in use. Assume that empty containers contain residues which are hazardous. Do not use with incompatible materials (see Section 10).

Discard all contaminated leather items such as watchbands, shoes and belts.

Storage: Keep storage area away from work areas. Store away from incompatible materials (see Section 10). Do not store in containers made of copper, brass or other copper alloys zinc or galvanized iron.

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Section 8: Exposure Controls and Personal Protection

<u>Ingredient</u>	<u>ACGIH TLV</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>U.S. OSHA PEL</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>Ontario (Canada) TWAEV</u> <u>(mg/m³)</u>
Trade Secret Alkanolamine	Not established	Not established	Not established

Engineering Controls:

Good general ventilation is normally sufficient. In places where vapors or mists of this material are created, local exhaust ventilation is recommended. Ventilation system should be made of corrosion-resistant material.

Hygiene Measures:

Remove contaminated clothing promptly. Keep contaminated clothing in closed containers; discard or launder before rewearing. Do not eat, drink or smoke in work areas. Wash hands thoroughly and promptly after handling this material.

Personal Protection

Respiratory Protection: Respiratory protection should not be necessary unless the product is heated to release vapors or a mist is created. If airborne vapor or mist exposure is likely wear a NIOSH/MSHA approved full-face mask, self-contained breathing apparatus.

Skin Protection: Wear chemical protective gloves, coveralls and boots. Protective clothing should be made of butyl rubber, neoprene, nitrile rubber or Viton™.

Eye Protection: Wear chemical safety goggles. If splashing is possible wear a face shield.

Other:

Have a safety shower and eye-wash fountain readily available in the immediate work area.

Section 9: Physical and Chemical Properties

Physical State:	Liquid	Vapor Pressure: <u>(mm Hg @ 20°C)</u>	<2.5 mmHg @ 20C
Appearance:	Clear colorless, viscous liquid	Vapor Density: <u>(Air = 1)</u>	2.6
pH:	11.65 @ 25°C	Solubility in Water:	Complete
Specific Gravity: <u>(water = 1)</u>	1.08 @ 25°C	Water / Oil distribution coefficient:	Not available
Boiling Point:	152-162°C (306-324°F)	Odor Type:	Fish-like amine odor
Freezing Point:	-4.5°C (24°F)	Evaporation Rate: <u>(n-Butyl Acetate = 1)</u>	Not available
Viscosity:	<13 centipoises @ 20°C		

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Section 10: Stability and Reactivity**Stability:**

Stable under normal temperature and pressure.

Incompatible Materials and Conditions to Avoid:

Product can decompose at elevated temperatures.

Avoid direct sunlight.

Avoid contact with nitriles, strong acids and strong oxidizing agents.

Hazardous Decomposition Products:

Decomposition products may include nitrogen oxides, ammonia, irritating aldehydes and ketones. Hazardous decomposition products depend upon temperature, air supply and the presence of other materials.

Hazardous Polymerization:

Mixing with nitrite containing materials may cause nitrosamine formation.

Other Reactivity Concerns:

Absorbs moisture and can react with carbon dioxide in the air to form salts. It is decomposed by light and slowly oxidized by air, turning yellow and then brown. This reaction is accelerated by heat and the presence of metals.

Corrosive to copper, brass, bronze and other copper alloys, zinc and galvanized iron.

Contact with nitrosating agents, under acidic conditions such as nitrous acid, nitrite or nitrogen oxides, can form nitrosamines some of which are potent carcinogens.

Section 11: Toxicological Information**Carcinogenicity:**

The table below indicates whether or not each agency has listed each ingredient as a carcinogen.

<u>Ingredient</u>	<u>ACGIH</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
Trade Secret Alkanolamine	Not listed	Not listed	Not listed	Not listed

Carcinogenicity Designations:

ACGIH: (American Conference of Governmental Industrial Hygienists)

IARC: (International Agency for Research on Cancer)

NTP: (National Toxicity Program)

OSHA: Occupational Safety and Health Administration

Acute Toxicity Data:

<u>Ingredient</u>	<u>LD₅₀ Oral</u> (mg/kg)	<u>LD₅₀ Dermal</u> (mg/kg)	<u>LC₅₀ Inhalation</u> (mg/m ³ , 4 hrs.)
Trade Secret Alkanolamine	> 500 (Rat)	> 1 000 (rabbit)	> 2 500 (rat)

Irritation:

Severely irritating to eyes, skin and mucous membranes.

Sensitization:

None reported

Neurological Effects:

None known

Teratogenicity:

None known

Reproductive Toxicity:

High concentrations may cause fetal toxicity.

Mutagenicity (Genetic Effects):

None known

Toxicologically Synergistic Materials:

Alkanolamine ingredients in this product may react with nitriles, under acid conditions to form nitrosamines some of which are potent carcinogens.

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Section 12: Ecological Information

Ecotoxicity: Not available.

Mobility: Not available

Persistence and degradability: Not available

Bioaccumulative potential: Not available

Other: For detailed Ecological data, write to the address in Section 1 or call INEOS Oxide's Customer Information Center at (866) 865-4767.

Section 13: Disposal Considerations

Waste Disposal Method: DO NOT dump into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage. For unused, uncontaminated product, the preferred options include sending to a licensed, permitted recycler, reclaimer, incinerator or other thermal destruction device.

USA: This product, as sold, meets the RCRA corrosivity characteristics described in 40 CFR §261.22 and has a hazardous waste number D002. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Dispose of in accordance with local, state and federal laws and regulations.
RCRA: None listed

Canada: Dispose of in accordance with local, provincial and federal laws and regulations.

Other: Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. INEOS Oxide HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2.

As a service to its customers, INEOS Oxide can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone INEOS Oxide's Customer Information Center at (866) 865-4767.

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MATERIAL SAFETY DATA SHEET

INEOS Oxide

Product Name: GAS/SPEC* CS-Plus* Solvent Additive
MSDS #: INEOS Oxide 29451
Preparation Date: January 7, 2005

Page # 8 of 10

Section 14: Transport InformationU.S. Hazardous Materials Regulation (DOT 49CFR)

DOT Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (Alkanolamine)

DOT Hazard Classification: *Primary:* 8
Secondary:

Product Identification Number: UN2735

Packing Group: II

Reportable Quantity for US Shipments: None

DOT Special Provisions: None

DOT Packaging Exceptions: None

DOT Non-bulk Packaging: None

DOT Bulk Packaging: None

Canadian Transportation of Dangerous Goods (TDG)

TDG Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (Alkanolamine)

TDG Hazard Classification: 8

Product Identification Number: UN2735

Packing Group: II

ADR/RID:

AMINES, LIQUID, CORROSIVE, N.O.S. (Alkanolamine), 8, UN2735, PGII

IMDG:

AMINES, LIQUID, CORROSIVE, N.O.S. (Alkanolamine), 8, UN2735, PGII

Marine Pollutants:

None

ICAO/IATA:

AMINES, LIQUID, CORROSIVE, N.O.S. (Alkanolamine), 8, UN2735, PGII

IATA Packing Instructions:Passenger/Cargo: 808
Cargo Only: 812
Limited Quantity: Y808Maximum Net Quantity per Package:Passenger/Cargo: 1L
Cargo Only: 30 L
Limited Quantity: 0.5 L

Other: For regulatory information regarding transportation, if required, consult product shipping papers, or your INEOS Oxide representative.

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MATERIAL SAFETY DATA SHEET

INEOS Oxide

Product Name: GAS/SPEC[®] CS-Plus[®] Solvent Additive

MSDS #: INEOS Oxide 29451

Preparation Date: January 7, 2005

Page # 9 of 10

Section 15: Regulatory Information

HMIS and NFPA Hazard Rating:

Category	HMIS	NFPA
Acute Health	3	3
Flammability	2	2
Reactivity	0	0

USA

TSCA Status: This alkanolamine is listed on the TSCA inventory.

SARA Title III: Trade Secret Alkanolamine: acute, chronic, flammable
 Sec. 302/304: None of the chemicals in this product have a TPQ.
 Sec. 311/312: Immediate Health Hazard; Delayed Health Hazard.
 Sec. 313: None
 CERCLA: None

Right to Know: This alkanolamine can be found on the following state right to know lists: Florida, Pennsylvania, and Massachusetts.

Clean Air Act: None

Clean Water Act: None of the chemicals in this product are listed as Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.

Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: B3 – Combustible Liquid
 E – Corrosive

NSNR Status (New Substance Notification Regulations): This alkanolamine is listed on Canada's Domestic Substances List (DSL).

NPRI Substances (National Pollutant Release Inventory): This alkanolamine is not a NPRI reportable substance.

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MATERIAL SAFETY DATA SHEET

INEOS Oxide

Product Name: GAS/SPEC* CS-Plus* Solvent Additive

MSDS #: INEOS Oxide 29451

Preparation Date: January 7, 2005

Page # 10 of 10

Section 16: Other Information

Preparation Information:

Prepared by: LEHDER Environmental Services Limited
704 Mara Street, Suite 210
Pt. Edward, ON
N7V 1X4
www.lehder.com

Phone: (519) 336-4101

Preparation date: January 7, 2005

Disclaimer: While LEHDER Environmental Services Limited believes that the data set forth herein is accurate, as of the date hereof, LEHDER makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration, investigation and verification.

Manufacturer Disclaimer: The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Common Name	Coastalguard EG 100	Code	37252
Supplier	COASTAL CHEMICAL CO., L.L.C. 3520 Veterans Memorial Drive ABBEVILLE, LA 70510 337-893-3862	MSDS#	Not available.
Synonym	Not available.	Validation Date	05/24/2004
Trade name	Not available.	Print Date	05/24/2004
Material Uses	Industrial applications: Coolant and antifreeze.	In case of Emergency	Transportation Emergency Call CHEMTREC 800-424-9300 Other Information Call Charles Toups 337-261-0796
Manufacturer	Coastal Chemical Co., Inc. 3520 Veterans Memorial Drive Abbeville, La.		

Section 2: Composition and Information on Ingredients

Name	CAS #	% by Weight	TLV/PEL	LC ₅₀ /LD ₅₀
1) Ethylene Glycol	107-21-1	95	CEIL: 39.4 (ppm) CEIL: 100 (mg/m ³)	ORAL (LD50) mg/kg: Acute: 4700 (Rat). DERMAL (LD50) mg/kg: Acute: 9530 (Rabbit).

Section 3: Hazards Identification

Emergency Overview	CAUTION! HARMFUL IF INHALED. HARMFUL IF SWALLOWED. MAY CAUSE EYE IRRITATION. Repeated or prolonged exposure to the substance can produce kidney damage.
Routes of Entry	Ingestion.
Potential Acute Health Effects	Very dangerous in case of ingestion. Very slightly to slightly dangerous in case of skin contact (irritant, sensitizer, permeator), of eye contact (irritant), of inhalation. This product may irritate eyes and skin upon contact.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. The substance is toxic to kidneys, the nervous system, the reproductive system, liver. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used.
Skin Contact	If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Hazardous Skin Contact	No additional information.
Inhalation	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Continued on Next Page

Coastalguard 100

Page Number: 2

Hazardous Inhalation	No additional information.
Ingestion	DO NOT induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention.
Hazardous Ingestion	DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Section 5. Fire and Explosion Data

Flammability of the Product	Combustible.
Auto-Ignition Temperature	The lowest known value is 398°C (748.4°F) (Ethylene Glycol).
Flash Points	The lowest known value is CLOSED CUP: 116°C (240.8°F) OPEN CUP: 232°C (240.8°F) (Cleveland) (Ethylene Glycol)
Flammable Limits	The greatest known range is LOWER: 3.2% UPPER: 15.3% (Ethylene Glycol)
Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Hazards in Presence of Various Substances	Very slightly to slightly flammable in presence of open flames and sparks, of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO ₂ , water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Special Remarks on Fire Hazards	When heated to decomposition, it emits acrid smoke and irritating fumes. (Ethylene Glycol)
Special Remarks on Explosion Hazards	No additional remark.

Section 6. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert DRY material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Handling	Not available.
Storage	Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Continued on Next Page

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.	
Personal Protection	Safety glasses. Lab coat. Gloves (impervious). Wear appropriate respirator when ventilation is inadequate.	
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.	
Chemical Name or Product Name	CAS #	Exposure Limits
1) 1,2-Ethanediol	107-21-1	CEIL: 39.4 (ppm) CEIL: 100 (mg/m³)

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1 % soln/water)	8 to 10 [Basic.]	Color	Green. (Dark.)
Boiling Point	The lowest known value is 198°C (388.4°F) (Ethylene Glycol).		
Melting Point/Pour Point	May start to solidify at -13.5°C (7.7°F) based on data for: Ethylene Glycol.		
Critical Temperature	Not available.		
Specific Gravity	The only known value is 1.12 (Water = 1) (Ethylene Glycol).		
Vapor Pressure	The highest known value is 0.05 mm of Hg (@ 20°C) (Ethylene Glycol).		
Vapor Density	The highest known value is 2.1 (Air = 1) (Ethylene Glycol).		
Volatility	Not available.		
Odor Threshold	Not available.		
Evaporation rate	Not available.		
Viscosity	Not available.		
Water/Oil Dist. Coeff.	The product is much more soluble in water.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, methanol, diethyl ether.		
Solubility	Easily soluble in cold water, hot water, methanol, diethyl ether. Very slightly soluble in n-octanol.		
Physical Chemical Comments	Not available.		

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	No additional remark.
Incompatibility with various substances	Slightly reactive to reactive with oxidizing agents, alkalis.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Not available.

Continued on Next Page

Coastalguard 100

Page Number: 4

Section 11. Toxicological Information

Toxicity to Animals	Acute oral toxicity (LD50): 4700 mg/kg (Rat) Acute dermal toxicity (LD50): > 5000 mg/kg (Rabbit.)
Chronic Effects on Humans	The substance is toxic to kidneys, the nervous system, the reproductive system, liver.
Other Toxic Effects on Humans	Very dangerous in case of ingestion. Very slightly to slightly dangerous in case of skin contact (irritant, sensitizer, permeator), of eye contact (irritant), of inhalation.
Special Remarks on Toxicity to Animals	Toxic for humans or animal life. (Ethylene Glycol)
Special Remarks on Chronic Effects on Humans	No additional remark.
Special Remarks on other Toxic Effects on Humans	Exposure can cause nausea, headache and vomiting. (Ethylene Glycol)

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Disposal	Follow local, state, and federal guidelines.
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Section 14. Transport Information

Proper Shipping Name	Drums - Not Regulated Bulk - Regulated Environmentally Hazardous Substance, liquid, n.o.s.
DOT Classification	DOT CLASS 9: Miscellaneous hazardous material.
DOT Identification Number	UN3082
Packing Group	III
Hazardous Substances Reportable Quantity (kg)	5000 LBS / 2268 kg
Special Provisions for Transport	No additional remark.

Continued on Next Page

Section 15: Regulatory Information**Federal and State Regulations**

The following product(s) is (are) listed on SARA 313: Ethylene Glycol
 The following product(s) is (are) listed by the State of Massachusetts: Ethylene Glycol
 The following product(s) is (are) listed on TSCA: Ethylene Glycol

Other Classifications

WHMIS (Canada) WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
 DSCL (EEC) Not controlled under DSCL (Europe).

Section 16: Other Information**HMIS (U.S.A.)**

Health Hazard	*	2
Fire Hazard		1
Reactivity		0
Personal Protection		B

National Fire Protection
 Association (U.S.A.)

Health



Fire Hazard

Reactivity

Specific hazard

References

Not available.

Other Special Considerations

No additional remark.

Validated by Charles Toups on 05/24/2004.

Verified by Charles Toups.

Printed 05/24/2004.

Transportation Emergency Call
 CHEMTREC 800-424-9300
 Other Information Call
 Charles Toups
 337-261-0796

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Western Refining Southwest, Inc. 50 CR 4990, Bloomfield, NM, 87413
2. Originating Site: Western Refining Southwest, Inc. Bloomfield Terminal – NESE27, T29N, R11W, San Juan County, NM
3. Location of Material (Street Address, City, State or ULSTR): Same as originating site
4. Source and Description of Waste: Treated non-hazardous water from the Bloomfield Terminal.
Estimated Volume _____ bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd ³ / bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <u>Matthew Krakow</u>  , representative or authorized agent for <u>Western Refining Southwest, Inc.</u> do hereby PRINT & SIGN NAME COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) ☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <i>Operator Use Only: Waste Acceptance Frequency</i> ☐ Monthly ☐ Weekly ☐ Per Load ☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) ☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4) GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <u>N/A</u> , representative for <u>N/A</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss Permit # UICI-005

Address of Facility: 345 Rd 350 Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED**

☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Garye Higgins

TITLE: _____ DATE: 10-26-15

SIGNATURE: 
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 486-4925

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Project #: P8#12610933

Project #:

Project Manager:

Project Manager:

Sampler:	Bob
On Ice:	☒ Yes ☐ No

Sampler: B56

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

HEAL No

Type

Container

8.

3-V0A

1-1 liter Amber	
-----------------	--

1-500m

-500m-

1-125m	H ₂ SO ₄
--------	--------------------------------

1-500m	HNO ₃
--------	------------------

1-500	NaOH
-------	------

1-500ml	Zn Acetate
---------	------------

Relinquished by:

Received by:

Date	Time
------	------

Robert Krohn

5/11/91

Relinquished by:

Received by:

Date	Time
11/11/11	11:11

Prof. C. C. C.

10/02/15 0800

Analysis Request

(1)

(1)

RC

8

—

7

S

1

14

12

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1510068

RcptNo: 1

Received by/date:

SA

10/02/15

Logged By: Lindsay Mangin

10/2/2015 8:00:00 AM

[Signature]

Completed By: Lindsay Mangin

10/2/2015 10:18:19 AM

[Signature]

Reviewed By:

[Signature]

10/05/15

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ?

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☒

No ☐

No VOA Vials ☐

11. Were any sample containers received broken?

Yes ☐

No ☒

of preserved
bottles checked
for pH:

2, B

(<2 or >12 unless noted)

NO

12. Does paperwork match bottle labels?

(Note discrepancies on chain of custody)

Yes ☒

No ☐

Adjusted?

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(if no, notify customer for authorization.)

Checked by:

[Signature]

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	MB-21710	SampType	MBLK	TestCode	SM2540C MOD: Total Dissolved Solids					
Client ID	PBW	Batch ID	21710	RunNo	29402					
Prep Date	10/7/2015	Analysis Date	10/8/2015	SeqNo	894282	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-21710	SampType	LCS	TestCode	SM2540C MOD: Total Dissolved Solids					
Client ID	LCSW	Batch ID	21710	RunNo	29402					
Prep Date	10/7/2015	Analysis Date	10/8/2015	SeqNo	894283	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	20.0	1000	0	101	80	120			

Sample ID	1510068-001CMS	SampType	MS	TestCode	SM2540C MOD: Total Dissolved Solids					
Client ID	I.W.	Batch ID	21710	RunNo	29402					
Prep Date	10/7/2015	Analysis Date	10/8/2015	SeqNo	894288	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	10800	200	10000	710.0	101	80	120			D

Sample ID	1510068-001CMSD	SampType	MSD	TestCode	SM2540C MOD: Total Dissolved Solids					
Client ID	I.W.	Batch ID	21710	RunNo	29402					
Prep Date	10/7/2015	Analysis Date	10/8/2015	SeqNo	894289	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	10700	200	10000	710.0	99.8	80	120	1.30	5	D

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	mb-1	SampType: MBLK		TestCode: SM2320B: Alkalinity						
Client ID:	PBW	Batch ID: R29409		RunNo: 29409						
Prep Date:		Analysis Date: 10/8/2015		SeqNo: 894449		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	Ics-1	SampType: LCS			TestCode: SM2320B: Alkalinity					
Client ID:	LCSW	Batch ID: R29409			RunNo: 29409					
Prep Date:		Analysis Date: 10/8/2015			SeqNo: 894450		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.52	20.00	80.00	0	99.4	90	110			

Sample ID	mb-2	SampType: MBLK			TestCode: SM2320B: Alkalinity					
Client ID:	PBW	Batch ID: R29409			RunNo: 29409					
Prep Date:		Analysis Date: 10/8/2015			SeqNo: 894473		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	Ics-2	SampType: LCS			TestCode: SM2320B: Alkalinity					
Client ID:	LCSW	Batch ID: R29409			RunNo: 29409					
Prep Date:		Analysis Date: 10/8/2015			SeqNo: 894474		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.32	20.00	80.00	0	100	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	MB-21722	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	21722	RunNo:	29410					
Prep Date:	10/7/2015	Analysis Date:	10/8/2015	SeqNo:	894615	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID	LCS-21722	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	21722	RunNo:	29410					
Prep Date:	10/7/2015	Analysis Date:	10/8/2015	SeqNo:	894616	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	101	80	120			
Barium	0.48	0.020	0.5000	0	95.6	80	120			
Cadmium	0.49	0.0020	0.5000	0	97.4	80	120			
Calcium	51	1.0	50.00	0	102	80	120			
Chromium	0.49	0.0060	0.5000	0	97.6	80	120			
Lead	0.48	0.0050	0.5000	0	95.7	80	120			
Magnesium	52	1.0	50.00	0	103	80	120			
Potassium	50	1.0	50.00	0	100	80	120			
Selenium	0.50	0.050	0.5000	0	99.8	80	120			
Silver	0.099	0.0050	0.1000	0	98.7	80	120			
Sodium	51	1.0	50.00	0	102	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	MB-21684	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	21684	RunNo:	29353					
Prep Date:	10/6/2015	Analysis Date:	10/6/2015	SeqNo:	892607	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-21684	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	21684	RunNo:	29353					
Prep Date:	10/6/2015	Analysis Date:	10/6/2015	SeqNo:	892608	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	ics-21682		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 21682		RunNo: 29400					
Prep Date:	10/6/2015		Analysis Date: 10/7/2015		SeqNo: 894253		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	48	10	100.0	0	47.6	40.2	107			
4-Chloro-3-methylphenol	110	10	200.0	0	54.8	48.2	107			
2-Chlorophenol	110	10	200.0	0	52.6	42.5	106			
1,4-Dichlorobenzene	49	10	100.0	0	48.9	31.6	111			
2,4-Dinitrotoluene	48	10	100.0	0	48.3	33.6	86.5			
N-Nitrosodi-n-propylamine	53	10	100.0	0	52.8	44	106			
4-Nitrophenol	110	10	200.0	0	56.0	25.5	109			
Pentachlorophenol	83	20	200.0	0	41.4	38.8	97.8			
Phenol	100	10	200.0	0	52.0	22.7	116			
Pyrene	48	10	100.0	0	48.2	29.3	138			
1,2,4-Trichlorobenzene	56	10	100.0	0	55.7	35.3	123			
Surr: 2-Fluorophenol	93		200.0		46.3	14.9	111			
Surr: Phenol-d5	120		200.0		58.4	11.3	108			
Surr: 2,4,6-Tribromophenol	91		200.0		45.3	15.7	154			
Surr: Nitrobenzene-d5	59		100.0		58.8	47.8	106			
Surr: 2-Fluorobiphenyl	52		100.0		52.3	21.3	123			
Surr: 4-Terphenyl-d14	38		100.0		38.4	14.3	135			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	mb-21682		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 21682		RunNo: 29400					
Prep Date:	10/6/2015		Analysis Date: 10/7/2015		SeqNo: 894252		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	98		200.0		49.2	14.9	111			
Surr: Phenol-d5	120		200.0		59.8	11.3	108			
Surr: 2,4,6-Tribromophenol	110		200.0		57.2	15.7	154			
Surr: Nitrobenzene-d5	62		100.0		61.9	47.8	106			
Surr: 2-Fluorobiphenyl	63		100.0		62.5	21.3	123			
Surr: 4-Terphenyl-d14	35		100.0		35.3	14.3	135			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	mb-21682		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 21682		RunNo: 29400					
Prep Date:	10/6/2015		Analysis Date: 10/7/2015		SeqNo: 894252		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R29380		RunNo: 29380						
Prep Date:	Analysis Date: 10/7/2015		SeqNo: 893404		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.5	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130			
Surr: Toluene-d8	8.9		10.00		88.6	70	130			

Sample ID	1510068-001ams	SampType: MS		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	I.W.	Batch ID: R29380		RunNo: 29380						
Prep Date:	Analysis Date: 10/7/2015		SeqNo: 893448		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	200	10	200.0	1.820	101	70	130			
Toluene	220	10	200.0	2.640	107	70	130			
Chlorobenzene	190	10	200.0	0	97.3	70	130			
1,1-Dichloroethene	210	10	200.0	0	105	70	130			
Trichloroethene (TCE)	200	10	200.0	0	98.9	70	130			
Surr: 1,2-Dichloroethane-d4	97		100.0		97.2	70	130			
Surr: 4-Bromofluorobenzene	94		100.0		94.0	70	130			
Surr: Dibromofluoromethane	100		100.0		101	70	130			
Surr: Toluene-d8	99		100.0		98.6	70	130			

Sample ID	1510068-001amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	I.W.	Batch ID: R29380	RunNo: 29380							
Prep Date:	Analysis Date: 10/7/2015		SeqNo: 893449		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	190	10	200.0	1.820	96.4	70	130	4.75	20	
Toluene	200	10	200.0	2.640	97.7	70	130	9.26	20	
Chlorobenzene	190	10	200.0	0	94.4	70	130	3.06	20	
1,1-Dichloroethene	200	10	200.0	0	99.7	70	130	5.26	20	
Trichloroethene (TCE)	190	10	200.0	0	95.7	70	130	3.32	20	
Surr: 1,2-Dichloroethane-d4	93		100.0		93.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	97		100.0		97.0	70	130	0	0	
Surr: Dibromofluoromethane	97		100.0		96.7	70	130	0	0	
Surr: Toluene-d8	94		100.0		93.6	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R29380			RunNo: 29380					
Prep Date:		Analysis Date: 10/7/2015			SeqNo: 893404		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	100ng LCS	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	LCSW	Batch ID: R29380		RunNo: 29380						
Prep Date:		Analysis Date: 10/7/2015		SeqNo: 893389		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.8	70	130			
Toluene	22	1.0	20.00	0	108	70	130			
Chlorobenzene	20	1.0	20.00	0	99.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.4	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.1	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.8	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R29380		RunNo: 29380						
Prep Date:		Analysis Date: 10/7/2015		SeqNo: 893404		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510068

21-Oct-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 10-1-15

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R29286	RunNo:	29286					
Prep Date:		Analysis Date:	10/2/2015	SeqNo:	890112	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R29286	RunNo:	29286					
Prep Date:		Analysis Date:	10/2/2015	SeqNo:	890113	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.1	0.50	5.000	0	103	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.5	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P)	5.1	0.50	5.000	0	101	90	110			
Sulfate	10	0.50	10.00	0	99.9	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

Anatek Labs, Inc.

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

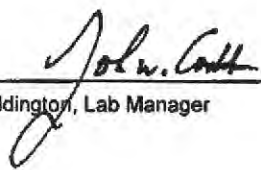
Batch #: 151006029
Project Name: 1510068

Analytical Results Report

Sample Number	151006029-001	Sampling Date	10/1/2015	Date/Time Received	10/6/2015 11:25 AM
Client Sample ID	1510068-001E / I.W.	Sampling Time	10:00 AM		
Matrix	Water	Sample Location			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	1	10/14/2015	MER	SW846 CH7	
Flashpoint	>200	°F		10/7/2015	KFG	EPA 1010	
pH	6.72	ph Units		10/8/2015	KMC	SM 4500pH-B	
Reactive sulfide	11.2	mg/L	0.49	10/9/2015	KMC	SW846 CH7	

Authorized Signature


John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510068

Date Reported: 10/21/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: I.W.

Project: Injection Well 10-1-15

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510068-001

Matrix: AQUEOUS

Received Date: 10/2/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
4-Isopropyltoluene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
4-Methyl-2-pentanone	ND	50	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Methylene Chloride	ND	15	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
n-Butylbenzene	ND	15	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
n-Propylbenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
sec-Butylbenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Styrene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
tert-Butylbenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,1,1,2-Tetrachloroethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,1,2,2-Tetrachloroethane	ND	10	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Tetrachloroethene (PCE)	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
trans-1,2-DCE	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
trans-1,3-Dichloropropene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2,3-Trichlorobenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2,4-Trichlorobenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,1,1-Trichloroethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,1,2-Trichloroethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Trichloroethene (TCE)	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Trichlorofluoromethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2,3-Trichloropropane	ND	10	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Vinyl chloride	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Xylenes, Total	ND	7.5	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Surr: 1,2-Dichloroethane-d4	95.5	70-130	D	%REC	10	10/7/2015 2:56:33 PM	R29380
Surr: 4-Bromofluorobenzene	92.2	70-130	D	%REC	10	10/7/2015 2:56:33 PM	R29380
Surr: Dibromofluoromethane	98.2	70-130	D	%REC	10	10/7/2015 2:56:33 PM	R29380
Surr: Toluene-d8	92.5	70-130	D	%REC	10	10/7/2015 2:56:33 PM	R29380

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Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510068

Date Reported: 10/21/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: I.W.

Project: Injection Well 10-1-15

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510068-001

Matrix: AQUEOUS

Received Date: 10/2/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1,2,4-Trimethylbenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,3,5-Trimethylbenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2-Dichloroethane (EDC)	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2-Dibromoethane (EDB)	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Naphthalene	ND	10	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1-Methylnaphthalene	ND	20	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
2-Methylnaphthalene	ND	20	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Acetone	ND	50	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Bromobenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Bromodichloromethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Bromoform	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Bromomethane	ND	15	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
2-Butanone	ND	50	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Carbon disulfide	ND	50	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Carbon Tetrachloride	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Chlorobenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Chloroethane	ND	10	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Chloroform	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Chloromethane	ND	15	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
2-Chlorotoluene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
4-Chlorotoluene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
cis-1,2-DCE	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
cis-1,3-Dichloropropene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2-Dibromo-3-chloropropane	ND	10	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Dibromochloromethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Dibromomethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2-Dichlorobenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,3-Dichlorobenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,4-Dichlorobenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Dichlorodifluoromethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,1-Dichloroethane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,1-Dichloroethene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,2-Dichloropropane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,3-Dichloropropane	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
2,2-Dichloropropane	ND	10	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
1,1-Dichloropropene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Hexachlorobutadiene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
2-Hexanone	ND	50	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Isopropylbenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380

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Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510068

Date Reported: 10/21/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: I.W.

Project: Injection Well 10-1-15

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510068-001

Matrix: AQUEOUS

Received Date: 10/2/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Hexachlorobenzene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Hexachlorobutadiene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Hexachloroethane	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Isophorone	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
1-Methylnaphthalene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2-Methylnaphthalene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2-Methylphenol	14	10		µg/L	1	10/7/2015 3:04:23 PM	21682
3+4-Methylphenol	440	50		µg/L	5	10/9/2015 9:47:22 AM	21682
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
N-Nitrosodimethylamine	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Naphthalene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2-Nitroaniline	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
3-Nitroaniline	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
4-Nitroaniline	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Nitrobenzene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2-Nitrophenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
4-Nitrophenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Pentachlorophenol	ND	20		µg/L	1	10/7/2015 3:04:23 PM	21682
Phenanthrene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Phenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Pyrene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Pyridine	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2,4,6-Trichlorophenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Surr: 2-Fluorophenol	51.0	14.9-111		%REC	1	10/7/2015 3:04:23 PM	21682
Surr: Phenol-d5	59.0	11.3-108		%REC	1	10/7/2015 3:04:23 PM	21682
Surr: 2,4,6-Tribromophenol	74.0	15.7-154		%REC	1	10/7/2015 3:04:23 PM	21682
Surr: Nitrobenzene-d5	73.1	47.8-106		%REC	1	10/7/2015 3:04:23 PM	21682
Surr: 2-Fluorobiphenyl	64.6	21.3-123		%REC	1	10/7/2015 3:04:23 PM	21682
Surr: 4-Terphenyl-d14	41.8	14.3-135		%REC	1	10/7/2015 3:04:23 PM	21682

EPA METHOD 8260B: VOLATILES

Analyst: **BCN**

Benzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Toluene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Ethylbenzene	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380
Methyl tert-butyl ether (MTBE)	ND	5.0	D	µg/L	10	10/7/2015 2:56:33 PM	R29380

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510068

Date Reported: 10/21/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: I.W.

Project: Injection Well 10-1-15

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510068-001

Matrix: AQUEOUS

Received Date: 10/2/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Azobenzene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Benz(a)anthracene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Benzo(a)pyrene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Benzo(b)fluoranthene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Benzo(k)fluoranthene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Benzoic acid	ND	20		µg/L	1	10/7/2015 3:04:23 PM	21682
Benzyl alcohol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Bis(2-chloroethyl)ether	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Butyl benzyl phthalate	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Carbazole	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
4-Chloro-3-methylphenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
4-Chloroaniline	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2-Chloronaphthalene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2-Chlorophenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Chrysene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Di-n-butyl phthalate	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Di-n-octyl phthalate	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Dibenzofuran	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
1,2-Dichlorobenzene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
1,3-Dichlorobenzene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
1,4-Dichlorobenzene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
3,3'-Dichlorobenzidine	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Diethyl phthalate	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Dimethyl phthalate	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2,4-Dichlorophenol	ND	20		µg/L	1	10/7/2015 3:04:23 PM	21682
2,4-Dimethylphenol	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	10/7/2015 3:04:23 PM	21682
2,4-Dinitrophenol	ND	20		µg/L	1	10/7/2015 3:04:23 PM	21682
2,4-Dinitrotoluene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
2,6-Dinitrotoluene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Fluoranthene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Fluorene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682

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Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510068

Date Reported: 10/21/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: I.W.

Project: Injection Well 10-1-15

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510068-001

Matrix: AQUEOUS

Received Date: 10/2/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	ND	0.50		mg/L	5	10/3/2015 4:00:14 AM	R29286
Chloride	270	10		mg/L	20	10/3/2015 4:12:38 AM	R29286
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	10/3/2015 4:00:14 AM	R29286
Bromide	1.9	0.50		mg/L	5	10/3/2015 4:00:14 AM	R29286
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	10/3/2015 4:00:14 AM	R29286
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	10/3/2015 4:00:14 AM	R29286
Sulfate	8.6	2.5		mg/L	5	10/3/2015 4:00:14 AM	R29286
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	1400	0.010		µmhos/cm	1	10/7/2015 10:01:55 PM	R29389
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	333.8	20.00		mg/L CaCO ₃	1	10/8/2015 3:16:52 PM	R29409
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	10/8/2015 3:16:52 PM	R29409
Total Alkalinity (as CaCO ₃)	333.8	20.00		mg/L CaCO ₃	1	10/8/2015 3:16:52 PM	R29409
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	710	200	*D	mg/L	1	10/8/2015 4:14:00 PM	21710
SM4500-H+B: PH							Analyst: MRA
pH	7.52	1.68	H	pH units	1	10/7/2015 10:01:55 PM	R29389
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.00020		mg/L	1	10/6/2015 3:45:20 PM	21684
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.020		mg/L	1	10/8/2015 3:14:24 PM	21722
Barium	0.23	0.020		mg/L	1	10/8/2015 3:14:24 PM	21722
Cadmium	ND	0.0020		mg/L	1	10/8/2015 3:14:24 PM	21722
Calcium	69	1.0		mg/L	1	10/8/2015 3:14:24 PM	21722
Chromium	ND	0.0060		mg/L	1	10/8/2015 3:14:24 PM	21722
Lead	ND	0.0050		mg/L	1	10/8/2015 3:14:24 PM	21722
Magnesium	20	1.0		mg/L	1	10/8/2015 3:14:24 PM	21722
Potassium	9.0	1.0		mg/L	1	10/8/2015 3:14:24 PM	21722
Selenium	ND	0.050		mg/L	1	10/8/2015 3:14:24 PM	21722
Silver	ND	0.0050		mg/L	1	10/8/2015 3:14:24 PM	21722
Sodium	190	5.0		mg/L	5	10/12/2015 9:41:04 AM	21722
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Acenaphthylene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Aniline	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682
Anthracene	ND	10		µg/L	1	10/7/2015 3:04:23 PM	21682

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	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 21, 2015

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: Injection Well 10-1-15

OrderNo.: 1510068

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/2/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1507094

RcptNo: 1

Received by/date:

AT 07/02/15

Logged By: Anne Thorne

Anne Thorne

7/2/2015 7:00:00 AM

Done Here

Completed By: Anne Thorne

Anne Thorne

7/2/2015

Ann. Hum. Genet. 1975, 37, 231-236

Reviewed By:

19

07/02/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

- | | | | |
|--|---|--|--|
| 4. Was an attempt made to cool the samples? | Yes ☒ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes ☒ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☒ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☒ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☒ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☒ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☒ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☒ | |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes ☒ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☒ | No ☐ | |
| 14. Is it clear what analyses were requested? | Yes ☒ | No ☐ | |
| 15. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes ☒ | No ☐ | |
- # of preserved bottles checked for pH: Adjusted? ☒

Checked by: _____

of preserved bottles checked for pH: 2 2

Adjusted?

Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.0	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	MB-20129	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	20129	RunNo:	27360					
Prep Date:	7/7/2015	Analysis Date:	7/8/2015	SeqNo:	820297	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-20129	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	20129	RunNo:	27360					
Prep Date:	7/7/2015	Analysis Date:	7/8/2015	SeqNo:	820298	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	mb-1	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R27329	RunNo:	27329					
Prep Date:		Analysis Date:	7/6/2015	SeqNo:	819128	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	ics-1	SampType: LCS			TestCode: SM2320B: Alkalinity					
Client ID:	LCSW	Batch ID: R27329			RunNo: 27329					
Prep Date:		Analysis Date: 7/6/2015			SeqNo: 819129		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.36	20.00	80.00	0	98.0	90	110			

Sample ID	mb-2	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R27329	RunNo:	27329					
Prep Date:		Analysis Date:	7/6/2015	SeqNo:	819152	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	ics-2	SampType:	LCS	TestCode:	SM2320B: Alkalinity					
Client ID:	LCSW	Batch ID:	R27329	RunNo:	27329					
Prep Date:		Analysis Date:	7/6/2015	SeqNo:	819153	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.44	20.00	80.00	0	99.3	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	1507094-001b dup	SampType:	DUP	TestCode:	SM4500-H+B: pH					
Client ID:	Injection Well	Batch ID:	R27329	RunNo:	27329					
Prep Date:		Analysis Date:	7/6/2015	SeqNo:	819204	Units:	pH units			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.46	1.68								H

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	MB-20102	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	20102	RunNo:	27540					
Prep Date:	7/6/2015	Analysis Date:	7/16/2015	SeqNo:	826932	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-20102	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	20102	RunNo:	27540					
Prep Date:	7/6/2015	Analysis Date:	7/16/2015	SeqNo:	826933	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Selenium	0.50	0.050	0.5000	0	99.7	80	120			
Silver	0.10	0.0050	0.1000	0	105	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	MB-20102		SampType: MBLK		TestCode: EPA 6010B: Total Recoverable Metals					
Client ID:	PBW		Batch ID: 20102		RunNo: 27378					
Prep Date:	7/6/2015		Analysis Date: 7/9/2015		SeqNo: 821352		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Calcium	ND	1.0								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-20102		SampType: LCS		TestCode: EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW		Batch ID: 20102		RunNo: 27378					
Prep Date:	7/6/2015		Analysis Date: 7/9/2015		SeqNo: 821353		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	103	80	120			
Barium	0.49	0.020	0.5000	0	98.5	80	120			
Calcium	51	1.0	50.00	0	102	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			
Magnesium	50	1.0	50.00	0	101	80	120			
Potassium	48	1.0	50.00	0	96.8	80	120			
Sodium	49	1.0	50.00	0	98.9	80	120			

Sample ID	MB-20102		SampType:	MBLK		TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	PBW		Batch ID:	20102		RunNo:	27491				
Prep Date:	7/6/2015		Analysis Date:	7/14/2015		SeqNo:	824974		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chromium	ND	0.0060									

Sample ID	LCS-20102		SampType: LCS		TestCode: EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW		Batch ID: 20102		RunNo: 27491					
Prep Date:	7/6/2015		Analysis Date: 7/14/2015		SeqNo: 824975		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0	98.5	80	120			

Sample ID	MB-20102		SampType:	MBLK		TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	PBW		Batch ID:	20102		RunNo:	27540				
Prep Date:	7/6/2015		Analysis Date:	7/16/2015		SeqNo:	826932		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	MB-20158	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	20158	RunNo:	27365					
Prep Date:	7/8/2015	Analysis Date:	7/8/2015	SeqNo:	820590	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-20158	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	20158	RunNo:	27365					
Prep Date:	7/8/2015	Analysis Date:	7/8/2015	SeqNo:	820591	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Sample ID	1507094-001DMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury					
Client ID:	Injection Well	Batch ID:	20158	RunNo:	27365					
Prep Date:	7/8/2015	Analysis Date:	7/8/2015	SeqNo:	820635	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0059	0.0010	0.005000	0	118	75	125			

Sample ID	1507094-001DMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury					
Client ID:	Injection Well	Batch ID:	20158	RunNo:	27365					
Prep Date:	7/8/2015	Analysis Date:	7/8/2015	SeqNo:	820638	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0058	0.0010	0.005000	0	116	75	125	1.62	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	1507094-001b dup	SampType:	DUP	TestCode:	SM2510B: Specific Conductance					
Client ID:	Injection Well	Batch ID:	R27329	RunNo:	27329					
Prep Date:		Analysis Date:	7/6/2015	SeqNo:	819171	Units:	µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	2000	0.010						0.0491	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	lcscd-20095	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	20095	RunNo:	27414					
Prep Date:	7/6/2015	Analysis Date:	7/10/2015	SeqNo:	822560	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	51		100.0		51.2	14.3	135	0	0	

Sample ID	mb-20218		SampType:	MBLK		TestCode:	EPA Method 8270C: Semivolatiles				
Client ID:	PBW		Batch ID:	20218		RunNo:	27531				
Prep Date:	7/13/2015		Analysis Date:	7/15/2015		SeqNo:	826536		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 2-Fluorophenol	90		200.0		45.0	14.9	111				
Surr: Phenol-d5	75		200.0		37.3	11.3	108				
Surr: 2,4,6-Tribromophenol	140		200.0		69.6	15.7	154				
Surr: Nitrobenzene-d5	64		100.0		64.4	47.8	106				
Surr: 2-Fluorobiphenyl	61		100.0		61.2	21.3	123				
Surr: 4-Terphenyl-d14	45		100.0		45.2	14.3	135				

Sample ID	lcs-20218	SampType:	LCS	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSW	Batch ID:	20218	RunNo:	27531					
Prep Date:	7/13/2015	Analysis Date:	7/15/2015	SeqNo:	826537	Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		53.4	14.9	111			
Surr: Phenol-d5	82		200.0		41.0	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		74.7	15.7	154			
Surr: Nitrobenzene-d5	74		100.0		74.2	47.8	106			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	21.3	123			
Surr: 4-Terphenyl-d14	44		100.0		44.2	14.3	135			

Sample ID	lcscd-20218	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	20218	RunNo:	27531					
Prep Date:	7/13/2015	Analysis Date:	7/15/2015	SeqNo:	826538	Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	100		200.0		52.2	14.9	111	0	0	
Surr: Phenol-d5	84		200.0		41.8	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		75.7	15.7	154	0	0	
Surr: Nitrobenzene-d5	76		100.0		76.0	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		68.5	21.3	123	0	0	
Surr: 4-Terphenyl-d14	46		100.0		45.5	14.3	135	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	ics-20095	SampType: LCS			TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW	Batch ID: 20095			RunNo: 27414					
Prep Date:	7/6/2015	Analysis Date: 7/10/2015			SeqNo: 822559		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	51	10	100.0	0	51.2	47.8	99.7			
4-Chloro-3-methylphenol	110	10	200.0	0	56.2	58.1	103			S
2-Chlorophenol	73	10	200.0	0	36.7	49.5	96.8			S
1,4-Dichlorobenzene	34	10	100.0	0	33.8	40.4	89.4			S
2,4-Dinitrotoluene	42	10	100.0	0	41.8	38.6	91.3			
N-Nitrosodi-n-propylamine	51	10	100.0	0	51.1	53.9	95.6			S
4-Nitrophenol	93	10	200.0	0	46.3	26.4	108			
Pentachlorophenol	98	20	200.0	0	49.1	36.5	86.6			
Phenol	85	10	200.0	0	42.7	29.3	108			
Pyrene	56	10	100.0	0	56.2	45.7	100			
1,2,4-Trichlorobenzene	43	10	100.0	0	42.9	39.3	94.5			
Surr: 2-Fluorophenol	67		200.0		33.4	14.9	111			
Surr: Phenol-d5	86		200.0		43.0	11.3	108			
Surr: 2,4,6-Tribromophenol	120		200.0		62.3	15.7	154			
Surr: Nitrobenzene-d5	47		100.0		46.6	47.8	106			S
Surr: 2-Fluorobiphenyl	53		100.0		53.0	21.3	123			
Surr: 4-Terphenyl-d14	44		100.0		44.1	14.3	135			

Sample ID	icsd-20095	SampType: LCSD			TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID: 20095			RunNo: 27414					
Prep Date:	7/6/2015	Analysis Date: 7/10/2015			SeqNo: 822560		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	76	10	100.0	0	76.1	47.8	99.7	39.1	28.2	R
4-Chloro-3-methylphenol	160	10	200.0	0	81.3	58.1	103	36.4	24.4	R
2-Chlorophenol	150	10	200.0	0	76.8	49.5	96.8	70.6	28.1	R
1,4-Dichlorobenzene	72	10	100.0	0	72.5	40.4	89.4	72.9	31.2	R
2,4-Dinitrotoluene	55	10	100.0	0	54.6	38.6	91.3	26.4	44.4	
N-Nitrosodi-n-propylamine	76	10	100.0	0	76.4	53.9	95.6	39.6	24.2	R
4-Nitrophenol	130	10	200.0	0	63.8	26.4	108	31.8	36.6	
Pentachlorophenol	130	20	200.0	0	65.8	36.5	86.6	29.1	29.5	
Phenol	160	10	200.0	0	77.8	29.3	108	58.2	30	R
Pyrene	69	10	100.0	0	69.3	45.7	100	20.8	31	
1,2,4-Trichlorobenzene	86	10	100.0	0	85.7	39.3	94.5	66.6	24	R
Surr: 2-Fluorophenol	140		200.0		70.6	14.9	111	0	0	
Surr: Phenol-d5	160		200.0		79.2	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		82.0	15.7	154	0	0	
Surr: Nitrobenzene-d5	80		100.0		79.5	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	77		100.0		77.3	21.3	123	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID: mb-20095	SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles							
Client ID: PBW	Batch ID: 20095		RunNo: 27414							
Prep Date: 7/6/2015	Analysis Date: 7/10/2015		SeqNo: 822558		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		69.6	14.9	111			
Surr: Phenol-d5	150		200.0		74.2	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		75.2	15.7	154			
Surr: Nitrobenzene-d5	75		100.0		75.0	47.8	106			
Surr: 2-Fluorobiphenyl	76		100.0		75.9	21.3	123			
Surr: 4-Terphenyl-d14	52		100.0		52.2	14.3	135			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	mb-20095	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	20095	RunNo:	27414					
Prep Date:	7/6/2015	Analysis Date:	7/10/2015	SeqNo:	822558	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID: rb1	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R27397		RunNo: 27397							
Prep Date:	Analysis Date: 7/9/2015		SeqNo: 822418		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	rb1	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R27397		RunNo: 27397						
Prep Date:		Analysis Date: 7/9/2015		SeqNo: 822418		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID: 100ng LCS	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R27397	RunNo: 27397								
Prep Date:	Analysis Date: 7/9/2015	SeqNo: 822125 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.9	70	130			
Toluene	17	1.0	20.00	0	87.2	70	130			
Chlorobenzene	17	1.0	20.00	0	85.5	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	95.4	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R27397	RunNo: 27397								
Prep Date:	Analysis Date: 7/9/2015	SeqNo: 822418 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507094

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID:	PBW	Batch ID: R27295		RunNo: 27295							
Prep Date:		Analysis Date: 7/2/2015		SeqNo: 817819		Units: mg/L					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	0.50								
Sulfate		ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions						
Client ID:	LCSW	Batch ID:	R27295	RunNo:	27295						
Prep Date:		Analysis Date:	7/2/2015	SeqNo:	817820	Units:	mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		5.0	0.50	5.000	0	99.0	90	110			
Sulfate		10	0.50	10.00	0	103	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 150707035
Project Name: 1507094

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.816	mg/L	0.907	90.0	70-130	7/15/2015	7/15/2015
Cyanide (reactive)	0.486	mg/L	0.5	97.2	80-120	7/15/2015	7/15/2015

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
150707035-001A	Reactive sulfide	ND	0.816	mg/L	0.907	90.0	70-130	7/15/2015	7/15/2015
150707035-001	Cyanide (reactive)	ND	0.462	mg/L	0.5	92.4	80-120	7/15/2015	7/15/2015

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	0.454	mg/L	0.5	90.8	1.7	0-25	7/15/2015	7/15/2015

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	7/15/2015	7/15/2015
Reactive sulfide	ND	mg/L	1	7/15/2015	7/15/2015

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA-ID00013; AZ:0701; CO-ID00013; FL(NELAP):E87893; ID-ID00013; MT:CERT0028; NM: ID00013; OR-ID200001-002; WA:C596
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

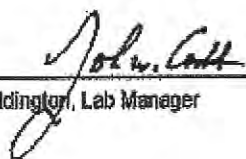
Batch #: 150707035
Project Name: 1507094

Analytical Results Report

Sample Number	150707035-001	Sampling Date	7/1/2015	Date/Time Received	7/7/2015 11:00 AM
Client Sample ID	1507094-001E / INJECTION WELL			Sampling Time	9:00 AM
Matrix	Water	Sample Location			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	1	7/15/2015	CRW	SW846 CH7	
Flashpoint	>200	°F		7/15/2015	KFG	EPA 1010	
pH	7.38	ph Units		7/8/2015	KMC	SM 4500pH-B	
Reactive sulfide	ND	mg/L	1	7/15/2015	HSW	SW846 CH7	

Authorized Signature


John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA ID00043, AZ0701, CO000013, FL(NELAP) E87693, ID000043, MT CERT0028, NM: ID00013, OR: ID20001-012, WA: C585
Certifications held by Anatek Labs WA: EPA WA00168, IT WA00168, WA: C585 MT Cert0028 FL(NELAP) E871099

Wednesday, July 22, 2015

Page 1 of 1

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1507094

Date Reported: 8/6/2015

CLIENT: Western Refining Southwest, Inc.**Client Sample ID:** Injection Well**Project:** Injection Well 7-1-15**Collection Date:** 7/1/2015 9:00:00 AM**Lab ID:** 1507094-001**Matrix:** AQUEOUS**Received Date:** 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
sec-Butylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Styrene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
tert-Butylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
trans-1,2-DCE	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Trichlorofluoromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Vinyl chloride	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Xylenes, Total	ND	1.5		µg/L	1	7/9/2015 8:19:52 PM	R27397
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397
Surr: 4-Bromofluorobenzene	90.8	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397
Surr: Dibromofluoromethane	103	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397
Surr: Toluene-d8	95.5	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507094

Date Reported: 8/6/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Injection Well

Project: Injection Well 7-1-15

Collection Date: 7/1/2015 9:00:00 AM

Lab ID: 1507094-001

Matrix: AQUEOUS

Received Date: 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1-Methylnaphthalene	ND	4.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Methylnaphthalene	ND	4.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Acetone	72	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromodichloromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromoform	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromomethane	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Butanone	11	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Carbon disulfide	ND	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Carbon Tetrachloride	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chloroethane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chloroform	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chloromethane	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Chlorotoluene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
4-Chlorotoluene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
cis-1,2-DCE	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Dibromochloromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Dibromomethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1-Dichloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1-Dichloroethene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dichloropropane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,3-Dichloropropane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2,2-Dichloropropane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1-Dichloropropene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Hexachlorobutadiene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Hexanone	ND	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Isopropylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
4-Isopropyltoluene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
4-Methyl-2-pentanone	ND	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Methylene Chloride	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
n-Butylbenzene	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
n-Propylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507094

Date Reported: 8/6/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Injection Well

Project: Injection Well 7-1-15

Collection Date: 7/1/2015 9:00:00 AM

Lab ID: 1507094-001

Matrix: AQUEOUS

Received Date: 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Isophorone	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1-Methylnaphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Methylnaphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Methylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
3+4-Methylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
N-Nitrosodimethylamine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Naphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Nitroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
3-Nitroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Nitroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Nitrobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Nitrophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Nitrophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Pentachlorophenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
Phenanthrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Phenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Pyrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Pyridine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Surr: 2-Fluorophenol	66.2	14.9-111		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: Phenol-d5	64.1	11.3-108		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: 2,4,6-Tribromophenol	75.7	15.7-154		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: Nitrobenzene-d5	84.6	47.8-106		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: 2-Fluorobiphenyl	63.7	21.3-123		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: 4-Terphenyl-d14	51.4	14.3-136		%REC	1	7/10/2015 1:30:30 PM	20095
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Toluene	1.5	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Ethylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Naphthalene	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507094

Date Reported: 8/6/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Injection Well

Project: Injection Well 7-1-15

Collection Date: 7/1/2015 9:00:00 AM

Lab ID: 1507094-001

Matrix: AQUEOUS

Received Date: 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Benzo(k)fluoranthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzoic acid	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzyl alcohol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Butyl benzyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Carbazole	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Chloroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Chloronaphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Chlorophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Chrysene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Di-n-butyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Di-n-octyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Dibenzofuran	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,2-Dichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,3-Dichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,4-Dichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Diethyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Dimethyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dichlorophenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dimethylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dinitrophenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dinitrotoluene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,6-Dinitrotoluene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Fluoranthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Fluorene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachlorobutadiene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachloroethane	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507094

Date Reported: 8/6/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Injection Well

Project: Injection Well 7-1-15

Collection Date: 7/1/2015 9:00:00 AM

Lab ID: 1507094-001

Matrix: AQUEOUS

Received Date: 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	480	50		mg/L	100	7/2/2015 5:18:55 PM	R27295
Sulfate	65	5.0		mg/L	10	7/2/2015 5:06:31 PM	R27295
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	2000	0.010		µmhos/cm	1	7/6/2015 11:31:17 AM	R27329
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	274.6	20.00		mg/L CaCO ₃	1	7/6/2015 11:31:17 AM	R27329
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	7/6/2015 11:31:17 AM	R27329
Total Alkalinity (as CaCO ₃)	274.6	20.00		mg/L CaCO ₃	1	7/6/2015 11:31:17 AM	R27329
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1220	40.0	*	mg/L	1	7/8/2015 5:09:00 PM	20129
SM4500-H+B: PH							Analyst: JRR
pH	7.45	1.68	H	pH units	1	7/6/2015 11:31:17 AM	R27329
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.0010		mg/L	5	7/8/2015 4:47:51 PM	20158
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.020		mg/L	1	7/9/2015 10:51:23 AM	20102
Barium	0.27	0.020		mg/L	1	7/9/2015 10:51:23 AM	20102
Cadmium	ND	0.0020		mg/L	1	7/16/2015 12:13:28 PM	20102
Calcium	120	5.0		mg/L	5	7/9/2015 1:02:36 PM	20102
Chromium	ND	0.0060		mg/L	1	7/14/2015 3:52:06 PM	20102
Lead	ND	0.0050		mg/L	1	7/9/2015 10:51:23 AM	20102
Magnesium	28	1.0		mg/L	1	7/9/2015 10:51:23 AM	20102
Potassium	7.7	1.0		mg/L	1	7/9/2015 10:51:23 AM	20102
Selenium	ND	0.050		mg/L	1	7/16/2015 12:13:28 PM	20102
Silver	ND	0.0050		mg/L	1	7/16/2015 12:13:28 PM	20102
Sodium	280	5.0		mg/L	5	7/9/2015 1:02:36 PM	20102
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Acenaphthylene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Aniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Anthracene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Azobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benz(a)anthracene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzo(a)pyrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzo(b)fluoranthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

102115MK



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 06, 2015

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: Injection Well 7-1-15

OrderNo.: 1507094

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/2/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011
Submitted 11/4/15
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Western Refining Pipeline, LLC
111 County Road 4990, Bloomfield, NM 87413

2. Originating Site:

Western Refining – Gallup Pipeline Station; SWNE Sec 33, T15N, R15W; McKinley County

3. Location of Material (Street Address, City, State or ULSTR):

Same as Originating Site

4. Source and Description of Waste:

Hydro Test water used to hydro test new facility piping.

Estimated Volume 8,800 bbls Known Volume (to be entered by the operator at the end of the haul) 4670 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Kelly Robinson Kelly Robinson representative or authorized agent for Western Refining Pipeline, LLC. do hereby

PRINT & SIGN NAME

COMPANY NAME

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Kelly Robinson Kelly Robinson representative for Western Refining Pipeline, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:

Triple S

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss, LLC Permit # UICI-005 (Class I Non-Hazardous Well)

Address of Facility: 345 CR 350, San Juan County, Aztec NM, 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: ADRIAN HUDSON

TITLE: Operator

DATE: 11/5/15

SIGNATURE: [Signature]

Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 334 6186



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1510A28

RcptNo: 1

Received by/date:

[Signature] 10/22/15

Logged By: Lindsay Mangin

10/22/2015 7:30:00 AM

[Signature]

Completed By: Lindsay Mangin

10/22/2015 7:53:31 AM

[Signature]

Reviewed By:

[Signature] 10/22/15

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ?

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☒

No ☐

No VOA Vials ☐

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:

2, 4
(2 or 12 unless noted)

Adjusted? No

Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	1510A28-001CMSD			SampType:	MSD		TestCode: EPA 6010B: Total Recoverable Metals				
Client ID:	Bisti			Batch ID:	22029		RunNo: 29799				
Prep Date:	10/26/2015			Analysis Date:	10/27/2015		SeqNo: 907721		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.57	0.020	0.5000	0.05610	102	75	125	1.35	20		
Cadmium	0.51	0.0020	0.5000	0	102	75	125	0.761	20		
Chromium	0.51	0.0060	0.5000	0	102	75	125	1.12	20		
Lead	0.51	0.0050	0.5000	0	102	75	125	0.0626	20		
Selenium	0.49	0.050	0.5000	0	98.7	75	125	2.13	20		
Silver	0.10	0.0050	0.1000	0	104	75	125	0.950	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	MB-22029	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	22029	RunNo:	29799					
Prep Date:	10/26/2015	Analysis Date:	10/27/2015	SeqNo:	907717	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-22029	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	22029	RunNo:	29799					
Prep Date:	10/26/2015	Analysis Date:	10/27/2015	SeqNo:	907718	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	102	80	120			
Barium	0.50	0.020	0.5000	0	99.8	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.6	80	120			
Chromium	0.50	0.0060	0.5000	0	99.3	80	120			
Lead	0.50	0.0050	0.5000	0	101	80	120			
Selenium	0.49	0.050	0.5000	0	97.5	80	120			
Silver	0.10	0.0050	0.1000	0	102	80	120			

Sample ID	1510A28-001CMS	SampType:	MS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Bisti	Batch ID:	22029	RunNo:	29799					
Prep Date:	10/26/2015	Analysis Date:	10/27/2015	SeqNo:	907720	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.53	0.020	0.5000	0	106	75	125			
Barium	0.56	0.020	0.5000	0.05610	101	75	125			
Cadmium	0.51	0.0020	0.5000	0	101	75	125			
Chromium	0.50	0.0060	0.5000	0	101	75	125			
Lead	0.51	0.0050	0.5000	0	102	75	125			
Selenium	0.48	0.050	0.5000	0	96.7	75	125			
Silver	0.10	0.0050	0.1000	0	103	75	125			

Sample ID	1510A28-001CMSD	SampType:	MSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Bisti	Batch ID:	22029	RunNo:	29799					
Prep Date:	10/26/2015	Analysis Date:	10/27/2015	SeqNo:	907721	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.53	0.020	0.5000	0	107	75	125	1.15	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	MB-21998	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	21998	RunNo:	29759				
Prep Date:	10/23/2015	Analysis Date:	10/23/2015	SeqNo:	906381	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Mercury	ND	0.00020							

Sample ID	LCS-21998	SampType:	LCS	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	21998	RunNo:	29759				
Prep Date:	10/23/2015	Analysis Date:	10/23/2015	SeqNo:	906382	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Mercury	0.0052	0.00020	0.005000	0	103	80	120		

Sample ID	1510A28-001CMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury				
Client ID:	Bisti	Batch ID:	21998	RunNo:	29759				
Prep Date:	10/23/2015	Analysis Date:	10/23/2015	SeqNo:	906384	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Mercury	0.0051	0.00020	0.005000	0	102	75	125		

Sample ID	1510A28-001CMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury				
Client ID:	Bisti	Batch ID:	21998	RunNo:	29759				
Prep Date:	10/23/2015	Analysis Date:	10/23/2015	SeqNo:	906385	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Mercury	0.0051	0.00020	0.005000	0	102	75	125	0.0557	20

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	lcsd-22016	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	22016	RunNo:	29797					
Prep Date:	10/26/2015	Analysis Date:	10/26/2015	SeqNo:	907638	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	46		100.0		46.5	12.9	107	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	Ics-22016		SampType: LCS	TestCode: EPA Method 8270C: Semivolatiles						
Client ID:	LCSW		Batch ID: 22016	RunNo: 29797						
Prep Date:	10/26/2015		Analysis Date: 10/26/2015	SeqNo: 907637		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.6	40.2	107			
4-Chloro-3-methylphenol	150	10	200.0	0	74.2	48.2	107			
2-Chlorophenol	170	10	200.0	0	84.3	42.5	106			
1,4-Dichlorobenzene	78	10	100.0	0	78.4	31.6	111			
2,4-Dinitrotoluene	62	10	100.0	0	62.2	33.6	86.5			
N-Nitrosodi-n-propylamine	77	10	100.0	0	76.9	44	106			
4-Nitrophenol	150	10	200.0	0	72.8	25.5	109			
Pentachlorophenol	120	20	200.0	0	58.3	38.8	97.8			
Phenol	160	10	200.0	0	78.6	22.7	116			
Pyrene	65	10	100.0	0	65.1	29.3	138			
1,2,4-Trichlorobenzene	80	10	100.0	0	80.2	35.3	123			
Surr: 2-Fluorophenol	150		200.0		74.6	4.63	113			
Surr: Phenol-d5	170		200.0		82.9	4.13	124			
Surr: 2,4,6-Tribromophenol	140		200.0		70.4	5.14	132			
Surr: Nitrobenzene-d5	78		100.0		77.9	9.13	140			
Surr: 2-Fluorobiphenyl	72		100.0		71.8	10.8	132			
Surr: 4-Terphenyl-d14	44		100.0		44.0	12.9	107			

Sample ID	Icsd-22016		SampType: LCSD	TestCode: EPA Method 8270C: Semivolatiles						
Client ID:	LCSS02		Batch ID: 22016	RunNo: 29797						
Prep Date:	10/26/2015		Analysis Date: 10/26/2015	SeqNo: 907638		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	92	10	100.0	0	92.4	40.2	107	22.7	46.7	
4-Chloro-3-methylphenol	180	10	200.0	0	91.6	48.2	107	21.1	29.4	
2-Chlorophenol	180	10	200.0	0	91.6	42.5	106	8.26	38.7	
1,4-Dichlorobenzene	88	10	100.0	0	87.5	31.6	111	11.0	25.3	
2,4-Dinitrotoluene	74	10	100.0	0	74.1	33.6	86.5	17.6	35.6	
N-Nitrosodi-n-propylamine	90	10	100.0	0	90.5	44	106	16.2	30.2	
4-Nitrophenol	160	10	200.0	0	81.1	25.5	109	10.7	42.2	
Pentachlorophenol	140	20	200.0	0	70.0	38.8	97.8	18.2	35.5	
Phenol	180	10	200.0	0	90.4	22.7	116	14.0	32	
Pyrene	82	10	100.0	0	81.7	29.3	138	22.6	27.1	
1,2,4-Trichlorobenzene	90	10	100.0	0	90.5	35.3	123	12.0	43.3	
Surr: 2-Fluorophenol	170		200.0		83.4	4.63	113	0	0	
Surr: Phenol-d5	180		200.0		92.4	4.13	124	0	0	
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	5.14	132	0	0	
Surr: Nitrobenzene-d5	87		100.0		86.5	9.13	140	0	0	
Surr: 2-Fluorobiphenyl	90		100.0		89.7	10.8	132	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	mb-22016	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	22016	RunNo:	29797					
Prep Date:	10/26/2015	Analysis Date:	10/26/2015	SeqNo:	907636	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		76.2	4.63	113			
Surr: Phenol-d5	150		200.0		73.0	4.13	124			
Surr: 2,4,6-Tribromophenol	150		200.0		72.9	5.14	132			
Surr: Nitrobenzene-d5	74		100.0		73.7	9.13	140			
Surr: 2-Fluorobiphenyl	75		100.0		74.7	10.8	132			
Surr: 4-Terphenyl-d14	50		100.0		50.4	12.9	107			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	mb-22016	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	22016	RunNo:	29797					
Prep Date:	10/26/2015	Analysis Date:	10/26/2015	SeqNo:	907636	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R29742	RunNo: 29742								
Prep Date:	Analysis Date: 10/22/2015	SeqNo: 905841 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	93.6	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	92.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R29742	RunNo:	29742					
Prep Date:		Analysis Date:	10/22/2015	SeqNo:	905840	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.6		10.00		96.3	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R29742	RunNo:	29742					
Prep Date:		Analysis Date:	10/22/2015	SeqNo:	905841	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.5	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510A28

28-Oct-15

Client: Western Refining Southwest, Inc.

Project: West Line Test Water 10-20-15

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R29742	RunNo:	29742					
Prep Date:		Analysis Date:	10/22/2015	SeqNo:	905840	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromofom	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chlorofom	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 151023025
Project Name: 1510A28

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.180	mg/L	0.2	90.0	70-130	10/26/2015	10/26/2015
Cyanide (reactive)	0.478	mg/L	0.5	95.6	80-120	10/28/2015	10/28/2015

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
151023025-001	Reactive sulfide	ND	0.224	mg/L	0.2	112.0	70-130	10/26/2015	10/26/2015
151023025-001	Cyanide (reactive)	ND	0.464	mg/L	0.5	92.8	80-120	10/28/2015	10/28/2015

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	0.474	mg/L	0.5	94.8	2.1	0-25	10/28/2015	10/28/2015

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	10/28/2015	10/28/2015
Reactive sulfide	ND	mg/L	1	10/26/2015	10/26/2015

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

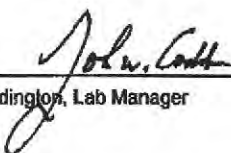
Batch #: 151023025
Project Name: 1510A28

Analytical Results Report

Sample Number	151023025-001	Sampling Date	10/20/2015	Date/Time Received	10/23/2015 10:30 AM
Client Sample ID	1510A28-001D / BISTI	Sampling Time	9:30 AM		
Matrix	Water	Sample Location			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	1	10/28/2015	MER	SW846 CH7	
Flashpoint	>200	°F		10/26/2015	KFG	EPA 1010	
pH	7.89	ph Units		10/26/2015	KMC	SM 4500pH-B	
Reactive sulfide	ND	mg/L	1	10/26/2015	KMC	SW846 CH7	

Authorized Signature


John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Wednesday, October 28, 2015

Page 1 of 1

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-IV

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:30:00 PM

Lab ID: 1510A28-005

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
4-Isopropyltoluene	5.0	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Xylenes, Total	170	1.5		µg/L	1	10/22/2015 4:00:46 PM	R29742
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742
Surr: Dibromofluoromethane	101	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742
Surr: Toluene-d8	101	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-IV

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:30:00 PM

Lab ID: 1510A28-005

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	36	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Toluene	30	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,4-Trimethylbenzene	76	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,3,5-Trimethylbenzene	49	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Carbon disulfide	21	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-III

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:25:00 PM

Lab ID: 1510A28-004

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
4-Isopropyltoluene	4.5	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Xylenes, Total	61	1.5		µg/L	1	10/22/2015 3:33:11 PM	R29742
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742
Surr: Dibromofluoromethane	103	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742
Surr: Toluene-d8	99.6	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-III

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:25:00 PM

Lab ID: 1510A28-004

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
Benzene	19	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Toluene	19	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,4-Trimethylbenzene	24	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,3,5-Trimethylbenzene	38	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Carbon disulfide	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-II

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:20:00 PM

Lab ID: 1510A28-003

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
4-Isopropyltoluene	2.8	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Xylenes, Total	30	1.5		µg/L	1	10/22/2015 3:05:32 PM	R29742
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742
Surr: Dibromofluoromethane	102	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742
Surr: Toluene-d8	96.3	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-II

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:20:00 PM

Lab ID: 1510A28-003

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	13	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Toluene	16	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,4-Trimethylbenzene	1.2	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,3,5-Trimethylbenzene	13	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Carbon disulfide	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-I

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:15:00 PM

Lab ID: 1510A28-002

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
4-Isopropyltoluene	2.6	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Xylenes, Total	27	1.5		µg/L	1	10/22/2015 2:37:55 PM	R29742
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742
Surr: Dibromofluoromethane	106	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742
Surr: Toluene-d8	100	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-I

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:15:00 PM

Lab ID: 1510A28-002

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	12	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Toluene	12	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,4-Trimethylbenzene	2.0	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,3,5-Trimethylbenzene	14	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Carbon disulfide	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported: 10/28/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-I

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:15:00 PM

Lab ID: 1510A28-002

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Fluoranthene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Fluorene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachlorobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachloroethane	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Isophorone	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
1-Methylnaphthalene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Methylphenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
3+4-Methylphenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Naphthalene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
3-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Nitrobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Nitrophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Nitrophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Pentachlorophenol	ND	20		µg/L	1	10/26/2015 4:33:33 PM	22016
Phenanthrene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Phenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Pyrene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Pyridine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2,4,6-Trichlorophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Surr: 2-Fluorophenol	85.2	4.63-113		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: Phenol-d5	69.5	4.13-124		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: 2,4,6-Tribromophenol	100	5.14-132		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: Nitrobenzene-d5	98.7	9.13-140		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: 2-Fluorobiphenyl	98.1	10.8-132		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: 4-Terphenyl-d14	48.5	12.9-107		%REC	1	10/26/2015 4:33:33 PM	22016

EPA METHOD 8260B: VOLATILES

Analyst: DJF

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 28, 2015

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: West Line Test Water 10-20-15

OrderNo.: 1510A28

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/22/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submitted 10/27/15 Form C-138
Revised August 1, 2011
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Western Refining Pipeline, LLC 111 CR 4009, Bloomfield, NM, 87413
2. Originating Site: Western Refining – Standing Rock Pipeline Station, McKinley County, SWNE Sec 22, T19N, R15W
3. Location of Material (Street Address, City, State or ULSTR): Same as originating Site
4. Source and Description of Waste: The crude impacted soil was generated during general maintenance and facility clean-up activities. Estimated Volume <u>1800</u> bbl Known Volume (to be entered by the operator at the end of the haul) <u>1865</u> yd ³ / bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <u>Kelly Robinson</u> <u>Kelly Robinson</u> , representative or authorized agent for <u>Western Refining Pipeline, LLC</u> do hereby PRINT & SIGN NAME COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) ☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> ☐ Monthly ☐ Weekly ☐ Per Load ☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) ☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4) GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <u>Kelly Robinson</u> <u>Kelly Robinson</u> , representative for <u>Western Refining Pipeline, LLC</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: SSS <u>SSS TRUCKING</u>

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss, LLC Permit # UICI-005 (Class I Non-Hazardous Well)

Address of Facility: 345 CR 350, San Juan County, Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED**

☐ **DENIED (Must Be Maintained As Permanent Record)**

PRINT NAME:

Adrian Hudson

TITLE:

Operator

DATE:

11/13/15

SIGNATURE:

[Signature]

TELEPHONE NO.:

(805) 334-6186

Surface Waste Management Facility Authorized Agent

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-IV

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:30:00 PM

Lab ID: 1510A28-005

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
4-Isopropyltoluene	5.0	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Xylenes, Total	170	1.5		µg/L	1	10/22/2015 4:00:46 PM	R29742
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742
Surr: Dibromofluoromethane	101	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742
Surr: Toluene-d8	101	70-130		%REC	1	10/22/2015 4:00:46 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-IV

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:30:00 PM

Lab ID: 1510A28-005

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	36	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Toluene	30	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2,4-Trimethylbenzene	76	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,3,5-Trimethylbenzene	49	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Carbon disulfide	21	10		µg/L	1	10/22/2015 4:00:46 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 4:00:46 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 4:00:46 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-III

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:25:00 PM

Lab ID: 1510A28-004

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
4-Isopropyltoluene	4.5	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Xylenes, Total	61	1.5		µg/L	1	10/22/2015 3:33:11 PM	R29742
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742
Surr: Dibromofluoromethane	103	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742
Surr: Toluene-d8	99.6	70-130		%REC	1	10/22/2015 3:33:11 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-III

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:25:00 PM

Lab ID: 1510A28-004

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	19	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Toluene	19	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2,4-Trimethylbenzene	24	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,3,5-Trimethylbenzene	38	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Carbon disulfide	ND	10		µg/L	1	10/22/2015 3:33:11 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:33:11 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 3:33:11 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-II

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:20:00 PM

Lab ID: 1510A28-003

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
4-Isopropyltoluene	2.8	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Xylenes, Total	30	1.5		µg/L	1	10/22/2015 3:05:32 PM	R29742
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742
Surr: Dibromofluoromethane	102	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742
Surr: Toluene-d8	96.3	70-130		%REC	1	10/22/2015 3:05:32 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-II

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:20:00 PM

Lab ID: 1510A28-003

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	13	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Toluene	16	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2,4-Trimethylbenzene	1.2	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,3,5-Trimethylbenzene	13	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Carbon disulfide	ND	10		µg/L	1	10/22/2015 3:05:32 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 3:05:32 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 3:05:32 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-I

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:15:00 PM

Lab ID: 1510A28-002

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
4-Isopropyltoluene	2.6	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Xylenes, Total	27	1.5		µg/L	1	10/22/2015 2:37:55 PM	R29742
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742
Surr: Dibromofluoromethane	106	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742
Surr: Toluene-d8	100	70-130		%REC	1	10/22/2015 2:37:55 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-I

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:15:00 PM

Lab ID: 1510A28-002

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	12	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Toluene	12	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2,4-Trimethylbenzene	2.0	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,3,5-Trimethylbenzene	14	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromodichloromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Carbon disulfide	ND	10		µg/L	1	10/22/2015 2:37:55 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chloroform	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 2:37:55 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 2:37:55 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-1

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:15:00 PM

Lab ID: 1510A28-002

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Fluoranthene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Fluorene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachlorobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Hexachloroethane	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Isophorone	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
1-Methylnaphthalene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Methylphenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
3+4-Methylphenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Naphthalene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
3-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Nitrobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Nitrophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Nitrophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Pentachlorophenol	ND	20		µg/L	1	10/26/2015 4:33:33 PM	22016
Phenanthrene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Phenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Pyrene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Pyridine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2,4,6-Trichlorophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Surr: 2-Fluorophenol	85.2	4.63-113		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: Phenol-d5	69.5	4.13-124		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: 2,4,6-Tribromophenol	100	5.14-132		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: Nitrobenzene-d5	98.7	9.13-140		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: 2-Fluorobiphenyl	98.1	10.8-132		%REC	1	10/26/2015 4:33:33 PM	22016
Surr: 4-Terphenyl-d14	48.5	12.9-107		%REC	1	10/26/2015 4:33:33 PM	22016

EPA METHOD 8260B: VOLATILES

Analyst: DJF

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SR-I

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 1:15:00 PM

Lab ID: 1510A28-002

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Acenaphthylene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Aniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Anthracene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Azobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Benz(a)anthracene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Benzo(a)pyrene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Benzo(b)fluoranthene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Benzo(k)fluoranthene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Benzoic acid	ND	20		µg/L	1	10/26/2015 4:33:33 PM	22016
Benzyl alcohol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Bis(2-chloroethyl)ether	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Butyl benzyl phthalate	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Carbazole	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Chloro-3-methylphenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Chloroaniline	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Chloronaphthalene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2-Chlorophenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Chrysene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Di-n-butyl phthalate	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Di-n-octyl phthalate	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Dibenzofuran	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
1,2-Dichlorobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
1,3-Dichlorobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
1,4-Dichlorobenzene	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
3,3'-Dichlorobenzidine	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Diethyl phthalate	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
Dimethyl phthalate	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
2,4-Dichlorophenol	ND	20		µg/L	1	10/26/2015 4:33:33 PM	22016
2,4-Dimethylphenol	ND	10		µg/L	1	10/26/2015 4:33:33 PM	22016
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	10/26/2015 4:33:33 PM	22016
2,4-Dinitrophenol	ND	20		µg/L	1	10/26/2015 4:33:33 PM	22016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 6 of 0
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix		

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Western Refining Pipeline, LLC
111 County Road 4990, Bloomfield, NM 87413

2. Originating Site:

Western Refining – Star Lake Pipeline Station; NWNE Sec 19, T21N, R7W; Sandoval County

3. Location of Material (Street Address, City, State or ULSTR):

Same as originating Site

4. Source and Description of Waste:

Test water used to hydrotest new facility piping.

Estimated Volume 40 bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Kelly Robinson, representative or authorized agent for Western Refining Pipeline, LLC. do hereby
PRINT & SIGN NAME COMPANY NAME

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Kelly Robinson, representative for Western Refining Pipeline, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:

To be determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss, LLC Permit # UICI-005 (Class I Non-Hazardous Well)

Address of Facility: 345 CR 350, San Juan County, Aztec NM, 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

TITLE: Operator DATE: _____

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 334-6186



Analytical Report

Report Summary

Client: Western Refining Southwest, Inc.

Chain Of Custody Number: 16177

Samples Received: 1/30/2015 7:55:00AM

Job Number: 96012-0115

Work Order: P501081

Project Name/Location: Star Lake

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Tim Cain, Laboratory Manager

Date: 2/3/15

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Test Water	P501081-01A	Aqueous	01/29/15	01/30/15	Poly 500mL
	P501081-01B	Aqueous	01/29/15	01/30/15	Poly 500mL; HNO ₃
	P501081-01C	Aqueous	01/29/15	01/30/15	Poly 500mL; NaOH

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laboratory@envirotech-inc.com



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Test Water
P501081-01 (Water)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Metals by 6010										
Arsenic	ND	0.01	mg/L	1		1505025	01/30/15	01/30/15	EPA 6010C	
Barium	0.09	0.05	mg/L	1		1505025	01/30/15	01/30/15	EPA 6010C	
Cadmium	ND	0.01	mg/L	1		1505025	01/30/15	01/30/15	EPA 6010C	
Chromium	ND	0.01	mg/L	1		1505025	01/30/15	01/30/15	EPA 6010C	
Lead	ND	0.01	mg/L	1		1505025	01/30/15	01/30/15	EPA 6010C	
Selenium	ND	0.01	mg/L	1		1505025	01/30/15	01/30/15	EPA 6010C	
Silver	ND	0.01	mg/L	1		1505025	01/30/15	01/30/15	EPA 6010C	
Cation/Anion Analysis										
pH @7.3°C	7.51		pH Units	1		1505024	01/30/15 09:50	01/30/15 09:50	150.1/4500H	
Suspected Hazardous Waste										
Flash Point	>95		°C	1		1505027	01/30/15	01/30/15	ASTM D93-10a	
Reactivity	Negative		N/A	1		1505024	01/30/15	01/30/15		
Total Mercury by EPA 7470A										
Mercury	ND	0.0002	mg/L	1		1505028	01/30/15	02/02/15	EPA 7470A	

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Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Total Metals by 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1505025 - Metal Water/TCLP (EPA 1311) Digestion EPA 3015A

Blank (1505025-BLK1)

Prepared & Analyzed: 30-Jan-15

Arsenic	ND	0.01	mg/L
Barium	ND	0.05	"
Cadmium	ND	0.01	"
Chromium	ND	0.01	"
Lead	ND	0.01	"
Selenium	ND	0.01	"
Silver	ND	0.01	"

Duplicate (1505025-DUP1)

Source: P501081-01

Prepared & Analyzed: 30-Jan-15

Arsenic	ND	0.01	mg/L	ND				30
Barium	0.09	0.05	"	0.09			1.81	30
Cadmium	ND	0.01	"	ND				30
Chromium	ND	0.01	"	ND				30
Lead	ND	0.01	"	ND				30
Selenium	ND	0.01	"	ND				30
Silver	ND	0.01	"	ND				30

Matrix Spike (1505025-MS1)

Source: P501081-01

Prepared & Analyzed: 30-Jan-15

Arsenic	0.24		mg/L	0.250	0.003	96.1	75-125
Barium	5.72		"	5.00	0.08	113	75-125
Cadmium	0.25		"	0.250	0.0005	98.8	75-125
Chromium	0.51		"	0.500	0.002	101	75-125
Lead	0.49		"	0.500	-0.001	97.5	75-125
Selenium	0.09		"	0.100	ND	89.5	75-125
Silver	0.10		"	0.100	-0.0005	96.6	75-125

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Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Total Mercury by EPA 7470A - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505028 - Mercury Water/TCLP Digestion KMNO4										
Blank (1505028-BLK1)				Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	ND	0.0002	mg/L							
LCS (1505028-BS1)				Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229		98.6	80-120			
Matrix Spike (1505028-MS1)				Source: P501081-01 Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	97.7	75-125			
Matrix Spike Dup (1505028-MSD1)				Source: P501081-01 Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	98.1	75-125	0.383	15	

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Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Notes and Definitions

FP1 >95
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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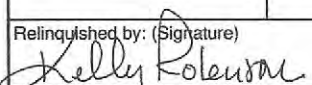
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CHAIN OF CUSTODY RECORD

16177

Client: WESTERN REFINING			Project Name / Location: STAR LAKE			ANALYSIS / PARAMETERS																																									
Email results to: Kelly.Robinson@wnr.com			Sampler Name: TERRY HOPKIN			<table border="1"> <tr> <th>TPH (Method 8015)</th> <th>BTEX (Method 8021)</th> <th>VOC (Method 8260)</th> <th>PCRA 8 Metals + TC 121</th> <th>Cation / Anion</th> <th>FCI</th> <th>TCLP with H/P</th> <th>CO Table 910-1</th> <th>TPH (418.1)</th> <th>CHLORIDE</th> <th>Ignitability</th> <th>Corrosivity</th> <th>Reactivity</th> <th>Sample Cool</th> <th>Sample Intact</th> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>												TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	PCRA 8 Metals + TC 121	Cation / Anion	FCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE	Ignitability	Corrosivity	Reactivity	Sample Cool	Sample Intact															
TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	PCRA 8 Metals + TC 121	Cation / Anion	FCI													TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE	Ignitability	Corrosivity	Reactivity	Sample Cool	Sample Intact																					
Client Phone No.: (505) 632-4166			Client No.: 96012-0115																																												
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative																																										
					HNO ₃	HCl	H ₂ O ₂																																								
TEST WATER	1/29/15	17:00	P501081-01	1-500mL			X																																								
↓	↓	↓	↓	1-500mL																																											
↓	↓	↓	↓	1-500mL	X																																										
Relinquished by: (Signature)  Relinquished by: (Signature) Date 1/30/15 Time 7:55 Received by: (Signature)  Received by: (Signature) Date 1/30/15 Time 7:55																																															
Sample Matrix Soil ☐ Solid ☐ Sludge ☐ Aqueous ☒ Other ☐																																															
☐ Sample(s) dropped off after hours to secure drop off area. P.O. 12610466 5795 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 • laboratory@envirotech-inc.com  envirotech Analytical Laboratory RUSH ASAP Please Call w/ Verbal 14.3, 7.1, 5.4																																															

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-138
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Western Refining Pipeline, LLC. 111 CR 4009, Bloomfield, NM, 87413
2. Originating Site: Western Refining – Bisti Pipeline Station, San Juan County, NESE Sec 17, T26N, R12W
3. Location of Material (Street Address, City, State or ULSTR): Same as originating Site
4. Source and Description of Waste: Crude paraffin from the clean-up of crude tank roof.
Estimated Volume <u>3600</u> bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd ³ / bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <u>Kelly Robinson</u> <i>Kelly Robinson</i> , representative or authorized agent for <u>Western Refining Pipeline, LLC.</u> do hereby PRINT & SIGN NAME COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) ☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load ☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) ☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4) GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <u>Kelly Robinson</u> <i>Kelly Robinson</i> , representative for <u>Western Refining Pipeline, LLC.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: SSS Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss, LLC Permit # UICI-005 (Class I Non-Hazardous Well)

Address of Facility: #345 CR 350, San Juan County, Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED**

☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson TITLE: Operator DATE: _____
SIGNATURE: *[Signature]* TELEPHONE NO.: (505) 334-486
Surface Waste Management Facility Authorized Agent

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1509734

RcptNo: 1

Received by/date:

MG 09/16/15

Logged By: Anne Thorne

9/16/2015 9:45:00 AM

Anne Thorne

Completed By: Anne Thorne

9/16/2015

Anne Thorne

Reviewed By:

mg

09/16/15

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

UPS

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☒

No ☐

No VOA Vials ☐

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody)

Yes ☒

No ☐

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?
(If no, notify customer for authorization.)

Yes ☒

No ☐

of preserved
bottles checked
for pH:

(52 or >12 unless noted)

Adjusted? ☐

Checked by *AT 09/16/15*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509734

22-Sep-15

Client: Western Refining Southwest, Inc.

Project: Hill Top

Sample ID	1509734-001A MS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Hill Top Water	Batch ID:	A28954	RunNo:	28954					
Prep Date:		Analysis Date:	9/18/2015	SeqNo:	878793	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	101	53.8	128			
Surr: BFB	9.9		10.00		98.8	70	130			

Sample ID	1509734-001A MSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Hill Top Water	Batch ID:	A28954	RunNo:	28954					
Prep Date:		Analysis Date:	9/18/2015	SeqNo:	878794	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.8	53.8	128	9.15	20	
Surr: BFB	9.7		10.00		97.4	70	130	0	0	

Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	A28954	RunNo:	28954					
Prep Date:		Analysis Date:	9/18/2015	SeqNo:	878796	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.2	80.6	122			
Surr: BFB	10		10.00		102	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	A28954	RunNo:	28954					
Prep Date:		Analysis Date:	9/18/2015	SeqNo:	878797	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		99.9	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509734

22-Sep-15

Client: Western Refining Southwest, Inc.

Project: Hill Top

Sample ID	1509734-001BMS	SampType:	MS	TestCode: EPA 6010B: Total Recoverable Metals						
Client ID:	Hill Top Water	Batch ID:	21379	RunNo: 28990						
Prep Date:	9/18/2015	Analysis Date:	9/21/2015	SeqNo: 879694			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.50	0.0020	0.5000	0.006910	99.6	75	125			
Selenium	0.52	0.050	0.5000	0	104	75	125			
Silver	0.11	0.0050	0.1000	0	105	75	125			
Uranium	0.51	0.10	0.5000	0	102	75	125			
Zinc	0.49	0.020	0.5000	0	98.0	75	125			

Sample ID	1509734-001BMSD			SampType:	MSD		TestCode:	EPA 6010B: Total Recoverable Metals			
Client ID:	Hill Top Water		Batch ID:	21379		RunNo:	28990				
Prep Date:	9/18/2015		Analysis Date:	9/21/2015		SeqNo:	879695		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.54	0.020	0.5000	0	107	75	125	0.748	20		
Barium	0.52	0.020	0.5000	0.02322	100	75	125	0.917	20		
Cadmium	0.51	0.0020	0.5000	0	102	75	125	0.468	20		
Chromium	0.50	0.0060	0.5000	0	99.7	75	125	0.0301	20		
Copper	0.55	0.0060	0.5000	0	110	75	125	0.409	20		
Lead	0.50	0.0050	0.5000	0	99.9	75	125	0.370	20		
Manganese	0.50	0.0020	0.5000	0.006910	98.7	75	125	0.887	20		
Selenium	0.50	0.050	0.5000	0	100	75	125	3.52	20		
Silver	0.10	0.0050	0.1000	0	104	75	125	1.33	20		
Uranium	0.51	0.10	0.5000	0	102	75	125	0.482	20		
Zinc	0.49	0.020	0.5000	0	97.2	75	125	0.877	20		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509734

22-Sep-15

Client: Western Refining Southwest, Inc.

Project: Hill Top

Sample ID	MB-21379		SampType:	MBLK		TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	PBW		Batch ID:	21379		RunNo:	28990				
Prep Date:	9/18/2015		Analysis Date:	9/21/2015		SeqNo:	879680		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	ND	0.020									
Barium	ND	0.020									
Cadmium	ND	0.0020									
Chromium	ND	0.0060									
Copper	ND	0.0060									
Lead	ND	0.0050									
Manganese	ND	0.0020									
Selenium	ND	0.050									
Silver	ND	0.0050									
Uranium	ND	0.10									
Zinc	ND	0.020									

Sample ID	LCS-21379		SampType: LCS		TestCode: EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW		Batch ID: 21379		RunNo: 28990					
Prep Date:	9/18/2015		Analysis Date: 9/21/2015		SeqNo: 879681		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	101	80	120			
Barium	0.48	0.020	0.5000	0	96.7	80	120			
Cadmium	0.48	0.0020	0.5000	0	96.9	80	120			
Chromium	0.48	0.0060	0.5000	0	96.6	80	120			
Copper	0.50	0.0060	0.5000	0	101	80	120			
Lead	0.48	0.0050	0.5000	0	96.5	80	120			
Manganese	0.47	0.0020	0.5000	0	94.7	80	120			
Selenium	0.50	0.050	0.5000	0	99.6	80	120			
Silver	0.099	0.0050	0.1000	0	99.2	80	120			
Uranium	0.49	0.10	0.5000	0	98.8	80	120			
Zinc	0.47	0.020	0.5000	0	94.2	80	120			

Sample ID	1509734-001BMS		SampType:	MS		TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	Hill Top Water		Batch ID:	21379		RunNo:	28990				
Prep Date:	9/18/2015		Analysis Date:	9/21/2015		SeqNo:	879694		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.54	0.020	0.5000	0	108	75	125				
Barium	0.53	0.020	0.5000	0.02322	101	75	125				
Cadmium	0.51	0.0020	0.5000	0	102	75	125				
Chromium	0.50	0.0060	0.5000	0	99.7	75	125				
Copper	0.55	0.0060	0.5000	0	110	75	125				
Lead	0.50	0.0050	0.5000	0	100	75	125				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509734

22-Sep-15

Client: Western Refining Southwest, Inc.

Project: Hill Top

Sample ID	MB-21377	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	21377	RunNo:	28965					
Prep Date:	9/18/2015	Analysis Date:	9/18/2015	SeqNo:	878715	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-21377		SampType:	LCS		TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW		Batch ID:	21377		RunNo:	28965				
Prep Date:	9/18/2015		Analysis Date:	9/18/2015		SeqNo:	878716		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0049	0.00020	0.005000	0	97.8	80	120				

Sample ID	1509734-001BMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury					
Client ID:	Hill Top Water	Batch ID:	21377	RunNo:	28965					
Prep Date:	9/18/2015	Analysis Date:	9/18/2015	SeqNo:	878718	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0.0001197	101	75	125			

Sample ID	1509734-001BMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury					
Client ID:	Hill Top Water	Batch ID:	21377	RunNo:	28965					
Prep Date:	9/18/2015	Analysis Date:	9/18/2015	SeqNo:	878719	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0.0001197	101	75	125	0.154	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509734

22-Sep-15

Client: Western Refining Southwest, Inc.

Project: Hill Top

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: B28954	RunNo: 28954								
Prep Date:	Analysis Date: 9/18/2015	SeqNo: 878809 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	20	1.0	20.00	0	99.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	10		10.00		99.6	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: B28954	RunNo: 28954								
Prep Date:	Analysis Date: 9/18/2015	SeqNo: 878810			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.9	70	130			
Surr: Toluene-d8	9.7		10.00		97.3	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1509734

Date Reported: 9/22/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Hill Top Water

Project: Hill Top

Collection Date: 9/15/2015 11:30:00 AM

Lab ID: 1509734-001

Matrix: AQUEOUS

Received Date: 9/16/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/18/2015 2:26:31 PM	21377
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.020		mg/L	1	9/21/2015 11:07:16 AM	21379
Barium	0.023	0.020		mg/L	1	9/21/2015 11:07:16 AM	21379
Cadmium	ND	0.0020		mg/L	1	9/21/2015 11:07:16 AM	21379
Chromium	ND	0.0060		mg/L	1	9/21/2015 11:07:16 AM	21379
Copper	ND	0.0060		mg/L	1	9/21/2015 11:07:16 AM	21379
Lead	ND	0.0050		mg/L	1	9/21/2015 11:07:16 AM	21379
Manganese	0.0069	0.0020		mg/L	1	9/21/2015 11:07:16 AM	21379
Selenium	ND	0.050		mg/L	1	9/21/2015 11:07:16 AM	21379
Silver	ND	0.0050		mg/L	1	9/21/2015 11:07:16 AM	21379
Uranium	ND	0.10		mg/L	1	9/21/2015 11:07:16 AM	21379
Zinc	ND	0.020		mg/L	1	9/21/2015 11:07:16 AM	21379
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2015 11:36:59 AM	A28954
Surr: BFB	98.7	70-130		%REC	1	9/18/2015 11:36:59 AM	A28954
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/18/2015 11:36:59 AM	B28954
Toluene	ND	1.0		µg/L	1	9/18/2015 11:36:59 AM	B28954
Ethylbenzene	ND	1.0		µg/L	1	9/18/2015 11:36:59 AM	B28954
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2015 11:36:59 AM	B28954
Xylenes, Total	ND	1.5		µg/L	1	9/18/2015 11:36:59 AM	B28954
Surr: 1,2-Dichloroethane-d4	93.0	70-130		%REC	1	9/18/2015 11:36:59 AM	B28954
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	9/18/2015 11:36:59 AM	B28954
Surr: Dibromofluoromethane	96.1	70-130		%REC	1	9/18/2015 11:36:59 AM	B28954
Surr: Toluene-d8	98.5	70-130		%REC	1	9/18/2015 11:36:59 AM	B28954

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 22, 2015

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: Hill Top

OrderNo.: 1509734

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/16/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011
Submitted 10/27/15
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Western Refining Pipeline, LLC. 111 CR 4009, Bloomfield, NM, 87413

2. Originating Site:

Western Refining - Bisti Pipeline Station, San Juan County, NESE Sec 17, T26N, R12W

3. Location of Material (Street Address, City, State or ULSTR):

Same as originating Site

4. Source and Description of Waste:

Estimated Volume 550 bbls Known Volume (to be entered by the operator at the end of the haul) 325 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Kelly Robinson Kelly Robinson representative or authorized agent for Western Refining Pipeline, LLC. do hereby
PRINT & SIGN NAME COMPANY NAME

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Kelly Robinson Kelly Robinson representative for Western Refining Pipeline, LLC. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:

SSS Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss, LLC Permit # UICI-005 (Class I Non-Hazardous Well)

Address of Facility: 345 CR 350 San Juan County, Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME:

Adrian Hudson

TITLE:

Operator

DATE:

11/13/15

SIGNATURE:

[Signature]

TELEPHONE NO.:

(505) 334-6186

Surface Waste Management Facility Authorized Agent

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Bisti

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 9:30:00 AM

Lab ID: 1510A28-001

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Surr: Dibromofluoromethane	113	70-130		%REC	1	10/22/2015 2:10:17 PM	R29742
Surr: Toluene-d8	99.2	70-130		%REC	1	10/22/2015 2:10:17 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Bisti

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 9:30:00 AM

Lab ID: 1510A28-001

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Dibromochloromethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Dibromomethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,1-Dichloroethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,1-Dichloroethene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,3-Dichloropropane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
2,2-Dichloropropane	ND	2.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,1-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Hexachlorobutadiene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
2-Hexanone	ND	10		µg/L	1	10/22/2015 2:10:17 PM	R29742
Isopropylbenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
4-Isopropyltoluene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
4-Methyl-2-pentanone	ND	10		µg/L	1	10/22/2015 2:10:17 PM	R29742
Methylene Chloride	ND	3.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
n-Butylbenzene	ND	3.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
n-Propylbenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
sec-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Styrene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
tert-Butylbenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
trans-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Trichlorofluoromethane	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Vinyl chloride	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Xylenes, Total	ND	1.5		µg/L	1	10/22/2015 2:10:17 PM	R29742
Surr: 1,2-Dichloroethane-d4	95.0	70-130		%REC	1	10/22/2015 2:10:17 PM	R29742
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	10/22/2015 2:10:17 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 4 of 0
D	Sample Diluted Due to Matrix	E Value above quantitation range	
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range	
R	RPD outside accepted recovery limits	RL Reporting Detection Limit	
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Bisti

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 9:30:00 AM

Lab ID: 1510A28-001

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyridine	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2,4,6-Trichlorophenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Surr: 2-Fluorophenol	91.8	4.63-113		%REC	1	10/26/2015 4:03:54 PM	22016
Surr: Phenol-d5	71.9	4.13-124		%REC	1	10/26/2015 4:03:54 PM	22016
Surr: 2,4,6-Tribromophenol	97.4	5.14-132		%REC	1	10/26/2015 4:03:54 PM	22016
Surr: Nitrobenzene-d5	94.0	9.13-140		%REC	1	10/26/2015 4:03:54 PM	22016
Surr: 2-Fluorobiphenyl	102	10.8-132		%REC	1	10/26/2015 4:03:54 PM	22016
Surr: 4-Terphenyl-d14	52.0	12.9-107		%REC	1	10/26/2015 4:03:54 PM	22016
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Toluene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Ethylbenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Naphthalene	ND	2.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
2-Methylnaphthalene	ND	4.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Acetone	ND	10		µg/L	1	10/22/2015 2:10:17 PM	R29742
Bromobenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Bromodichloromethane	2.3	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Bromoform	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Bromomethane	ND	3.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
2-Butanone	ND	10		µg/L	1	10/22/2015 2:10:17 PM	R29742
Carbon disulfide	ND	10		µg/L	1	10/22/2015 2:10:17 PM	R29742
Carbon Tetrachloride	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Chlorobenzene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Chloroethane	ND	2.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Chloroform	13	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
Chloromethane	ND	3.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
2-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
4-Chlorotoluene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
cis-1,2-DCE	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/22/2015 2:10:17 PM	R29742
1,2-Dibromo-3-chloropropene	ND	2.0		µg/L	1	10/22/2015 2:10:17 PM	R29742

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Bisti

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 9:30:00 AM

Lab ID: 1510A28-001

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Dibenzofuran	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
1,2-Dichlorobenzene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
1,3-Dichlorobenzene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
1,4-Dichlorobenzene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
3,3'-Dichlorobenzidine	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Diethyl phthalate	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Dimethyl phthalate	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2,4-Dichlorophenol	ND	20		µg/L	1	10/26/2015 4:03:54 PM	22016
2,4-Dimethylphenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	10/26/2015 4:03:54 PM	22016
2,4-Dinitrophenol	ND	20		µg/L	1	10/26/2015 4:03:54 PM	22016
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Fluoranthene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Fluorene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Hexachlorobenzene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Hexachloroethane	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Isophorone	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
1-Methylnaphthalene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2-Methylphenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
3+4-Methylphenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Naphthalene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
3-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
4-Nitroaniline	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Nitrobenzene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2-Nitrophenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
4-Nitrophenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Pentachlorophenol	ND	20		µg/L	1	10/26/2015 4:03:54 PM	22016
Phenanthrene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Phenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Pyrene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 2 of 0
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510A28

Date Reported:

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Bisti

Project: West Line Test Water 10-20-15

Collection Date: 10/20/2015 9:30:00 AM

Lab ID: 1510A28-001

Matrix: AQUEOUS

Received Date: 10/22/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: JLF
Mercury	ND	0.00020		mg/L	1	10/23/2015 2:39:09 PM	21998
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.020		mg/L	1	10/27/2015 7:52:17 AM	22029
Barium	0.056	0.020		mg/L	1	10/27/2015 7:52:17 AM	22029
Cadmium	ND	0.0020		mg/L	1	10/27/2015 7:52:17 AM	22029
Chromium	ND	0.0060		mg/L	1	10/27/2015 7:52:17 AM	22029
Lead	ND	0.0050		mg/L	1	10/27/2015 7:52:17 AM	22029
Selenium	ND	0.050		mg/L	1	10/27/2015 7:52:17 AM	22029
Silver	ND	0.0050		mg/L	1	10/27/2015 7:52:17 AM	22029
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Acenaphthylene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Aniline	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Anthracene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Azobenzene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Benz(a)anthracene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Benzo(a)pyrene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Benzo(b)fluoranthene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Benzo(k)fluoranthene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Benzoic acid	ND	20		µg/L	1	10/26/2015 4:03:54 PM	22016
Benzyl alcohol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Bis(2-chloroethyl)ether	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Butyl benzyl phthalate	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Carbazole	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
4-Chloro-3-methylphenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
4-Chloroaniline	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2-Chloronaphthalene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
2-Chlorophenol	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Chrysene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Di-n-butyl phthalate	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Di-n-octyl phthalate	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/26/2015 4:03:54 PM	22016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Annual Class I Well Report for 2016

March 14th , 2017

Agua Moss, LLC

PO Box 600

Farmington, NM 87499

Permit UICI-005

API 30-045-28653

Submitted By:

Philana Thompson

Regulatory Compliance Specialist

Merrion Oil & Gas

610 Reilly Ave

Farmington, NM 87401

505-486-1171 cell

pthompson@merrion.bz

Summary of Operations

The annual MIT was performed 6/27/2016 and Bradenhead test was performed 6/27/2016. The Fall off Test was performed 6/2016, next Fall off test to be performed June 2017. No major events occurred.

Appendices

Appendix A

Monthly Injection/disposal volumes
MAX and Average injection PSI

Appendix B

Quarterly Chemical Analyses Data

Appendix C

MIT
BH Test
FOT

Appendix D

Charts
C-138s

Appendix E

AOR

Appendix A

UICI-5-0
Agua Moss, LLC
Sunco Disposal #1 30-045-28653

2016
Quarterly
Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maxium Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	Total Cumulative Volume (barrels)	
													Previous year	14063784	
Jan-2016	2045.238	2250	1900	55.45138889	82.04583333	34.65	0	0	0	1901.19	2813	1188	39925	14103709	
Feb-2016	2026.19	2250	1900	57.775	89.36666667	40.745833	0	0	0	1980.857	3064	1397	41598	14145307	
Mar-2016	1702.174	1900	1500	17.90833333	43.60416667	4.8416667	0	0	0	586.0909	1495	0	12894	14158201	
													Previous Quarter	14158201	
Apr-2016	1683.333	2250	1550	17.28935185	43.3125	6.0958333	0	0	0	592.7778	1485	209	10670	14168871	
May-2016	1638.636	1900	1450	16.31064815	32.025	6.1541667	0	0	0	559.2222	1098	211	10066	14178937	
Jun-2016	1572.727	1975	1325	26.10902778	90.09583333	2.275	0	0	0	895.1667	3089	78	10742	14189679	
													Previous Quarter	14189679	
Jul-16	1572.727	1800	1400	22.203125	47.62916667	6.7958333	0	0	0	761.25	1633	233	9135	14198814	
Aug-16	1626.25	1800	1400	15.67416667	33.22083333	4.0541667	0	0	0	537.4	1139	139	8061	14206875	
Sep-16	1608.696	1850	1450	17.63611111	30.5375	1.9541667	0	0	0	604.6667	1047	67	10884	14217759	
													Previous Quarter	14217759	
Oct-2016	1692.045	1800	1500	13.4375	28.93333333	1.4291667	0	0	0	460.7143	992	49	9675	14227434	
Nov-2016	1690.476	2000	1550	21.57239583	42.4375	7.0291667	0	0	0	739.625	1455	241	11834	14239268	
Dec-2016	1735.714	2250	1450	16.21838235	42.72916667	4.375	0	0	0	556.0588	1465	150	9453	14248721	
												Total for year	184937	14433658	Life Of well injected

Appendix B

August 4, 2016

Agua Moss
c/o Merrion Oil & Gas Corp.
610 Reilly Avenue
Farmington, New Mexico 87401

Attn: Ms. Shacie Murray
P: (505) 324-5324
E: shacie@merrion.bz

Re: First Quarter 2016 Analytical Results
NM1-9 Injection Well
SWNW S2, T29N, R12W
Crouch Mesa Road
San Juan County, New Mexico
Terracon Project No. 66157040

Dear Ms. Murray;

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit analytical results for the first quarter 2016 quarterly sampling of the NM1-9 Injection Well water. The injection well analytical results are summarized in Table 1. A copy of the laboratory analytical report is also provided as an attachment.

We appreciate the opportunity to provide environmental services for you. If you should have any questions or comments regarding this data, please contact Mike Meyer at (505) 222-5795.

Sincerely,
Terracon Consultants, Inc.



Michael L. Meyer, P.G. (PA)
Office Manager



Mark Hillier PG (TX)
Department Manager

Attachment – Table 1 – Injection Well Analytical Results
Laboratory Analytical Report



TABLE 1

NM1-9 INJECTION WELL ANALYTICAL RESULTS
Agua Moss Disposal Facility
Crouch Mesa Road
San Juan County, New Mexico

1/28/16

Contaminant of Concern	Units	Sample Location
		NM1-9 IW (06/28/2016)
pH*	ratio	6.57
ORP*	mV ¹	-290
Specific Conductance*	mS/cm ²	18.6
Temperature*	°C ³	20
Specific Gravity	ratio	1.003
Total Dissolved Solids @ 180° C	mg/L ⁴	5,730
Specific Conductance (Laboratory)	µmhos/cm ⁵	8,300
Sodium Absorption Ratio	ratio	13
Total Alkalinity as CaCO ₃	mg/L	401.3
Total Hardness as CaCO ₃	mg/L	1,200
Bicarbonate as CaCO ₃	mg/L	401.3
Carbonate as CaCO ₃	mg/L	ND
Nitrate Nitrogen	mg/L	ND
Nitrite Nitrogen	mg/L	ND
Chloride	mg/L	2,000
Fluoride	mg/L	ND
Phosphate	mg/L	ND
Sulfate	mg/L	980
Calcium	mg/L	410
Magnesium	mg/L	31
Potassium	mg/L	280
Sodium	mg/L	1,000
Bromide	mg/L	9.5

* - Field Measurement

1 - mV - millivolts

2 - mS - millisiemen per centimeter

3 - °C - degrees Celsius

4 - mg/L - milligrams per liter

5 - µmhos/cm - micromhos per centimeter



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 10, 2016

Mark Hillier

Terracon

4905 Hawkins, NE

Albuquerque, NM 87109

TEL: (505) 715-0375

FAX (505) 797-4288

RE: NM1-9 Landfarm

OrderNo.: 1601B39

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/29/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1601B39

Date Reported: 2/10/2016

CLIENT: Terracon

Client Sample ID: Q116C2S

Project: NM1-9 Landfarm

Collection Date: 1/28/2016 12:50:00 PM

Lab ID: 1601B39-001

Matrix: SOIL

Received Date: 1/29/2016 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	2/2/2016	23505
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	2/2/2016 11:03:34 PM	23504
Toluene	ND	0.048		mg/Kg	1	2/2/2016 11:03:34 PM	23504
Ethylbenzene	ND	0.048		mg/Kg	1	2/2/2016 11:03:34 PM	23504
Xylenes, Total	ND	0.096		mg/Kg	1	2/2/2016 11:03:34 PM	23504
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	2/2/2016 11:03:34 PM	23504

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1601B39

Date Reported: 2/10/2016

CLIENT: Terracon

Client Sample ID: Q116C1

Project: NM1-9 Landfarm

Collection Date: 1/28/2016 1:15:00 PM

Lab ID: 1601B39-002

Matrix: SOIL

Received Date: 1/29/2016 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	2/2/2016	23505
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	2/2/2016 11:26:47 PM	23504
Toluene	ND	0.049		mg/Kg	1	2/2/2016 11:26:47 PM	23504
Ethylbenzene	ND	0.049		mg/Kg	1	2/2/2016 11:26:47 PM	23504
Xylenes, Total	ND	0.098		mg/Kg	1	2/2/2016 11:26:47 PM	23504
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	2/2/2016 11:26:47 PM	23504

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1601B39

Date Reported: 2/10/2016

CLIENT: Terracon

Client Sample ID: Q116C2N

Project: NM1-9 Landfarm

Collection Date: 1/28/2016 1:45:00 PM

Lab ID: 1601B39-003

Matrix: SOIL

Received Date: 1/29/2016 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	1700	190		mg/Kg	10	2/2/2016	23505
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	2/2/2016 11:49:58 PM	23504
Toluene	ND	0.048		mg/Kg	1	2/2/2016 11:49:58 PM	23504
Ethylbenzene	ND	0.048		mg/Kg	1	2/2/2016 11:49:58 PM	23504
Xylenes, Total	ND	0.095		mg/Kg	1	2/2/2016 11:49:58 PM	23504
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	2/2/2016 11:49:58 PM	23504

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1601B39

Date Reported: 2/10/2016

CLIENT: Terracon

Client Sample ID: Q116IW

Project: NM1-9 Landfarm

Collection Date: 1/28/2016 2:40:00 PM

Lab ID: 1601B39-004

Matrix: AQUEOUS

Received Date: 1/29/2016 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: MED
Hardness (As CaCO ₃)	1200	6.6		mg/L	1	2/1/2016	R31819
SODIUM ADSORPTION RATIO							Analyst: MED
Sodium Adsorption Ratio	13	0			1	2/1/2016	R31819
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.003	0			1	2/4/2016 11:22:00 AM	R31910
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	ND	0.50		mg/L	5	1/30/2016 12:02:53 AM	R31808
Chloride	2000	100		mg/L	200	2/3/2016 5:34:33 AM	A31880
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	1/30/2016 12:02:53 AM	R31808
Bromide	9.5	0.50		mg/L	5	1/30/2016 12:02:53 AM	R31808
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	1/30/2016 12:02:53 AM	R31808
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	1/30/2016 12:02:53 AM	R31808
Sulfate	980	10		mg/L	20	1/30/2016 12:15:18 AM	R31808
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	8300	0.020		µmhos/cm	2	2/2/2016 7:54:39 PM	R31881
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	401.3	20.00		mg/L CaCO ₃	1	1/30/2016 7:10:52 AM	R31826
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	1/30/2016 7:10:52 AM	R31826
Total Alkalinity (as CaCO ₃)	401.3	20.00		mg/L CaCO ₃	1	1/30/2016 7:10:52 AM	R31826
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	5730	100	*D	mg/L	1	2/2/2016 4:33:00 PM	23514
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Calcium	410	10		mg/L	10	2/1/2016 12:42:45 PM	23489
Magnesium	31	1.0		mg/L	1	2/1/2016 10:55:20 AM	23489
Potassium	280	10		mg/L	10	2/1/2016 12:42:45 PM	23489
Sodium	1000	50		mg/L	50	2/1/2016 12:44:10 PM	23489

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601B39

10-Feb-16

Client: Terracon
Project: NM1-9 Landfarm

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R31808		RunNo: 31808							
Prep Date:	Analysis Date: 1/29/2016		SeqNo: 973448		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R31808		RunNo: 31808							
Prep Date:	Analysis Date: 1/29/2016		SeqNo: 973449		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	107	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.3	90	110			
Bromide	2.6	0.10	2.500	0	103	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.2	90	110			
Sulfate	9.8	0.50	10.00	0	98.0	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A31880		RunNo: 31880							
Prep Date:	Analysis Date: 2/3/2016		SeqNo: 975578		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: A31880		RunNo: 31880							
Prep Date:	Analysis Date: 2/3/2016		SeqNo: 975579		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.2	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601B39

10-Feb-16

Client: Terracon
Project: NM1-9 Landfarm

Sample ID	MB-23505		SampType: MBLK		TestCode: EPA Method 418.1: TPH					
Client ID:	PBS		Batch ID: 23505		RunNo: 31860					
Prep Date:	2/1/2016		Analysis Date: 2/2/2016		SeqNo: 974843		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-23505		SampType: LCS		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS		Batch ID: 23505		RunNo: 31860					
Prep Date:	2/1/2016		Analysis Date: 2/2/2016		SeqNo: 974844		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	101	83.4	127			

Sample ID	LCSD-23505		SampType: LCSD		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS02		Batch ID: 23505		RunNo: 31860					
Prep Date:	2/1/2016		Analysis Date: 2/2/2016		SeqNo: 974845		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	102	83.4	127	1.29	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601B39

10-Feb-16

Client: Terracon
Project: NM1-9 Landfarm

Sample ID	MB-23504		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	23504		RunNo:	31851			
Prep Date:	2/1/2016		Analysis Date:	2/2/2016		SeqNo:	975028		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	LCS-23504		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	23504		RunNo:	31851			
Prep Date:	2/1/2016		Analysis Date:	2/2/2016		SeqNo:	975029		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	103	80	120			
Toluene	1.1	0.050	1.000	0	109	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		117	80	120			

Sample ID	1601B39-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	Q116C2S		Batch ID:	23504		RunNo:	31851			
Prep Date:	2/1/2016		Analysis Date:	2/2/2016		SeqNo:	975032		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.047	0.9425	0	123	71.5	122			S
Toluene	1.2	0.047	0.9425	0	129	71.2	123			S
Ethylbenzene	1.2	0.047	0.9425	0	129	75.2	130			
Xylenes, Total	3.6	0.094	2.828	0	129	72.4	131			
Surr: 4-Bromofluorobenzene	1.1		0.9425		117	80	120			

Sample ID	1601B39-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	Q116C2S		Batch ID:	23504		RunNo:	31851			
Prep Date:	2/1/2016		Analysis Date:	2/2/2016		SeqNo:	975033		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.049	0.9737	0	118	71.5	122	0.283	20	
Toluene	1.2	0.049	0.9737	0	123	71.2	123	1.43	20	
Ethylbenzene	1.2	0.049	0.9737	0	123	75.2	130	1.14	20	
Xylenes, Total	3.6	0.097	2.921	0	123	72.4	131	0.850	20	
Surr: 4-Bromofluorobenzene	1.1		0.9737		117	80	120	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601B39

10-Feb-16

Client: Terracon
Project: NM1-9 Landfarm

Sample ID	MB-23489	SampType: MBLK			TestCode: EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID: 23489			RunNo: 31819					
Prep Date:	1/29/2016	Analysis Date: 2/1/2016			SeqNo: 973721		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-23489		SampType: LCS		TestCode: EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW		Batch ID: 23489		RunNo: 31819					
Prep Date:	1/29/2016		Analysis Date: 2/1/2016		SeqNo: 973722		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.3	80	120			
Magnesium	49	1.0	50.00	0	98.6	80	120			
Potassium	47	1.0	50.00	0	94.0	80	120			
Sodium	48	1.0	50.00	0	95.5	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601B39

10-Feb-16

Client: Terracon
Project: NM1-9 Landfarm

Sample ID mb-1	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R31826			RunNo: 31826						
Prep Date:	Analysis Date: 1/29/2016			SeqNo: 973885		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-1	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R31826			RunNo: 31826						
Prep Date:	Analysis Date: 1/29/2016			SeqNo: 973886		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.72	20.00	80.00	0	97.2	90	110			

Sample ID mb-2	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R31826			RunNo: 31826						
Prep Date:	Analysis Date: 1/29/2016			SeqNo: 973909		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-2	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R31826			RunNo: 31826						
Prep Date:	Analysis Date: 1/29/2016			SeqNo: 973910		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.48	20.00	80.00	0	96.8	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601B39

10-Feb-16

Client: Terracon
Project: NM1-9 Landfarm

Sample ID	1601B39-004ADUP	SampType:	DUP	TestCode:	Specific Gravity					
Client ID:	Q116IW	Batch ID:	R31910	RunNo:	31910					
Prep Date:		Analysis Date:	2/4/2016	SeqNo:	976402	Units:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.003	0						0.0499	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601B39

10-Feb-16

Client: Terracon
Project: NM1-9 Landfarm

Sample ID	MB-23514		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW		Batch ID: 23514		RunNo: 31863					
Prep Date:	2/1/2016		Analysis Date: 2/2/2016		SeqNo: 974947		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-23514		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 23514		RunNo: 31863					
Prep Date:	2/1/2016		Analysis Date: 2/2/2016		SeqNo: 974948		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: TER-Alb

Work Order Number: 1601B39

RcptNo: 1

Received by/date: AG 01/29/16

Logged By: **Anne Thorne**

1/29/2016 11:50:00 AM

Completed By: **Anne Thorne**

1/29/2016

Reviewed By:

Chain of Custody:

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

- | | | | |
|--|---|--|---|
| 4. Was an attempt made to cool the samples? | Yes ☒ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes ☒ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☒ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☒ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☒ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☒ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☒ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☒ | <div> # of preserved bottles checked for pH:
 Adjusted?
 Checked by: </div> |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes ☒ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☒ | No ☐ | |
| 14. Is it clear what analyses were requested? | Yes ☒ | No ☐ | |
| 15. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes ☒ | No ☐ | |

of preserved bottles checked for pH: 2

(12 or >12 unless noted)

Adjusted?

Adjusted?

Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	Date
By Whom:	Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	
Client Instructions:	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.8	Good	Not Present			

Chain-of-Custody Record

Client: Terraviva

Mailing Address: 4905 Hawkins NE

Phone #: 505-797-4287

Fax #: 505-797-4287

VQC Package: ☒ Standard ☐ Other ☐ Level 4 (Full Validation)

Standard ☐ Other ☐ NELAP ☐ Other ☐

Project Manager: M. H. Miller

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
12/15/01	1750	S	Q116C25	02402		1601B39
"	1315	S	Q116C1	"		202
"	1345	S	Q116C2N	"		203
"	1440	W	Q116IN	3		204

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: NM-9 Landform

Project #: 66158040

Project Manager: M. H. Miller

Sample: M. H. Miller

On Ice: ☒ Yes ☐ No

Sample Temperature: 58

Container Type and #

Preservative Type

HEAL No.

Relinquished by: [Signature] Date: 12/16/01 Time: 11:50

Received by: [Signature] Date: 12/16/01 Time: 11:50



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request											
BTEX + MTBE + TMBs (8021)	X										
BTEX + MTBE (8021)	X										
TPH (Method 418.1)	X										
TPH (Method 504.1)	X										
PAHs (8310 or 8270 SIMS)											
RCRA 8 Metals											
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)											
8081 Pesticides / 8082 PCBs											
8260B (VOA)											
8270 (Semi-VOA)											
Specific Grav.											
Sediment Description											
Total Hardness											
Calcium / Magnesium Balance											
Air Bubbles (Y or N)											

Remarks: For water sample, analyze per Lab ID 1510070-001 10% dilution

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.

July 20, 2016

Agua Moss
c/o Merrion Oil & Gas Corp.
610 Reilly Avenue
Farmington, New Mexico 87401

Attn: Ms. Shacie Murray
P: (505) 324-5324
E: shacie@merrion.bz

Re: Analytical Results
NM1-9 Injection Well
SWNW S2, T29N, R12W
Crouch Mesa Road
San Juan County, New Mexico
Terracon Project No. 66157040

Dear Ms. Murray;

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit analytical results for the second quarter 2016 quarterly sampling of the NM1-9 Injection Well water. The injection well analytical results are summarized in Table 1. A copy of the laboratory analytical report is also provided as an attachment.

We appreciate the opportunity to provide environmental services for you. If you should have any questions or comments regarding this data, please contact Mike Meyer at (505) 222-5795.

Sincerely,
Terracon Consultants, Inc.



Michael L. Meyer, P.G. (PA)
Office Manager



Mark Hillier PG (TX)
Department Manager

Attachment – Table 1 – Injection Well Analytical Results
Laboratory Analytical Report



TABLE 1

NM1-9 INJECTION WELL ANALYTICAL RESULTS
Agua Moss Disposal Facility
Crouch Mesa Road
San Juan County, New Mexico

6/28/16

Contaminant of Concern	Units	Sample Location
		NM1-9 IW (06/28/2016)
pH*	ratio	8.11
ORP*	mV ¹	-303
Specific Conductance*	mS/cm ²	24.43
Temperature*	°C ³	24.3
Specific Gravity	ratio	1.006
Conductivity @ 25° C	µS ⁴	8,300
Total Dissolved Solids @ 180° C	mg/L ⁵	15,500
Specific Conductance (Laboratory)	µmhos/cm ⁶	29,000
Sodium Absorption Ratio	ratio	74
Total Alkalinity as CaCO ₃	mg/L	682
Total Hardness as CaCO ₃	mg/L	930
Bicarbonate as CaCO ₃	mg/L	682
Carbonate as CaCO ₃	mg/L	<2.0
Nitrate Nitrogen	mg/L	<10
Nitrite Nitrogen	mg/L	<10
Chloride	mg/L	9,000
Fluoride	mg/L	<2.0
Phosphate	mg/L	<2.5
Sulfate	mg/L	100
Iron	mg/L	0.75
Calcium	mg/L	300
Magnesium	mg/L	44
Potassium	mg/L	88
Sodium	mg/L	5,200
Bromide	mg/L	17

* - Field Measurement

1 - mV - millivolts

2 - mS - millisiemen per centimeter

3 - °C - degrees Celsius

4 - µS - micro Siemens

5 - mg/L - milligrams per liter

6 - µmhos/cm - micromhos per centimeter



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 15, 2016

Mike Meyer

Terracon

4905 Hawkins, NE

Albuquerque, NM 87109

TEL: (505) 797-4287

FAX (505) 797-4288

RE: Agua Moss

OrderNo.: 1606G14

Dear Mike Meyer:

Hall Environmental Analysis Laboratory received 16 sample(s) on 6/29/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C1-1-36"

Project: Agua Moss

Collection Date: 6/28/2016 9:30:00 AM

Lab ID: 1606G14-001

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	280	30		mg/Kg	20	7/7/2016 3:44:55 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/30/2016 1:44:04 PM	26147
Toluene	ND	0.047		mg/Kg	1	6/30/2016 1:44:04 PM	26147
Ethylbenzene	ND	0.047		mg/Kg	1	6/30/2016 1:44:04 PM	26147
Xylenes, Total	ND	0.094		mg/Kg	1	6/30/2016 1:44:04 PM	26147
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	6/30/2016 1:44:04 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C1-3-36"

Project: Agua Moss

Collection Date: 6/28/2016 10:15:00 AM

Lab ID: 1606G14-002

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	59	30		mg/Kg	20	7/7/2016 3:57:19 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/30/2016 2:08:32 PM	26147
Toluene	ND	0.049		mg/Kg	1	6/30/2016 2:08:32 PM	26147
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2016 2:08:32 PM	26147
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2016 2:08:32 PM	26147
Surr: 4-Bromofluorobenzene	96.9	80-120		%Rec	1	6/30/2016 2:08:32 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C1-2-36"

Project: Agua Moss

Collection Date: 6/28/2016 9:55:00 AM

Lab ID: 1606G14-003

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	18		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	870	30		mg/Kg	20	7/7/2016 4:09:44 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/30/2016 2:32:57 PM	26147
Toluene	ND	0.048		mg/Kg	1	6/30/2016 2:32:57 PM	26147
Ethylbenzene	ND	0.048		mg/Kg	1	6/30/2016 2:32:57 PM	26147
Xylenes, Total	ND	0.096		mg/Kg	1	6/30/2016 2:32:57 PM	26147
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/30/2016 2:32:57 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C1-4-36"

Project: Agua Moss

Collection Date: 6/28/2016 10:20:00 AM

Lab ID: 1606G14-004

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	270	30		mg/Kg	20	7/7/2016 4:22:09 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	6/30/2016 2:57:22 PM	26147
Toluene	ND	0.046		mg/Kg	1	6/30/2016 2:57:22 PM	26147
Ethylbenzene	ND	0.046		mg/Kg	1	6/30/2016 2:57:22 PM	26147
Xylenes, Total	ND	0.091		mg/Kg	1	6/30/2016 2:57:22 PM	26147
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/30/2016 2:57:22 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2S-1-36"

Project: Agua Moss

Collection Date: 6/28/2016 10:55:00 AM

Lab ID: 1606G14-005

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	150	30		mg/Kg	20	7/7/2016 4:34:34 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/30/2016 3:21:51 PM	26147
Toluene	ND	0.049		mg/Kg	1	6/30/2016 3:21:51 PM	26147
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2016 3:21:51 PM	26147
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2016 3:21:51 PM	26147
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/30/2016 3:21:51 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2S-2-36"

Project: Agua Moss

Collection Date: 6/28/2016 11:05:00 AM

Lab ID: 1606G14-006

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	170	30		mg/Kg	20	7/7/2016 4:46:58 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/30/2016 5:24:04 PM	26147
Toluene	ND	0.050		mg/Kg	1	6/30/2016 5:24:04 PM	26147
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2016 5:24:04 PM	26147
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2016 5:24:04 PM	26147
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	6/30/2016 5:24:04 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2S-3-36"

Project: Agua Moss

Collection Date: 6/28/2016 11:10:00 AM

Lab ID: 1606G14-007

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	98	30		mg/Kg	20	7/7/2016 5:24:11 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/30/2016 5:48:36 PM	26147
Toluene	ND	0.048		mg/Kg	1	6/30/2016 5:48:36 PM	26147
Ethylbenzene	ND	0.048		mg/Kg	1	6/30/2016 5:48:36 PM	26147
Xylenes, Total	ND	0.095		mg/Kg	1	6/30/2016 5:48:36 PM	26147
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/30/2016 5:48:36 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2S-4-36"

Project: Agua Moss

Collection Date: 6/28/2016 11:20:00 AM

Lab ID: 1606G14-008

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	110	30		mg/Kg	20	7/7/2016 5:36:36 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/30/2016 6:13:05 PM	26147
Toluene	ND	0.048		mg/Kg	1	6/30/2016 6:13:05 PM	26147
Ethylbenzene	ND	0.048		mg/Kg	1	6/30/2016 6:13:05 PM	26147
Xylenes, Total	ND	0.095		mg/Kg	1	6/30/2016 6:13:05 PM	26147
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	6/30/2016 6:13:05 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2N-1-36"

Project: Agua Moss

Collection Date: 6/28/2016 11:30:00 AM

Lab ID: 1606G14-009

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	180	30		mg/Kg	20	7/7/2016 5:49:01 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/30/2016 6:37:29 PM	26147
Toluene	ND	0.049		mg/Kg	1	6/30/2016 6:37:29 PM	26147
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2016 6:37:29 PM	26147
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2016 6:37:29 PM	26147
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/30/2016 6:37:29 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606G14

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2N-2-36"

Project: Agua Moss

Collection Date: 6/28/2016 11:42:00 AM

Lab ID: 1606G14-010

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	18		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	320	30		mg/Kg	20	7/7/2016 6:01:26 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	6/30/2016 7:01:50 PM	26147
Toluene	ND	0.047		mg/Kg	1	6/30/2016 7:01:50 PM	26147
Ethylbenzene	ND	0.047		mg/Kg	1	6/30/2016 7:01:50 PM	26147
Xylenes, Total	ND	0.093		mg/Kg	1	6/30/2016 7:01:50 PM	26147
Surr: 4-Bromofluorobenzene	98.3	80-120		%Rec	1	6/30/2016 7:01:50 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2N-3-36"

Project: Agua Moss

Collection Date: 6/28/2016 11:40:00 AM

Lab ID: 1606G14-011

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	1000	30		mg/Kg	20	7/7/2016 6:13:50 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/30/2016 7:26:07 PM	26147
Toluene	ND	0.050		mg/Kg	1	6/30/2016 7:26:07 PM	26147
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2016 7:26:07 PM	26147
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2016 7:26:07 PM	26147
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	6/30/2016 7:26:07 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2N-4-36"

Project: Agua Moss

Collection Date: 6/28/2016 12:00:00 PM

Lab ID: 1606G14-012

Matrix: SOIL

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	91	30		mg/Kg	20	7/7/2016 6:26:14 PM	26268
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/30/2016 7:50:29 PM	26147
Toluene	ND	0.049		mg/Kg	1	6/30/2016 7:50:29 PM	26147
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2016 7:50:29 PM	26147
Xylenes, Total	ND	0.097		mg/Kg	1	6/30/2016 7:50:29 PM	26147
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	6/30/2016 7:50:29 PM	26147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C1-6"

Project: Agua Moss

Collection Date: 6/28/2016 10:25:00 AM

Lab ID: 1606G14-013

Matrix: AQUEOUS

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	2800	1900		mg/Kg	100	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	7/8/2016 12:33:58 PM	26308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2S-1-6"

Project: Agua Moss

Collection Date: 6/28/2016 12:10:00 PM

Lab ID: 1606G14-014

Matrix: AQUEOUS

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	3900	1900		mg/Kg	100	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	430	30		mg/Kg	20	7/8/2016 12:46:23 PM	26308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: C2N-1-6"

Project: Agua Moss

Collection Date: 6/28/2016 12:15:00 PM

Lab ID: 1606G14-015

Matrix: AQUEOUS

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: KJH
Petroleum Hydrocarbons, TR	6000	1900		mg/Kg	100	7/6/2016	26214
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	290	30		mg/Kg	20	7/8/2016 12:58:48 PM	26308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1606G14**

Date Reported: 7/15/2016

CLIENT: Terracon

Client Sample ID: NM1-9IW16Q2

Project: Agua Moss

Collection Date: 6/28/2016 12:40:00 PM

Lab ID: 1606G14-016

Matrix: AQUEOUS

Received Date: 6/29/2016 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: MED
Hardness (As CaCO ₃)	930	6.6		mg/L	1	7/8/2016 10:30:00 AM	R35523
SODIUM ADSORPTION RATIO							Analyst: MED
Calcium	300	1.0		mg/L	1	7/8/2016 10:30:00 AM	R35523
Magnesium	44	1.0		mg/L	1	7/8/2016 10:30:00 AM	R35523
Sodium	5200	1.0		mg/L	1	7/8/2016 10:30:00 AM	R35523
Sodium Absorption Ratio	74	0			1	7/8/2016 10:30:00 AM	R35523
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.006	0			1	6/30/2016 11:55:00 AM	R35345
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	ND	2.0		mg/L	20	6/29/2016 6:42:07 PM	R35326
Chloride	9000	500		mg/L	1E	7/6/2016 1:28:04 AM	A35449
Bromide	17	0.50		mg/L	5	7/6/2016 1:15:39 AM	A35449
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	6/29/2016 6:29:42 PM	R35326
Sulfate	100	2.5		mg/L	5	6/29/2016 6:29:42 PM	R35326
Nitrate+Nitrite as N	ND	10		mg/L	50	7/7/2016 2:21:46 PM	R35506
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	29000	10		µmhos/cm	10	7/6/2016 7:52:42 AM	R35440
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	681.8	20.00		mg/L CaCO ₃	1	6/29/2016 9:55:57 PM	R35350
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	6/29/2016 9:55:57 PM	R35350
Total Alkalinity (as CaCO ₃)	681.8	20.00		mg/L CaCO ₃	1	6/29/2016 9:55:57 PM	R35350
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	15500	2000	*D	mg/L	1	7/6/2016 4:54:00 PM	26208
EPA METHOD 6010B: DISSOLVED METALS							Analyst: MED
Calcium	300	5.0		mg/L	5	7/8/2016 12:27:45 PM	A35523
Iron	0.75	0.020		mg/L	1	7/8/2016 11:47:26 AM	A35523
Magnesium	44	1.0		mg/L	1	7/8/2016 11:47:26 AM	A35523
Potassium	88	1.0		mg/L	1	7/8/2016 11:47:26 AM	A35523
Sodium	5200	100		mg/L	100	7/8/2016 12:41:39 PM	A35523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID	MB-26268		SampType: MBLK		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 26268		RunNo: 35474					
Prep Date:	7/6/2016		Analysis Date: 7/6/2016		SeqNo: 1098081		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-26268		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 26268		RunNo: 35474					
Prep Date:	7/6/2016		Analysis Date: 7/6/2016		SeqNo: 1098082		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	90	110			

Sample ID	MB-26268		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	26268		RunNo:	35519				
Prep Date:	7/6/2016		Analysis Date:	7/7/2016		SeqNo:	1099749		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-26268		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 26268		RunNo: 35519					
Prep Date:	7/6/2016		Analysis Date: 7/7/2016		SeqNo: 1099750		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Sample ID	MB-26308		SampType: MBLK		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 26308		RunNo: 35546					
Prep Date:	7/8/2016		Analysis Date: 7/8/2016		SeqNo: 1100588		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-26308		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 26308		RunNo: 35546					
Prep Date:	7/8/2016		Analysis Date: 7/8/2016		SeqNo: 1100589		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R35326		RunNo: 35326							
Prep Date:	Analysis Date: 6/29/2016		SeqNo: 1092939		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R35326		RunNo: 35326							
Prep Date:	Analysis Date: 6/29/2016		SeqNo: 1092940		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.7	90	110			
Sulfate	9.7	0.50	10.00	0	96.6	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A35449		RunNo: 35449							
Prep Date:	Analysis Date: 7/5/2016		SeqNo: 1097052		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: A35449		RunNo: 35449							
Prep Date:	Analysis Date: 7/5/2016		SeqNo: 1097053		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.7	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R35506		RunNo: 35506							
Prep Date:	Analysis Date: 7/7/2016		SeqNo: 1099031		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID	LCS		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSW		Batch ID: R35506		RunNo: 35506					
Prep Date:			Analysis Date: 7/7/2016		SeqNo: 1099032		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	95.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID	MB-26214		SampType: MBLK		TestCode: EPA Method 418.1: TPH					
Client ID:	PBS		Batch ID: 26214		RunNo: 35450					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097109		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-26214		SampType: LCS		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS		Batch ID: 26214		RunNo: 35450					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097110		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	101	83.4	127			

Sample ID	LCSD-26214		SampType: LCSD		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS02		Batch ID: 26214		RunNo: 35450					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097111		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	97	20	100.0	0	97.3	83.4	127	3.88	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID	MB-26147		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26147		RunNo: 35363					
Prep Date:	6/29/2016		Analysis Date: 6/30/2016		SeqNo: 1093895		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.6	80	120			

Sample ID	LCS-26147		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26147		RunNo: 35363					
Prep Date:	6/29/2016		Analysis Date: 6/30/2016		SeqNo: 1093896		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	105	75.3	123			
Toluene	0.96	0.050	1.000	0	95.9	80	124			
Ethylbenzene	0.95	0.050	1.000	0	95.2	82.8	121			
Xylenes, Total	2.8	0.10	3.000	0	93.0	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID MB-A	SampType: MBLK			TestCode: EPA Method 6010B: Dissolved Metals						
Client ID: PBW	Batch ID: A35523			RunNo: 35523						
Prep Date:	Analysis Date: 7/8/2016			SeqNo: 1099959		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID LCS-A	SampType: LCS			TestCode: EPA Method 6010B: Dissolved Metals						
Client ID: LCSW	Batch ID: A35523			RunNo: 35523						
Prep Date:	Analysis Date: 7/8/2016			SeqNo: 1099960		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	53	1.0	50.00	0	105	80	120			
Iron	0.49	0.020	0.5000	0	98.0	80	120			
Magnesium	53	1.0	50.00	0	106	80	120			
Potassium	51	1.0	50.00	0	102	80	120			
Sodium	51	1.0	50.00	0	102	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID mb-1	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R35350			RunNo: 35350						
Prep Date:	Analysis Date: 6/29/2016			SeqNo: 1093478		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-1	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R35350			RunNo: 35350						
Prep Date:	Analysis Date: 6/29/2016			SeqNo: 1093479		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.96	20.00	80.00	0	97.5	90	110			

Sample ID mb-2	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R35350			RunNo: 35350						
Prep Date:	Analysis Date: 6/29/2016			SeqNo: 1093502		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-2	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R35350			RunNo: 35350						
Prep Date:	Analysis Date: 6/29/2016			SeqNo: 1093503		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.28	20.00	80.00	0	97.9	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID	1606G14-016ADUP	SampType:	DUP	TestCode:	Specific Gravity					
Client ID:	NM1-9IW16Q2	Batch ID:	R35345	RunNo:	35345					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093385	Units:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.005	0						0.119	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606G14

15-Jul-16

Client: Terracon
Project: Agua Moss

Sample ID	MB-26208		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW		Batch ID: 26208		RunNo: 35456					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097402		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-26208		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 26208		RunNo: 35456					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097403		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: TER-Alb

Work Order Number: 1606G14

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

6/29/2016 10:30:00 AM

Completed By: **Ashley Gallegos**

6/29/2016 11:12:09 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

- | | | | |
|--|---|--|--|
| 4. Was an attempt made to cool the samples? | Yes ☒ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes ☒ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☒ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☒ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☒ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☒ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☒ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☒ | |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes ☒ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☒ | No ☐ | |
| 14. Is it clear what analyses were requested? | Yes ☒ | No ☐ | |
| 15. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes ☒ | No ☐ | |
- # of preserved bottles checked for pH: 62

Adjusted? [initials]

Checked by: [signature]

of preserved bottles checked for pH: 2

Adjusted? (2) or >12 unless noted

Adjusted? No

Checked by: as

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Not Present			

October 26, 2016

Ms. Shacie Murray
Agua Moss LLC
P.O. Box 600
Farmington, New Mexico 87499

**Re: Sunco Disposal #1
Injection Water Quarterly Monitoring
3rd Quarter 2016**

Dear Ms. Murray:

This report summarizes the sample collection, field screening, and laboratory analysis of the injection water at the Agua Moss LLC Sunco Disposal #1 well for the 3rd Quarter 2016. Injection water of the Class I Sunco Disposal #1 well is assessed on a quarterly basis in accordance with 20.6.5207B NMAC.

Field Activities

Rule Engineering, LLC (Rule) personnel collected one injection water sample from a settling tank at the location on September 16, 2016. Injection water was discharged from the valve of the settling tank into a clean, 5-gallon bucket for field screening and transfer to laboratory sample containers.

Sample Collection and Field Screening Procedures

The injection water sample (S-1) was field screened for time sensitive parameters including pH, temperature, reduction potential (Eh), and specific conductance. Field screening was conducted utilizing a handheld water quality meter calibrated on the day of use with laboratory grade standards.

The sampled injection water was placed into laboratory supplied containers, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico.

Table 1. Field Screening and Laboratory Analytical Summary

Constituent	Laboratory Value	Field Measurement
<i>pH</i>	6.72	7.17
<i>Temperature</i>	--	21.5 °C
<i>Reduction Potential</i>	135 mV	-248.5 mV
<i>Specific Conductance</i>	53,000 µmhos/cm	42,041 µmhos/cm
<i>Specific Gravity</i>	1.013	--

Constituent	Laboratory Value	Field Measurement
Total Dissolved Solids	26,300 mg/L	--
Bicarbonate (As CaCO₃)	876.6 mg/L CaCO ₃	--
Carbonate (As CaCO₃)	<2.000 mg/L CaCO ₃	--
Fluoride	<2.0 mg/L	--
Chloride	13,000 mg/L	--
Bromide	21 mg/L	--
Phosphorous, Orthophosphate	14 mg/L	--
Sulfate	1,300 mg/L	--
Nitrate+Nitrite as N	<10 mg/L	--
Calcium	810 mg/L	--
Magnesium	40 mg/L	--
Potassium	270 mg/L	--
Sodium	9,100 mg/L	--

QA/QC Considerations

Field measurements for time sensitive parameters including pH, temperature, reduction potential, and specific conductance more accurately reflect the characteristics of the injection water than laboratory results for these parameters due to their rapidly changing nature when removed from the stable environment of the tank. A hold time qualifier is indicated on the laboratory report for phosphorus as orthophosphate as the hold time of 48 hours from collection was exceeded during transport prior to analysis. However, the reported concentration of phosphorus as orthophosphate is sufficient for generalizations concerning the overall water characteristics. A dilution due to matrix qualifier is indicated on the laboratory report for total dissolved solids due to an initial dilution made during sample preparation based on the visual observations of laboratory personnel indicating the need for the dilution. The reported concentration of total dissolved solids is sufficient for generalizations concerning overall water characteristics.

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Ms. Shacie Murray
Sunco Disposal #1: Injection Water Monitoring – 3rd Qtr 2016
October 26, 2016
Page 3 of 3

Rule Engineering appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-1055.

Sincerely,
Rule Engineering, LLC



Heather M. Woods, P.G.
Area Manager/Geologist

Attachments:

Laboratory Analytical Report (Hall: 1609983)



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 30, 2016

Heather Woods

Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Sunco Disposal Well 1

OrderNo.: 1609983

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/17/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1609983**

Date Reported: **9/30/2016**

CLIENT: Rule Engineering LLC

Client Sample ID: S-1

Project: Sunco Disposal Well 1

Collection Date: 9/16/2016 9:00:00 AM

Lab ID: 1609983-001

Matrix: AQUEOUS

Received Date: 9/17/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SPECIFIC GRAVITY							Analyst: LGT
Specific Gravity	1.013		0		1	9/21/2016 3:49:00 PM	R37370
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	ND	2.0		mg/L	20	9/26/2016 3:26:12 AM	R37468
Chloride	13000	1000		mg/L	2E	9/26/2016 3:38:37 AM	R37468
Bromide	21	2.0		mg/L	20	9/26/2016 3:26:12 AM	R37468
Phosphorus, Orthophosphate (As P)	14	2.5	H	mg/L	5	9/21/2016 4:24:36 AM	R37349
Sulfate	1300	1000		mg/L	2E	9/26/2016 3:38:37 AM	R37468
Nitrate+Nitrite as N	ND	10		mg/L	50	9/26/2016 3:51:02 AM	R37468
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	53000	10		µmhos/cm	10	9/21/2016 11:00:46 AM	R37378
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	876.6	20.00		mg/L CaCO3	1	9/19/2016 8:44:26 PM	R37296
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	9/19/2016 8:44:26 PM	R37296
Total Alkalinity (as CaCO3)	876.6	20.00		mg/L CaCO3	1	9/19/2016 8:44:26 PM	R37296
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	26300	200	*D	mg/L	1	9/24/2016 6:34:00 PM	27655
SM4500-H+B: PH							Analyst: JRR
pH	7.17	1.68	H	pH units	1	9/19/2016 8:44:26 PM	R37296
EPA METHOD 6010B: DISSOLVED METALS							Analyst: MED
Calcium	810	10		mg/L	10	9/20/2016 11:02:52 AM	A37317
Magnesium	40	1.0		mg/L	1	9/20/2016 10:11:48 AM	A37317
Potassium	270	5.0		mg/L	5	9/20/2016 10:13:37 AM	A37317
Sodium	9100	100		mg/L	100	9/20/2016 11:06:49 AM	A37317

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

1609983-001C S-1
Collected date/time: 09/16/16 09:00

SAMPLE RESULTS - 01

L861181

ONE LAB. NATIONWIDE:



Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
ORP	135		1	09/26/2016 16:00	WG911529

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCOUNT:

Hel Environmental Analysis Laboratory

PROJECT:

SDG:

L861181

DATE/TIME:

09/27/16 16:02

L861181-01 Original Sample (OS) • Duplicate (DUP)

(OS) L861181-01 09/26/16 16:00 • (DUP) WG911529-1 09/26/16 16:00

Analyte	Original Result mV	DUP Result mV	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
ORP	135	136	1	0.738		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG911529-2 09/26/16 16:00 • (LCSD) WG911529-3 09/26/16 16:00

Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
ORP	100	109	110	109	110	90.0-110			0.913	20

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609983

30-Sep-16

Client: Rule Engineering LLC

Project: Sunco Disposal Well 1

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R37349	RunNo:	37349					
Prep Date:		Analysis Date:	9/20/2016	SeqNo:	1160322	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P)	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R37349	RunNo:	37349					
Prep Date:		Analysis Date:	9/20/2016	SeqNo:	1160323	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P)	4.9	0.50	5.000	0	97.3	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R37468	RunNo:	37468					
Prep Date:		Analysis Date:	9/25/2016	SeqNo:	1164992	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R37468	RunNo:	37468					
Prep Date:		Analysis Date:	9/25/2016	SeqNo:	1164993	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	110	90	110			
Chloride	4.9	0.50	5.000	0	97.1	90	110			
Bromide	2.4	0.10	2.500	0	97.1	90	110			
Sulfate	9.9	0.50	10.00	0	99.4	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609983

30-Sep-16

Client: Rule Engineering LLC

Project: Sunco Disposal Well 1

Sample ID	MB-A	SampType: MBLK		TestCode: EPA Method 6010B: Dissolved Metals						
Client ID:	PBW	Batch ID: A37317		RunNo: 37317						
Prep Date:		Analysis Date: 9/20/2016		SeqNo: 1158926		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-A	SampType: LCS			TestCode: EPA Method 6010B: Dissolved Metals					
Client ID:	LCSW	Batch ID: A37317			RunNo: 37317					
Prep Date:		Analysis Date: 9/20/2016			SeqNo: 1158927		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	101	80	120			
Magnesium	51	1.0	50.00	0	102	80	120			
Potassium	50	1.0	50.00	0	100	80	120			
Sodium	50	1.0	50.00	0	100	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609983

30-Sep-16

Client: Rule Engineering LLC

Project: Sunco Disposal Well 1

Sample ID	mb-1		SampType:	mblk		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW		Batch ID:	R37296		RunNo:	37296				
Prep Date:			Analysis Date:	9/19/2016		SeqNo:	1159171	Units:	mg/L CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	ND	20.00									

Sample ID	lcs-1		SampType: lcs		TestCode: SM2320B: Alkalinity					
Client ID:	LCSW		Batch ID: R37296		RunNo: 37296					
Prep Date:			Analysis Date: 9/19/2016		SeqNo: 1159172		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.28	20.00	80.00	0	100	90	110			

Sample ID	mb-2		SampType: mblk		TestCode: SM2320B: Alkalinity					
Client ID:	PBW		Batch ID: R37296		RunNo: 37296					
Prep Date:			Analysis Date: 9/19/2016		SeqNo: 1159195		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-2		SampType: lcs		TestCode: SM2320B: Alkalinity					
Client ID:	LCSW		Batch ID: R37296		RunNo: 37296					
Prep Date:			Analysis Date: 9/19/2016		SeqNo: 1159196		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.44	20.00	80.00	0	101	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609983

30-Sep-16

Client: Rule Engineering LLC

Project: Sunco Disposal Well 1

Sample ID	MB-27655		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW		Batch ID: 27655		RunNo: 37451					
Prep Date:	9/22/2016		Analysis Date: 9/24/2016		SeqNo: 1164163		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-27655		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 27655		RunNo: 37451					
Prep Date:	9/22/2016		Analysis Date: 9/24/2016		SeqNo: 1164164		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1040	20.0	1000	0	104	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1609983

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

9/17/2016 8:00:00 AM

Completed By: Lindsay Mangin

9/19/2016 9:52:05 AM

Reviewed By:

jc 09/19/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 2
(2 or >12 unless noted)
Adjusted? No
Checked by: ds

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:

Client: Rule Engineering, LLC ☒ Standard ☐ Rush
Project Name: _____

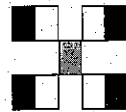
Mailing Address: 501 Airport Dr Suite 205
Farmington, NM 87401
Phone #: (505) 716-2757
Email or Fax #: hwood@ruleengineering.com

VQC Package: ☐ Level 4 (Full Validation) ☐ Other _____

Standard ☐ Level 4 (Full Validation) ☐ Other _____
Accreditation ☐ NELAP ☐ Other _____

Project Manager: Heather Woods
Sampler: HW/JV
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.7

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
10/16/16	0900	Water	S-1	(2) 500 mL Plastic	None	1609983
				(1) 125 mL Plastic	H ₂ SO ₄	-001
				(1) 125 mL Plastic	HNO ₃	



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TMB's (8021)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	See Notes	Air Bubbles (Y or N)
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Remarks:

Analyte for:
pH, Eh, Specific Conductance, Specific Gravity,
Fluoride, Calcium, potassium, magnesium, sodium
bicarbonate, carbonate, chloride, sulfate, TDS,
Cation/anion balance, bromide.

Received by: Christina Woods Date: 9/16/16 Time: 1630

Received by: [Signature] Date: 09/17/16 Time: 0800

Relinquished by: _____

Relinquished by: _____

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

January 23, 2017

Ms. Shacie Murray
Agua Moss LLC
P.O. Box 600
Farmington, New Mexico 87499

**Re: Sunco Disposal #1
Injection Water Quarterly Monitoring
4th Quarter 2016**

Dear Ms. Murray:

This report summarizes the sample collection, field screening, and laboratory analysis of the injection water at the Agua Moss LLC Sunco Disposal #1 well for the 4th Quarter 2016. Injection water of the Class I Sunco Disposal #1 well is assessed on a quarterly basis in accordance with 20.6.5207B NMAC.

Field Activities

Rule Engineering, LLC (Rule) personnel collected one injection water sample from the process line inside the pump building at the location on December 14, 2016. Injection water was discharged from the valve of the process line into a clean, 5-gallon bucket for field screening and transfer to laboratory sample containers.

Sample Collection and Field Screening Procedures

The injection water sample (S-2) was field screened for time sensitive parameters including pH, temperature, reduction potential (Eh), and specific conductance. Field screening was conducted utilizing a handheld water quality meter calibrated on the day of use with laboratory grade standards.

The sampled injection water was placed into laboratory supplied containers, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico.

Table 1. Field Screening and Laboratory Analytical Summary

Constituent	Laboratory Value	Field Measurement
<i>pH</i>	7.22	6.60
<i>Temperature</i>	--	10.6 °C
<i>Reduction Potential</i>	--	-351.2 mV
<i>Specific Conductance</i>	60,000 µmhos/cm	22,000 µmhos/cm
<i>Specific Gravity</i>	1.017	--

Constituent	Laboratory Value	Field Measurement
Total Dissolved Solids	31,100 mg/L	--
Bicarbonate (As CaCO₃)	662.8 mg/L CaCO ₃	--
Carbonate (As CaCO₃)	<2.000 mg/L CaCO ₃	--
Fluoride	<5.0 mg/L	--
Chloride	17,000* mg/L	--
Bromide	150 mg/L	--
Phosphorous, Orthophosphate	<2.5 mg/L	--
Sulfate	1,100* mg/L	--
Nitrite (as N)	<5.0 mg/L	--
Nitrate (as N)	<2.0 mg/L	--
Calcium	610 mg/L	--
Magnesium	46 mg/L	--
Potassium	190 mg/L	--
Sodium	11,000 mg/L	--
Reactive Cyanide	<0.00500 mg/L	--
Reactive Sulfide	0.490 mg/L	--
Corrosivity by pH	6.75	--
Flashpoint	Did not flash at 170°F	--

*Exceeded maximum contaminate level

QA/QC Considerations

Field measurements for time sensitive parameters including pH, temperature, reduction potential, and specific conductance more accurately reflect the characteristics of the injection water than laboratory results for these parameters due to their rapidly changing nature when removed from the stable environment of the process line. The hold time qualifier is indicated on the laboratory report for pH as the hold time of 15 minutes from collection was exceeded during transport prior to analysis.

A dilution due to matrix qualifier is indicated on the laboratory report for total dissolved solids due to an initial dilution made during sample preparation based on the visual observations of laboratory personnel indicating the need for the dilution. The reported concentration of total dissolved solids is sufficient for generalizations concerning overall water characteristics.

Results for chloride and sulfate exceed the maximum contaminate level reportable by the laboratory. However, the reported concentrations of chloride and sulfate are sufficient for generalizations concerning the overall water characteristics.

Rule

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Rule Engineering appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-1055.

Sincerely,
Rule Engineering, LLC



Heather M. Woods, P.G.
Area Manager/Geologist

Attachments:

Laboratory Analytical Report (Hall: 1612861)



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 10, 2017

Heather Woods

Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Sunco Disposal Well #1

OrderNo.: 1612861

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1612861**

Date Reported: **1/10/2017**

CLIENT: Rule Engineering LLC

Client Sample ID: S-2 (12/14/16)

Project: Sunco Disposal Well #1

Collection Date: 12/14/2016 2:25:00 PM

Lab ID: 1612861-001

Matrix: AQUEOUS

Received Date: 12/15/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SPECIFIC GRAVITY							Analyst: LGT
Specific Gravity	1.017		0		1	12/29/2016 3:27:00 PM	R39733
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	ND	5.0		mg/L	50	12/16/2016 5:19:41 AM	A39441
Chloride	17000	1000	*	mg/L	2E	12/29/2016 12:02:53 AM	A39721
Nitrogen, Nitrite (As N)	ND	5.0		mg/L	50	12/16/2016 5:19:41 AM	A39441
Bromide	150	5.0		mg/L	50	12/16/2016 5:19:41 AM	A39441
Nitrogen, Nitrate (As N)	ND	2.0		mg/L	20	12/15/2016 3:15:42 PM	R39441
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	12/15/2016 3:03:18 PM	R39441
Sulfate	1100	25	*	mg/L	50	12/16/2016 5:19:41 AM	A39441
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	60000	50		µmhos/cm	50	12/21/2016 6:08:14 PM	R39580
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	662.8	20.00		mg/L CaCO ₃	1	12/19/2016 9:51:45 PM	R39516
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	12/19/2016 9:51:45 PM	R39516
Total Alkalinity (as CaCO ₃)	662.8	20.00		mg/L CaCO ₃	1	12/19/2016 9:51:45 PM	R39516
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	31100	200	*D	mg/L	1	12/21/2016 9:42:00 PM	29306
SM4500-H+B: PH							Analyst: JRR
pH	7.22	1.68	H	pH units	1	12/19/2016 9:51:45 PM	R39516
EPA METHOD 200.7: TOTAL METALS							Analyst: TES
Calcium	610	10		mg/L	10	1/3/2017 10:08:00 PM	29318
Magnesium	46	1.0		mg/L	1	12/30/2016 5:23:23 PM	29318
Potassium	190	5.0		mg/L	5	12/30/2016 5:30:57 PM	29318
Sodium	11000	500		mg/L	500	1/4/2017 3:17:09 PM	29318

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

1612861-001C S-2 (12/14/16)

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 12/14/16 14:25

L879353

Wet Chemistry by Method 9012 B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	ND		0.00500	1	12/21/2016 20:01	WG937712

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	0.490		0.0500	1	12/21/2016 11:00	WG93747C

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	6.75		1	12/22/2016 11:50	WG937745

Sample Narrative:

9040C L879353-01 WG937745: 6.75 at 19.6c

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170 F		1	12/21/2016 14:31	WG937344

2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

ACCOUNT:

Hall Environmental Analysis Laboratory

PROJECT:

SDG:

L879353

DATE/TIME:

12/22/16 16:10



QUALITY CONTROL SUMMARY

L879353-01

WG937712

Wet Chemistry by Method 9012 B

Method Blank (MB)

(MB) R3186428-1 12/21/16 19:45		MB Result	MB Qualifier	MB MDL	MB RDL
Analyte		mg/l		mg/l	mg/l
Reactive Cyanide		U	0.0018	0.00500	

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3186428-2 12/21/16 19:46 • (LCSD) R3186428-3 12/21/16 19:47

Spike Amount		LCSD Result	LCSD Rec.	LCS Qualifier	RPD	RPD Limits
mg/l		mg/l	%		%	%
0.100		0.108	108	85-115	18	20

10	3 Ss	4 Cn	6 Sr	6 Qc	7 Gl	11 Al	9 Sc
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ACCOUNT:
Hall Environmental Analysis Laboratory

PROJECT:

SDG:
L879353

DATE/TIME:
12/22/16 16:10



Method Blank (MB)

(MB) R3186243-1 12/21/16 10:57				
Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3186243-2 12/21/16 10:57 • (LCSD) R3186243-3 12/21/16 10:57

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Reactive Sulfide	0.500	0.464	0.465	93.0	93.0	85.0-115			0.000	20

1 Pb

2 Sn

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 Al

9 Sc

QUALITY CONTROL SUMMARY

L879353-01

WG937745

Wet Chemistry by Method 9040C

L879011-01 Original Sample (OS) • Duplicate (DUP)

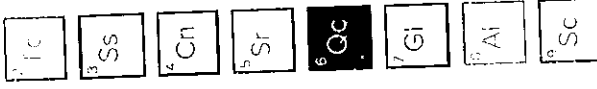
(OS) L879011-01 12/22/16 11:50 • (DUP) WG937745-1 12/22/16 11:50

Analyte	Original Result	DUP Result	DUP RPD	DUP Qualifier	DUP RPD Limits
Corrosivity by pH	su 7.10	su 7.09	% 0.141	% 10	% 10

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG937745-2 12/22/16 11:50 • (LCSD) WG937745-3 12/22/16 11:50

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Corrosivity by pH	su 6.07	su 6.09	su 6.10	% 100	% 100	% 98.4-102	% 100	% 0.164	% 0.164	% 10



PROJECT:

SDG:

DATE/TIME:
12/22/16 16:10



L879889-01 Original Sample (OS) • Duplicate (DUP)

(OS) L879889-01 12/21/16 14:31 • (DUP) WG937344-3 12/21/16 14:31

Analyte	Original Result deg F	DUP Result deg F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Flashpoint	130	128	1	1.55		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG937344-1 12/21/16 14:31 • (LCSD) WG937344-2 12/21/16 14:31

Analyte	Spike Amount deg F	LCS Result deg F	LCSD Result deg F	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Flashpoint	82.0	82.6	82.6	101	101	96.0-104			0.000	7

1
Tc

3
Ss

4
Cn

5
Si

6
Qc

7
Gl

8
Al

9
Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Rec.	Recovery.

Qualifier	Description
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The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612861

10-Jan-17

Client: Rule Engineering LLC
Project: Sunco Disposal Well #1

Sample ID	MB-29318	SampType: MBLK			TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID: 29318			RunNo: 39684					
Prep Date:	12/20/2016	Analysis Date: 12/28/2016			SeqNo: 1244074		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-29318		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 29318		RunNo: 39684					
Prep Date:	12/20/2016		Analysis Date: 12/28/2016		SeqNo: 1244075		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.8	85	115			
Magnesium	48	1.0	50.00	0	96.8	85	115			
Potassium	49	1.0	50.00	0	97.9	85	115			
Sodium	48	1.0	50.00	0	96.3	85	115			

Sample ID	LLLCS-29318	SampType:	LCSLL	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	29318	RunNo:	39684					
Prep Date:	12/20/2016	Analysis Date:	12/28/2016	SeqNo:	1246095	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	101	50	150			
Magnesium	ND	1.0	0.5000	0	103	50	150			
Potassium	ND	1.0	0.5000	0	114	50	150			
Sodium	ND	1.0	0.5000	0	134	50	150			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612861

10-Jan-17

Client: Rule Engineering LLC
Project: Sunco Disposal Well #1

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R39441		RunNo: 39441							
Prep Date:	Analysis Date: 12/15/2016		SeqNo: 1235232		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R39441		RunNo: 39441							
Prep Date:	Analysis Date: 12/15/2016		SeqNo: 1235233		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.1	90	110			
Phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	94.9	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A39441		RunNo: 39441							
Prep Date:	Analysis Date: 12/15/2016		SeqNo: 1235286		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Sulfate	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: A39441		RunNo: 39441							
Prep Date:	Analysis Date: 12/15/2016		SeqNo: 1235287		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.6	90	110			
Bromide	2.4	0.10	2.500	0	95.3	90	110			
Sulfate	9.7	0.50	10.00	0	96.9	90	110			

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A39721		RunNo: 39721							
Prep Date:	Analysis Date: 12/28/2016		SeqNo: 1244513		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612861

10-Jan-17

Client: Rule Engineering LLC
Project: Sunco Disposal Well #1

Sample ID	LCS	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	A39721	RunNo:	39721					
Prep Date:		Analysis Date:	12/28/2016	SeqNo:	1244514	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612861

10-Jan-17

Client: Rule Engineering LLC
Project: Sunco Disposal Well #1

Sample ID mb-1	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R39516			RunNo: 39516						
Prep Date:	Analysis Date: 12/19/2016			SeqNo: 1237543		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-1	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R39516			RunNo: 39516						
Prep Date:	Analysis Date: 12/19/2016			SeqNo: 1237544		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.48	20.00	80.00	0	96.8	90	110			

Sample ID mb-2	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R39516			RunNo: 39516						
Prep Date:	Analysis Date: 12/19/2016			SeqNo: 1237567		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID lcs-2	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R39516			RunNo: 39516						
Prep Date:	Analysis Date: 12/19/2016			SeqNo: 1237568		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	76.88	20.00	80.00	0	96.1	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612861

10-Jan-17

Client: Rule Engineering LLC
Project: Sunco Disposal Well #1

Sample ID	1612861-001ADUP	SampType:	DUP	TestCode:	Specific Gravity					
Client ID:	S-2 (12/14/16)	Batch ID:	R39733	RunNo:	39733					
Prep Date:		Analysis Date:	12/29/2016	SeqNo:	1244930	Units:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.018	0						0.0688	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612861

10-Jan-17

Client: Rule Engineering LLC
Project: Sunco Disposal Well #1

Sample ID	MB-29306		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW		Batch ID: 29306		RunNo: 39571					
Prep Date:	12/20/2016		Analysis Date: 12/21/2016		SeqNo: 1239259		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-29306		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 29306		RunNo: 39571					
Prep Date:	12/20/2016		Analysis Date: 12/21/2016		SeqNo: 1239260		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1050	20.0	1000	0	105	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1612861

RcptNo: 1

Received by/date:

AG 12/15/16

Logged By: Anne Thorne

12/15/2016 8:10:00 AM

Anne Thorne

Completed By: Anne Thorne

12/15/2016 1:17:12 PM

Anne Thorne

Reviewed By:

aj

12/15/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 3
(≤ 2 or ≥ 12 unless noted)

Adjusted? _____

Checked by: AT 12/15/16

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Appendix C

Sunco SWD #1
30-045-28653
Class I Disposal: UICI-5-0
2016 Falloff Test

Agua Moss, LLC
P.O Box 600
Farmington, NM 87499
ORGID 247130

Report Components:

1. Facility Operator Information
 - a. Agua Moss, LLC
 - b. PO Box 600 Farmington, NM 87499
 - c. OGRID 247130
2. Well Information:
 - a. UIC Permit # UICI-5-0
 - b. Class I
 - c. Sunco Disposal #1
 - d. 30-045-28653
 - e. UL E, Sec 2, T29N, R12W 1595 FNL & 1005 FWL San Juan County
3. Current Wellbore Diagram: **Attached** (page 4)
4. Copy of Electronic Log: **Previously submitted 1992** (page 5)
5. Copy of Porosity Log: **Previously submitted 1992** (page 6)
6. See attached Fall off Test analysis
 - a. FOT Procedure (page 7)
 - b. Analysis (page 7)
 - c. Results (page 18)
 - d. Summary (page 18)
7. Results Comparison attached (page 19)
8. The raw test data will be kept on file for a period of 3-year and will be made available to the NMOCD upon written request. (page 19)
9. Conclusions (page 19)
10. Any pressure or temperature anomaly: **None seen on BH readings, surface pressure fell off and rate increased: (See Figures 3, 4 & 5)** possible cause is change of injection fluid density and friction properties. Pumped Fresh water through first 2/3rds of injection period and then switched over to produced water. Decrease in tubing pressure from density change and possible friction properties allowed rate to ramp up until it stabilized, injection period was extended to ensure rate stabilization prior to fall-off period.
11. Plots attached
 - a. Pressure and Rate (fig 3) (page 20)
 - b. Injection Rate vs Time (fig 4) (page 21)
 - c. Pressure and Rate (fig 5) (page 22)
 - d. Elapsed Time (fig 6) (page 23)
 - e. Derivative Plot (fig 7) (page 24)
 - f. Horner Plot (fig 8) (page 25)
 - g. Elapsed Gauge Time (fig 9) (page 26)
 - h. Injection Volumes and Surface Pressure (fig10) (page 27)
12. NO PVT data necessary, injected fluid is fresh-to-slightly saline water. No significant hydrocarbons present that would alter the density, compressibility and/or viscosity of the fluid.

- a. AOR 1 mile (page 32)
 - b. AOR 1 mile well data (page 33)
 - c. The McGrath #4 was the only offset well that was injecting into the Point Lookout formation within 1 mile. This well was plugged 7/25/2013.
- 16. Geological information was provided in the last Permit renewal submitted and approved in 2012.
- 17. Offset Wells: One offset well that was completed in the same injection interval was the McGrath #4. This well was plugged 7/2013 and therefore was not impacted.
- 18. Chronological listing of the daily, testing activities (operations log) attached (pages 35-50)
 - a. Date of Test: **Monday June 27th 2016 through Tuesday July 25th 2016**
 - b. Time of the injection period: **57.6 hours**
 - c. Type of injection fluid: **Produced water**
 - d. Final injection pressure & temp prior to shutting in in the well: **3763.46 psi, 83.69 °F**
 - e. Total shut-in time: **130.6 hours**
 - f. Final static pressure & temp at the end of the fall-off portion of the test: **3304 psi, 91.45 °F**
- 19. Location of the shut in valve: **A wing valve located on the well's Christmas Tree was closed to begin the FOT**
- 20. Pressure Gauges: (see attached)
 - a. SP-2000 Memory Pressure Gauge (page 51)
 - b. Pressure range: **0-5000 psig** (page 52)
 - c. Last Calibration: **2/4/14** (page 53)

Wellbore Schematic:

Agua Moss, LLC

Wellbore Schematic

Sunco No. 1, SWD

Current Wellbore Configuration

Location: 1595' fnl & 1005' fwl
Sec 2, T29N, R12W
San Juan Co, New Mexico

July 12th, 2013

Elevation: 5,859' GL
5,872' RKB

By: J. Ryan Davis

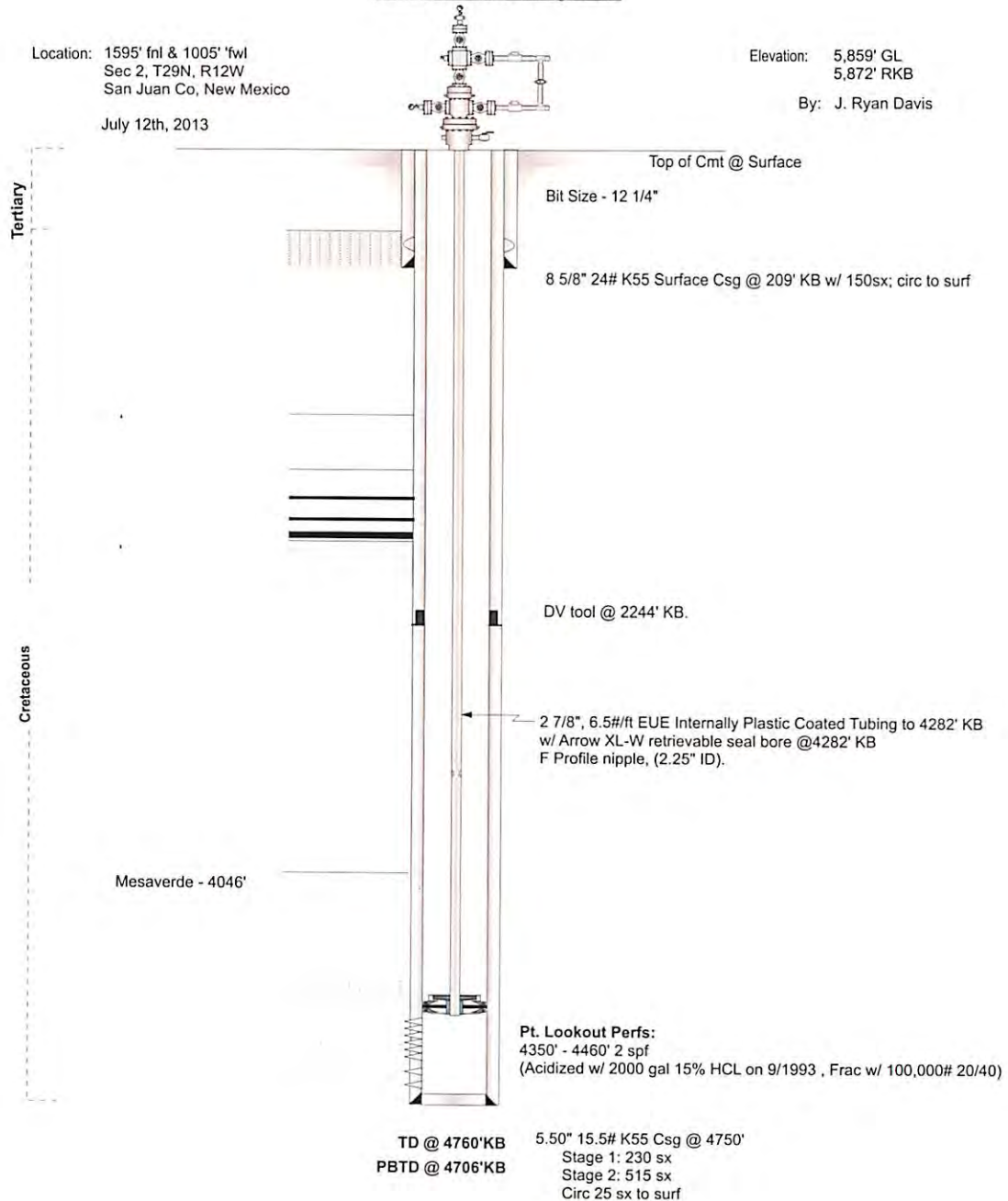
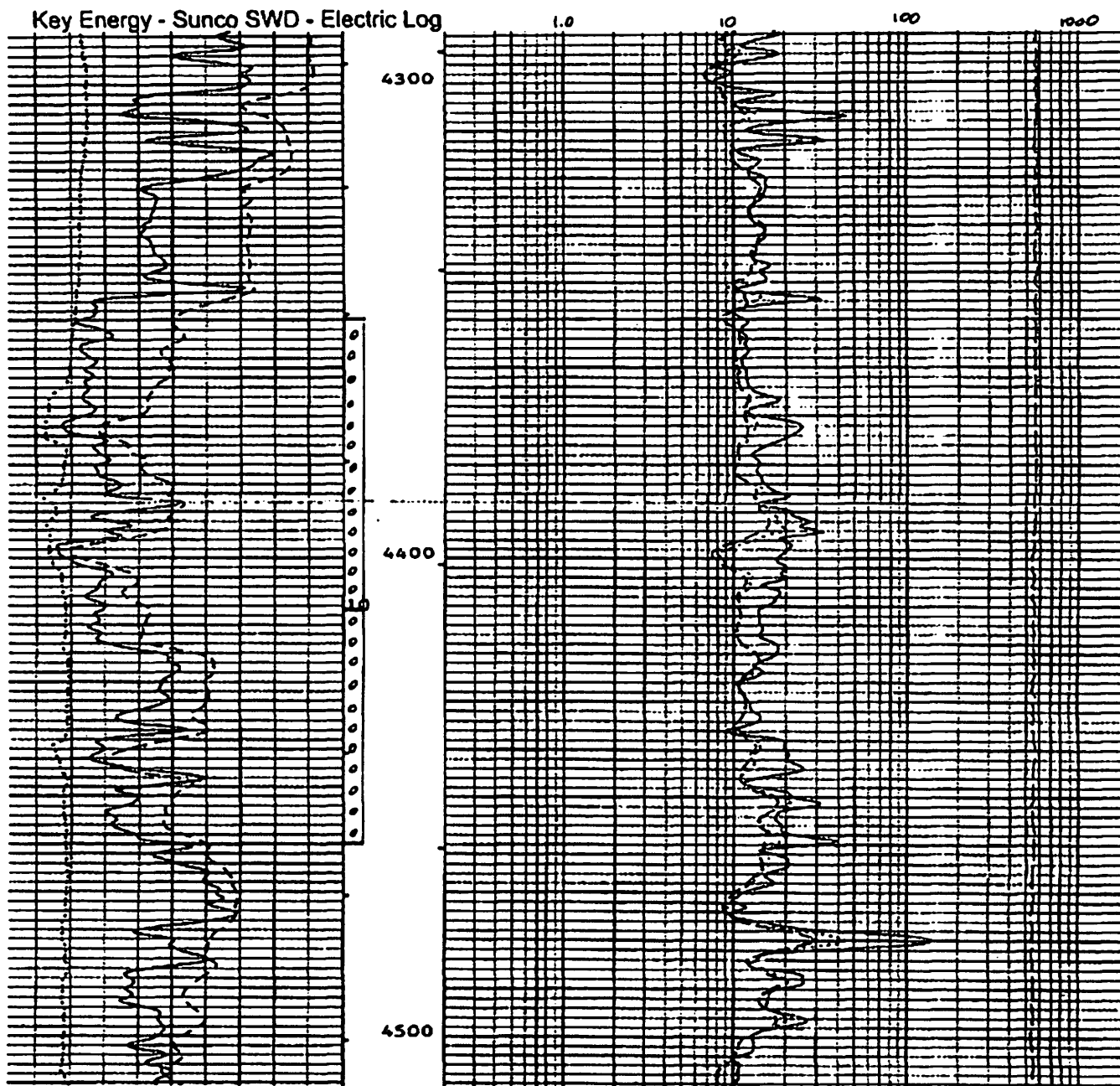


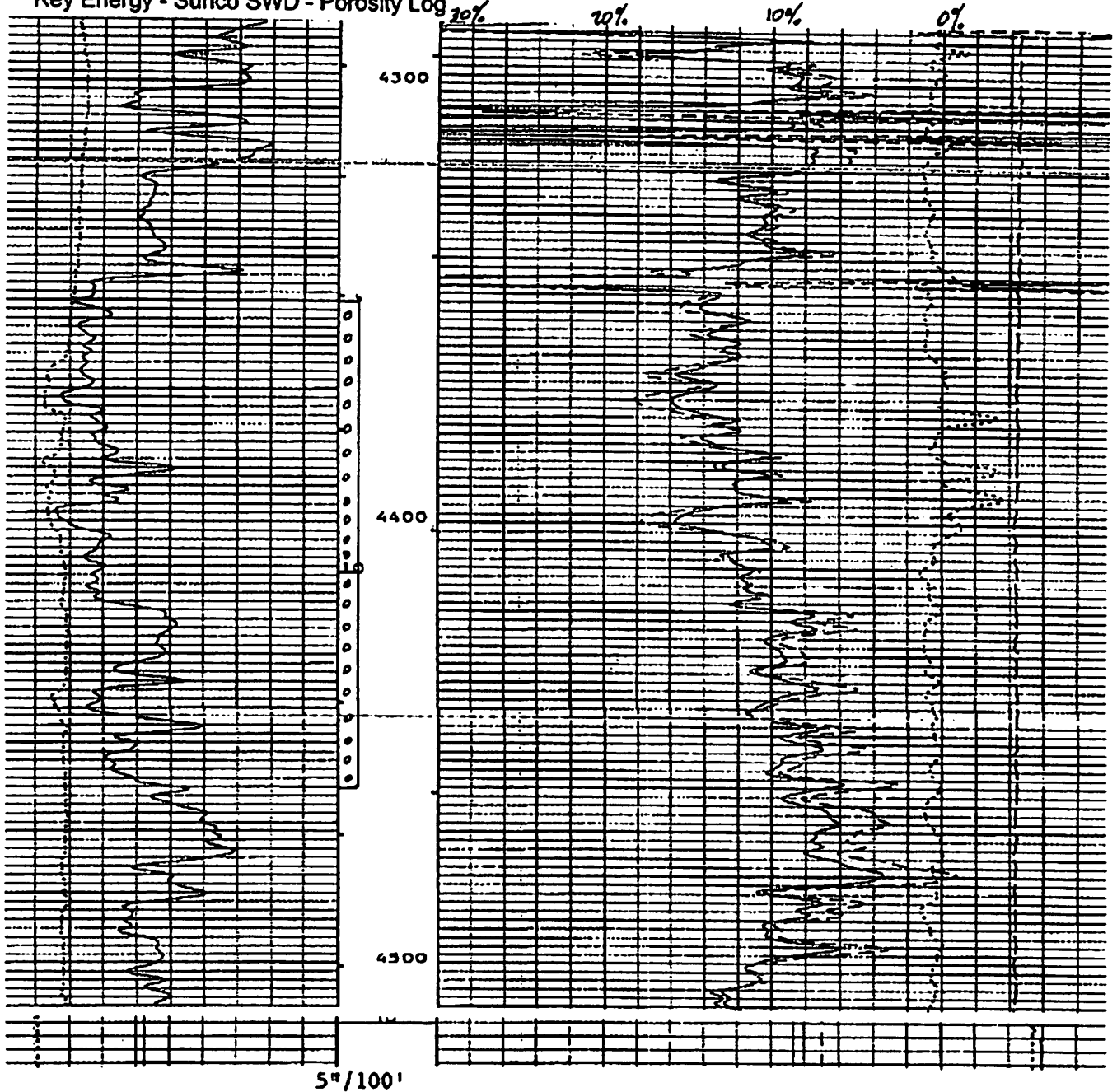
Figure 1: Wellbore Schematic

Key Energy - Sunco SWD - Electric Log



		TENS(LBF)	
		15000	0.0
CAL(IN)		SFLU(OHMM)	
3.0000	16.000	20000	2000.0
GR(GAP)		LD(OHMM)	
1.0	200.00	20000	2000.0
SP(MV)		ILM(OHMM)	
80.00	20.000	20000	2000.0

Key Energy - Sunco SWD - Porosity Log



CP 32.6

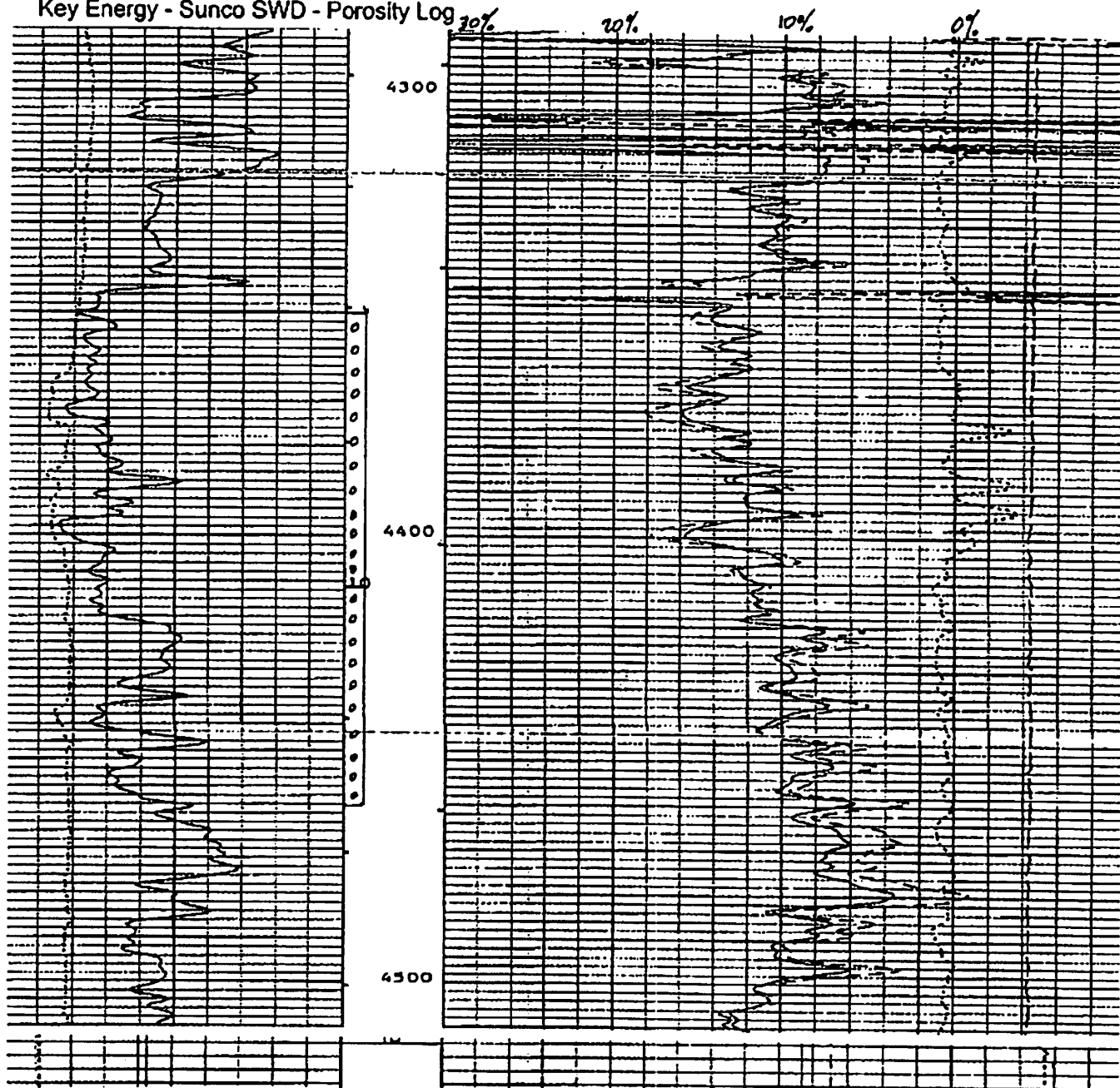
FILE 6

01-FEB-1992 20:21

(UP)

		CPHQ(G/C3)	
		2500	25000
		TENS(LBF)	
		10000	0.0
CALI(IN.)		RHO(B/G/C3)	
8.0000	18.000	2.0000	3.0000
GR(GAP)		DPHI(V/V)	
0.0	200.00	30000	-1000

Key Energy - Sunco SWD - Porosity Log



5"/100'

CP 32.6

FILE 6

01-FEB-1992 20:21

(UP)

		DRHQ(G/C3)	
		2500	25000
		TENS(LBF)	
		10000	0.0
CALI(N/I)		RHOB(G/C3)	
8.0000	16.000	2.0000	3.0000
GR(GAP)		DPHI(V/V)	
0.0	200.00	30000	-1000

At the request of the NMOCD, a Falloff Test (FOT) was performed on the Sunco SWD #1 Class I injection well (UICI-5-0) on **06/27/2016**. Below is the summary of findings from the 2016 FOT.

Procedure:

Tandem electronic gauges were run in the subject well. The initial BHP was 3204 psi at a depth of 4405'. The injection period started at 11:00 am on 06/27/2016, with a total of 7503 bbls injected over 58 hours, and an average injection rate of 3132 bpd (91 gpm). The final bottom hole injection pressure was 3782 psi. Injection was shut down and the well was shut in at the wellhead. The bottom hole pressures were monitored for 120 hours of pressure falloff. The final BHP was 3304 psi.

Analysis:

The data was compiled in excel and analyzed. A Cartesian plot of pressure and temperature versus time was created see Figure 2 below..

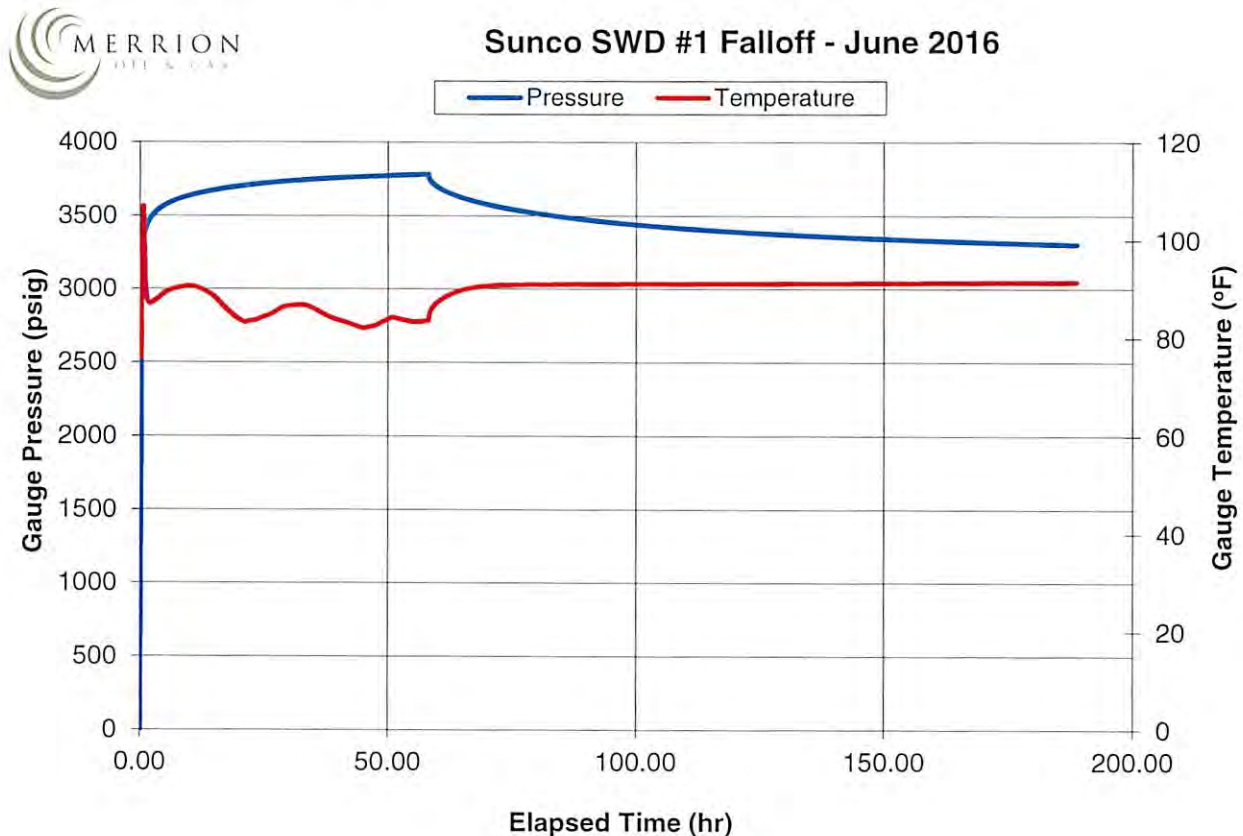


Figure 2: Cart Pressure/Temp vs. Time

The stabilization of pressure was confirmed prior to shut-in. The plot was reviewed for anomalous data, none found.



**2016 Fall-off Pressure Test Analysis
for the
Sunco Disposal Well #1
San Juan County, New Mexico**

**prepared for
Merrion Oil and Gas Corporation**

8 September 2016

**International Reservoir Technologies, Inc.
Lakewood, Colorado, USA**

**Tel. (303) 279-0877
Fax (303) 279-0936**



Sunco Disposal Well #1 2016 Fall-off Test Results

Summary:

The results of the 2016 fall off test (FOT) for the Sunco Disposal Well #1 indicate that the length of the shut-in test did allow the transient to reach a stabilized flow period and that the well has a significant hydraulic fracture. These results are similar to the 2015 test results. The pressure transient effect of the frac plus the wellbore storage effects do obscure to some extent the reservoir property influences; however, a reasonable and satisfactory set of reservoir properties could be calculated. The conventional straight-line analysis for extrapolated pressure and the reservoir property calculations from the Horner and MDH type plots are acceptable. The input parameters for the fluid properties (i.e. PVT data) changed slightly due to newly available fluid analysis (Report titled "2nd Quarter 2016 Sampling - Injection Well.pdf", NM1-9 INJECTION WELL ANALYTICAL RESULTS, Agua Moss Disposal Facility, Crouch Mesa Road, San Juan County, New Mexico, 6/28/16).

The results from the derivative, Horner and MDH type pressure plots are summarized in the table below. The results for the different methods were consistent and the average calculated properties were:

- Estimated Kw (permeability) = 11.5 md
- Estimated skin = -5.93
- Extrapolated pressure = 3114 psig
- Fracture half-length = 594 feet (from derivative half-slope line)
- Radius of investigation = 1430 feet

Calculated Reservoir Parameters				
	Horner Analysis	MDH Plot	Derivative Plot	Average
Estimated Kw (permeability, mD)	11.1	13.0	10.4	11.5
Estimated skin (dimensionless)	-5.96	-5.88	-5.95	-5.93
Extrapolated pressure (psig)	3098	3156	3088	3114
Fracture half-length (feet)	--	--	594	594
Radius of investigation (feet)	1660	1550	1080	1430

Larger versions of the plots appear at the end of this document.



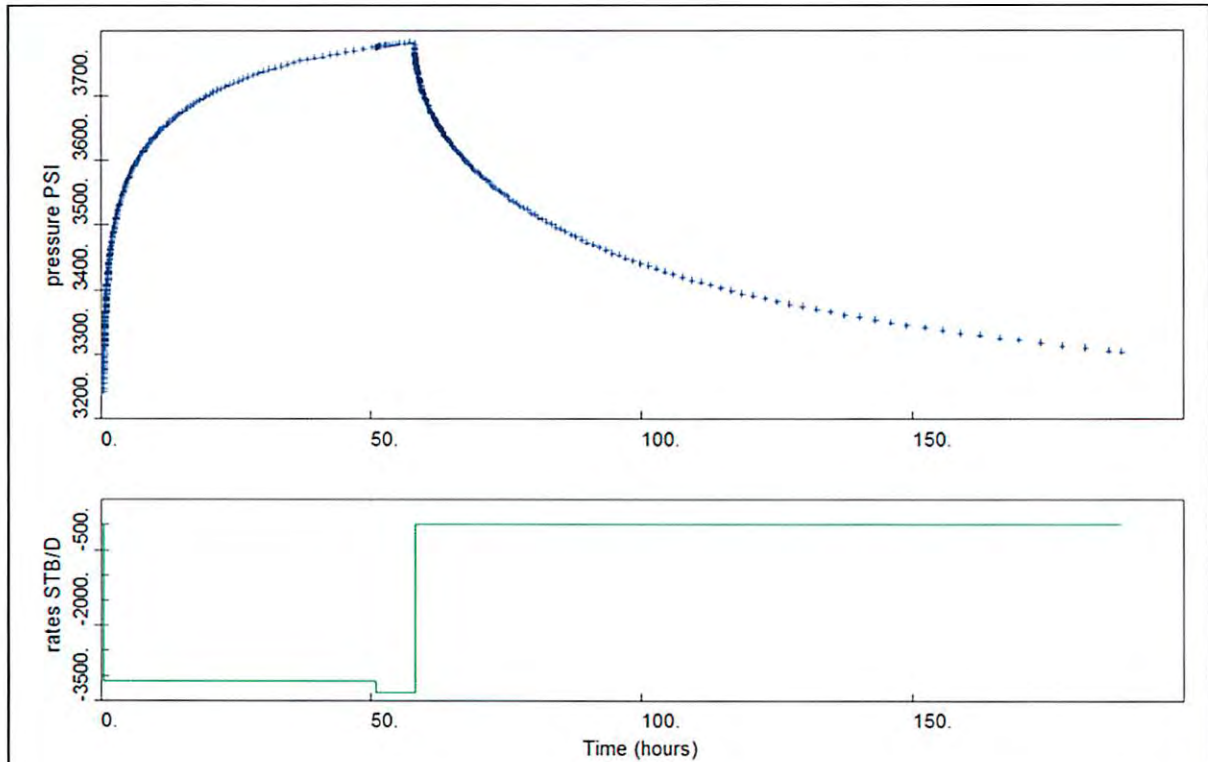
Input data and assumptions:

Assumptions:

- Formation fluid properties equal injection water properties due to cumulative volume injected and miscibility of formation water and injection water
- Reservoir temperature = 91 deg F
- Porosity = 0.114 (fraction, estimated from density log)
- Net pay = 110 feet
- Rock compressibility = $4.50\text{E-}06$ 1/psi (correlation)
- Wellbore radius = 0.506 ft
- Wellbore volume total = 34.88 bbls (tubing = 24.79 bbls, casing = 10.09 bbls)
- Wellbore compressibility = injection water compressibility = $2.64\text{E-}06$ 1/psi (from Osif correlation)
- Injected water specific gravity = 1.006 (pure water = 1.0); density = 8.392 lb./gal, TDS = 15,500 mg/L
- Injected water FVF = 1.0023 rb/stb (McCain correlation)
- Injected water viscosity = 0.737 cp (McCain correlation)



DATA PLOT:



Sunco Disposal #1

Analysis-Data ID: GAU001
 Gauge-Data ID: GAU001
 Data starts at 2016-06-27 11:46:29
 Data ends at 2016-07-05 07:56:00
 Number of rates = 3
 Cum. Production = -7500. BBLs

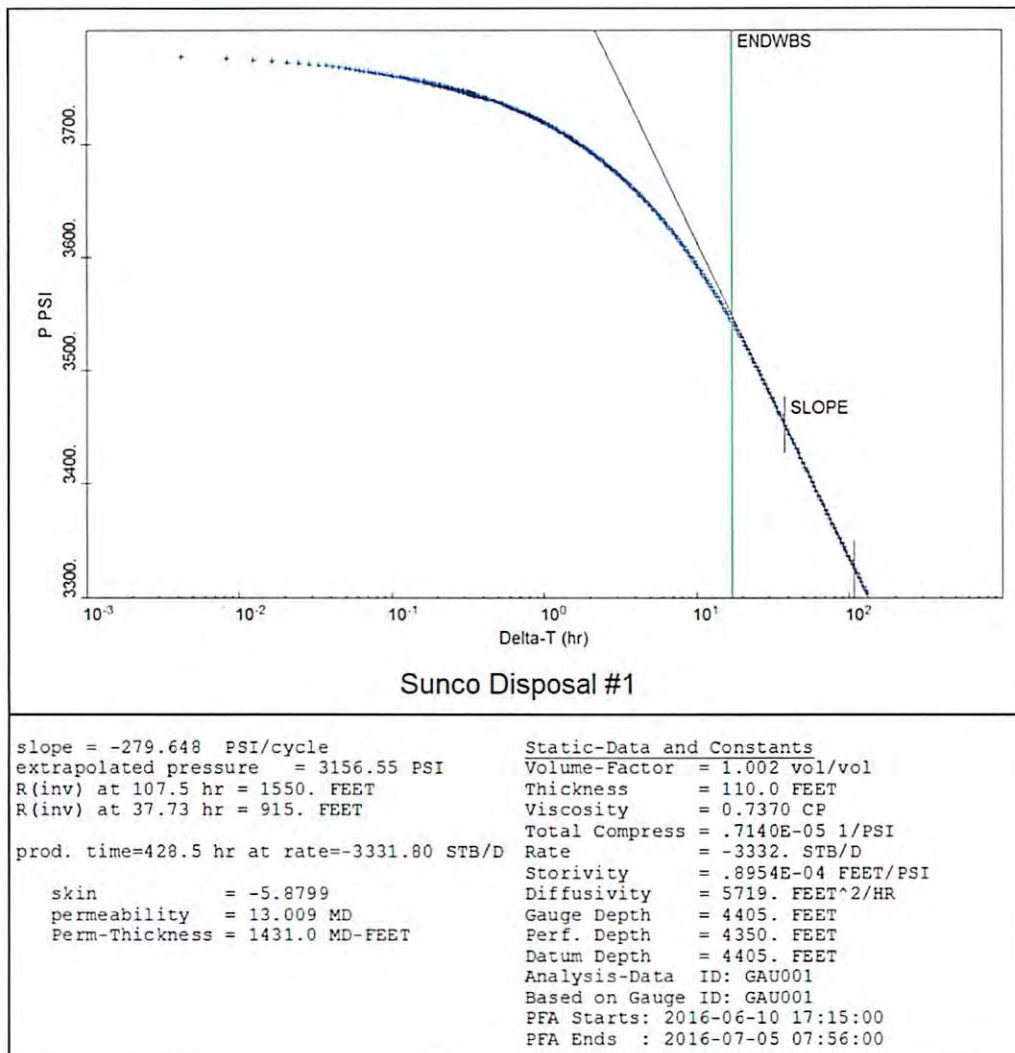
Static-Data and Constants
 Volume-Factor = 1.002 vol/vol
 Thickness = 110.0 FEET
 Viscosity = 0.7370 CP
 Total Compress = .7140E-05 1/PSI
 Rate = -3332. STB/D
 Storivity = .8954E-04 FEET/PSI
 Diffusivity = N/A FEET^2/HR
 Gauge Depth = 4405. FEET
 Perf. Depth = 4350. FEET
 Datum Depth = 4405. FEET
 Analysis-Data ID: GAU001
 Based on Gauge ID: GAU001
 PFA Starts: 2016-06-27 11:46:29
 PFA Ends : 2016-07-05 07:56:00



MDH PLOT:

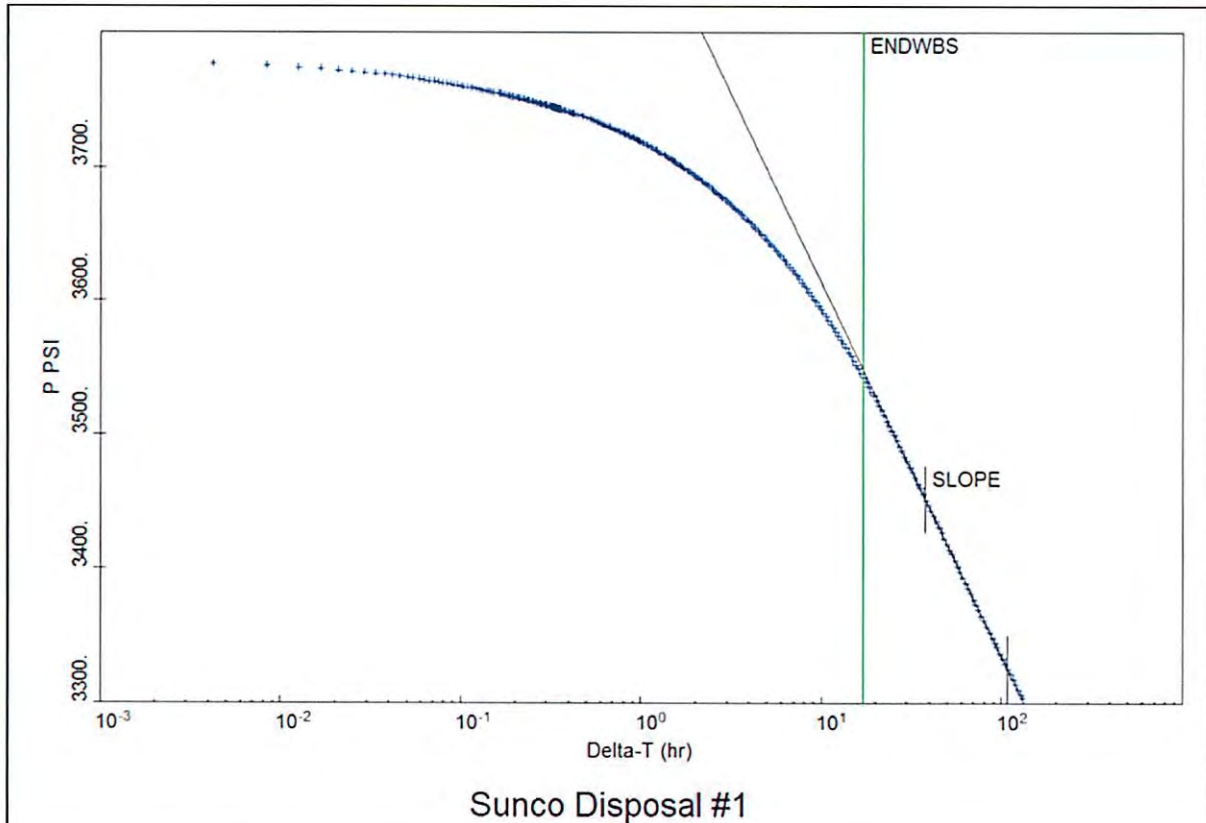
Conclusions: The stabilized flow period was reached relatively late in the conventional straight-line extrapolation for the extrapolated pressure, however the MDH values do appear reasonable.

- Estimated extrapolated pressure = 3157. psig
- Estimated Kw (permeability) = 13.0 md
- Estimated skin = -5.88
- Radius of investigation = 1550 feet





MDH PLOT:



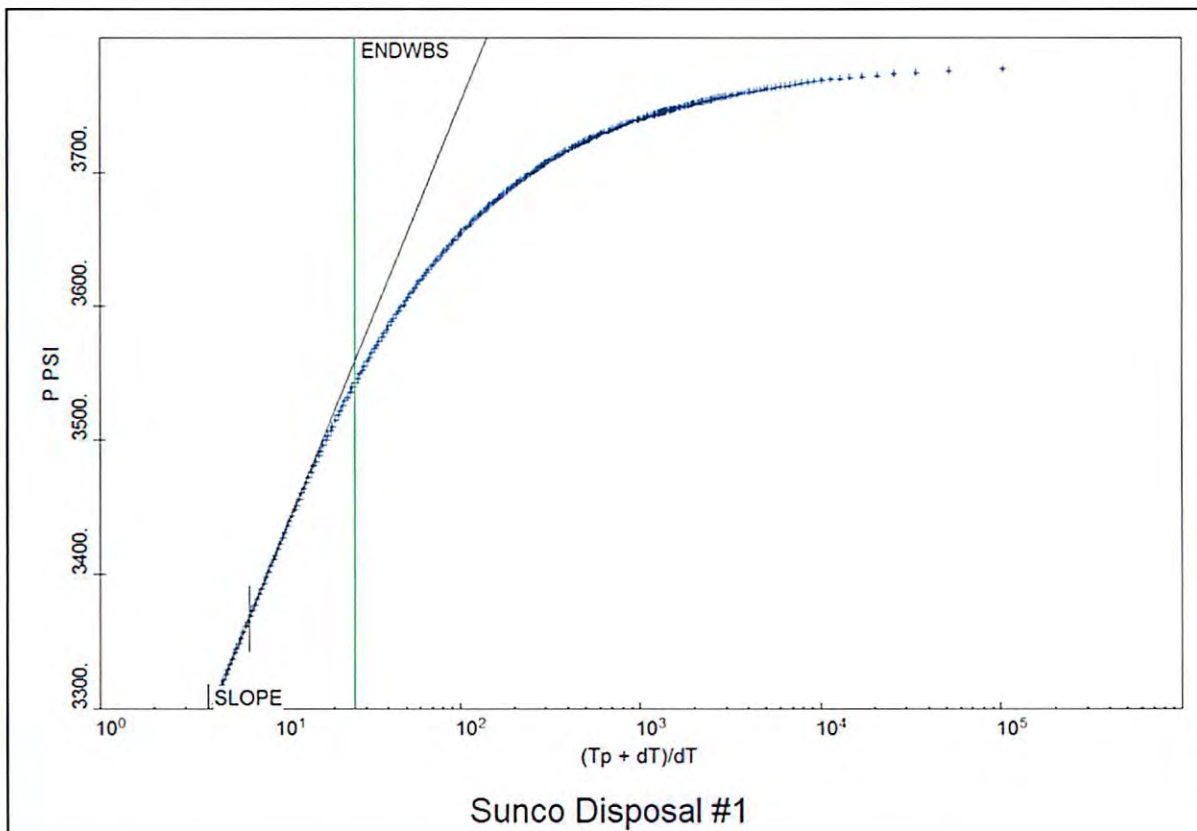
slope = -279.648 PSI/cycle
 extrapolated pressure = 3156.55 PSI
 R(inv) at 107.5 hr = 1550. FEET
 R(inv) at 37.73 hr = 915. FEET
 prod. time=428.5 hr at rate=-3331.80 STB/D
 skin = -5.8799
 permeability = 13.009 MD
 Perm-Thickness = 1431.0 MD-FEET

Static-Data and Constants
 Volume-Factor = 1.002 vol/vol
 Thickness = 110.0 FEET
 Viscosity = 0.7370 CP
 Total Compress = .7140E-05 1/PSI
 Rate = -3332. STB/D
 Storivity = .8954E-04 FEET/PSI
 Diffusivity = 5719. FEET^2/HR
 Gauge Depth = 4405. FEET
 Perf. Depth = 4350. FEET
 Datum Depth = 4405. FEET
 Analysis-Data ID: GAU001
 Based on Gauge ID: GAU001
 PFA Starts: 2016-06-10 17:15:00
 PFA Ends : 2016-07-05 07:56:00



ENLARGED PLOTS:

HORNER PLOT:



slope = 326.5131 PSI/cycle
 extrapolated pressure = 3098.14 PSI
 R(inv) at 145.0 hr = 1660. FEET
 R(inv) at 75.47 hr = 1200. FEET
 prod. time=428.5 hr at rate=-3331.80 STB/D
 skin = -5.9632
 permeability = 11.142 MD
 Perm-Thickness = 1225.6 MD-FEET

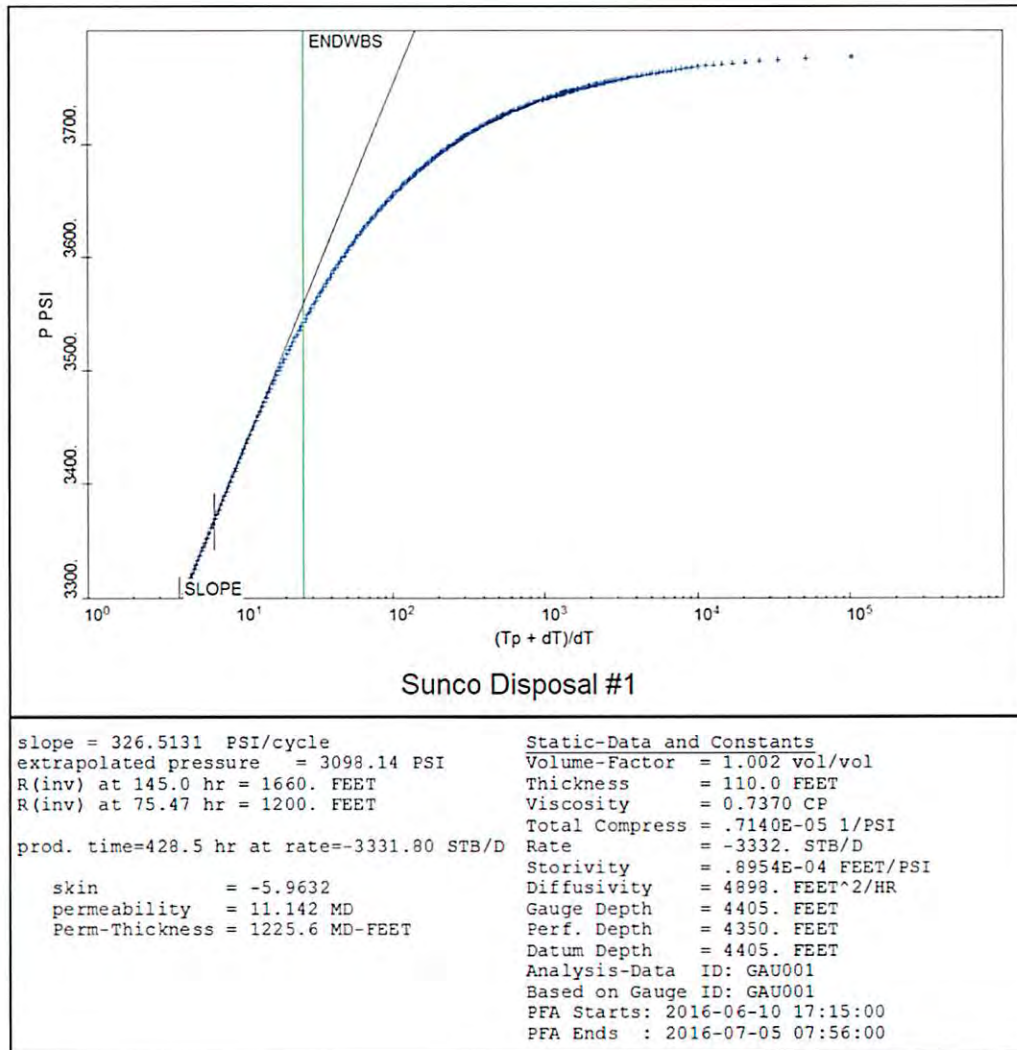
Static-Data and Constants
 Volume-Factor = 1.002 vol/vol
 Thickness = 110.0 FEET
 Viscosity = 0.7370 CP
 Total Compress = .7140E-05 1/PSI
 Rate = -3332. STB/D
 Storivity = .8954E-04 FEET/PSI
 Diffusivity = 4898. FEET^2/HR
 Gauge Depth = 4405. FEET
 Perf. Depth = 4350. FEET
 Datum Depth = 4405. FEET
 Analysis-Data ID: GAU001
 Based on Gauge ID: GAU001
 PFA Starts: 2016-06-10 17:15:00
 PFA Ends : 2016-07-05 07:56:00



HORNER PLOT:

Conclusions: The stabilized flow period was reached relatively late in the conventional straight-line extrapolation for the extrapolated pressure, however the reservoir property calculations appear reasonable.

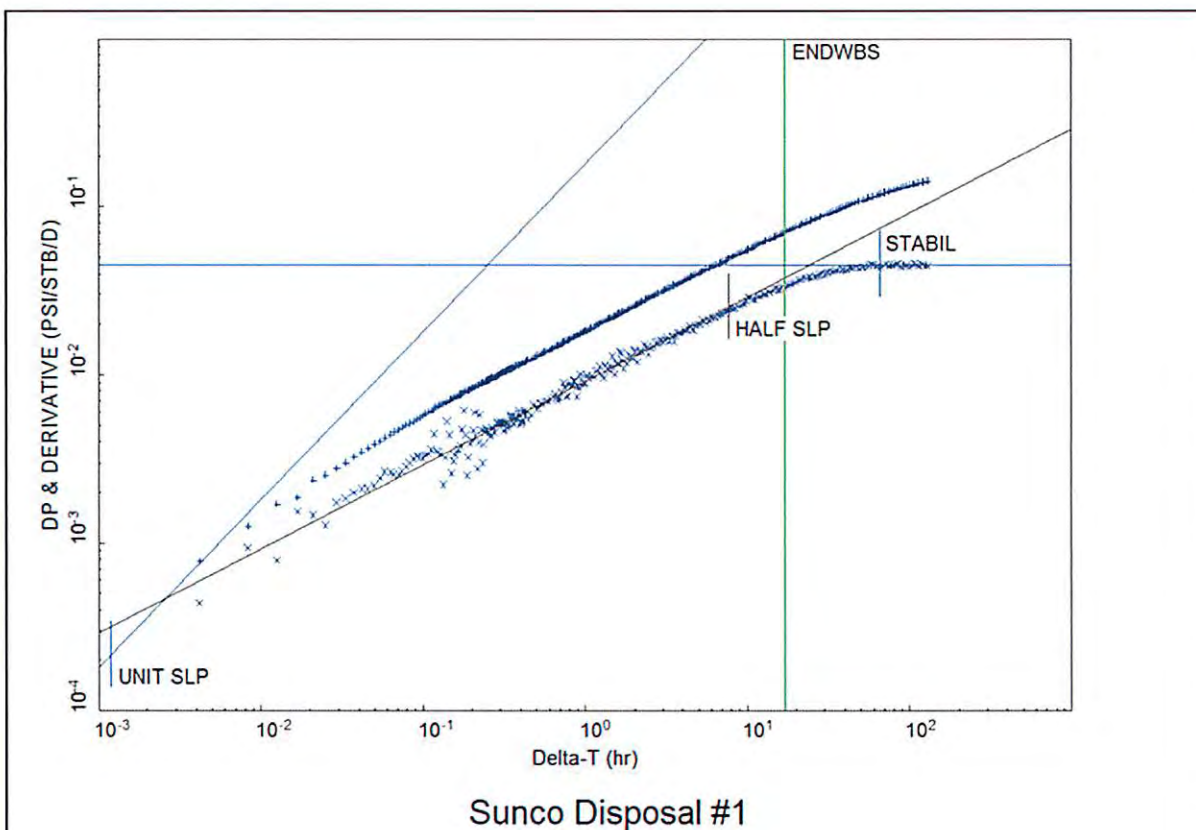
- Estimated extrapolated pressure = 3098. psig
- Estimated Kw (permeability) = 11.1 md
- Estimated skin = -5.96
- Radius of investigation = 1,660 feet



PLH



DERIVATIVE PLOT:



well. storage = 0.23139 BBLS/PSI
 skin = -5.9537
 permeability = 10.352 MD
 Perm-Thickness = 1138.7 MD-FEET
 Half.Length = 593.76 FEET
 P-extrap. = 3087.89 PSI
 R(inv) at 65.63 hr = 1080. FEET
 Smoothing Coef = 0.,0.

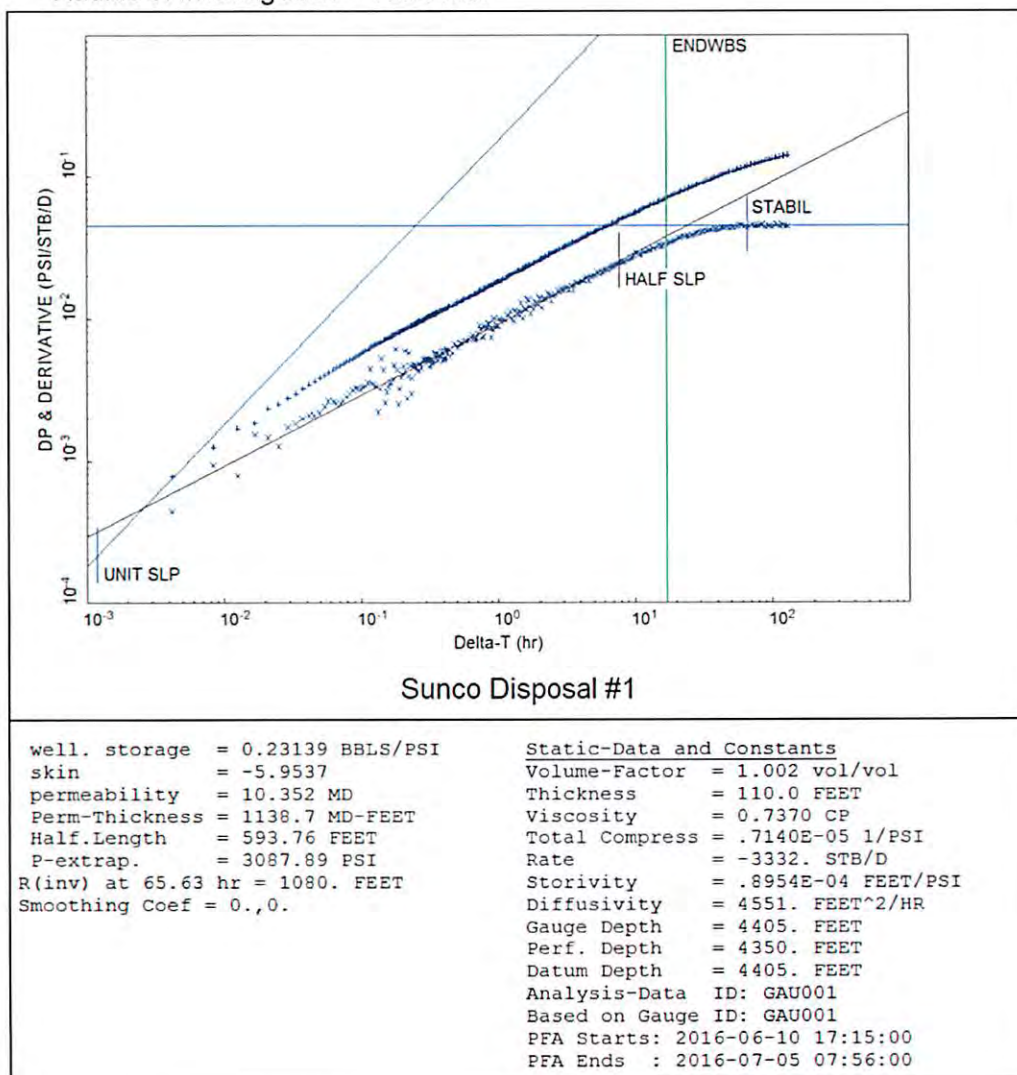
Static-Data and Constants
 Volume-Factor = 1.002 vol/vol
 Thickness = 110.0 FEET
 Viscosity = 0.7370 CP
 Total Compress = .7140E-05 1/PSI
 Rate = -3332. STB/D
 Storivity = .8954E-04 FEET/PSI
 Diffusivity = 4551. FEET^2/HR
 Gauge Depth = 4405. FEET
 Perf. Depth = 4350. FEET
 Datum Depth = 4405. FEET
 Analysis-Data ID: GAU001
 Based on Gauge ID: GAU001
 PFA Starts: 2016-06-10 17:15:00
 PFA Ends : 2016-07-05 07:56:00



DERIVATIVE PLOT:

Conclusions: The behavior of the derivative curve is affected by the wellbore storage and the influence of an apparent hydraulic fracture. The data does appear valid. Also the plot indicates that the length of the shut-in test was sufficient to reach a stabilized period. A half-slope is shown in the derivative curve which is characteristic of linear-flow due to a hydraulic-fracture. The calculated half-length for the fracture was 594 feet. There is no clear indication of a boundary or fault.

- Estimated extrapolated pressure = 3088 psig
- Estimated Kw (permeability) = 10.4 md
- Estimated skin = -5.95
- Fracture half-length = 594 feet
- Radius of investigation = 1080 feet



Results:

The results from the derivative , Horner and MDH type pressure plots are summarized in the table below. The results for the different methods were consistent and the average calculated properties were:

1. $P^* = 3114$ psi
2. $K = 11.5$ md
3. $S = -5.93$
4. Radius of Investigation = 1,430 feet
5. No boundary seen

Calculated Reservoir Parameters				
	Horner Analysis	MDH Plot	Derivative Plot	Average
Estimated Kw (permeability, mD)	11.1	13.0	10.4	11.5
Estimated skin (dimensionless)	-5.96	-5.88	-5.95	-5.93
Extrapolated pressure (psig)	3098	3156	3088	3114
Fracture half-length (feet)	--	--	594	594
Radius of investigation (feet)	1660	1550	1080	1430

Summary:

The results of the 2016 fall off test (FOT) for the Sunco Disposal Well #1 indicate that the length of the shut-in test did allow the transient to reach a stabilized flow period and that the well has a significant hydraulic fracture. These results are similar to the 2015 test results. The pressure transient effect of the frac plus the wellbore storage effects do obscure to some extent the reservoir property influences; however, a reasonable and satisfactory set of reservoir properties could be calculated. The conventional straight-line analysis for extrapolated pressure and the reservoir property calculations from the Horner and MDH type plots are acceptable. The input parameters for the fluid properties (i.e. PVT data) changed slightly due to newly available fluid analysis (Report titled "2nd Quarter 2016 Sampling - Injection Well.pdf", NM1-9 INJECTION WELL ANALYTICAL RESULTS, Agua Moss Disposal Facility, Crouch Mesa Road, San Juan County, New Mexico, 6/28/16).

Comparison with past Falloff Tests:

The results from the 2016 FOT were compiled with previous FOT results from the facility and are shown below in Table 1.

Table 1: Results Comparison

	<u>2016</u>	<u>2015</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Rate (bbl/day)	3132	3340	4500			
P* (psi)	3114	3283	3231	3242	3176	3258
K (md)	11.5	15.8	13.6	10.2	20.7	
S	-5.93	-5.97	-7.18	-7.23	-6.79	
Radius of Inv (ft)	1430	1,580	1450	1250	1750	1620
Frac ½ Length (ft)	594	467	893	926	596	688
Boundary	none	none	648, 1520	755	987	none

Agua Moss did not conduct the prior tests and is relying on the 2010 report submitted by Key Energy, the prior operator, for the prior results. In comparing the results, there are a number of observations to make:

1. The consistent to slightly lower P* suggests that there has been some pressure dissipation in the reservoir. That is a good sign, indicating the disposal zone has a lot of capacity to accept fluids.
2. The radius of investigation for 2016 was adequate enough to see out beyond all but one of the previously seem boundaries.
Note: *On 2010 results seems peculiar to have a boundary beyond the Radius of Investigation.*
3. The parameters calculated compare well enough with previous FOT parameter to validate the 2016 FOT results.

The raw test data obtain during the 2016 falloff test and used for the analysis will be kept on file for a period of three (3) years and will be available upon request.

Conclusions:

Based on the above analysis and results comparison, Agua Moss believes the Sunco SWD #1 2016 FOT was successfully completed and doesn't show any indications of concern to continue the current waste injection operations.

Pressure and Rate

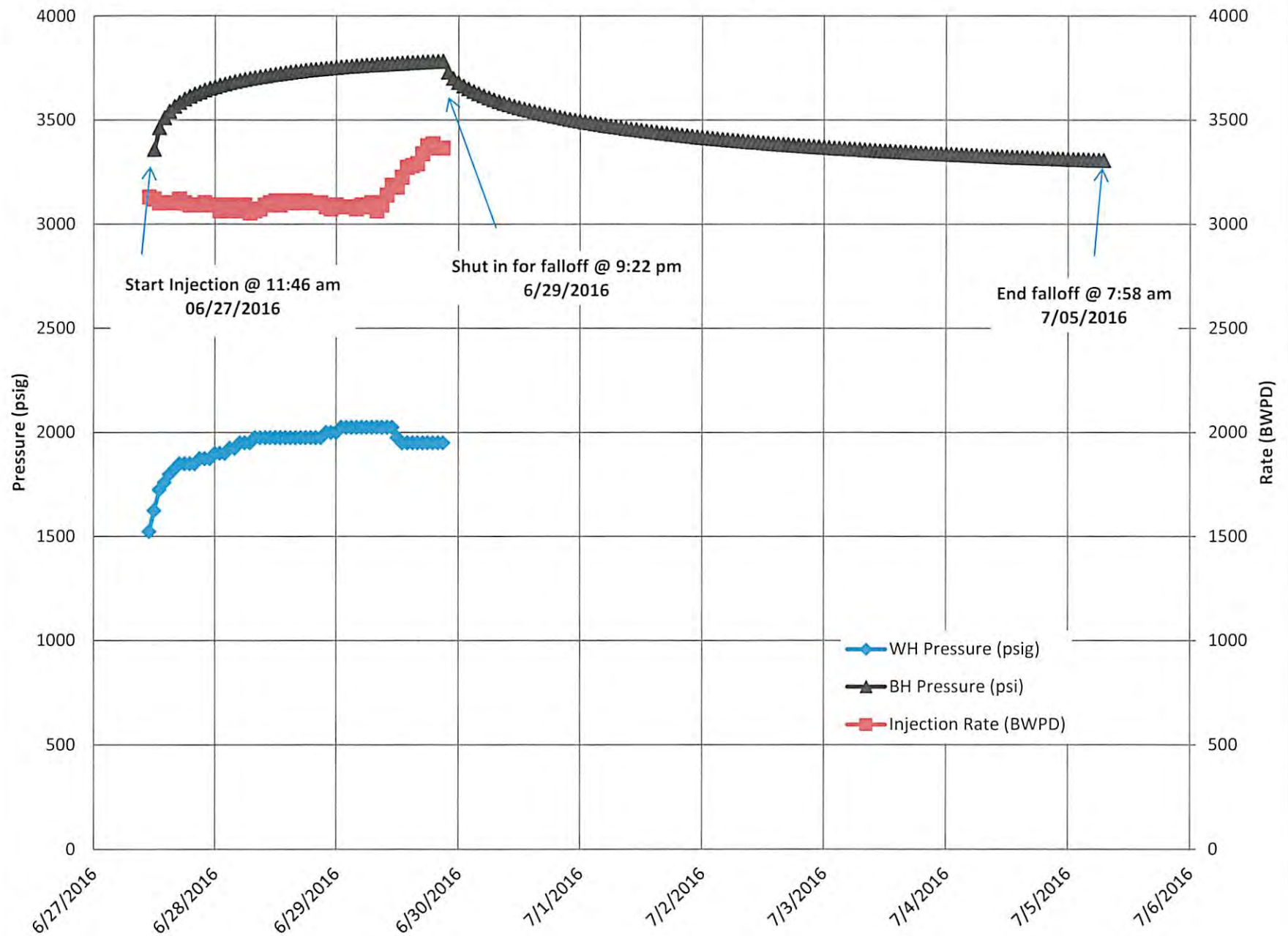


Figure 3

Pressure and Rate

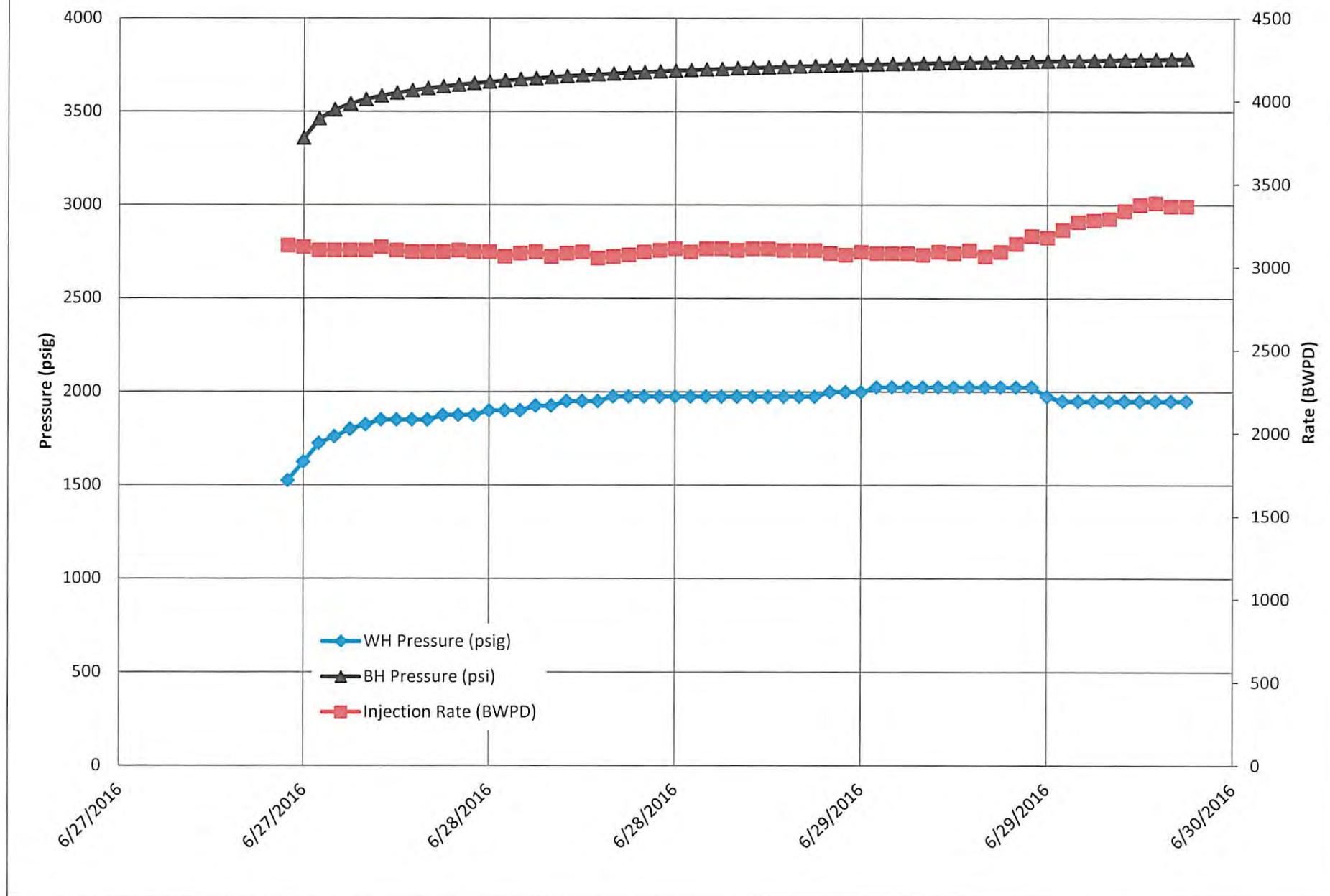


Figure 5



Sunco SWD #1 Falloff - June 2016

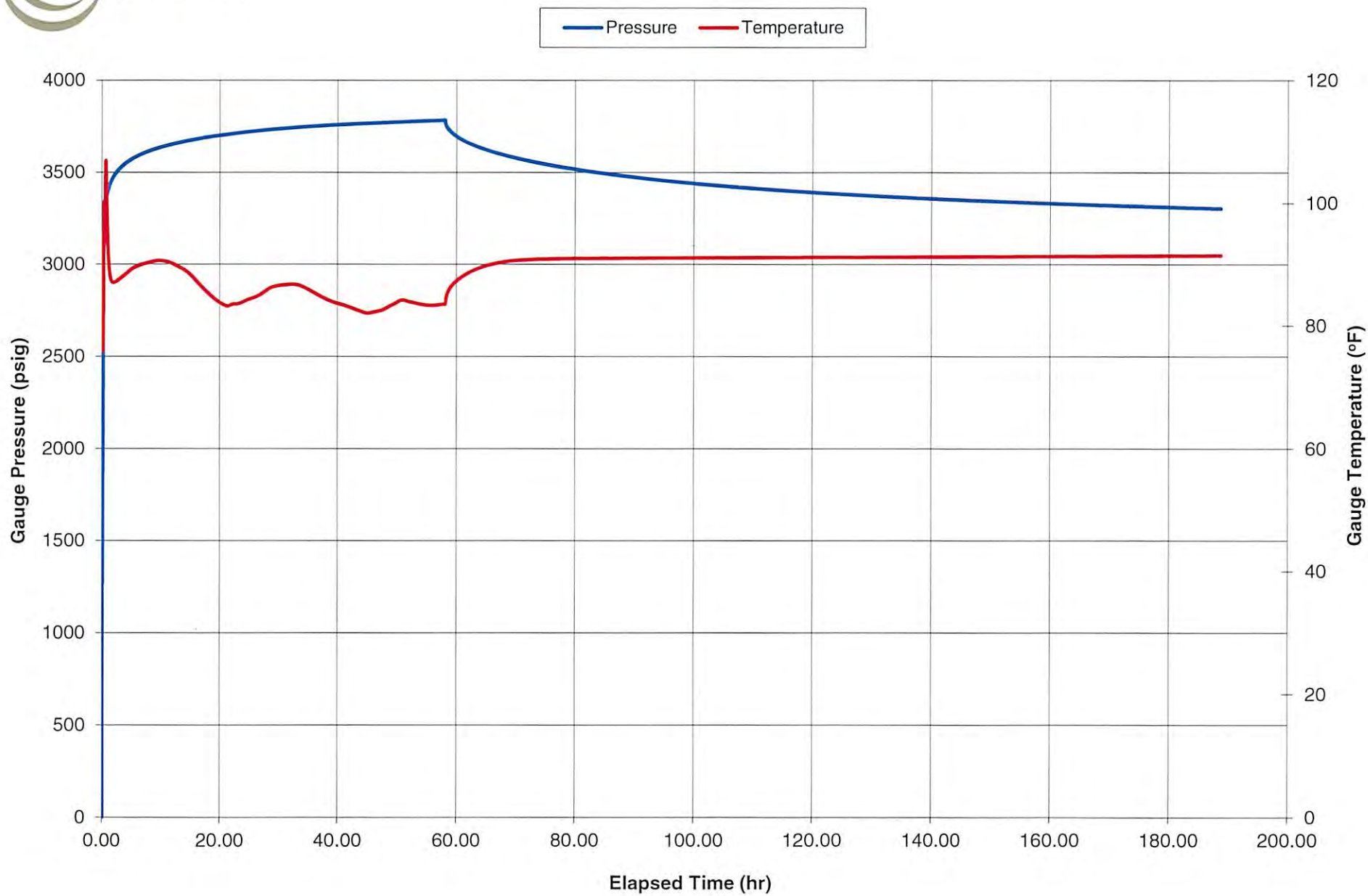


Figure 6

DERIVATIVE PLOT:

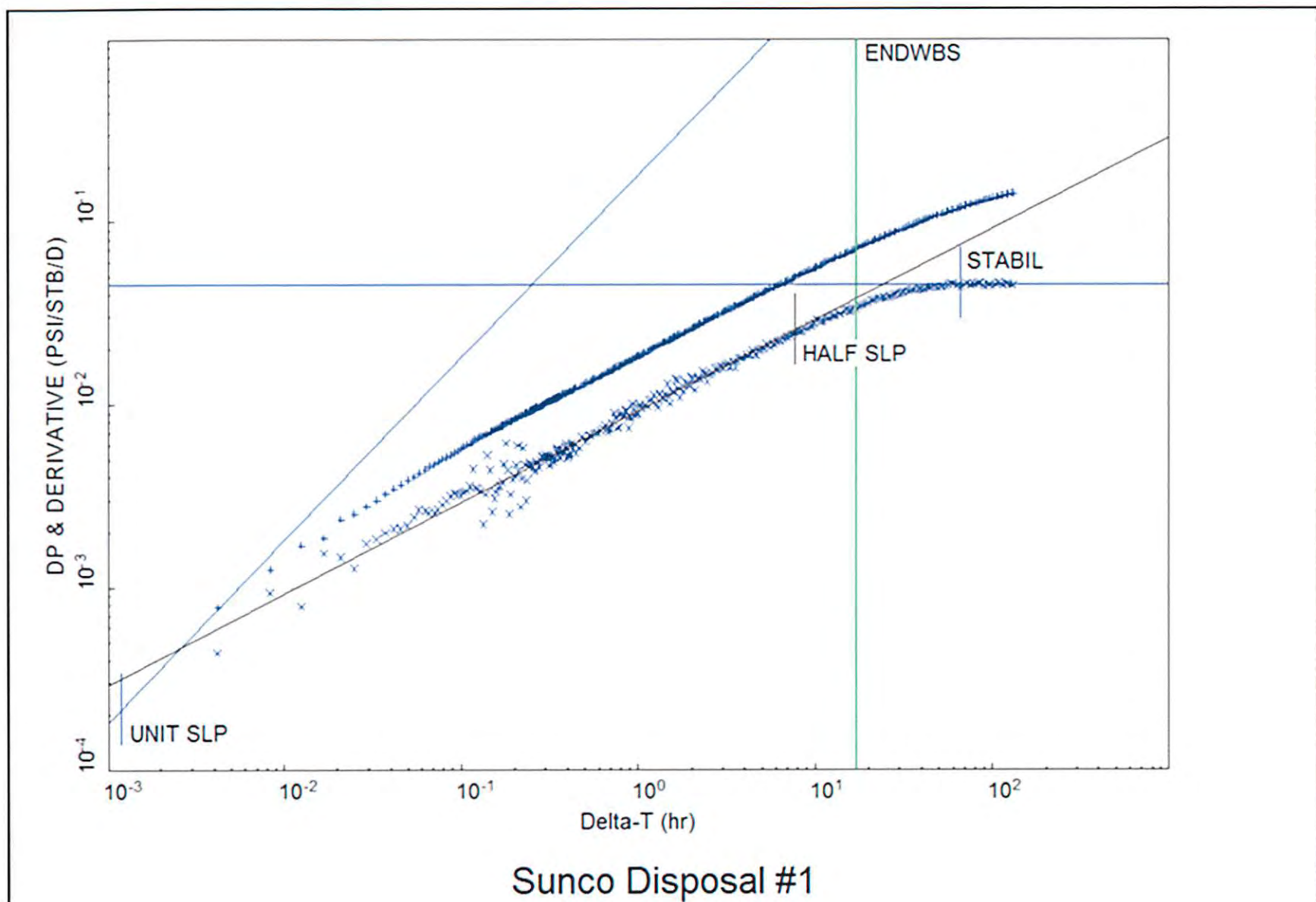


Figure 7

HORNER PLOT:

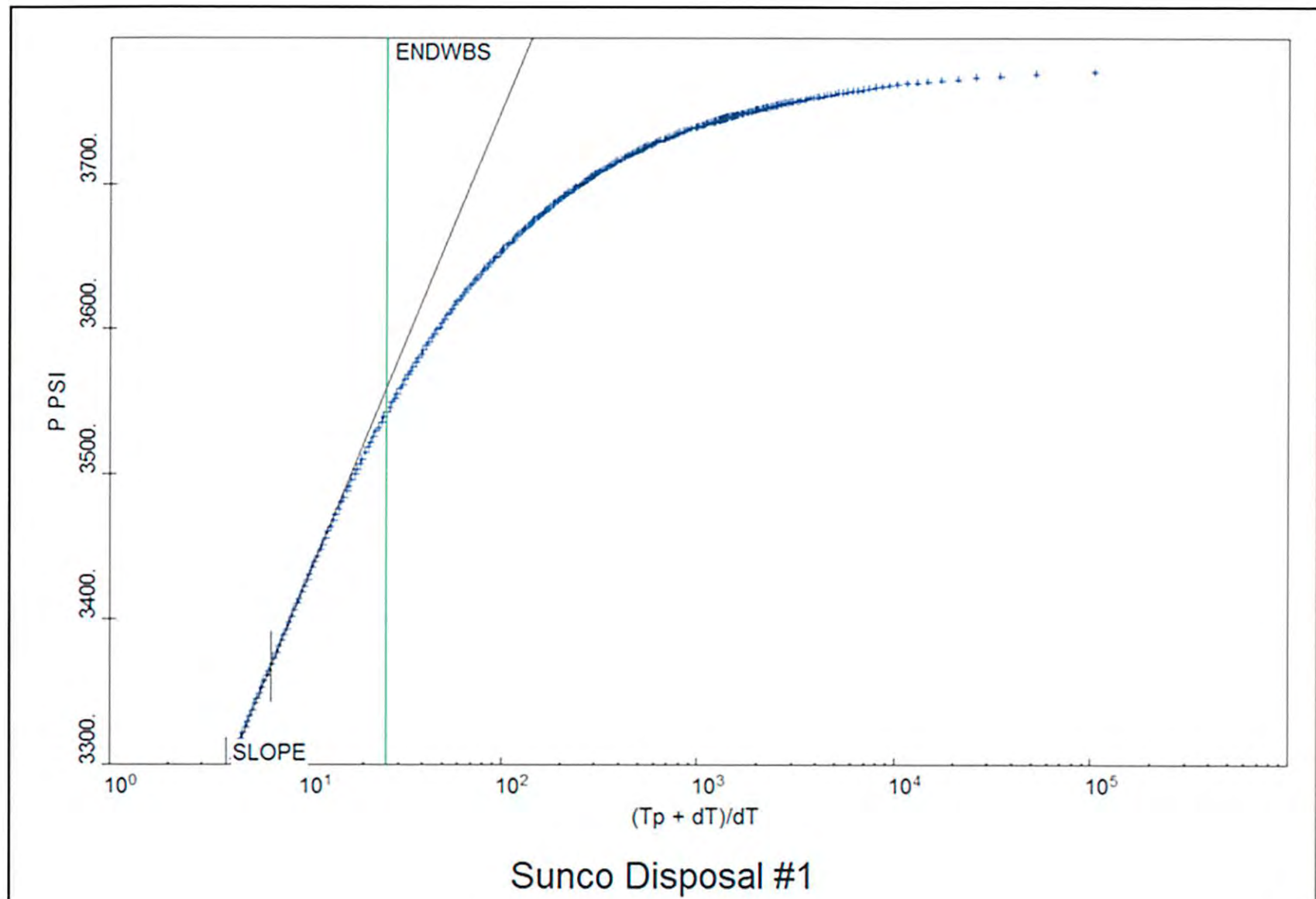


Figure 8

Sunco SWD #1 Falloff - June 2016

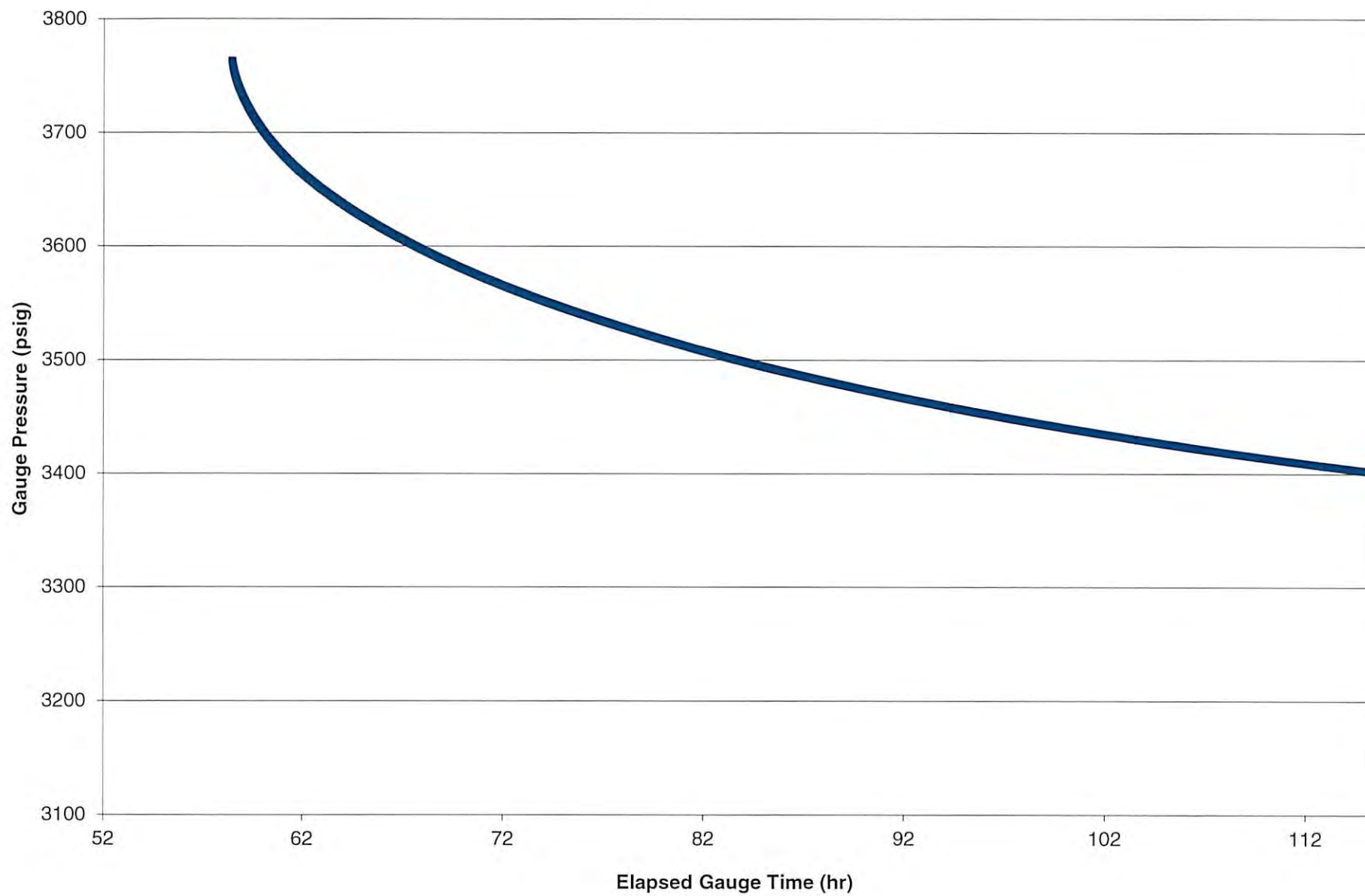


Figure 9

2016 WH Pressure

1/1/16	1900	
1/2/16		
1/3/16		
1/4/16	2100	
1/5/16	2100	
1/6/16	2100	
1/7/16	2100	
1/8/16	2100	
1/9/16		
1/10/16		
1/11/16	1900	
1/12/16	2000	
1/13/16	2100	
1/14/16	2100	
1/15/16	2250	
1/16/16		
1/17/16		
1/18/16	2200	
1/19/16	2000	
1/20/16	2100	
1/21/16	2100	
1/22/16	1900	
1/23/16		
1/24/16		
1/25/16	1900	
1/26/16	2000	
1/27/16	2100	
1/28/16	2000	
1/29/16	1900	
1/30/16		
1/31/16		
	2045.238	AVG
	1900	MIN
	2250	MAX

2/1/16	2250	
2/2/16	1900	
2/3/16	1900	
2/4/16	1900	
2/5/16	1950	
2/6/16		
2/7/16		
2/8/16	2200	
2/9/16	2200	
2/10/16	2200	
2/11/16	2000	
2/12/16	2000	
2/13/16		
2/14/16		
2/15/16	2200	
2/16/16	2000	
2/17/16	2100	
2/18/16	1950	
2/19/16	2000	
2/20/16		
2/21/16		
2/22/16	2000	
2/23/16	1900	
2/24/16	2100	
2/25/16	2000	
2/26/16	1900	
2/27/16		
2/28/16		
2/29/16	1900	
	2026.19	AVG
	1900	MIN
	2250	MAX

3/1/16	1900	
3/2/16	1600	
3/3/16	1600	
3/4/16	1700	
3/5/16		
3/6/16		
3/7/16	1750	
3/8/16	1650	
3/9/16	1750	
3/10/16	1700	
3/11/16	1800	
3/12/16		
3/13/16		
3/14/16	1550	
3/15/16	1700	
3/16/16	1600	
3/17/16	1500	
3/18/16	1700	
3/19/16		
3/20/16		
3/21/16	1600	
3/22/16	1700	
3/23/16	1900	
3/24/16	1900	
3/25/16	1900	
3/26/16		
3/27/16		
3/28/16	1650	
3/29/16	1550	
3/30/16	1750	
3/31/16	1700	
	1702.174	AVG
	1500	MIN
	1900	MAX

2016 WH Pressure

4/1/16	1700
4/2/16	
4/3/16	
4/4/16	1600
4/5/16	2250
4/6/16	1700
4/7/16	1700
4/8/16	1700
4/9/16	
4/10/16	
4/11/16	1700
4/12/16	1700
4/13/16	1600
4/14/16	1550
4/15/16	1700
4/16/16	
4/17/16	
4/18/16	1600
4/19/16	1700
4/20/16	1600
4/21/16	1750
4/22/16	1650
4/23/16	
4/24/16	
4/25/16	1600
4/26/16	1700
4/27/16	1650
4/28/16	1600
4/29/16	1600
4/30/16	

1683.333	AVG
1550	MIN
2250	MAX

5/1/16	
5/2/16	1650
5/3/16	1500
5/4/16	1900
5/5/16	1650
5/6/16	1500
5/7/16	
5/8/16	
5/9/16	1500
5/10/16	1450
5/11/16	1650
5/12/16	1600
5/13/16	1650
5/14/16	
5/15/16	
5/16/16	1600
5/17/16	1650
5/18/16	1600
5/19/16	1800
5/20/16	1700
5/21/16	
5/22/16	
5/23/16	1650
5/24/16	1600
5/25/16	1700
5/26/16	1600
5/27/16	1700
5/28/16	
5/29/16	
5/30/16	1650
5/31/16	1750

1638.636	AVG
1450	MIN
1900	MAX

6/1/16	1500
6/2/16	1600
6/3/16	1700
6/4/16	
6/5/16	
6/6/16	1500
6/7/16	1600
6/8/16	1600
6/9/16	1450
6/10/16	1375
6/11/16	
6/12/16	
6/13/16	1350
6/14/16	1325
6/15/16	1325
6/16/16	1750
6/17/16	1600
6/18/16	
6/19/16	
6/20/16	1500
6/21/16	1750
6/22/16	1550
6/23/16	1450
6/24/16	1400
6/25/16	
6/26/16	
6/27/16	1750
6/28/16	1975
6/29/16	1950
6/30/16	1600

1572.727	AVG
1325	MIN
1975	MAX

2016 Injection Volume

Total Injected

1/1/2016	1188	34.65	2/1/2016	1959	3/1/2016	1314
1/2/2016			2/2/2016	1732	3/2/2016	0
1/3/2016			2/3/2016	1573	3/3/2016	616
1/4/2016	2755	80.35416667	2/4/2016	1499	3/4/2016	204
1/5/2016	2042		2/5/2016	2440	3/5/2016	
1/6/2016	1943		2/6/2016		3/6/2016	
1/7/2016	2131	62.15416667	2/7/2016		3/7/2016	588
1/8/2016	1743		2/8/2016	1755	3/8/2016	319
1/9/2016			2/9/2016	1940	3/9/2016	772
1/10/2016			2/10/2016	1967	3/10/2016	168
1/11/2016	1336	38.96666667	2/11/2016	1968	3/11/2016	774
1/12/2016	1482		2/12/2016	1878	3/12/2016	
1/13/2016	2053		2/13/2016		3/13/2016	
1/14/2016	1641		2/14/2016		3/14/2016	166
1/15/2016	2813		2/15/2016	3064	3/15/2016	500
1/16/2016			2/16/2016	1931	3/16/2016	177
1/17/2016			2/17/2016	1982	3/17/2016	208
1/18/2016	2471	72.07083333	2/18/2016	1728	3/18/2016	327
1/19/2016	2012		2/19/2016	1797	3/19/2016	
1/20/2016	1831		2/20/2016		3/20/2016	
1/21/2016	1611		2/21/2016		3/21/2016	435
1/22/2016	1932		2/22/2016	2589	3/22/2016	864
1/23/2016		0	2/23/2016	1675	3/23/2016	1451
1/24/2016			2/24/2016	2924	3/24/2016	858
1/25/2016	1908		2/25/2016	1873	3/25/2016	1495
1/26/2016	1888		2/26/2016	1397	3/26/2016	
1/27/2016	1853		2/27/2016		3/27/2016	
1/28/2016	1916		2/28/2016		3/28/2016	419
1/29/2016	1376	40.13333333	2/29/2016	1927	3/29/2016	0
1/30/2016		0			3/30/2016	949
1/31/2016		0			3/31/2016	290

AVG	1901.19	36.48101852		1980.857		560.6087
MAX	2813	80.35416667		3064		1495
MIN	1188	0.00000000		1397		0
Total for month	39925			41598		12894

2016 Injection Volume

4/1/2016	754	5/1/2016		6/1/2016	0
4/2/2016		5/2/2016	937	6/2/2016	462
4/3/2016		5/3/2016	0	6/3/2016	499
4/4/2016	236	5/4/2016	1098	6/4/2016	
4/5/2016	1481	5/5/2016	636	6/5/2016	
4/6/2016	1485	5/6/2016	0	6/6/2016	0
4/7/2016	828	5/7/2016		6/7/2016	202
4/8/2016	335	5/8/2016		6/8/2016	99
4/9/2016		5/9/2016	215	6/9/2016	0
4/10/2016		5/10/2016	0	6/10/2016	0
4/11/2016	381	5/11/2016	367	6/11/2016	
4/12/2016	746	5/12/2016	548	6/12/2016	
4/13/2016	0	5/13/2016	0	6/13/2016	0
4/14/2016	255	5/14/2016		6/14/2016	0
4/15/2016	593	5/15/2016		6/15/2016	0
4/16/2016		5/16/2016	667	6/16/2016	578
4/17/2016		5/17/2016	709	6/17/2016	239
4/18/2016	209	5/18/2016	211	6/18/2016	
4/19/2016	476	5/19/2016	791	6/19/2016	
4/20/2016	350	5/20/2016	306	6/20/2016	185
4/21/2016	338	5/21/2016		6/21/2016	897
4/22/2016	0	5/22/2016		6/22/2016	78
4/23/2016		5/23/2016	465	6/23/2016	0
4/24/2016		5/24/2016	369	6/24/2016	0
4/25/2016	628	5/25/2016	601	6/25/2016	
4/26/2016	395	5/26/2016	342	6/26/2016	
4/27/2016	970	5/27/2016	590	6/27/2016	1589
4/28/2016	210	5/28/2016		6/28/2016	3089
4/29/2016	0	5/29/2016		6/29/2016	2825
4/30/2016		5/30/2016	222	6/30/2016	0
		5/31/2016	992		

	508.0952		457.5455		488.2727
	1485		1098		3089
	0		0		0
	10670		10066		10742

2016 Quarterly Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maxium Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	Total Cumulative Volume (barrels)
													Previous year	14063784
Jan-2016	2045.238	2250	1900	55.45138889	82.04583333	34.65	0	0	0	1901.19	2813	1188	39925	14103709
Feb-2016	2026.19	2250	1900	57.775	89.36666667	40.745833	0	0	0	1980.857	3064	1397	41598	14145307
Mar-2016	1702.174	1900	1500	17.90833333	43.60416667	4.8416667	0	0	0	586.0909	1495	0	12894	14158201
													Previous Quarter	14158201
Apr-2016	1683.333	2250	1550	17.28935185	43.3125	6.0958333	0	0	0	592.7778	1485	209	10670	14168871
May-2016	1638.636	1900	1450	16.31064815	32.025	6.1541667	0	0	0	559.2222	1098	211	10066	14178937
Jun-2016	1572.727	1975	1325	26.10902778	90.09583333	2.275	0	0	0	895.1667	3089	78	10742	14189679
													Previous Quarter	14189679
Jul-16	1572.727	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679
Aug-16	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679
Sep-16	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679
													Previous Quarter	14189679
Oct-2016	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679
Nov-2016	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679
Dec-2016	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679
													Total for year	125895
													14315574	Life Of well injected

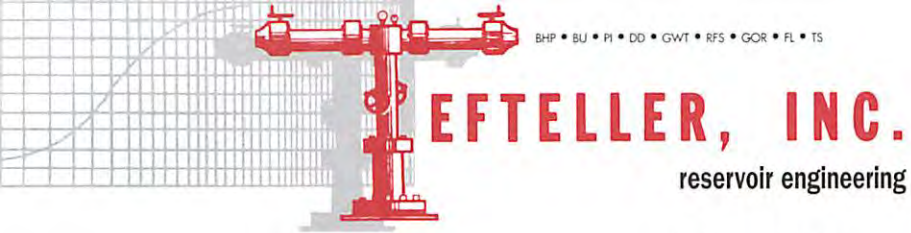
2016 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 1-MILE AOR

Sec	TWN	RNG	UL	
1	29N	12W	DELM	
2	29N	12W	ALL	
3	29N	12W	ABCFGHIJKOP	
10	29N	12W	AB	
11	29N	12W	ABCDEF	
34	30N	12W	AGHIJKNOP	
35	30N	12W	DEFGHIJKLMNOP	
36	30N	12W	LM	

**All tracts within the AOR were reviewed for activity that
had ensued since 2015 Annual Report.**

												Surface Casing				INT Casing			Production Casing						
	API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC	Perfs	Packer	PLUGGED
x	30-045-08851	ALLEN A	#001	BP America	Gas	Private	Active	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		
x	30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
x	30-045-32346	CORNELL	#002R	Energen Resources	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
x	30-045-32241	BECK	#001R	Burlington	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
x	30-045-33811	BECK	#001S	Burlington	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
x	30-045-31580	CORNELL COM	#500	Burlington	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
x	30-045-08714	CORNELL SRC	#007	Burlington	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
x	30-045-08704	MCGRATH B	#001	Burlington	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
	30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
x	30-045-08839	YOUNG	#001	Burlington	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
x	30-045-33580	MCGRATH	#003S	Burlington	Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf				4.5	2112	289 surf	1692-1904		
x	30-045-08712	MCGRATH A	#001	Burlington	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
x	30-045-32931	WALKER	#100S	Burlington	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		NOI to PA 5/2014
x	30-045-23889	BECK A	#001E	Burlington	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		
x	30-045-30381	CORNELL	#100	Burlington	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1744-1800		
x	30-045-08615	CORNELL	#006	Thompson Engr & Prod	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
x	30-045-31581	CORNELL	#101	Burlington	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
x	30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
x	30-045-26141	DUFF GAS COM	#001E	Burlington	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04'RC to FC 1492-1870		TA'd 3/5/14
x	30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
x	30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
x	30-045-11770	HUDSON J	#003	Burlington	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01' RC to FC 1784-1994		
	30-045-28177	FC STATE COM	#024	Burlington	Gas	State	Plugged	36	30N	12W	M	10/9/1990	6608	8.625	316	250 surf				4.5	6609	6000 surf	1492-1870		3/26/2013
	30-045-08945	MCGRATH C	#001	Burlington	Gas	Federal	Plugged	34	30n	12W	p	2/7/1963	6637	8.625	323	225 surf				4.5	6637	925 surf	6367-6576		4/29/2009

30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136	13 & 10.75	550 & 864	2 sx mud 4 sx mud	8.625	1526	5 sx mud	5.50 & 3.50	2020 2136	12 sx mud 140 surf	2020-2136 2012-2078		1998
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125											2/23/1984	
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged, Not Released	2	29N	12W	J	3/23/2001	2235	8.625	53	12 surf				2.875	2228	425 surf	2010-2157		6/25/2010
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125											3/16/1948	
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996	8.625	97	75 surf				5.5	1950	100 surf	1711-1936		9/15/2005
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050	16	21	20 surf	5.5	1930		3.5	2050	175 surf	1938-1974		10/12/2009
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940											11/10/1964	
30-045-23758	Pre-Ongard		Southland	Gas	Federal	Plugged	10	29N	12W	A	12/19/1980	1870											2/10/1984	
30-045-08950	HUDSON	2	Burlington	Gas	Federal	Plugged	34	30N	12W	P	7/17/1946	2137	15.5	38	20 surf	10 & 8.625	1217 1618	99 surf	5.5	1961	40 surf	1728-1938 1962-2008	2128	9/26/2008
30-045-08955	Pre-Ongard		Aztec O&G	Gas	Private	Plugged	34	30N	12W	N	11/1/1944	1965											10/29/1977	
30-045-20140	Pre-Ongard		Southland	Gas	Federal	Plugged	35	30N	12W	L	9/7/1967	DH											6/9/1982	
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08709	MCGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040	13.375	675	2 surf	8.625 INT 1 5.5 INT 2	1460 1928	4 surf 58 surf	3.5	2011	110 surf	1872-1912 1922-1937	1871-1876	3/1/2013



FARMINGTON, NEW MEXICO/
GRAND JUNCTION, COLORADO

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AGUA MOSS, LLC

SUNCO SWD NO. 1

JUNE 27 – JULY 7, 2016

Serving the Rocky Mountains and the Western Slope

Page A

Gauge Identification

Gauge Setup Parameters

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Probe Set Up Time ..... 6/27/16 11:15: 0
Time Delay to First Reading .....
Test Type Selection ..... INJECTION AND FALL-OFF TESTS
Test Duration Selection ..... 180 HRS. TANDEM ELEC. MEMORY INST. TIME

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COMPANY: AGUA MOSS, LLC

PAGE 1 OF 10

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD hh:mm:ss	Time mmmmmm.mmmmm	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/27 11:15:00		.0000	.01	95.11		
06/27 11:20:00		5.0000	.01	94.56	.00	
06/27 11:21:00		6.0000	1268.38	94.39	1268.37	PRESSURED UP LUBRICATOR
06/27 11:23:45		8.7500	1265.63	91.20	-2.75	
06/27 11:25:30		10.5000	1271.08	88.13	5.45	SURFACE STOP
06/27 11:25:45		10.7500	1322.40	87.65	51.32	
06/27 11:26:00		11.0000	1354.90	87.17	32.50	R.I.H. W/TANDEM ELEC. MEMORY INST.
06/27 11:26:15		11.2500	1408.45	86.68	53.55	
06/27 11:26:30		11.5000	1438.66	86.20	30.21	
06/27 11:26:45		11.7500	1468.62	85.72	29.96	
06/27 11:27:00		12.0000	1490.34	85.23	21.72	
06/27 11:27:15		12.2500	1512.18	84.31	21.84	
06/27 11:27:30		12.5000	1537.44	83.57	25.26	
06/27 11:27:45		12.7500	1587.78	82.82	50.34	
06/27 11:28:00		13.0000	1646.28	82.08	58.50	
06/27 11:28:15		13.2500	1710.89	81.34	64.60	
06/27 11:28:30		13.5000	1767.51	80.60	56.63	
06/27 11:28:45		13.7500	1819.63	79.87	52.12	
06/27 11:29:00		14.0000	1872.69	79.13	53.06	
06/27 11:29:15		14.2500	1927.08	78.39	54.39	
06/27 11:29:30		14.5000	1976.19	77.65	49.11	
06/27 11:29:45		14.7500	2024.56	76.91	48.36	
06/27 11:30:00		15.0000	2075.02	76.17	50.46	
06/27 11:30:15		15.2500	2127.95	75.91	52.94	
06/27 11:30:30		15.5000	2174.41	76.32	46.46	
06/27 11:30:45		15.7500	2226.30	76.73	51.89	
06/27 11:31:00		16.0000	2277.68	77.14	51.37	
06/27 11:31:15		16.2500	2328.38	77.56	50.71	
06/27 11:31:30		16.5000	2380.66	77.97	52.27	
06/27 11:31:45		16.7500	2432.42	78.37	51.76	
06/27 11:32:00		17.0000	2484.95	78.79	52.53	
06/27 11:32:15		17.2500	2538.49	79.20	53.54	
06/27 11:32:30		17.5000	2577.02	79.61	38.53	
06/27 11:32:45		17.7500	2605.57	80.02	28.55	
06/27 11:33:00		18.0000	2642.67	80.43	37.10	
06/27 11:33:15		18.2500	2674.66	81.40	32.00	
06/27 11:33:30		18.5000	2703.75	82.50	29.08	
06/27 11:33:45		18.7500	2732.55	83.61	28.80	
06/27 11:34:00		19.0000	2764.60	84.71	32.05	
06/27 11:34:15		19.2500	2796.11	85.82	31.51	
06/27 11:34:30		19.5000	2832.01	86.93	35.90	
06/27 11:34:45		19.7500	2870.38	88.04	38.37	
06/27 11:35:00		20.0000	2906.39	89.14	36.01	
06/27 11:35:15		20.2500	2943.69	90.25	37.30	
06/27 11:35:30		20.5000	2981.75	91.36	38.06	
06/27 11:35:45		20.7500	3020.71	92.47	38.96	
06/27 11:36:00		21.0000	3061.47	93.58	40.76	
06/27 11:36:15		21.2500	3103.03	94.75	41.56	
06/27 11:36:30		21.5000	3129.05	95.24	26.02	
06/27 11:36:45		21.7500	3153.62	95.75	24.57	
06/27 11:37:00		22.0000	3186.97	96.26	33.35	
06/27 11:38:15		23.2500	3205.69	98.78	18.72	TANDEM INST. @ 4405'
06/27 11:38:30		23.5000	3206.24	99.28	.55	
06/27 11:43:00		28.0000	3210.61	96.21	4.37	
06/27 11:46:15		31.2500	3208.77	93.92	-1.85	
06/27 11:46:30		31.5000	3244.12	93.85	35.35	BEGAN INJECTING WATER
06/27 11:47:15		32.2500	3261.42	93.61	17.30	
06/27 11:47:30		32.5000	3266.46	93.53	5.04	
06/27 11:49:15		34.2500	3285.21	96.58	18.75	
06/27 11:50:30		35.5000	3297.37	100.08	12.16	
06/27 11:52:00		37.0000	3312.82	103.30	15.45	
06/27 11:54:00		39.0000	3327.73	106.47	14.91	
06/27 11:57:00		42.0000	3345.56	106.88	17.83	
06/27 11:57:15		42.2500	3346.86	106.78	1.31	
06/27 12:01:30		46.5000	3364.23	103.74	17.37	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/27	12:05:15	50.2500	3375.20	100.59	10.97	
06/27	12:09:30	54.5000	3385.15	97.44	9.95	
06/27	12:14:45	59.7500	3397.04	94.35	11.88	
06/27	12:22:15	67.2500	3411.34	91.35	14.31	
06/27	12:33:45	78.7500	3430.11	88.83	18.76	
06/27	12:34:00	79.0000	3430.47	88.79	.36	
06/27	12:48:00	93.0000	3448.96	87.52	18.49	
06/27	12:48:15	93.2500	3449.44	87.52	.48	
06/27	13:06:00	111.0000	3468.10	87.08	18.66	
06/27	13:06:15	111.2500	3468.46	87.08	.36	
06/27	13:27:15	132.2500	3487.24	87.10	18.78	
06/27	13:27:30	132.5000	3487.41	87.11	.17	
06/27	13:51:00	156.0000	3504.19	87.31	16.77	
06/27	14:14:00	179.0000	3518.24	87.59	14.06	
06/27	14:37:00	202.0000	3530.60	87.88	12.36	
06/27	15:00:00	225.0000	3541.50	88.18	10.91	
06/27	15:23:00	248.0000	3551.32	88.48	9.81	
06/27	15:46:00	271.0000	3560.33	88.80	9.02	
06/27	16:09:00	294.0000	3568.17	89.11	7.83	
06/27	16:32:00	317.0000	3575.60	89.37	7.43	
06/27	16:55:00	340.0000	3582.51	89.56	6.91	
06/27	17:18:00	363.0000	3588.98	89.74	6.47	
06/27	17:41:00	386.0000	3595.05	89.88	6.07	
06/27	18:04:00	409.0000	3600.54	89.99	5.49	
06/27	18:27:00	432.0000	3605.83	90.10	5.29	
06/27	18:50:00	455.0000	3610.74	90.20	4.91	
06/27	19:13:00	478.0000	3615.35	90.29	4.61	
06/27	19:36:00	501.0000	3619.81	90.37	4.46	
06/27	19:59:00	524.0000	3623.87	90.47	4.06	
06/27	20:22:00	547.0000	3627.87	90.55	4.01	
06/27	20:45:00	570.0000	3631.79	90.60	3.92	
06/27	21:08:00	593.0000	3635.34	90.59	3.55	
06/27	21:31:00	616.0000	3638.86	90.57	3.51	
06/27	21:54:00	639.0000	3642.46	90.51	3.60	
06/27	22:17:00	662.0000	3645.65	90.43	3.19	
06/27	22:40:00	685.0000	3648.84	90.32	3.20	
06/27	23:03:00	708.0000	3651.73	90.19	2.89	
06/27	23:26:00	731.0000	3654.53	90.01	2.80	
06/27	23:49:00	754.0000	3657.35	89.83	2.82	
06/28	00:12:00	777.0000	3660.07	89.64	2.71	
06/28	00:35:00	800.0000	3662.89	89.44	2.82	
06/28	00:58:00	823.0000	3665.48	89.24	2.59	
06/28	01:21:00	846.0000	3668.07	89.00	2.59	
06/28	01:44:00	869.0000	3670.53	88.74	2.47	
06/28	02:07:00	892.0000	3673.01	88.43	2.47	
06/28	02:30:00	915.0000	3675.34	88.08	2.33	
06/28	02:53:00	938.0000	3677.70	87.69	2.36	
06/28	03:16:00	961.0000	3680.08	87.28	2.38	
06/28	03:39:00	984.0000	3682.32	86.89	2.25	
06/28	04:02:00	1007.0000	3684.50	86.50	2.17	
06/28	04:25:00	1030.0000	3686.61	86.11	2.11	
06/28	04:48:00	1053.0000	3688.66	85.74	2.06	
06/28	05:11:00	1076.0000	3690.57	85.39	1.91	
06/28	05:34:00	1099.0000	3692.57	85.04	2.00	
06/28	05:57:00	1122.0000	3694.43	84.72	1.85	
06/28	06:20:00	1145.0000	3696.22	84.41	1.79	
06/28	06:43:00	1168.0000	3697.98	84.12	1.76	
06/28	07:06:00	1191.0000	3699.67	83.85	1.70	
06/28	07:29:00	1214.0000	3701.27	83.63	1.60	
06/28	07:52:00	1237.0000	3702.95	83.43	1.68	
06/28	08:15:00	1260.0000	3704.48	83.27	1.53	
06/28	08:38:00	1283.0000	3706.05	83.20	1.58	
06/28	09:01:00	1306.0000	3707.73	83.36	1.68	
06/28	09:24:00	1329.0000	3709.25	83.50	1.52	
06/28	09:47:00	1352.0000	3710.86	83.54	1.61	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

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Date MM/DD	Time hh:mm:ss	Test Time mmmmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/28	10:10:00	1375.0000	3712.41	83.55	1.55	
06/28	10:33:00	1398.0000	3713.84	83.64	1.43	
06/28	10:56:00	1421.0000	3715.33	83.78	1.49	
06/28	11:19:00	1444.0000	3716.82	83.95	1.49	
06/28	11:42:00	1467.0000	3718.22	84.13	1.40	
06/28	12:05:00	1490.0000	3719.64	84.28	1.42	
06/28	12:28:00	1513.0000	3720.96	84.41	1.32	
06/28	12:51:00	1536.0000	3722.31	84.53	1.35	
06/28	13:14:00	1559.0000	3723.64	84.67	1.33	
06/28	13:37:00	1582.0000	3724.90	84.84	1.26	
06/28	14:00:00	1605.0000	3726.18	85.02	1.28	
06/28	14:23:00	1628.0000	3727.39	85.25	1.21	
06/28	14:46:00	1651.0000	3728.59	85.51	1.21	
06/28	15:09:00	1674.0000	3729.86	85.76	1.27	
06/28	15:32:00	1697.0000	3730.98	86.02	1.12	
06/28	15:55:00	1720.0000	3732.08	86.21	1.11	
06/28	16:18:00	1743.0000	3733.21	86.35	1.12	
06/28	16:41:00	1766.0000	3734.28	86.44	1.08	
06/28	17:04:00	1789.0000	3735.32	86.53	1.04	
06/28	17:27:00	1812.0000	3736.39	86.58	1.07	
06/28	17:50:00	1835.0000	3737.35	86.62	.96	
06/28	18:13:00	1858.0000	3738.47	86.65	1.12	
06/28	18:36:00	1881.0000	3739.42	86.70	.95	
06/28	18:59:00	1904.0000	3740.42	86.72	1.00	
06/28	19:22:00	1927.0000	3741.33	86.75	.91	
06/28	19:45:00	1950.0000	3742.32	86.75	.99	
06/28	20:08:00	1973.0000	3743.24	86.73	.92	
06/28	20:31:00	1996.0000	3744.18	86.67	.94	
06/28	20:54:00	2019.0000	3745.15	86.56	.96	
06/28	21:17:00	2042.0000	3746.03	86.40	.88	
06/28	21:40:00	2065.0000	3746.94	86.22	.92	
06/28	22:03:00	2088.0000	3747.74	86.05	.79	
06/28	22:26:00	2111.0000	3748.62	85.86	.89	
06/28	22:49:00	2134.0000	3749.50	85.65	.87	
06/28	23:12:00	2157.0000	3750.22	85.44	.73	
06/28	23:35:00	2180.0000	3751.14	85.23	.92	
06/28	23:58:00	2203.0000	3751.90	85.02	.76	
06/29	00:21:00	2226.0000	3752.47	84.81	.56	
06/29	00:44:00	2249.0000	3753.35	84.61	.88	
06/29	01:07:00	2272.0000	3754.08	84.43	.73	
06/29	01:30:00	2295.0000	3754.82	84.25	.74	
06/29	01:53:00	2318.0000	3755.47	84.10	.65	
06/29	02:16:00	2341.0000	3756.20	83.95	.73	
06/29	02:39:00	2364.0000	3756.89	83.81	.69	
06/29	03:02:00	2387.0000	3757.55	83.69	.66	
06/29	03:25:00	2410.0000	3758.29	83.59	.74	
06/29	03:48:00	2433.0000	3758.98	83.49	.68	
06/29	04:11:00	2456.0000	3759.58	83.39	.60	
06/29	04:34:00	2479.0000	3760.22	83.26	.64	
06/29	04:57:00	2502.0000	3760.94	83.12	.72	
06/29	05:20:00	2525.0000	3761.50	82.99	.56	
06/29	05:43:00	2548.0000	3762.14	82.85	.64	
06/29	06:06:00	2571.0000	3762.68	82.71	.55	
06/29	06:29:00	2594.0000	3763.15	82.57	.47	
06/29	06:52:00	2617.0000	3763.67	82.43	.52	
06/29	07:15:00	2640.0000	3764.22	82.29	.55	
06/29	07:38:00	2663.0000	3764.78	82.17	.56	
06/29	08:01:00	2686.0000	3765.40	82.06	.62	
06/29	08:24:00	2709.0000	3765.98	82.05	.58	
06/29	08:47:00	2732.0000	3766.48	82.11	.50	
06/29	09:10:00	2755.0000	3767.01	82.20	.54	
06/29	09:33:00	2778.0000	3767.55	82.29	.53	
06/29	09:56:00	2801.0000	3768.01	82.35	.47	
06/29	10:19:00	2824.0000	3768.57	82.43	.56	
06/29	10:42:00	2847.0000	3769.07	82.54	.50	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

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Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/29	11:05:00	2870.0000	3769.55	82.71	.48	
06/29	11:28:00	2893.0000	3770.07	82.91	.52	
06/29	11:51:00	2916.0000	3770.68	83.12	.61	
06/29	12:14:00	2939.0000	3771.20	83.32	.51	
06/29	12:37:00	2962.0000	3771.73	83.50	.54	
06/29	13:00:00	2985.0000	3772.26	83.69	.53	
06/29	13:23:00	3008.0000	3772.86	83.92	.61	
06/29	13:46:00	3031.0000	3773.45	84.11	.58	
06/29	14:09:00	3054.0000	3774.02	84.18	.57	
06/29	14:32:00	3077.0000	3774.54	84.13	.52	
06/29	14:55:00	3100.0000	3775.06	84.00	.52	
06/29	15:18:00	3123.0000	3775.54	83.90	.48	
06/29	15:41:00	3146.0000	3775.94	83.83	.40	
06/29	16:04:00	3169.0000	3776.39	83.74	.45	
06/29	16:27:00	3192.0000	3776.92	83.65	.53	
06/29	16:50:00	3215.0000	3777.34	83.57	.42	
06/29	17:13:00	3238.0000	3777.79	83.49	.45	
06/29	17:36:00	3261.0000	3778.25	83.41	.46	
06/29	17:59:00	3284.0000	3778.67	83.38	.42	
06/29	18:22:00	3307.0000	3779.06	83.35	.39	
06/29	18:45:00	3330.0000	3779.45	83.32	.39	
06/29	19:08:00	3353.0000	3779.99	83.30	.54	
06/29	19:31:00	3376.0000	3780.36	83.32	.37	
06/29	19:54:00	3399.0000	3780.80	83.36	.44	
06/29	20:17:00	3422.0000	3781.19	83.41	.39	
06/29	20:40:00	3445.0000	3781.69	83.48	.50	
06/29	21:03:00	3468.0000	3782.11	83.50	.42	
06/29	21:22:15	3487.2500	3763.46	83.69	-18.66	
06/29	21:22:30	3487.5000	3762.97	83.71	-.49	END WATER INJECTION TEST
06/29	21:37:30	3502.5000	3744.21	85.10	-18.75	BEGAN FALL-OFF TEST
06/29	21:37:45	3502.7500	3744.01	85.11	-.21	
06/29	22:01:00	3526.0000	3727.90	85.94	-16.10	
06/29	22:24:00	3549.0000	3715.47	86.47	-12.44	
06/29	22:47:00	3572.0000	3705.04	86.89	-10.43	
06/29	23:10:00	3595.0000	3696.00	87.22	-9.04	
06/29	23:33:00	3618.0000	3687.86	87.55	-8.13	
06/29	23:56:00	3641.0000	3680.44	87.82	-7.43	
06/30	00:19:00	3664.0000	3673.68	88.07	-6.75	
06/30	00:42:00	3687.0000	3667.22	88.31	-6.46	
06/30	01:05:00	3710.0000	3661.48	88.53	-5.75	
06/30	01:28:00	3733.0000	3655.91	88.72	-5.57	
06/30	01:51:00	3756.0000	3650.53	88.91	-5.38	
06/30	02:14:00	3779.0000	3645.64	89.08	-4.88	
06/30	02:37:00	3802.0000	3640.83	89.23	-4.81	
06/30	03:00:00	3825.0000	3636.13	89.37	-4.70	
06/30	03:23:00	3848.0000	3631.77	89.51	-4.36	
06/30	03:46:00	3871.0000	3627.51	89.64	-4.26	
06/30	04:09:00	3894.0000	3623.36	89.75	-4.15	
06/30	04:32:00	3917.0000	3619.32	89.86	-4.05	
06/30	04:55:00	3940.0000	3615.41	89.96	-3.90	
06/30	05:18:00	3963.0000	3611.66	90.04	-3.75	
06/30	05:41:00	3986.0000	3608.00	90.13	-3.66	
06/30	06:04:00	4009.0000	3604.39	90.19	-3.61	
06/30	06:27:00	4032.0000	3600.93	90.26	-3.46	
06/30	06:50:00	4055.0000	3597.48	90.33	-3.46	
06/30	07:13:00	4078.0000	3594.13	90.39	-3.34	
06/30	07:36:00	4101.0000	3590.83	90.45	-3.30	
06/30	07:59:00	4124.0000	3587.60	90.50	-3.23	
06/30	08:22:00	4147.0000	3584.50	90.53	-3.10	
06/30	08:45:00	4170.0000	3581.43	90.58	-3.07	
06/30	09:08:00	4193.0000	3578.45	90.61	-2.98	
06/30	09:31:00	4216.0000	3575.61	90.64	-2.84	
06/30	09:54:00	4239.0000	3572.65	90.67	-2.96	
06/30	10:17:00	4262.0000	3570.03	90.71	-2.62	
06/30	10:40:00	4285.0000	3567.28	90.72	-2.74	

COMPANY: AGUA MOSS, LLC

PAGE 5 OF 10

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/30	11:03:00	4308.0000	3564.54	90.74	-2.74	
06/30	11:26:00	4331.0000	3561.86	90.77	-2.68	
06/30	11:49:00	4354.0000	3559.20	90.78	-2.67	
06/30	12:12:00	4377.0000	3556.59	90.80	-2.61	
06/30	12:35:00	4400.0000	3554.21	90.81	-2.38	
06/30	12:58:00	4423.0000	3551.60	90.84	-2.61	
06/30	13:21:00	4446.0000	3549.30	90.84	-2.30	
06/30	13:44:00	4469.0000	3546.97	90.84	-2.34	
06/30	14:07:00	4492.0000	3544.51	90.85	-2.45	
06/30	14:30:00	4515.0000	3542.28	90.85	-2.23	
06/30	14:53:00	4538.0000	3539.99	90.88	-2.29	
06/30	15:16:00	4561.0000	3537.78	90.89	-2.21	
06/30	15:39:00	4584.0000	3535.48	90.90	-2.31	
06/30	16:02:00	4607.0000	3533.35	90.89	-2.12	
06/30	16:25:00	4630.0000	3531.19	90.90	-2.16	
06/30	16:48:00	4653.0000	3529.05	90.91	-2.14	
06/30	17:11:00	4676.0000	3526.97	90.92	-2.08	
06/30	17:34:00	4699.0000	3524.86	90.93	-2.10	
06/30	17:57:00	4722.0000	3522.80	90.94	-2.06	
06/30	18:20:00	4745.0000	3520.83	90.93	-1.96	
06/30	18:43:00	4768.0000	3518.84	90.94	-2.00	
06/30	19:06:00	4791.0000	3516.84	90.95	-2.00	
06/30	19:29:00	4814.0000	3514.92	90.95	-1.93	
06/30	19:52:00	4837.0000	3512.97	90.95	-1.95	
06/30	20:15:00	4860.0000	3511.08	90.96	-1.89	
06/30	20:38:00	4883.0000	3509.21	90.97	-1.87	
06/30	21:01:00	4906.0000	3507.43	90.96	-1.78	
06/30	21:24:00	4929.0000	3505.55	90.97	-1.87	
06/30	21:47:00	4952.0000	3503.69	90.97	-1.87	
06/30	22:10:00	4975.0000	3501.94	90.97	-1.75	
06/30	22:33:00	4998.0000	3500.23	90.97	-1.71	
06/30	22:56:00	5021.0000	3498.53	90.97	-1.70	
06/30	23:19:00	5044.0000	3496.79	90.98	-1.74	
06/30	23:42:00	5067.0000	3495.11	90.97	-1.67	
07/01	00:05:00	5090.0000	3493.48	90.98	-1.64	
07/01	00:28:00	5113.0000	3491.78	90.99	-1.70	
07/01	00:51:00	5136.0000	3490.22	90.98	-1.55	
07/01	01:14:00	5159.0000	3488.59	90.98	-1.64	
07/01	01:37:00	5182.0000	3487.02	90.98	-1.57	
07/01	02:00:00	5205.0000	3485.41	90.99	-1.61	
07/01	02:23:00	5228.0000	3483.86	90.99	-1.55	
07/01	02:46:00	5251.0000	3482.34	91.00	-1.52	
07/01	03:09:00	5274.0000	3480.80	91.00	-1.54	
07/01	03:32:00	5297.0000	3479.25	91.00	-1.55	
07/01	03:55:00	5320.0000	3477.78	91.00	-1.47	
07/01	04:18:00	5343.0000	3476.28	91.01	-1.50	
07/01	04:41:00	5366.0000	3474.81	91.02	-1.47	
07/01	05:04:00	5389.0000	3473.36	91.02	-1.45	
07/01	05:27:00	5412.0000	3471.97	91.02	-1.39	
07/01	05:50:00	5435.0000	3470.50	91.02	-1.46	
07/01	06:13:00	5458.0000	3469.08	91.01	-1.42	
07/01	06:36:00	5481.0000	3467.63	91.02	-1.46	
07/01	06:59:00	5504.0000	3466.28	91.02	-1.35	
07/01	07:22:00	5527.0000	3464.83	91.02	-1.45	
07/01	07:45:00	5550.0000	3463.53	91.02	-1.30	
07/01	08:08:00	5573.0000	3462.19	91.02	-1.34	
07/01	08:31:00	5596.0000	3460.82	91.02	-1.37	
07/01	08:54:00	5619.0000	3459.49	91.03	-1.33	
07/01	09:17:00	5642.0000	3458.22	91.02	-1.27	
07/01	09:40:00	5665.0000	3456.84	91.03	-1.37	
07/01	10:03:00	5688.0000	3455.56	91.04	-1.28	
07/01	10:26:00	5711.0000	3454.32	91.04	-1.24	
07/01	10:49:00	5734.0000	3453.07	91.04	-1.25	
07/01	11:12:00	5757.0000	3451.82	91.04	-1.26	
07/01	11:35:00	5780.0000	3450.61	91.04	-1.21	

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD hh:mm:ss	Time mmmmmm.mmmmm	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/01 11:58:00		5803.0000	3449.34	91.04	-1.26	
07/01 12:21:00		5826.0000	3448.16	91.04	-1.18	
07/01 12:44:00		5849.0000	3446.98	91.04	-1.19	
07/01 13:07:00		5872.0000	3445.81	91.04	-1.17	
07/01 13:30:00		5895.0000	3444.58	91.05	-1.23	
07/01 13:53:00		5918.0000	3443.44	91.06	-1.14	
07/01 14:16:00		5941.0000	3442.31	91.05	-1.13	
07/01 14:39:00		5964.0000	3441.18	91.06	-1.14	
07/01 15:02:00		5987.0000	3440.10	91.07	-1.08	
07/01 15:25:00		6010.0000	3438.94	91.05	-1.16	
07/01 15:48:00		6033.0000	3437.80	91.07	-1.14	
07/01 16:11:00		6056.0000	3436.72	91.07	-1.09	
07/01 16:34:00		6079.0000	3435.62	91.05	-1.10	
07/01 16:57:00		6102.0000	3434.58	91.07	-1.04	
07/01 17:20:00		6125.0000	3433.43	91.07	-1.16	
07/01 17:43:00		6148.0000	3432.45	91.07	-.98	
07/01 18:06:00		6171.0000	3431.32	91.07	-1.12	
07/01 18:29:00		6194.0000	3430.27	91.07	-1.06	
07/01 18:52:00		6217.0000	3429.22	91.07	-1.04	
07/01 19:15:00		6240.0000	3428.14	91.07	-1.08	
07/01 19:38:00		6263.0000	3427.17	91.07	-.97	
07/01 20:01:00		6286.0000	3426.13	91.07	-1.04	
07/01 20:24:00		6309.0000	3425.16	91.08	-.97	
07/01 20:47:00		6332.0000	3424.09	91.08	-1.07	
07/01 21:10:00		6355.0000	3423.11	91.08	-.98	
07/01 21:33:00		6378.0000	3422.08	91.07	-1.03	
07/01 21:56:00		6401.0000	3421.11	91.08	-.98	
07/01 22:19:00		6424.0000	3420.09	91.09	-1.01	
07/01 22:42:00		6447.0000	3419.16	91.09	-.93	
07/01 23:05:00		6470.0000	3418.21	91.08	-.96	
07/01 23:28:00		6493.0000	3417.26	91.09	-.95	
07/01 23:51:00		6516.0000	3416.35	91.09	-.91	
07/02 00:14:00		6539.0000	3415.45	91.09	-.91	
07/02 00:37:00		6562.0000	3414.50	91.09	-.94	
07/02 01:00:00		6585.0000	3413.58	91.10	-.92	
07/02 01:23:00		6608.0000	3412.65	91.09	-.94	
07/02 01:46:00		6631.0000	3411.69	91.11	-.95	
07/02 02:09:00		6654.0000	3410.86	91.11	-.83	
07/02 02:32:00		6677.0000	3409.94	91.11	-.92	
07/02 02:55:00		6700.0000	3409.12	91.10	-.82	
07/02 03:18:00		6723.0000	3408.25	91.11	-.87	
07/02 03:41:00		6746.0000	3407.38	91.11	-.88	
07/02 04:04:00		6769.0000	3406.49	91.11	-.89	
07/02 04:27:00		6792.0000	3405.65	91.11	-.84	
07/02 04:50:00		6815.0000	3404.78	91.11	-.87	
07/02 05:13:00		6838.0000	3403.94	91.11	-.84	
07/02 05:36:00		6861.0000	3403.07	91.11	-.87	
07/02 05:59:00		6884.0000	3402.22	91.12	-.85	
07/02 06:22:00		6907.0000	3401.39	91.12	-.84	
07/02 06:45:00		6930.0000	3400.58	91.12	-.81	
07/02 07:08:00		6953.0000	3399.71	91.12	-.87	
07/02 07:31:00		6976.0000	3398.90	91.12	-.81	
07/02 07:54:00		6999.0000	3398.07	91.13	-.83	
07/02 08:17:00		7022.0000	3397.23	91.13	-.84	
07/02 08:40:00		7045.0000	3396.42	91.12	-.81	
07/02 09:03:00		7068.0000	3395.65	91.11	-.78	
07/02 09:26:00		7091.0000	3394.81	91.12	-.83	
07/02 09:49:00		7114.0000	3394.01	91.14	-.81	
07/02 10:12:00		7137.0000	3393.27	91.14	-.74	
07/02 10:35:00		7160.0000	3392.45	91.14	-.82	
07/02 10:58:00		7183.0000	3391.68	91.14	-.78	
07/02 11:21:00		7206.0000	3390.91	91.14	-.77	
07/02 11:44:00		7229.0000	3390.20	91.14	-.71	
07/02 12:07:00		7252.0000	3389.42	91.14	-.78	
07/02 12:30:00		7275.0000	3388.71	91.14	-.72	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/02	12:53:00	7298.0000	3387.95	91.14	-.75	
07/02	13:16:00	7321.0000	3387.28	91.14	-.68	
07/02	13:39:00	7344.0000	3386.51	91.14	-.76	
07/02	14:02:00	7367.0000	3385.85	91.14	-.66	
07/02	14:25:00	7390.0000	3385.14	91.14	-.71	
07/02	14:48:00	7413.0000	3384.42	91.15	-.72	
07/02	15:11:00	7436.0000	3383.76	91.14	-.66	
07/02	15:34:00	7459.0000	3383.05	91.15	-.71	
07/02	15:57:00	7482.0000	3382.40	91.15	-.65	
07/02	16:20:00	7505.0000	3381.73	91.14	-.68	
07/02	16:43:00	7528.0000	3380.96	91.15	-.76	
07/02	17:06:00	7551.0000	3380.32	91.15	-.64	
07/02	17:29:00	7574.0000	3379.69	91.16	-.64	
07/02	17:52:00	7597.0000	3379.00	91.16	-.69	
07/02	18:15:00	7620.0000	3378.31	91.16	-.69	
07/02	18:38:00	7643.0000	3377.66	91.16	-.65	
07/02	19:01:00	7666.0000	3376.95	91.16	-.71	
07/02	19:24:00	7689.0000	3376.32	91.16	-.63	
07/02	19:47:00	7712.0000	3375.67	91.16	-.66	
07/02	20:10:00	7735.0000	3374.95	91.17	-.72	
07/02	20:33:00	7758.0000	3374.29	91.18	-.66	
07/02	20:56:00	7781.0000	3373.66	91.18	-.62	
07/02	21:19:00	7804.0000	3373.00	91.18	-.66	
07/02	21:42:00	7827.0000	3372.38	91.17	-.62	
07/02	22:05:00	7850.0000	3371.71	91.18	-.67	
07/02	22:28:00	7873.0000	3371.08	91.18	-.63	
07/02	22:51:00	7896.0000	3370.46	91.18	-.62	
07/02	23:14:00	7919.0000	3369.82	91.19	-.64	
07/02	23:37:00	7942.0000	3369.19	91.19	-.63	
07/03	00:00:00	7965.0000	3368.55	91.19	-.63	
07/03	00:23:00	7988.0000	3367.90	91.19	-.66	
07/03	00:46:00	8011.0000	3367.34	91.20	-.56	
07/03	01:09:00	8034.0000	3366.72	91.21	-.62	
07/03	01:32:00	8057.0000	3366.16	91.20	-.56	
07/03	01:55:00	8080.0000	3365.60	91.20	-.56	
07/03	02:18:00	8103.0000	3364.91	91.20	-.69	
07/03	02:41:00	8126.0000	3364.36	91.20	-.56	
07/03	03:04:00	8149.0000	3363.76	91.20	-.60	
07/03	03:27:00	8172.0000	3363.22	91.21	-.54	
07/03	03:50:00	8195.0000	3362.67	91.19	-.55	
07/03	04:13:00	8218.0000	3362.06	91.21	-.61	
07/03	04:36:00	8241.0000	3361.52	91.21	-.54	
07/03	04:59:00	8264.0000	3360.98	91.21	-.54	
07/03	05:22:00	8287.0000	3360.39	91.21	-.59	
07/03	05:45:00	8310.0000	3359.79	91.21	-.60	
07/03	06:08:00	8333.0000	3359.23	91.22	-.56	
07/03	06:31:00	8356.0000	3358.67	91.21	-.56	
07/03	06:54:00	8379.0000	3358.08	91.22	-.59	
07/03	07:17:00	8402.0000	3357.54	91.22	-.55	
07/03	07:40:00	8425.0000	3356.97	91.22	-.57	
07/03	08:03:00	8448.0000	3356.38	91.23	-.59	
07/03	08:26:00	8471.0000	3355.81	91.22	-.56	
07/03	08:49:00	8494.0000	3355.25	91.23	-.56	
07/03	09:12:00	8517.0000	3354.63	91.23	-.62	
07/03	09:35:00	8540.0000	3354.19	91.23	-.44	
07/03	09:58:00	8563.0000	3353.61	91.24	-.58	
07/03	10:21:00	8586.0000	3353.01	91.24	-.60	
07/03	10:44:00	8609.0000	3352.47	91.24	-.55	
07/03	11:07:00	8632.0000	3351.96	91.24	-.51	
07/03	11:30:00	8655.0000	3351.39	91.25	-.56	
07/03	11:53:00	8678.0000	3350.89	91.23	-.50	
07/03	12:16:00	8701.0000	3350.33	91.25	-.56	
07/03	12:39:00	8724.0000	3349.81	91.25	-.52	
07/03	13:02:00	8747.0000	3349.31	91.25	-.50	
07/03	13:25:00	8770.0000	3348.83	91.25	-.49	

COMPANY: AGUA MOSS, LLC

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WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/03	13:48:00	8793.0000	3348.32	91.26	-.51	
07/03	14:11:00	8816.0000	3347.80	91.25	-.52	
07/03	14:34:00	8839.0000	3347.32	91.26	-.48	
07/03	14:57:00	8862.0000	3346.87	91.26	-.45	
07/03	15:20:00	8885.0000	3346.38	91.26	-.49	
07/03	15:43:00	8908.0000	3345.86	91.26	-.51	
07/03	16:06:00	8931.0000	3345.41	91.27	-.46	
07/03	16:29:00	8954.0000	3344.91	91.27	-.50	
07/03	16:52:00	8977.0000	3344.42	91.27	-.50	
07/03	17:15:00	9000.0000	3343.94	91.27	-.48	
07/03	17:38:00	9023.0000	3343.50	91.26	-.44	
07/03	18:01:00	9046.0000	3343.00	91.28	-.50	
07/03	18:24:00	9069.0000	3342.53	91.28	-.47	
07/03	18:47:00	9092.0000	3342.07	91.28	-.46	
07/03	19:10:00	9115.0000	3341.64	91.27	-.43	
07/03	19:33:00	9138.0000	3341.12	91.28	-.52	
07/03	19:56:00	9161.0000	3340.67	91.28	-.46	
07/03	20:19:00	9184.0000	3340.17	91.28	-.50	
07/03	20:42:00	9207.0000	3339.68	91.28	-.49	
07/03	21:05:00	9230.0000	3339.25	91.28	-.43	
07/03	21:28:00	9253.0000	3338.78	91.28	-.47	
07/03	21:51:00	9276.0000	3338.34	91.29	-.44	
07/03	22:14:00	9299.0000	3337.79	91.29	-.55	
07/03	22:37:00	9322.0000	3337.35	91.29	-.44	
07/03	23:00:00	9345.0000	3336.89	91.30	-.47	
07/03	23:23:00	9368.0000	3336.42	91.30	-.46	
07/03	23:46:00	9391.0000	3335.98	91.30	-.44	
07/04	00:09:00	9414.0000	3335.53	91.30	-.46	
07/04	00:32:00	9437.0000	3335.09	91.30	-.43	
07/04	00:55:00	9460.0000	3334.63	91.30	-.47	
07/04	01:18:00	9483.0000	3334.22	91.30	-.40	
07/04	01:41:00	9506.0000	3333.77	91.31	-.46	
07/04	02:04:00	9529.0000	3333.39	91.30	-.37	
07/04	02:27:00	9552.0000	3332.92	91.31	-.47	
07/04	02:50:00	9575.0000	3332.50	91.31	-.43	
07/04	03:13:00	9598.0000	3332.07	91.32	-.43	
07/04	03:36:00	9621.0000	3331.73	91.32	-.34	
07/04	03:59:00	9644.0000	3331.27	91.32	-.46	
07/04	04:22:00	9667.0000	3330.87	91.32	-.40	
07/04	04:45:00	9690.0000	3330.45	91.32	-.42	
07/04	05:08:00	9713.0000	3330.03	91.32	-.42	
07/04	05:31:00	9736.0000	3329.61	91.32	-.42	
07/04	05:54:00	9759.0000	3329.28	91.33	-.33	
07/04	06:17:00	9782.0000	3328.79	91.33	-.49	
07/04	06:40:00	9805.0000	3328.37	91.33	-.42	
07/04	07:03:00	9828.0000	3328.02	91.34	-.35	
07/04	07:26:00	9851.0000	3327.53	91.33	-.49	
07/04	07:49:00	9874.0000	3327.07	91.35	-.46	
07/04	08:12:00	9897.0000	3326.70	91.34	-.37	
07/04	08:35:00	9920.0000	3326.21	91.35	-.49	
07/04	08:58:00	9943.0000	3325.84	91.34	-.36	
07/04	09:21:00	9966.0000	3325.42	91.35	-.43	
07/04	09:44:00	9989.0000	3324.99	91.35	-.43	
07/04	10:07:00	10012.0000	3324.65	91.35	-.34	
07/04	10:30:00	10035.0000	3324.15	91.35	-.49	
07/04	10:53:00	10058.0000	3323.79	91.36	-.36	
07/04	11:16:00	10081.0000	3323.31	91.36	-.48	
07/04	11:39:00	10104.0000	3322.97	91.36	-.35	
07/04	12:02:00	10127.0000	3322.54	91.37	-.42	
07/04	12:25:00	10150.0000	3322.11	91.37	-.43	
07/04	12:48:00	10173.0000	3321.79	91.37	-.32	
07/04	13:11:00	10196.0000	3321.38	91.37	-.41	
07/04	13:34:00	10219.0000	3320.93	91.37	-.45	
07/04	13:57:00	10242.0000	3320.60	91.37	-.33	
07/04	14:20:00	10265.0000	3320.23	91.38	-.38	

COMPANY: AGUA MOSS, LLC

PAGE 9 OF 10

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/04	14:43:00	10288.0000	3319.86	91.37	-.37	
07/04	15:06:00	10311.0000	3319.48	91.38	-.38	
07/04	15:29:00	10334.0000	3319.09	91.38	-.39	
07/04	15:52:00	10357.0000	3318.72	91.38	-.36	
07/04	16:15:00	10380.0000	3318.37	91.39	-.35	
07/04	16:38:00	10403.0000	3318.09	91.39	-.29	
07/04	17:01:00	10426.0000	3317.67	91.39	-.42	
07/04	17:24:00	10449.0000	3317.31	91.39	-.36	
07/04	17:47:00	10472.0000	3316.97	91.39	-.33	
07/04	18:10:00	10495.0000	3316.61	91.39	-.36	
07/04	18:33:00	10518.0000	3316.26	91.39	-.36	
07/04	18:56:00	10541.0000	3315.88	91.39	-.38	
07/04	19:19:00	10564.0000	3315.55	91.39	-.33	
07/04	19:42:00	10587.0000	3315.14	91.39	-.41	
07/04	20:05:00	10610.0000	3314.82	91.40	-.32	
07/04	20:28:00	10633.0000	3314.45	91.39	-.37	
07/04	20:51:00	10656.0000	3314.11	91.40	-.34	
07/04	21:14:00	10679.0000	3313.73	91.40	-.38	
07/04	21:37:00	10702.0000	3313.39	91.41	-.34	
07/04	22:00:00	10725.0000	3313.04	91.40	-.35	
07/04	22:23:00	10748.0000	3312.66	91.40	-.38	
07/04	22:46:00	10771.0000	3312.28	91.41	-.38	
07/04	23:09:00	10794.0000	3311.96	91.39	-.33	
07/04	23:32:00	10817.0000	3311.58	91.40	-.37	
07/04	23:55:00	10840.0000	3311.29	91.40	-.30	
07/05	00:18:00	10863.0000	3310.91	91.42	-.38	
07/05	00:41:00	10886.0000	3310.46	91.42	-.45	
07/05	01:04:00	10909.0000	3310.08	91.42	-.37	
07/05	01:27:00	10932.0000	3309.80	91.42	-.28	
07/05	01:50:00	10955.0000	3309.45	91.42	-.35	
07/05	02:13:00	10978.0000	3309.15	91.40	-.30	
07/05	02:36:00	11001.0000	3308.85	91.42	-.30	
07/05	02:59:00	11024.0000	3308.45	91.42	-.40	
07/05	03:22:00	11047.0000	3308.17	91.42	-.27	
07/05	03:45:00	11070.0000	3307.80	91.42	-.37	
07/05	04:08:00	11093.0000	3307.52	91.42	-.28	
07/05	04:31:00	11116.0000	3307.22	91.42	-.30	
07/05	04:54:00	11139.0000	3306.92	91.42	-.30	
07/05	05:17:00	11162.0000	3306.55	91.44	-.37	
07/05	05:40:00	11185.0000	3306.19	91.44	-.36	
07/05	06:03:00	11208.0000	3305.90	91.44	-.29	
07/05	06:26:00	11231.0000	3305.59	91.44	-.31	
07/05	06:49:00	11254.0000	3305.25	91.44	-.34	
07/05	07:12:00	11277.0000	3304.95	91.44	-.30	
07/05	07:35:00	11300.0000	3304.61	91.45	-.34	
07/05	07:58:00	11323.0000	3304.30	91.45	-.31	
07/05	07:59:00	11324.0000	3291.02	91.44	-13.28	TANDEM INST. OFF BOTTOM
07/05	07:59:15	11324.2500	3269.67	91.44	-21.35	
07/05	07:59:30	11324.5000	3240.37	92.07	-29.30	
07/05	07:59:45	11324.7500	3209.67	92.69	-30.69	
07/05	08:00:00	11325.0000	3178.36	93.31	-31.31	
07/05	08:00:15	11325.2500	3146.52	93.93	-31.84	
07/05	08:00:30	11325.5000	3127.37	94.55	-19.15	
07/05	08:01:45	11326.7500	3119.19	97.65	-8.17	
07/05	08:02:45	11327.7500	3120.27	100.69	1.08	
07/05	08:03:45	11328.7500	3121.82	103.72	1.55	
07/05	08:04:45	11329.7500	3122.89	106.76	1.06	
07/05	08:06:30	11331.5000	3125.50	110.17	2.61	
07/05	08:08:45	11333.7500	3128.19	113.20	2.69	
07/05	08:09:00	11334.0000	3104.27	113.32	-23.92	STOP @ 4000'
07/05	08:09:15	11334.2500	3071.55	113.45	-32.72	
07/05	08:09:30	11334.5000	3035.10	113.58	-36.45	
07/05	08:09:45	11334.7500	2992.37	113.70	-42.73	
07/05	08:10:00	11335.0000	2948.60	113.83	-43.77	
07/05	08:10:15	11335.2500	2903.83	113.95	-44.77	

COMPANY: AGUA MOSS, LLC

PAGE 10 OF 10

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment
						Ga. Press Ref. to 14.7 Psi Atm.
07/05	08:10:30	11335.5000	2858.66	114.08	-45.16	
07/05	08:10:45	11335.7500	2815.82	114.21	-42.84	
07/05	08:11:00	11336.0000	2777.48	114.34	-38.34	
07/05	08:11:15	11336.2500	2740.64	114.21	-36.84	
07/05	08:11:30	11336.5000	2706.71	113.92	-33.93	
07/05	08:14:15	11339.2500	2700.25	110.75	-6.46	
07/05	08:17:30	11342.5000	2698.41	107.68	-1.84	
07/05	08:18:45	11343.7500	2697.75	106.91	-.66	
07/05	08:19:00	11344.0000	2665.58	106.76	-32.16	STOP @ 3000'
07/05	08:19:15	11344.2500	2626.79	106.60	-38.79	
07/05	08:19:30	11344.5000	2587.74	106.44	-39.06	
07/05	08:19:45	11344.7500	2548.82	106.29	-38.92	
07/05	08:20:00	11345.0000	2509.51	106.14	-39.30	
07/05	08:20:15	11345.2500	2470.66	105.92	-38.85	
07/05	08:20:30	11345.5000	2431.35	105.46	-39.31	
07/05	08:20:45	11345.7500	2392.69	104.99	-38.66	
07/05	08:21:00	11346.0000	2359.16	104.53	-33.53	
07/05	08:21:15	11346.2500	2330.27	104.06	-28.89	
07/05	08:21:30	11346.5000	2299.32	103.60	-30.95	
07/05	08:21:45	11346.7500	2268.99	103.14	-30.33	
07/05	08:23:30	11348.5000	2267.60	99.77	-1.39	
07/05	08:25:15	11350.2500	2266.06	96.48	-1.54	
07/05	08:27:30	11352.5000	2263.82	93.38	-2.24	
07/05	08:28:45	11353.7500	2262.95	92.05	-.87	STOP @ 2000'
07/05	08:29:00	11354.0000	2237.23	91.79	-25.72	
07/05	08:29:15	11354.2500	2201.63	91.58	-35.61	
07/05	08:29:30	11354.5000	2166.31	91.14	-35.32	
07/05	08:29:45	11354.7500	2130.74	90.69	-35.57	
07/05	08:30:00	11355.0000	2094.66	90.24	-36.09	
07/05	08:30:15	11355.2500	2058.18	89.79	-36.48	
07/05	08:30:30	11355.5000	2020.92	89.34	-37.26	
07/05	08:30:45	11355.7500	1983.28	88.89	-37.65	
07/05	08:31:00	11356.0000	1942.79	88.44	-40.49	
07/05	08:31:15	11356.2500	1902.04	87.99	-40.75	
07/05	08:31:30	11356.5000	1860.25	87.54	-41.79	
07/05	08:31:45	11356.7500	1830.45	87.10	-29.80	
07/05	08:33:00	11358.0000	1831.52	83.99	1.07	
07/05	08:34:15	11359.2500	1830.98	80.74	-.54	
07/05	08:35:45	11360.7500	1829.65	77.47	-1.34	
07/05	08:37:45	11362.7500	1827.88	74.29	-1.77	
07/05	08:38:45	11363.7500	1827.26	73.04	-.62	STOP @ 1000'
07/05	08:39:00	11364.0000	1798.37	72.76	-28.89	
07/05	08:39:15	11364.2500	1761.31	72.47	-37.06	
07/05	08:39:30	11364.5000	1723.98	72.18	-37.33	
07/05	08:39:45	11364.7500	1684.97	71.91	-39.02	
07/05	08:40:00	11365.0000	1644.93	71.62	-40.04	
07/05	08:40:15	11365.2500	1603.70	71.34	-41.22	
07/05	08:40:30	11365.5000	1564.56	71.06	-39.15	
07/05	08:40:45	11365.7500	1524.64	70.77	-39.92	
07/05	08:41:00	11366.0000	1486.39	70.49	-38.25	
07/05	08:41:15	11366.2500	1447.50	70.10	-38.89	
07/05	08:41:30	11366.5000	1408.24	70.01	-39.27	
07/05	08:42:00	11367.0000	1389.42	69.83	-18.82	
07/05	08:42:15	11367.2500	1389.12	69.74	-.30	
07/05	08:47:30	11372.5000	1383.11	72.95	-6.00	
07/05	08:49:45	11374.7500	1395.94	75.01	12.82	SURFACE STOP
07/05	08:50:00	11375.0000	336.44	75.23	-1059.50	
07/05	08:50:15	11375.2500	.01	75.41	-336.43	

 *
 * E V E N T S U M M A R Y *
 *

COMPANY : AGUA MOSS, LLC

PAGE : B1

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

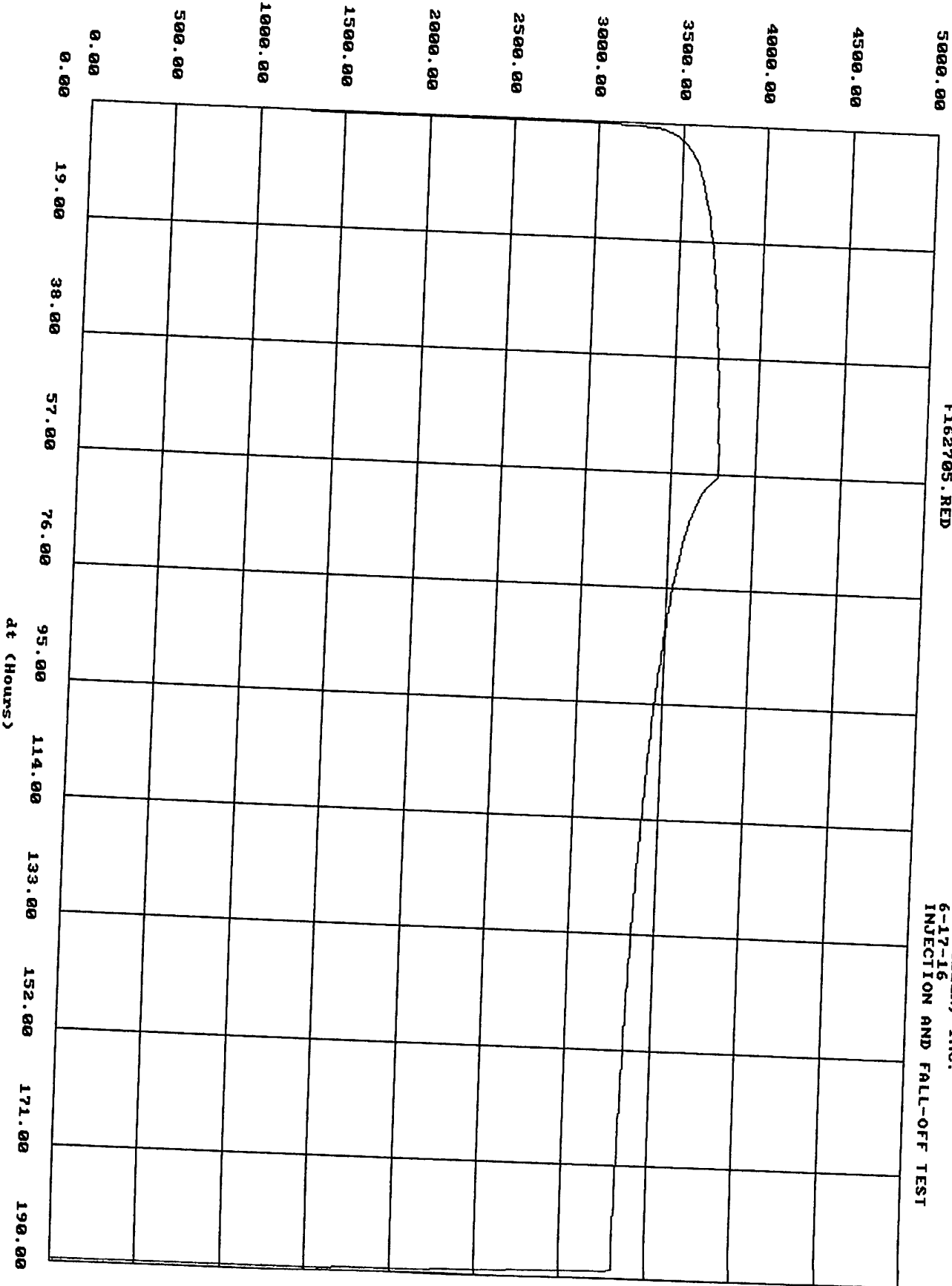
Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Key Event	Pressure Psig	Temp Deg F
06/27	11:21:00	6.0000	PRESSURED UP LUBRICATOR		
06/27	11:25:30	10.5000	SURFACE STOP	1268.38	94.39
06/27	11:26:00	11.0000	R.I.H. W/TANDEM ELEC. MEMORY INST.	1271.08	88.13
06/27	11:38:15	23.2500	TANDEM INST. @ 4405'	1354.90	87.17
06/27	11:46:30	31.5000	BEGAN INJECTING WATER	3205.69	98.78
06/29	21:22:15	3487.2500	END WATER INJECTION TEST	3244.12	93.85
06/29	21:22:30	3487.5000	BEGAN FALL-OFF TEST	3763.46	83.69
07/05	07:58:00	11323.0000	TANDEM INST. OFF BOTTOM	3762.97	83.71
07/05	08:08:45	11333.7500	STOP @ 4000'	3304.30	91.45
07/05	08:18:45	11343.7500	STOP @ 3000'	3128.19	113.20
07/05	08:28:45	11353.7500	STOP @ 2000'	2697.75	106.91
07/05	08:38:45	11363.7500	STOP @ 1000'	2262.95	92.05
07/05	08:47:30	11372.5000	SURFACE STOP	1827.26	73.04
				1383.11	72.95

Pressure (Psig)

SUNCO SMD NO. 1
SAN JUAN COUNTY, NM
F162705.RED

AGUA MOSS, LLC
Pressure vs dt

TEFTELLER, INC.
6-17-16
INJECTION AND FALL-OFF TEST



Company: AGUA MOSS, LLC
Well: SUNCO SWD NO. 1
Field: POINT LOOKOUT FORMATION
Engineer: NEIL TEFTELLER
Gauge Type: ELECTRONIC MEMORY
Gauge Range: 0 - 5000
Gauge Depth: 4405 ft
Serial No.: 162

County: SAN JUAN
State: NEW MEXICO
Date: 06/27/2016
Well Type: DISPOSAL
Test Type: GRADIENT
Status: SHUT IN
File Name: 66869

Tubing: 2-7/8" TO 4282'
Tubing: TO
Casing: TO
Perfs.: 4350' - 4460'

Packer Depth 4282 ft

Oil Level
H2O Level

Shut-in BHP 3304 @ 4405 ft
Shut-in WHP 1389

Shut-in BHT 91 F @ 4405 ft
Shut-in WHT 0 F

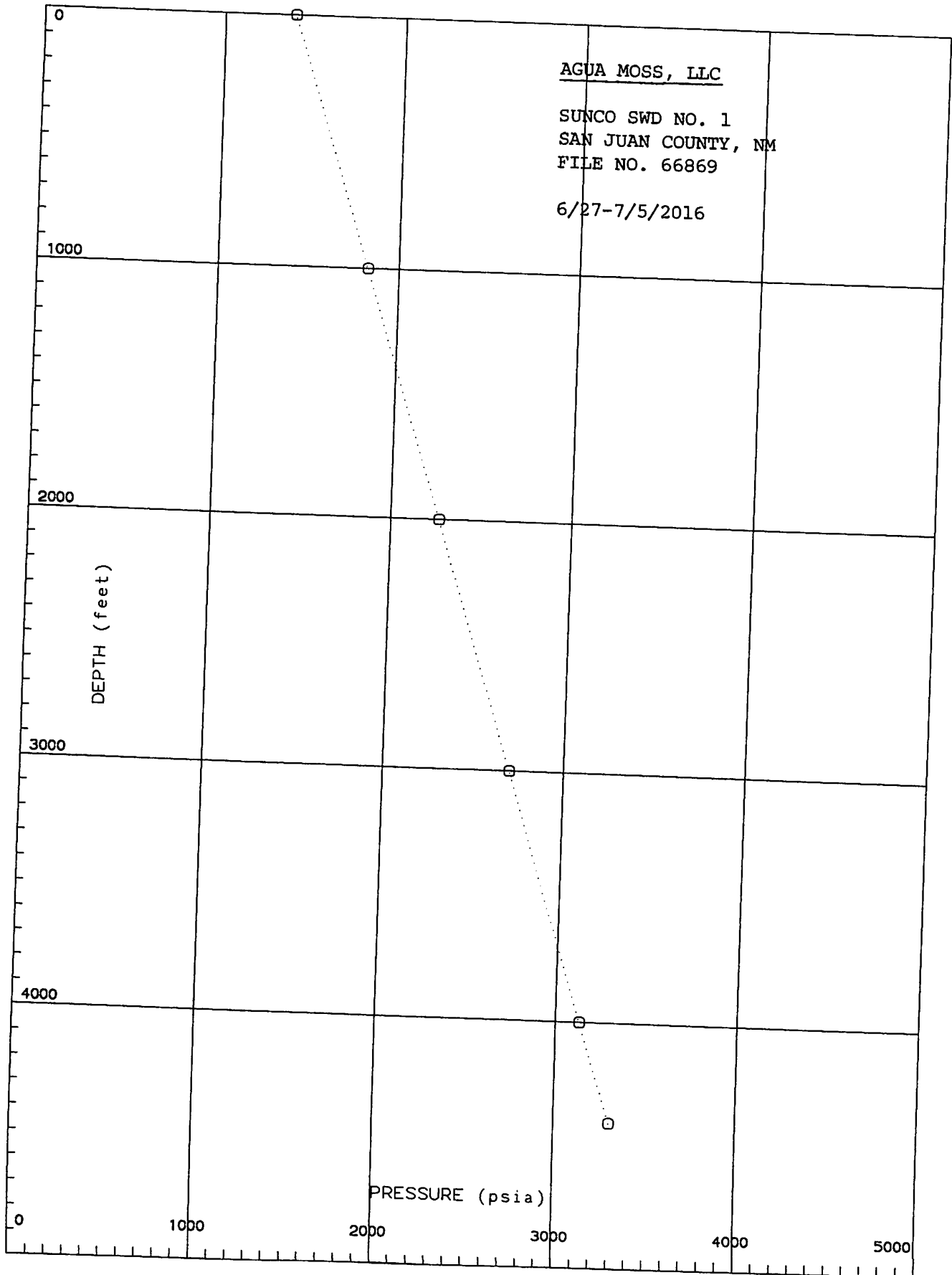
[Tefteller Incorporated]

#	MD	TVD	PRESSURE	PSI/ft
1	4405	4405	3304.00	
2	4000	4000	3128.00	0.435
3	3000	3000	2698.00	0.430
4	2000	2000	2263.00	0.435
5	1000	1000	1827.00	0.436
6	0	0	1389.00	0.438

AGUA MOSS, LLC

SUNCO SWD NO. 1
SAN JUAN COUNTY, NM
FILE NO. 66869

6/27-7/5/2016



SP-2000



Downhole Memory Pressure Gauge

The SP-2000 downhole memory pressure gauge is controlled by an internal microprocessor and powerful software.

The SP-2000 can stay downhole and collect data for hours or days; depending on your application. It is slimline and operates fully from battery power.

The microprocessor is capable of detecting the correct pressure and temperature and adjust the sampling rate automatically (once programmed for the test application).

The SP-2000 is tough, dependable, simple, and intelligent. If your job requires gauges that are reliable yet rugged and simple to use, the SP-2000 memory gauge, with its Hybrid-Quartz sensor is the one for you. It is so simple that a paper clip can be used to program it by changing the switch settings for the Type and Duration of test.

With the use of our simple, menu driven software, you can retrieve and report the gauge data (using a compatible computer and printer) from the tool once it is removed from the well.

Advanced reporting features are available such as data printouts, gradient reports, gradient plots and most of the standard time vs. pressure/temperature plot formats.

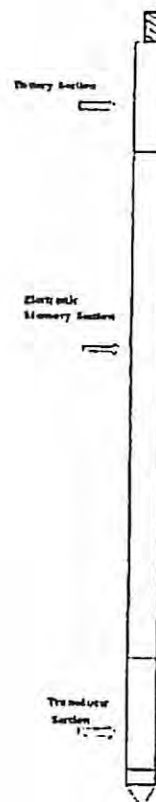
Micro-Smart Systems offers complete Well Test Interpretation, utilizing Fekete's "F.A.S.T. Well Test"™ software. This powerful state-of-the-art software includes data preparation, various analysis methods, analytical reservoir modeling and deliverability.

Micro-Smart Systems is the **SMART** choice for cutting-edge technology and superior customer support. We can save you time, money, and help you keep your customers satisfied.

SMART Features:

The technological features of the SP-2000 are:

- Dual EEPROM Memory
- Tool performs internal tests and delivers audible signal to confirm operation
- Multiple-run data storage capability
- User friendly software
- Convert from memory to SRO gauge with simple module change
- Compatible with Micro-Smart's production logging tools
- Standard ASCII data storage format
- Switch selectable programming without the use of a computer
- Selectable switches for duration in DAYS and TYPE of TEST
- Custom computer programming
 - up to 15 time periods
 - specify time interval, sampling rate, and ΔP switching.



"SMART AND SIMPLE"

SPECIFICATIONS:

Memory Capacity: 48,000 data sets (main memory) 2,000 data sets (backup memory) (time, pressure, temp.)	Pressure Ranges: 2,500 psi (17,000 KPA) 5,000 psi (34,000 KPA) 10,000 psi (68,000 KPA) 15,000 psi (102,000 KPA) 20,000 psi (136,000 KPA)
Sampling Intervals: 1.875 seconds to 64 minutes (in binary multiples)	Weight: 14 lbs (5.9 Kg)
Diameter: 1.25 inch (31.2 mm)	Operating Temp.: 32° F to 325° F 10° C to 160° C
Resolution: Pressure .01 psi Temp. .04° F	Power: 11.5v (9 "c" cell Alkaline) 14.4v (4 "c" cell Lithium)
Accuracy: Pressure $\pm .05\%$ Full Scale Temp. $\pm 1^\circ F$ Time $\pm .05\%$	Length: 53 in. (1.3 m) plus battery pack 24 in. (6 m) for 9 cell pack 16 in. (4 m) for 4 cell pack



ACCURACY VERIFICATION

5-February-2014

Gauge Model SP-2000
Gauge S/N 162

Pressure Range 5 K
Accuracy 0.05% Full Scale

Applied Pressure psig	Recorded Pressure psig	Difference	
		psi	Percent (%)
0.01	0.71	0.70	0.0139%
774.08	774.96	0.88	0.0177%
1498.24	1499.12	0.88	0.0176%
2222.36	2222.99	0.63	0.0126%
2946.53	2947.04	0.51	0.0102%
3670.66	3671.23	0.57	0.0113%
4394.87	4395.53	0.66	0.0133%
5119.00	5119.94	0.94	0.0187%
4394.87	4396.16	1.29	0.0258%
3670.66	3671.99	1.33	0.0265%
2946.53	2947.97	1.44	0.0287%
2222.36	2223.84	1.48	0.0296%
1498.24	1499.73	1.49	0.0299%
774.08	775.18	1.10	0.0220%
0.01	0.25	0.24	0.0049%

Oven Temperature: 144.7 °F

Probe Temperature: 144.7 °F

Smart Gauge Calibration accuracy is confirmed.

Calibrated with RUSKA Pressure Standard, model # 2451-700-00

Serial #26618, Mass Set Serial #25608

Compensated to local acceleration due to gravity

Verified by: CM



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONS. DIV DIST. 3

JUN 27 2016

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 6-27-16 Operator Aguilar Moss API # 30-0 45-28653

Property Name Sunco Disposal Well # 1 Location: Unit Sec 2 Twn 29 Rge 12

Land Type:

State
Federal
Private
Indian

Well Type:

Water Injection
Salt Water Disposal ✓
Gas Injection
Producing Oil/Gas
Pressure observation

Temporarily Abandoned Well (Y/N): TA Expires:

Casing Pres. 0
Bradenhead Pres. 0
Tubing Pres. 1325
Int. Casing Pres. 214

Tbg. SI Pres.
Tbg. Inj. Pres.

Max. Inj. Pres.

Pressured annulus up to 380 psi. for 30 mins. Test passed/failed

REMARKS:

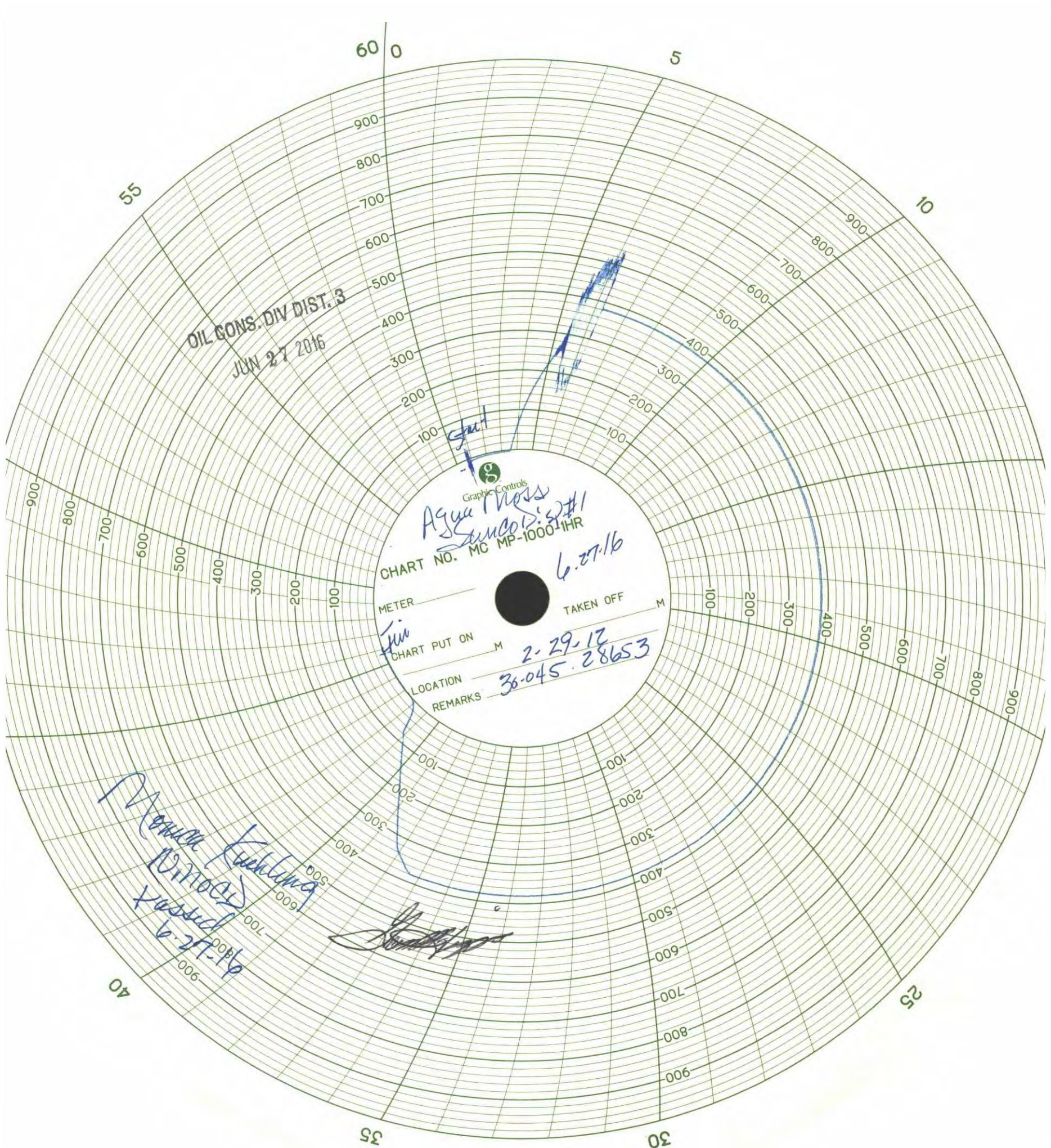
packer set 4282 top of tub 4350

By [Signature]
(Operator Representative)

Witness [Signature]
(NMOCD)

(Position)

Revised 02-11-02





NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emnrd.state.nm.us/ocd/District III/3district.htm](http://emnrd.state.nm.us/ocd/District%20III/3district.htm)

OIL CONS. DIV DIST. 3

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

JUN 27 2016

Date of Test 6-27-16 Operator Agua Moss API #30-0 45-28653
Property Name Sunco Well No. 1 Location: Unit 2 Section 2 Township 29 Range 12
Well Status (Shut-In or Producing) Initial PSI: Tubing 1315 Intermediate N/A Casing 100 Bradenhead 0

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Testing	PRESSURE				
	BH	Bradenhead		INTERM	
		Int	Csg	Int	Csg
TIME					
5 min	<u>0</u>		<u>100</u>		
10 min	<u>0</u>		<u>100</u>		
15 min	<u>0</u>		<u>100</u>		
20 min					
25 min					
30 min					

	FLOW CHARACTERISTICS	
	BRADENHEAD	INTERMEDIATE
Steady Flow		
Surges		
Down to Nothing		
Nothing		
Gas		
Gas & Water		
Water		

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR _____ FRESH _____ SALTY _____ SULFUR _____ BLACK _____

5 MINUTE SHUT-IN PRESSURE

BRADENHEAD 0

INTERMEDIATE N/A

REMARKS:

Vacuum when opened. Nothing when opened
after 5 min shut-in.

By [Signature]

Witness _____

(Position)

E-mail address _____

Appendix D

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Kinder Morgan CO2, 17801 Hwy 491, Cortez, CO 81321

2. Originating Site:

DC-3 Well Location

3. Location of Material (Street Address, City, State or ULSTR):

Township 40N and Range 17W, Section 6, Dolores County, Colorado

4. Source and Description of Waste: Drilling Waste Fluids

Estimated Volume 1000 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 2600 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Jami C. Knight, representative or authorized agent for Kinder Morgan CO2 do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Jami C. Knight, representative for Kinder Morgan CO2 authorize JFJ/IEI to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for _____ do hereby certify that

Representative/Agent Signature

Representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: RW Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility: #

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Artem Hobbs

TITLE: Operator DATE: 11/2/16

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 534-6886



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 20, 2015

Tami Knight
Kinder Morgan
17801 Hwy 491
Cortez, CO 81321
TEL: (970) 882-5520
FAX

RE: Aqua Moss Water

OrderNo.: 1502269

Dear Tami Knight:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/6/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1502269

Date Reported: 2/20/2015

CLIENT: Kinder Morgan

Client Sample ID: Tank #5

Project: Aqua Moss Water

Collection Date: 2/5/2015 10:15:00 AM

Lab ID: 1502269-001

Matrix: AQUEOUS

Received Date: 2/6/2015 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: MMD
Mercury	0.0013	0.00040		mg/L	1	2/13/2015 2:38:39 PM	17736
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: ELS
Arsenic	ND	0.20		mg/L	10	2/19/2015 1:22:28 PM	17765
Barium	0.32	0.10		mg/L	5	2/19/2015 1:19:18 PM	17765
Cadmium	ND	0.010		mg/L	5	2/19/2015 1:19:18 PM	17765
Chromium	3.1	0.030		mg/L	5	2/19/2015 1:19:18 PM	17765
Lead	ND	0.025		mg/L	5	2/19/2015 1:19:18 PM	17765
Selenium	ND	0.25		mg/L	5	2/19/2015 1:19:18 PM	17765
Silver	ND	0.025		mg/L	5	2/19/2015 1:19:18 PM	17765

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

February 17, 2015

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

Date Received : February 10, 2015
Description :
Sample ID : 1502269-001B TANK #5
Collected By :
Collection Date : 02/05/15 15:00

ESC Sample # : L747923-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Corrosivity	Non-Corrosive			9040C	02/11/15	1
Flashpoint	See Footnote		deg F	D93/1010A	02/15/15	1
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/l	9012B/SW846 7	02/12/15	1
Reactive Sulf. (SW846 7.3.4.1)	BDL	25.	mg/l	9034/9030B	02/12/15	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/17/15 14:49 Printed: 02/17/15 14:49
L747923-01 (FLASHPOINT) - Did Not Flash @ 170 F



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L747923

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 17, 2015

Analyte	Result	Laboratory Blank Units % Rec	Limit	Batch	Date Analyzed
Reactive Sulf. (SW846 7.3.4.1)	< 25	mg/l		WG769788	02/12/15 16:16
Reactive CN (SW846 7.3.3.2)	< .125	mg/l		WG769790	02/12/15 17:34

Analyte	Units	Result	Duplicate Duplicate	RPD	Limit	Ref Samp	Batch
Corrosivity		0.0	0.0	0.0	10	L747923-01	WG769746
Reactive Sulf. (SW846 7.3.4.1)	mg/l	0.0	0.0	0.0	20	L747836-01	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	0.0	0.0	0.0	20	L747836-01	WG769790
Flashpoint	deg F	0.00	0.00	0.00	20	L748722-05	WG770370

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Corrosivity		5.9	5.85	99.2	98.3-101.7	WG769746
Reactive Sulf. (SW846 7.3.4.1)	mg/l	100	85.0	85.0	70-130	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	.1	0.105	105.	90-110	WG769790
Flashpoint	deg F	82	82.0	100.	96-104	WG770370

Analyte	Units	Laboratory Control Result	Sample Ref	Duplicate % Rec	Limit	RPD	Limit	Batch
Corrosivity		5.86	5.85	99.0	98.3-101.7	0.171	10	WG769746
Reactive Sulf. (SW846 7.3.4.1)	mg/l	85.0	85.0	85.0	70-130	0.0	20	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	0.0953	0.105	95.0	90-110	9.69	20	WG769790
Flashpoint	deg F	82.0	82.0	100.	96-104	0.00	7	WG770370

Batch number / Run number / Sample number cross reference

WG769746: R3019321: L747923-01
WG769788: R3019639: L747923-01
WG769790: R3019673: L747923-01
WG770370: R3020153: L747923-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502269

20-Feb-15

Client: Kinder Morgan

Project: Aqua Moss Water

Sample ID	MB-17736	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	17736	RunNo:	24308					
Prep Date:	2/13/2015	Analysis Date:	2/13/2015	SeqNo:	716384	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-17736	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	17736	RunNo:	24308					
Prep Date:	2/13/2015	Analysis Date:	2/13/2015	SeqNo:	716385	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0055	0.00020	0.005000	0	110	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502269

20-Feb-15

Client: Kinder Morgan
Project: Aqua Moss Water

Sample ID	MB-17765	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	17765	RunNo:	24390					
Prep Date:	2/16/2015	Analysis Date:	2/18/2015	SeqNo:	718659	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-17765	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	17765	RunNo:	24390					
Prep Date:	2/16/2015	Analysis Date:	2/18/2015	SeqNo:	718660	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	102	80	120			
Barium	0.49	0.020	0.5000	0	97.3	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.1	80	120			
Chromium	0.49	0.0060	0.5000	0	98.7	80	120			
Lead	0.48	0.0050	0.5000	0	96.4	80	120			
Selenium	0.50	0.050	0.5000	0	100	80	120			
Silver	0.11	0.0050	0.1000	0	105	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: KINDER MORGAN CO

Work Order Number: 1502289

RcptNo: 1

Received by/date: AT 02/06/15

Logged By: Anne Thorne 2/8/2015 7:50:00 AM

Completed By: Anne Thorne 2/8/2015

Reviewed By: AT/SA 02/06/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0° C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.6	Good	Yes			

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Kinder Morgan CO2, 17801 Hwy 491, Cortez, CO 81321	
2. Originating Site: DC-3 Well Location	
3. Location of Material (Street Address, City, State or ULSTR): Township 40N and Range 17W, Section 6, Dolores County, Colorado	
4. Source and Description of Waste: Drilling Waste Fluids	
Estimated Volume <u>1000</u> yd ³ / <u>6bbls</u> Known Volume (to be entered by the operator at the end of the haul) <u>2600</u> yd ³ / bbls	
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS	
I, <u>Joni C. Knight</u> , representative or authorized agent for <u>Kinder Morgan CO2</u> do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)	
☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> ☐ Monthly ☐ Weekly ☐ Per Load	
☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)	
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)	
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS	
I, <u>Joni C. Knight</u> , representative for <u>Kinder Morgan CO2</u> authorize JFJ/IEI to complete Generator Signature the required testing/sign the Generator Waste Testing Certification.	
I, _____, representative for _____ do hereby certify that Representative/Agent Signature Representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.	
6. Transporter: RW Trucking	

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility: #

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Andrew Huber

TITLE: Operator DATE: 11/2/16

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 534-6186



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

February 20, 2015

Tami Knight
Kinder Morgan
17801 Hwy 491
Cortez, CO 81321
TEL: (970) 882-5520
FAX

RE: Aqua Moss Water

OrderNo.: 1502269

Dear Tami Knight:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/6/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kinder Morgan

Client Sample ID: Tank #5

Project: Aqua Moss Water

Collection Date: 2/5/2015 10:15:00 AM

Lab ID: 1502269-001

Matrix: AQUEOUS

Received Date: 2/6/2015 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: MMD
Mercury	0.0013	0.00040		mg/L	1	2/13/2015 2:38:39 PM	17736
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: ELS
Arsenic	ND	0.20		mg/L	10	2/19/2015 1:22:28 PM	17765
Barium	0.32	0.10		mg/L	5	2/19/2015 1:19:18 PM	17765
Cadmium	ND	0.010		mg/L	5	2/19/2015 1:19:18 PM	17765
Chromium	3.1	0.030		mg/L	5	2/19/2015 1:19:18 PM	17765
Lead	ND	0.025		mg/L	5	2/19/2015 1:19:18 PM	17765
Selenium	ND	0.25		mg/L	5	2/19/2015 1:19:18 PM	17765
Silver	ND	0.025		mg/L	5	2/19/2015 1:19:18 PM	17765

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

February 17, 2015

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

Date Received : February 10, 2015
Description :
Sample ID : 1502269-001B TANK #5
Collected By :
Collection Date : 02/05/15 15:00

ESC Sample # : L747923-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Corrosivity	Non-Corrosive			9040C	02/11/15	1
Flashpoint	See Footnote		deg F	D93/1010A	02/15/15	1
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/l	9012B/SW846 7	02/12/15	1
Reactive Sulf. (SW846 7.3.4.1)	BDL	25.	mg/l	9034/9030B	02/12/15	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/17/15 14:49 Printed: 02/17/15 14:49
L747923-01 (FLASHPOINT) - Did Not Flash @ 170 F



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L747923

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 17, 2015

Analyte	Result	Laboratory Blank Units % Rec	Limit	Batch	Date Analyzed
Reactive Sulf.(SW846 7.3.4.1)	< 25	mg/l		WG769788	02/12/15 16:16
Reactive CN (SW846 7.3.3.2)	< .125	mg/l		WG769790	02/12/15 17:34

Analyte	Units	Result	Duplicate Duplicate	RPD	Limit	Ref Samp	Batch
Corrosivity		0.0	0.0	0.0	10	L747923-01	WG769746
Reactive Sulf.(SW846 7.3.4.1)	mg/l	0.0	0.0	0.0	20	L747836-01	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	0.0	0.0	0.0	20	L747836-01	WG769790
Flashpoint	deg F	0.00	0.00	0.00	20	L748722-05	WG770370

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Corrosivity		5.9	5.85	99.2	98.3-101.7	WG769746
Reactive Sulf. (SW846 7.3.4.1)	mg/l	100	85.0	85.0	70-130	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	.1	0.105	105.	90-110	WG769790
Flashpoint	deg F	82	82.0	100.	96-104	WG770370

Analyte	Units	Laboratory Control Sample Duplicate Result Ref %Rec	Limit	RPD	Limit	Batch
Corrosivity		5.86 5.85 99.0	98.3-101.7	0.171	10	WG769746
Reactive Sulf.(SW846 7.3.4.1)	mg/l	85.0 85.0 85.0	70-130	0.0	20	WG769788
Reactive CN (SW846 7.3.3.2)	mg/l	0.0953 0.105 95.0	90-110	9.69	20	WG769790
Flashpoint	deg F	82.0 82.0 100.	96-104	0.00	7	WG770370

Batch number /Run number / Sample number Cross reference

WG769746: R3019321: L747923-01
WG769788: R3019639: L747923-01
WG769790: R3019673: L747923-01
WG770370: R3020153: L747923-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502269

20-Feb-15

Client: Kinder Morgan
Project: Aqua Moss Water

Sample ID	MB-17736	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	17736	RunNo:	24308					
Prep Date:	2/13/2015	Analysis Date:	2/13/2015	SeqNo:	716384	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-17736	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	17736	RunNo:	24308					
Prep Date:	2/13/2015	Analysis Date:	2/13/2015	SeqNo:	716385	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0055	0.00020	0.005000	0	110	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502269

20-Feb-15

Client: Kinder Morgan
Project: Aqua Moss Water

Sample ID	MB-17765	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	17765	RunNo:	24390					
Prep Date:	2/16/2015	Analysis Date:	2/18/2015	SeqNo:	718659	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-17765	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	17765	RunNo:	24390					
Prep Date:	2/16/2015	Analysis Date:	2/18/2015	SeqNo:	718660	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	102	80	120			
Barium	0.49	0.020	0.5000	0	97.3	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.1	80	120			
Chromium	0.49	0.0060	0.5000	0	98.7	80	120			
Lead	0.48	0.0050	0.5000	0	96.4	80	120			
Selenium	0.50	0.050	0.5000	0	100	80	120			
Silver	0.11	0.0050	0.1000	0	105	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

Sample Log-In Check List

Client Name: KINDER MORGAN CO

Work Order Number: 1502269

RcptNo: 1

Received by/date: AT 02/06/15

Logged By: Anne Thorne 2/6/2015 7:50:00 AM

Completed By: Anne Thorne 2/6/2015

Reviewed By: AT/SA 02/06/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 5.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

Client: Kriegsmorgan CO2

Mailing Address: 17001 Hwy 491

Corte2 CO 6132N

Phone #: 970 882 5500

email or Fax#: tami-knight@kriegsmorgan.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Project Manager: Tami Knight

Sampler: TCR

On loc: ☒ Yes ☐ No

Sample Temperature: 1.6

Date Time Matrix Sample Request ID

11/15 1015 H2O Tank #5

Container Type and #

plastic 1003

Preservative Type

HEAL No. 1502269

HEAL No.

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Aqua Mass Water

Project #:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	☒
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	<u>X RCI</u>
Air Bubbles (Y or N)	

Remarks:

Received by: Tami Knight Date: 11/15/07

Received by: Tami Knight Date: 11/15/07

Date: 11/15/07 Relinquished by: Tami Knight

Date: 11/15/07 Relinquished by: Tami Knight

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Gobenador Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL D Section 31 Township 30 North Range 7 West; 36.774685, 107.617915 San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 183 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long* 3-15-16, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Triple S Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrianthuban

SIGNATURE: *Adrianthuban*

TITLE: Operator

TELEPHONE NO.: (505) 334-6186

DATE: 3/16/16

1/2/17

Surface Waste Management Facility Authorized Agent

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603446

Date Reported:

CLIENT: Souder, Miller and Associates

Client Sample ID: Gobenador Non Exempt

Project: Gobenador CS

Collection Date: 3/8/2016 12:25:00 PM

Lab ID: 1603446-001

Matrix: AQUEOUS

Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: pmf
Mercury	ND	0.00080		mg/L	1	3/14/2016 4:16:19 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/14/2016 3:18:46 PM
Barium	ND	0.20		mg/L	1	3/14/2016 3:18:46 PM
Cadmium	ND	0.020		mg/L	1	3/14/2016 3:18:46 PM
Chromium	0.084	0.060		mg/L	1	3/14/2016 3:18:46 PM
Lead	ND	0.050		mg/L	1	3/14/2016 3:18:46 PM
Selenium	ND	0.50		mg/L	1	3/14/2016 3:18:46 PM
Silver	ND	0.050		mg/L	1	3/14/2016 3:18:46 PM
EPA METHOD 8270C TCLP						Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/12/2016 4:49:05 PM
3+4-Methylphenol	ND	200		mg/L	1	3/12/2016 4:49:05 PM
Phenol	ND	200		mg/L	1	3/12/2016 4:49:05 PM
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/12/2016 4:49:05 PM
Hexachlorobenzene	ND	0.13		mg/L	1	3/12/2016 4:49:05 PM
Hexachlorobutadiene	ND	0.50		mg/L	1	3/12/2016 4:49:05 PM
Hexachloroethane	ND	3.0		mg/L	1	3/12/2016 4:49:05 PM
Nitrobenzene	ND	2.0		mg/L	1	3/12/2016 4:49:05 PM
Pentachlorophenol	ND	100		mg/L	1	3/12/2016 4:49:05 PM
Pyridine	ND	5.0		mg/L	1	3/12/2016 4:49:05 PM
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/12/2016 4:49:05 PM
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/12/2016 4:49:05 PM
Cresols, Total	ND	200		mg/L	1	3/12/2016 4:49:05 PM
Surr: 2-Fluorophenol	10.9	15-124	S	%Rec	1	3/12/2016 4:49:05 PM
Surr: Phenol-d5	12.4	15-118	S	%Rec	1	3/12/2016 4:49:05 PM
Surr: 2,4,6-Tribromophenol	52.7	15-148		%Rec	1	3/12/2016 4:49:05 PM
Surr: Nitrobenzene-d5	64.0	40.6-124		%Rec	1	3/12/2016 4:49:05 PM
Surr: 2-Fluorobiphenyl	70.5	35.7-128		%Rec	1	3/12/2016 4:49:05 PM
Surr: 4-Terphenyl-d14	59.0	18.8-115		%Rec	1	3/12/2016 4:49:05 PM
EPA METHOD 8260B: VOLATILES						Analyst: AG
Benzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Toluene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Ethylbenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603446

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Gobenador Non Exempt

Project: Gobenador CS

Collection Date: 3/8/2016 12:25:00 PM

Lab ID: 1603446-001

Matrix: AQUEOUS

Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: AG
Naphthalene	ND	0.40		mg/L	200	3/11/2016 6:09:50 AM
1-Methylnaphthalene	ND	0.80		mg/L	200	3/11/2016 6:09:50 AM
2-Methylnaphthalene	ND	0.80		mg/L	200	3/11/2016 6:09:50 AM
Acetone	ND	2.0		mg/L	200	3/11/2016 6:09:50 AM
Bromobenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Bromodichloromethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Bromoform	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Bromomethane	ND	0.60		mg/L	200	3/11/2016 6:09:50 AM
2-Butanone	ND	2.0		mg/L	200	3/11/2016 6:09:50 AM
Carbon disulfide	ND	2.0		mg/L	200	3/11/2016 6:09:50 AM
Carbon Tetrachloride	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Chlorobenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Chloroethane	ND	0.40		mg/L	200	3/11/2016 6:09:50 AM
Chloroform	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Chloromethane	ND	0.60		mg/L	200	3/11/2016 6:09:50 AM
2-Chlorotoluene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
4-Chlorotoluene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
cis-1,2-DCE	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/11/2016 6:09:50 AM
Dibromochloromethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Dibromomethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,1-Dichloroethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,1-Dichloroethene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2-Dichloropropane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,3-Dichloropropane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
2,2-Dichloropropane	ND	0.40		mg/L	200	3/11/2016 6:09:50 AM
1,1-Dichloropropene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Hexachlorobutadiene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
2-Hexanone	ND	2.0		mg/L	200	3/11/2016 6:09:50 AM
Isopropylbenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
4-Isopropyltoluene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/11/2016 6:09:50 AM
Methylene Chloride	ND	0.60		mg/L	200	3/11/2016 6:09:50 AM
n-Butylbenzene	ND	0.60		mg/L	200	3/11/2016 6:09:50 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603446

Date Reported:

CLIENT: Souder, Miller and Associates

Client Sample ID: Gobenador Non Exempt

Project: Gobenador CS

Collection Date: 3/8/2016 12:25:00 PM

Lab ID: 1603446-001

Matrix: AQUEOUS

Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: AG
n-Propylbenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
sec-Butylbenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Styrene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
tert-Butylbenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/11/2016 6:09:50 AM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
trans-1,2-DCE	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Trichlorofluoromethane	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/11/2016 6:09:50 AM
Vinyl chloride	ND	0.20		mg/L	200	3/11/2016 6:09:50 AM
Xylenes, Total	ND	0.30		mg/L	200	3/11/2016 6:09:50 AM
Surr: 1,2-Dichloroethane-d4	93.2	70-130		%Rec	200	3/11/2016 6:09:50 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	200	3/11/2016 6:09:50 AM
Surr: Dibromofluoromethane	105	70-130		%Rec	200	3/11/2016 6:09:50 AM
Surr: Toluene-d8	104	70-130		%Rec	200	3/11/2016 6:09:50 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

022 District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
MAPL-Enterprise Products Operating LLC, 614 Reilly Ave, Farmington, NM 87401 Pay Key Code: Send Invoices to Runell Scale at address above.

2. Originating Site:
MAPL 3.5" OD LID 696 - San Juan County, NM

3. Location of Material (Street Address, City, State or ULSTR):
Start: ULG- S1, T29N R15W End: UL N-S16, T26N, R12W San Juan County, NM

4. Source and Description of Waste:
Potable fresh water (Farmington Municipal Water/Lower Water Valley Water Users Assoc.) used to hydrotest test for 4" pipeline from San Juan River Plant to Chaco Metering.

Estimated Volume **1260 bbls** yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) **1316** yd³ / bbls

5. **Runell Scale** **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**
I, **Runell Scale**, **Runell Scale, DATE: 8-8-16**, representative or authorized agent for MAPL-Enterprise Products
Generator Signature

Do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency** ☐ Monthly ☐ Weekly ☒ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☒ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I, **Runell Scale**, representative for **MAPL-Enterprise Products Operating** authorize Auga Moss to complete the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for _____ do hereby certify that
Representative/Agent Signature
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: **Three Rivers Trucking or other trucking company on approved water haulers list.**

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Agua Moss Crouch Mesa SWD #NM-01-0009 Class I Disposal Well**

Address of Facility: **345 CR 350, Farmington, NM 87401**

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED**

☐ **DENIED (Must Be Maintained As Permanent Record)**

PRINT NAME: **Adrian Hudson**

TITLE: **Operator** DATE: **8/16**

SIGNATURE: **[Signature]**
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: **505-334-6186 Fax 505-334-5410**

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Middle Mesa Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL N Section 10 Township 31 North Range 7 West; 36.907568, -107.562762, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 60 yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 55 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Various Apporved Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME:

Adrian Hudson

TITLE:

Operator

DATE:

1/2/17

SIGNATURE:

Surface Waste Management Facility Authorized Agent

TELEPHONE NO.:

(505) 534-6186

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1803984

RcptNo: 1

Received by/date: in 03/18/16

Logged By: Anne Thorne 3/18/2016 7:30:00 AM

Anne Thorne

Completed By: Anne Thorne 3/18/2016

Anne Thorne

Reviewed By:

[Signature]

03/21/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? as Yes ☒ No ☒
9. Was preservative added to bottles? Yes ☒ No ☒ as NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 1
(2) or >12 unless noted
Adjusted? YES
Checked by: as

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks: For metals analysis: added 1 ML HNO₃ to -cool for acceptable pH

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

3/21 @ 1435
as

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID	MB-24414	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24414	RunNo:	33073					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1014893	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24414	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24414	RunNo:	33073					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1014894	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.4	80	120			
Barium	0.48	0.020	0.5000	0	96.2	80	120			
Cadmium	0.48	0.0020	0.5000	0	95.6	80	120			
Chromium	0.48	0.0060	0.5000	0	96.0	80	120			
Lead	0.47	0.0050	0.5000	0	94.8	80	120			
Selenium	0.48	0.050	0.5000	0	96.3	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

Sample ID	LCSD-24414	SampType:	LCSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSS02	Batch ID:	24414	RunNo:	33073					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1014895	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120	0.315	20	
Barium	0.48	0.020	0.5000	0	96.1	80	120	0.164	20	
Cadmium	0.48	0.0020	0.5000	0	95.7	80	120	0.105	20	
Chromium	0.48	0.0060	0.5000	0	96.1	80	120	0.0875	20	
Lead	0.47	0.0050	0.5000	0	94.6	80	120	0.232	20	
Selenium	0.48	0.050	0.5000	0	96.8	80	120	0.480	20	
Silver	0.097	0.0050	0.1000	0	97.3	80	120	0.123	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID	MB-24421	SampType:	mblk	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24421	RunNo:	33122					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1016891	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24421	SampType:	lcs	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24421	RunNo:	33122					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1016892	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.7	80	120			

Sample ID	LCSD-24421	SampType:	lcsd	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSS02	Batch ID:	24421	RunNo:	33122					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1016893	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.4	80	120	1.77	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID	ics-24409	SampType:	LCS	TestCode:	EPA Method 8270C TCLP					
Client ID:	LCSS	Batch ID:	24409	RunNo:	33040					
Prep Date:	3/24/2016	Analysis Date:	3/24/2016	SeqNo:	1014304	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	0.17		0.2000		86.1	15	148			
Surr: Nitrobenzene-d5	0.10		0.1000		102	40.6	124			
Surr: 2-Fluorobiphenyl	0.094		0.1000		94.2	35.7	128			
Surr: 4-Terphenyl-d14	0.067		0.1000		66.8	18.8	115			

Sample ID	Icsd-24409		SampType: LCSD		TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS02		Batch ID: 24409		RunNo: 33040					
Prep Date:	3/24/2016		Analysis Date: 3/24/2016		SeqNo: 1014305		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.097	0.010	0.1000	0	96.9	32.1	120	1.22	20	
3+4-Methylphenol	0.32	0.010	0.2000	0	160	10.9	204	15.0	20	
2,4-Dinitrotoluene	0.080	0.010	0.1000	0	80.2	41.9	116	8.34	20	
Hexachlorobenzene	0.088	0.010	0.1000	0	87.9	37.7	99.4	7.70	20	
Hexachlorobutadiene	0.10	0.010	0.1000	0	104	30.6	107	6.47	20	
Hexachloroethane	0.089	0.010	0.1000	0	89.0	27.4	121	1.88	20	
Nitrobenzene	0.091	0.010	0.1000	0	91.1	28.6	134	1.13	20	
Pentachlorophenol	0.084	0.010	0.1000	0	84.4	7.71	111	5.15	20	
Pyridine	0.078	0.010	0.1000	0	78.1	8.54	92.4	4.16	20	
2,4,5-Trichlorophenol	0.12	0.010	0.1000	0	115	25.3	146	11.1	20	
2,4,6-Trichlorophenol	0.10	0.010	0.1000	0	102	21.5	145	3.14	20	
Cresols, Total	0.42	0.010	0.3000	0	139	30	136	11.6	20	S
Surr: 2-Fluorophenol	0.16		0.2000		79.6	15	124	0	20	
Surr: Phenol-d5	0.19		0.2000		97.5	15	118	0	20	
Surr: 2,4,6-Tribromophenol	0.19		0.2000		93.2	15	148	0	20	
Surr: Nitrobenzene-d5	0.11		0.1000		106	40.6	124	0	20	
Surr: 2-Fluorobiphenyl	0.091		0.1000		90.7	35.7	128	0	20	
Surr: 4-Terphenyl-d14	0.068		0.1000		67.8	18.8	115	0	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID	mb-24409		SampType: MBLK		TestCode: EPA Method 8270C TCLP					
Client ID:	PBS		Batch ID: 24409		RunNo: 33040					
Prep Date:	3/24/2016		Analysis Date: 3/24/2016		SeqNo: 1014302		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								
Phenol	ND	200								
2,4-Dinitrotoluene	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND	0.50								
Hexachloroethane	ND	3.0								
Nitrobenzene	ND	2.0								
Pentachlorophenol	ND	100								
Pyridine	ND	5.0								
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.14		0.2000		71.9	15	124			
Surr: Phenol-d5	0.17		0.2000		86.2	15	118			
Surr: 2,4,6-Tribromophenol	0.16		0.2000		78.8	15	148			
Surr: Nitrobenzene-d5	0.087		0.1000		87.3	40.6	124			
Surr: 2-Fluorobiphenyl	0.083		0.1000		83.2	35.7	128			
Surr: 4-Terphenyl-d14	0.061		0.1000		61.2	18.8	115			

Sample ID	lcs-24409		SampType: LCS		TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS		Batch ID: 24409		RunNo: 33040					
Prep Date:	3/24/2016		Analysis Date: 3/24/2016		SeqNo: 1014304		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.096	0.010	0.1000	0	95.8	32.1	120			
3+4-Methylphenol	0.28	0.010	0.2000	0	138	10.9	204			
2,4-Dinitrotoluene	0.087	0.010	0.1000	0	87.2	41.9	116			
Hexachlorobenzene	0.081	0.010	0.1000	0	81.4	37.7	99.4			
Hexachlorobutadiene	0.098	0.010	0.1000	0	97.8	30.6	107			
Hexachloroethane	0.087	0.010	0.1000	0	87.3	27.4	121			
Nitrobenzene	0.090	0.010	0.1000	0	90.0	28.6	134			
Pentachlorophenol	0.080	0.010	0.1000	0	80.2	7.71	111			
Pyridine	0.075	0.010	0.1000	0	74.9	8.54	92.4			
2,4,5-Trichlorophenol	0.10	0.010	0.1000	0	103	25.3	146			
2,4,6-Trichlorophenol	0.098	0.010	0.1000	0	98.4	21.5	145			
Cresols, Total	0.37	0.010	0.3000	0	124	30	136			
Surr: 2-Fluorophenol	0.17		0.2000		84.1	15	124			
Surr: Phenol-d5	0.19		0.2000		96.8	15	118			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R33025			RunNo: 33025					
Prep Date:		Analysis Date: 3/23/2016			SeqNo: 1013096		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	12		10.00		118	70	130			
Surr: Toluene-d8	9.5		10.00		95.5	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R33025		RunNo: 33025						
Prep Date:		Analysis Date: 3/23/2016		SeqNo: 1013096		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID	100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	LCSW	Batch ID: R33025		RunNo: 33025						
Prep Date:		Analysis Date: 3/23/2016		SeqNo: 1013095		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.4	70	130			
Surr: Dibromofluoromethane	12		10.00		115	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R33025		RunNo: 33025						
Prep Date:		Analysis Date: 3/23/2016		SeqNo: 1013096		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603994

Date Reported: 4/19/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Middle Mesa Non Exempt

Project: Middle Mesa CS

Collection Date: 3/17/2016 9:39:00 AM

Lab ID: 1603994-001

Matrix: AQUEOUS

Received Date: 3/18/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: AG			
n-Propylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
sec-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Styrene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
tert-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
trans-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Trichlorofluoromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Vinyl chloride	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Xylenes, Total	ND	0.30		mg/L	200	3/23/2016 3:33:24 PM	R33025
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025
Surr: Dibromofluoromethane	118	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025
Surr: Toluene-d8	103	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603994

Date Reported: 4/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Middle Mesa Non Exempt

Project: Middle Mesa CS

Collection Date: 3/17/2016 9:39:00 AM

Lab ID: 1603994-001

Matrix: AQUEOUS

Received Date: 3/18/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: AG		
Naphthalene	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
1-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 3:33:24 PM	R33025
Acetone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromodichloromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromoform	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromomethane	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Butanone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Carbon disulfide	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Carbon Tetrachloride	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chloroethane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chloroform	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chloromethane	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
4-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
cis-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Dibromochloromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Dibromomethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1-Dichloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1-Dichloroethene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,3-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
2,2-Dichloropropane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Hexachlorobutadiene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Hexanone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Isopropylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
4-Isopropyltoluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Methylene Chloride	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025
n-Butylbenzene	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603994

Date Reported: 4/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Middle Mesa Non Exempt

Project: Middle Mesa CS

Collection Date: 3/17/2016 9:39:00 AM

Lab ID: 1603994-001

Matrix: AQUEOUS

Received Date: 3/18/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
3+4-Methylphenol	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
Phenol	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/24/2016 3:52:21 PM	24409
Hexachlorobenzene	ND	0.13		mg/L	1	3/24/2016 3:52:21 PM	24409
Hexachlorobutadiene	ND	0.50		mg/L	1	3/24/2016 3:52:21 PM	24409
Hexachloroethane	ND	3.0		mg/L	1	3/24/2016 3:52:21 PM	24409
Nitrobenzene	ND	2.0		mg/L	1	3/24/2016 3:52:21 PM	24409
Pentachlorophenol	ND	100		mg/L	1	3/24/2016 3:52:21 PM	24409
Pyridine	ND	5.0		mg/L	1	3/24/2016 3:52:21 PM	24409
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/24/2016 3:52:21 PM	24409
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/24/2016 3:52:21 PM	24409
Cresols, Total	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
Surr: 2-Fluorophenol	3.10	15-124	S	%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: Phenol-d5	8.28	15-118	S	%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: 2,4,6-Tribromophenol	9.01	15-148	S	%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: Nitrobenzene-d5	89.1	40.6-124		%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: 2-Fluorobiphenyl	80.0	35.7-128		%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: 4-Terphenyl-d14	73.2	18.8-115		%Rec	1	3/24/2016 3:52:21 PM	24409
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.00080		mg/L	1	3/25/2016 8:10:23 AM	24421
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/25/2016 1:11:34 PM	24414
Barium	ND	0.20		mg/L	1	3/25/2016 1:11:34 PM	24414
Cadmium	ND	0.020		mg/L	1	3/25/2016 1:11:34 PM	24414
Chromium	ND	0.060		mg/L	1	3/25/2016 1:11:34 PM	24414
Lead	ND	0.050		mg/L	1	3/25/2016 1:11:34 PM	24414
Selenium	ND	2.5		mg/L	5	3/25/2016 1:13:08 PM	24414
Silver	ND	0.050		mg/L	1	3/25/2016 1:11:34 PM	24414
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Toluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Ethylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 19, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Middle Mesa CS

OrderNo.: 1603994

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/18/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Hill Top Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL A Section 10 Township 27 North Range 11 West; 36.595129, -107.984824, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 10 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

TITLE: Operator

DATE: 1/2/17

SIGNATURE: *Adrian Hudson*

TELEPHONE NO.: (505) 854-6186

Surface Waste Management Facility Authorized Agent

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603527

RcptNo: 1

Received by/date:

SA 03/10/16

Logged By: Lindsay Mangin

3/10/2016 7:25:00 AM

July Mugo

Completed By: Lindsay Mangin

3/10/2016 8:42:48 AM

July Mugo

Reviewed By:

SA 03/10/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0° C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603527

22-Mar-16

Client: Souder, Miller and Associates

Project: Hill Top

Sample ID	MB-24202	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004070	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24202	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004071	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.4	80	120			
Barium	0.48	0.020	0.5000	0	96.5	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.0	80	120			
Chromium	0.48	0.0060	0.5000	0	95.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.1	80	120			
Selenium	0.49	0.050	0.5000	0	99.0	80	120			
Silver	0.099	0.0050	0.1000	0	99.2	80	120			

Sample ID	LCSD-24202	SampType:	LCSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSS02	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004072	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	104	80	120	4.47	20	
Barium	0.49	0.020	0.5000	0	98.5	80	120	2.12	20	
Cadmium	0.50	0.0020	0.5000	0	101	80	120	2.63	20	
Chromium	0.50	0.0060	0.5000	0	99.3	80	120	3.48	20	
Lead	0.50	0.0050	0.5000	0	100	80	120	3.12	20	
Selenium	0.52	0.050	0.5000	0	103	80	120	4.11	20	
Silver	0.10	0.0050	0.1000	0	101	80	120	1.48	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603527

22-Mar-16

Client: Souder, Miller and Associates

Project: Hill Top

Sample ID	MB-24205	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004533	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24205	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004534	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603527

22-Mar-16

Client: Souder, Miller and Associates

Project: Hill Top

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R32783		RunNo: 32783							
Prep Date:	Analysis Date: 3/14/2016		SeqNo: 1004413		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.1	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.4	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603527

22-Mar-16

Client: Souder, Miller and Associates

Project: Hill Top

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R32783		RunNo: 32783						
Prep Date:		Analysis Date: 3/14/2016		SeqNo: 1004412		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.0	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID	100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	LCSW	Batch ID: R32783		RunNo: 32783						
Prep Date:		Analysis Date: 3/14/2016		SeqNo: 1004413		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.3	70	130			
Toluene	23	1.0	20.00	0	117	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603527

22-Mar-16

Client: Souder, Miller and Associates

Project: Hill Top

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID:	PBW	Batch ID: R32783		RunNo: 32783							
Prep Date:		Analysis Date: 3/14/2016		SeqNo: 1004412		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	1.0									
Toluene	ND	1.0									
Ethylbenzene	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,2-Dichloroethane (EDC)	ND	1.0									
1,2-Dibromoethane (EDB)	ND	1.0									
Naphthalene	ND	2.0									
1-Methylnaphthalene	ND	4.0									
2-Methylnaphthalene	ND	4.0									
Acetone	ND	10									
Bromobenzene	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	3.0									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	2.0									
Chloroform	ND	1.0									
Chloromethane	ND	3.0									
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
cis-1,2-DCE	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	2.0									
Dibromochloromethane	ND	1.0									
Dibromomethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
Dichlorodifluoromethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2-Dichloropropane	ND	1.0									
1,3-Dichloropropane	ND	1.0									
2,2-Dichloropropane	ND	2.0									

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603527

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hill Top Non Exempt

Project: Hill Top

Collection Date: 3/9/2016 10:25:00 AM

Lab ID: 1603527-001

Matrix: AQUEOUS

Received Date: 3/10/2016 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
n-Propylbenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
sec-Butylbenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Styrene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
tert-Butylbenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/14/2016 8:42:09 PM	R32783
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
trans-1,2-DCE	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Trichlorofluoromethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/14/2016 8:42:09 PM	R32783
Vinyl chloride	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Xylenes, Total	ND	0.30		mg/L	200	3/14/2016 8:42:09 PM	R32783
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%Rec	200	3/14/2016 8:42:09 PM	R32783
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	200	3/14/2016 8:42:09 PM	R32783
Surr: Dibromofluoromethane	96.8	70-130		%Rec	200	3/14/2016 8:42:09 PM	R32783
Surr: Toluene-d8	96.8	70-130		%Rec	200	3/14/2016 8:42:09 PM	R32783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603527

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hill Top Non Exempt

Project: Hill Top

Collection Date: 3/9/2016 10:25:00 AM

Lab ID: 1603527-001

Matrix: AQUEOUS

Received Date: 3/10/2016 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: DJF		
Naphthalene	ND	0.40		mg/L	200	3/14/2016 8:42:09 PM	R32783
1-Methylnaphthalene	ND	0.80		mg/L	200	3/14/2016 8:42:09 PM	R32783
2-Methylnaphthalene	ND	0.80		mg/L	200	3/14/2016 8:42:09 PM	R32783
Acetone	13	2.0		mg/L	200	3/14/2016 8:42:09 PM	R32783
Bromobenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Bromodichloromethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Bromoform	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Bromomethane	ND	0.60		mg/L	200	3/14/2016 8:42:09 PM	R32783
2-Butanone	ND	2.0		mg/L	200	3/14/2016 8:42:09 PM	R32783
Carbon disulfide	ND	2.0		mg/L	200	3/14/2016 8:42:09 PM	R32783
Carbon Tetrachloride	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Chlorobenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Chloroethane	ND	0.40		mg/L	200	3/14/2016 8:42:09 PM	R32783
Chloroform	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Chloromethane	ND	0.60		mg/L	200	3/14/2016 8:42:09 PM	R32783
2-Chlorotoluene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
4-Chlorotoluene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
cis-1,2-DCE	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/14/2016 8:42:09 PM	R32783
Dibromochloromethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Dibromomethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,1-Dichloroethane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,1-Dichloroethene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2-Dichloropropane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,3-Dichloropropane	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
2,2-Dichloropropane	ND	0.40		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,1-Dichloropropene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Hexachlorobutadiene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
2-Hexanone	ND	2.0		mg/L	200	3/14/2016 8:42:09 PM	R32783
Isopropylbenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
4-Isopropyltoluene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/14/2016 8:42:09 PM	R32783
Methylene Chloride	ND	0.60		mg/L	200	3/14/2016 8:42:09 PM	R32783
n-Butylbenzene	ND	0.60		mg/L	200	3/14/2016 8:42:09 PM	R32783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 2 of 8
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603527

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hill Top Non Exempt

Project: Hill Top

Collection Date: 3/9/2016 10:25:00 AM

Lab ID: 1603527-001

Matrix: AQUEOUS

Received Date: 3/10/2016 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200	D	mg/L	10	3/16/2016 3:57:36 PM	24177
3+4-Methylphenol	ND	200	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Phenol	ND	200	D	mg/L	10	3/16/2016 3:57:36 PM	24177
2,4-Dinitrotoluene	ND	0.50	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Hexachlorobenzene	ND	0.50	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Hexachlorobutadiene	ND	0.50	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Hexachloroethane	ND	3.0	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Nitrobenzene	ND	2.0	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Pentachlorophenol	ND	100	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Pyridine	ND	5.0	D	mg/L	10	3/16/2016 3:57:36 PM	24177
2,4,5-Trichlorophenol	ND	400	D	mg/L	10	3/16/2016 3:57:36 PM	24177
2,4,6-Trichlorophenol	ND	2.0	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Cresols, Total	ND	200	D	mg/L	10	3/16/2016 3:57:36 PM	24177
Surr: 2-Fluorophenol	36.3	15-124	D	%Rec	10	3/16/2016 3:57:36 PM	24177
Surr: Phenol-d5	19.3	15-118	D	%Rec	10	3/16/2016 3:57:36 PM	24177
Surr: 2,4,6-Tribromophenol	48.9	15-148	D	%Rec	10	3/16/2016 3:57:36 PM	24177
Surr: Nitrobenzene-d5	48.0	40.6-124	D	%Rec	10	3/16/2016 3:57:36 PM	24177
Surr: 2-Fluorobiphenyl	57.2	35.7-128	D	%Rec	10	3/16/2016 3:57:36 PM	24177
Surr: 4-Terphenyl-d14	0	18.8-115	SD	%Rec	10	3/16/2016 3:57:36 PM	24177
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.00080		mg/L	1	3/14/2016 4:12:13 PM	24205
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	1.0		mg/L	50	3/18/2016 9:40:06 AM	24202
Barium	ND	0.040		mg/L	2	3/16/2016 8:37:58 AM	24202
Cadmium	0.0074	0.0020		mg/L	1	3/16/2016 8:09:41 AM	24202
Chromium	ND	0.30		mg/L	50	3/18/2016 9:40:06 AM	24202
Lead	ND	0.010		mg/L	2	3/16/2016 8:37:58 AM	24202
Selenium	ND	2.5		mg/L	50	3/18/2016 9:40:06 AM	24202
Silver	ND	0.0050		mg/L	1	3/16/2016 8:09:41 AM	24202
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Toluene	0.23	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Ethylbenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/14/2016 8:42:09 PM	R32783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 22, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Hill Top

OrderNo.: 1603527

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/10/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Angel Peak Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL E Section 20 Township 27 North Range 10 West; 36.561288, -107.926090, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ / bbbs Known Volume (to be entered by the operator at the end of the haul) 190 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hobson

TITLE: Operator

DATE: 1/2/17

SIGNATURE: *Adrian Hobson*

TELEPHONE NO.: (505) 334-6186

Surface Waste Management Facility Authorized Agent



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1809441

RcptNo: 1

Received by/date:

AG 09/09/16

Logged By: Lindsay Mangin

9/9/2016 7:30:00 AM

[Signature]

Completed By: Lindsay Mangin

9/9/2016 9:34:55 AM

[Signature]

Reviewed By:

jc 09/09/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

1
(2 or >12 unless noted)

Adjusted?

No

Checked by:

as

Special Handling (If applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609441

03-Oct-16

Client: Souder, Miller and Associates

Project: Enterprise Angel Peak

Sample ID	MB-27641	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	27641	RunNo:	37426					
Prep Date:	9/21/2016	Analysis Date:	9/22/2016	SeqNo:	1163336	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-27641	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	27641	RunNo:	37426					
Prep Date:	9/21/2016	Analysis Date:	9/22/2016	SeqNo:	1163337	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.2	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609441

03-Oct-16

Client: Souder, Miller and Associates

Project: Enterprise Angel Peak

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R37161		RunNo: 37161							
Prep Date:	Analysis Date: 9/13/2016		SeqNo: 1152624		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.7	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	70	130			

Sample ID 1609441-001a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: Angel Peak BGT	Batch ID: R37161		RunNo: 37161							
Prep Date:	Analysis Date: 9/13/2016		SeqNo: 1152648		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4800	200	4000	0.3476	120	70	130			
Toluene	4600	200	4000	0.6113	114	70	130			
Chlorobenzene	3800	200	4000	0	95.0	70	130			
1,1-Dichloroethene	4100	200	4000	0	104	70	130			
Trichloroethene (TCE)	4200	200	4000	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	2100		2000		105	70	130			
Surr: 4-Bromofluorobenzene	1900		2000		94.9	70	130			
Surr: Dibromofluoromethane	2200		2000		110	70	130			
Surr: Toluene-d8	1900		2000		95.4	70	130			

Sample ID 1609441-001a msd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: Angel Peak BGT	Batch ID: R37161		RunNo: 37161							
Prep Date:	Analysis Date: 9/13/2016		SeqNo: 1152649		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4500	200	4000	0.3476	113	70	130	6.06	20	
Toluene	4400	200	4000	0.6113	110	70	130	3.10	20	
Chlorobenzene	3700	200	4000	0	93.2	70	130	1.97	20	
1,1-Dichloroethene	3900	200	4000	0	97.6	70	130	6.03	20	
Trichloroethene (TCE)	4000	200	4000	0	101	70	130	4.53	20	
Surr: 1,2-Dichloroethane-d4	2000		2000		98.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	1900		2000		96.3	70	130	0	0	
Surr: Dibromofluoromethane	2000		2000		102	70	130	0	0	
Surr: Toluene-d8	1900		2000		94.6	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609441

03-Oct-16

Client: Souder, Miller and Associates

Project: Enterprise Angel Peak

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R37161		RunNo: 37161						
Prep Date:		Analysis Date: 9/13/2016		SeqNo: 1152623		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.8	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.6		10.00		95.7	70	130			

Sample ID	100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	LCSW	Batch ID: R37161		RunNo: 37161						
Prep Date:		Analysis Date: 9/13/2016		SeqNo: 1152624		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	19	1.0	20.00	0	97.0	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609441

03-Oct-16

Client: Souder, Miller and Associates

Project: Enterprise Angel Peak

Sample ID	rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	PBW	Batch ID: R37161	RunNo: 37161							
Prep Date:	Analysis Date: 9/13/2016		SeqNo: 1152623		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- | | |
|---|---|
| • Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609441

Date Reported: 10/3/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Angel Peak BGT

Project: Enterprise Angel Peak

Collection Date: 9/8/2016 2:30:00 PM

Lab ID: 1609441-001

Matrix: AQUEOUS

Received Date: 9/9/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: DJF		
n-Propylbenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
sec-Butylbenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Styrene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
tert-Butylbenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	9/13/2016 12:17:00 PM	R37161
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
trans-1,2-DCE	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,1,1-Trichloroethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,1,2-Trichloroethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Trichloroethene (TCE)	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Trichlorofluoromethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2,3-Trichloropropane	ND	0.40		mg/L	200	9/13/2016 12:17:00 PM	R37161
Vinyl chloride	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Xylenes, Total	ND	0.30		mg/L	200	9/13/2016 12:17:00 PM	R37161
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%Rec	200	9/13/2016 12:17:00 PM	R37161
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	200	9/13/2016 12:17:00 PM	R37161
Surr: Dibromofluoromethane	105	70-130		%Rec	200	9/13/2016 12:17:00 PM	R37161
Surr: Toluene-d8	97.4	70-130		%Rec	200	9/13/2016 12:17:00 PM	R37161

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609441

Date Reported: 10/3/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Angel Peak BGT

Project: Enterprise Angel Peak

Collection Date: 9/8/2016 2:30:00 PM

Lab ID: 1609441-001

Matrix: AQUEOUS

Received Date: 9/9/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: DJF		
Naphthalene	ND	0.40		mg/L	200	9/13/2016 12:17:00 PM	R37161
1-Methylnaphthalene	ND	0.80		mg/L	200	9/13/2016 12:17:00 PM	R37161
2-Methylnaphthalene	ND	0.80		mg/L	200	9/13/2016 12:17:00 PM	R37161
Acetone	ND	2.0		mg/L	200	9/13/2016 12:17:00 PM	R37161
Bromobenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Bromodichloromethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Bromoform	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Bromomethane	ND	0.60		mg/L	200	9/13/2016 12:17:00 PM	R37161
2-Butanone	ND	2.0		mg/L	200	9/13/2016 12:17:00 PM	R37161
Carbon disulfide	ND	2.0		mg/L	200	9/13/2016 12:17:00 PM	R37161
Carbon Tetrachloride	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Chlorobenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Chloroethane	ND	0.40		mg/L	200	9/13/2016 12:17:00 PM	R37161
Chloroform	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Chloromethane	ND	0.60		mg/L	200	9/13/2016 12:17:00 PM	R37161
2-Chlorotoluene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
4-Chlorotoluene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
cis-1,2-DCE	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	9/13/2016 12:17:00 PM	R37161
Dibromochloromethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Dibromomethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2-Dichlorobenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,3-Dichlorobenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,4-Dichlorobenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Dichlorodifluoromethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,1-Dichloroethane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,1-Dichloroethene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2-Dichloropropane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,3-Dichloropropane	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
2,2-Dichloropropane	ND	0.40		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,1-Dichloropropene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Hexachlorobutadiene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
2-Hexanone	ND	2.0		mg/L	200	9/13/2016 12:17:00 PM	R37161
Isopropylbenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
4-Isopropyltoluene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
4-Methyl-2-pentanone	ND	2.0		mg/L	200	9/13/2016 12:17:00 PM	R37161
Methylene Chloride	ND	0.60		mg/L	200	9/13/2016 12:17:00 PM	R37161
n-Butylbenzene	ND	0.60		mg/L	200	9/13/2016 12:17:00 PM	R37161

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609441

Date Reported: 10/3/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Angel Peak BGT

Project: Enterprise Angel Peak

Collection Date: 9/8/2016 2:30:00 PM

Lab ID: 1609441-001

Matrix: AQUEOUS

Received Date: 9/9/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	9/14/2016 4:58:02 PM	27476
3+4-Methylphenol	ND	200		mg/L	1	9/14/2016 4:58:02 PM	27476
Phenol	ND	200		mg/L	1	9/14/2016 4:58:02 PM	27476
2,4-Dinitrotoluene	ND	0.13		mg/L	1	9/14/2016 4:58:02 PM	27476
Hexachlorobenzene	ND	0.13		mg/L	1	9/14/2016 4:58:02 PM	27476
Hexachlorobutadiene	ND	0.50		mg/L	1	9/14/2016 4:58:02 PM	27476
Hexachloroethane	ND	3.0		mg/L	1	9/14/2016 4:58:02 PM	27476
Nitrobenzene	ND	2.0		mg/L	1	9/14/2016 4:58:02 PM	27476
Pentachlorophenol	ND	100		mg/L	1	9/14/2016 4:58:02 PM	27476
Pyridine	ND	5.0		mg/L	1	9/14/2016 4:58:02 PM	27476
2,4,5-Trichlorophenol	ND	400		mg/L	1	9/14/2016 4:58:02 PM	27476
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	9/14/2016 4:58:02 PM	27476
Cresols, Total	ND	200		mg/L	1	9/14/2016 4:58:02 PM	27476
Surr: 2-Fluorophenol	15.1	15-124		%Rec	1	9/14/2016 4:58:02 PM	27476
Surr: Phenol-d5	19.4	15-118		%Rec	1	9/14/2016 4:58:02 PM	27476
Surr: 2,4,6-Tribromophenol	27.3	15-148		%Rec	1	9/14/2016 4:58:02 PM	27476
Surr: Nitrobenzene-d5	45.8	40.6-124		%Rec	1	9/14/2016 4:58:02 PM	27476
Surr: 2-Fluorobiphenyl	39.2	35.7-128		%Rec	1	9/14/2016 4:58:02 PM	27476
Surr: 4-Terphenyl-d14	28.7	18.8-115		%Rec	1	9/14/2016 4:58:02 PM	27476
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	0.00076	0.00020		mg/L	1	9/22/2016 3:36:35 PM	27641
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.020		mg/L	1	9/22/2016 3:48:44 PM	27619
Barium	0.048	0.020		mg/L	1	9/22/2016 3:48:44 PM	27619
Cadmium	ND	0.0020		mg/L	1	9/22/2016 3:48:44 PM	27619
Chromium	ND	0.0060		mg/L	1	9/22/2016 3:48:44 PM	27619
Lead	ND	0.0050		mg/L	1	9/22/2016 3:48:44 PM	27619
Selenium	ND	0.050		mg/L	1	9/22/2016 3:48:44 PM	27619
Silver	ND	0.0050		mg/L	1	9/22/2016 3:48:44 PM	27619
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.50		mg/L	200	9/13/2016 12:17:00 PM	R37161
Toluene	0.61	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Ethylbenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	9/13/2016 12:17:00 PM	R37161

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 03, 2016

Tom Long
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Enterprise Angel Peak

OrderNo.: 1609441

Dear Tom Long:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/9/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-138
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401	
2. Originating Site: AID 144 LID 699 – Four Corners Lateral (Kutz to MP 312)	Bill To AFE A21190
3. Location of Material (Street Address, City, State or ULSTR): North 1/4 of Section 29, T16N, R1W, Sandoval County, NM; 35 35.632', -106 57.627'	
4. Source and Description of Waste: Diesel Fuel Estimated Volume <u>9</u> yd ³ (bbl) Known Volume (to be entered by the operator at the end of the haul) _____ yd ³ / bbls	
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, Thomas Long <i>Thomas Long</i> representative or authorized agent for Enterprise Field Services, LLC do hereby PRINT & SIGN NAME COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) ☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load ☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4) GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <i>Thomas Long</i> 6-23-15, representative for Enterprise Field Services, LLC authorize Agua Moss, LLC. to Generator Signature complete the required testing/sign the Generator Waste Testing Certification. I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.	
5. Transporter: Agua Moss	

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Name and Facility Permit #: Agua Moss, LLC. Permit #UIC1-005
Address of Facility: County Road 350 #345 Farmington, NM 87402
Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: _____

TITLE: _____

DATE: _____

SIGNATURE: _____

TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Negro Canyon Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL O Section 14 Township 31 North Range 8 West; 36.893574, -107.644755, -108.088655, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 80 yd³ 0 bbls Known Volume (to be entered by the operator at the end of the haul) 0 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete
Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. Transporter: Triple S Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hobson

SIGNATURE: Adrian Hobson

Surface Waste Management Facility Authorized Agent

TITLE: Operator

TELEPHONE NO.: (505) 394-6186

DATE: 1/2/17

Chain-of-Custody Record

Turn-Around Time:

Ident: **SMFA**

☒ Standard ☐ Rush

Billing Address: **401 W Broadway**

Project Name: **Niegro Canyon CS**

Farmington, NM 87401

Project #:

Phone #: **505-325-7535**

Fax #: **505-325-7535**

Project Manager:

VOC Package: **Standard**

Tom Long / Ashery Maxwell

☐ Level 4 (Full Validation)

Creditation

NELAP ☐ Other

EDD (Type)

Sampler: **Easy Lab**
On Ice: ☒ Yes ☐ No
Sample Temperature: **23.10°C = 73.6°F**

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

11/11/15 Agiles Negro Canyon BOR

Various Various

BTEX + MTBE + TMB's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	X
RCRA 8 Metals	X
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	X
8270 (Semi-VOA)	
Air Bubbles (Y or N)	



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Relinquished by: **[Signature]** Date Time

Relinquished by: **[Signature]** Date Time

Site: **1735**

Received by: **[Signature]** Date Time

Site: **1847** **Anastasia** **03/14/16 0945** **cc: Tom Long / Enterprise**

Remarks: **8260 Full List: TCLP Report**

Compound at TCLP limits

Invoice Enterprise

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603833

RcptNo: 1

Received by/date:

CM 03/16/16

Logged By: Anne Thorne

3/16/2016 7:45:00 AM

Anne Thorne

Completed By: Anne Thorne

3/16/2016

Anne Thorne

Reviewed By:

RT 3/16/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

1
(2 or >12 unless noted)

Adjusted?

NO

Checked by:

AJ

Special Handling (If applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603833

08-Apr-16

Client: Souder, Miller and Associates

Project: Negro Canyon CS

Sample ID	MB-24414	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24414	RunNo:	33073					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1014893	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24414	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24414	RunNo:	33073					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1014894	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.4	80	120			
Barium	0.48	0.020	0.5000	0	96.2	80	120			
Cadmium	0.48	0.0020	0.5000	0	95.6	80	120			
Chromium	0.48	0.0060	0.5000	0	96.0	80	120			
Lead	0.47	0.0050	0.5000	0	94.8	80	120			
Selenium	0.48	0.050	0.5000	0	96.3	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

Sample ID	LCSD-24414	SampType:	LCSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSS02	Batch ID:	24414	RunNo:	33073					
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1014895	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120	0.315	20	
Barium	0.48	0.020	0.5000	0	96.1	80	120	0.164	20	
Cadmium	0.48	0.0020	0.5000	0	95.7	80	120	0.105	20	
Chromium	0.48	0.0060	0.5000	0	96.1	80	120	0.0875	20	
Lead	0.47	0.0050	0.5000	0	94.6	80	120	0.232	20	
Selenium	0.48	0.050	0.5000	0	96.8	80	120	0.480	20	
Silver	0.097	0.0050	0.1000	0	97.3	80	120	0.123	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603833

08-Apr-16

Client: Souder, Miller and Associates

Project: Negro Canyon CS

Sample ID	MB-24317	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24317	RunNo:	32894					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008338	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24317	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24317	RunNo:	32894					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008339	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603833

08-Apr-16

Client: Souder, Miller and Associates

Project: Negro Canyon CS

Sample ID	100ng lcs c	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R32988	RunNo:	32988					
Prep Date:		Analysis Date:	3/22/2016	SeqNo:	1011773	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603833

08-Apr-16

Client: Souder, Miller and Associates

Project: Negro Canyon CS

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R32988		RunNo: 32988						
Prep Date:	Analysis Date: 3/22/2016		SeqNo: 1011772		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	100ng lcs c	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	LCSW	Batch ID: R32988	RunNo: 32988							
Prep Date:	Analysis Date: 3/22/2016		SeqNo: 1011773		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	22	1.0	20.00	0	110	70	130			
Toluene	22	1.0	20.00	0	108	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603833

08-Apr-16

Client: Souder, Miller and Associates

Project: Negro Canyon CS

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32988			RunNo: 32988					
Prep Date:		Analysis Date: 3/22/2016			SeqNo: 1011772 Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603833

Date Reported: 4/8/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Negro Canyon Non Exempt

Project: Negro Canyon CS

Collection Date: 3/15/2016 11:45:00 AM

Lab ID: 1603833-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
n-Propylbenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
sec-Butylbenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Styrene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
tert-Butylbenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/22/2016 9:49:46 PM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
trans-1,2-DCE	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Trichlorofluoromethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/22/2016 9:49:46 PM
Vinyl chloride	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Xylenes, Total	ND	0.30		mg/L	200	3/22/2016 9:49:46 PM
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	200	3/22/2016 9:49:46 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	200	3/22/2016 9:49:46 PM
Surr: Dibromofluoromethane	98.4	70-130		%Rec	200	3/22/2016 9:49:46 PM
Surr: Toluene-d8	104	70-130		%Rec	200	3/22/2016 9:49:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603833

Date Reported: 4/8/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Negro Canyon Non Exempt

Project: Negro Canyon CS

Collection Date: 3/15/2016 11:45:00 AM

Lab ID: 1603833-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Naphthalene	ND	0.40		mg/L	200	3/22/2016 9:49:46 PM
1-Methylnaphthalene	ND	0.80		mg/L	200	3/22/2016 9:49:46 PM
2-Methylnaphthalene	ND	0.80		mg/L	200	3/22/2016 9:49:46 PM
Acetone	ND	2.0		mg/L	200	3/22/2016 9:49:46 PM
Bromobenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Bromodichloromethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Bromoform	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Bromomethane	ND	0.60		mg/L	200	3/22/2016 9:49:46 PM
2-Butanone	ND	2.0		mg/L	200	3/22/2016 9:49:46 PM
Carbon disulfide	ND	2.0		mg/L	200	3/22/2016 9:49:46 PM
Carbon Tetrachloride	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Chlorobenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Chloroethane	ND	0.40		mg/L	200	3/22/2016 9:49:46 PM
Chloroform	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Chloromethane	ND	0.60		mg/L	200	3/22/2016 9:49:46 PM
2-Chlorotoluene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
4-Chlorotoluene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
cis-1,2-DCE	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/22/2016 9:49:46 PM
Dibromochloromethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Dibromomethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,1-Dichloroethane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,1-Dichloroethene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2-Dichloropropane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,3-Dichloropropane	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
2,2-Dichloropropane	ND	0.40		mg/L	200	3/22/2016 9:49:46 PM
1,1-Dichloropropene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Hexachlorobutadiene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
2-Hexanone	ND	2.0		mg/L	200	3/22/2016 9:49:46 PM
Isopropylbenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
4-Isopropyltoluene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/22/2016 9:49:46 PM
Methylene Chloride	ND	0.60		mg/L	200	3/22/2016 9:49:46 PM
n-Butylbenzene	ND	0.60		mg/L	200	3/22/2016 9:49:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603833

Date Reported: 4/8/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Negro Canyon Non Exempt

Project: Negro Canyon CS

Collection Date: 3/15/2016 11:45:00 AM

Lab ID: 1603833-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: pmf
Mercury	0.0012	0.00080		mg/L	1	3/18/2016 11:07:47 AM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/25/2016 12:57:12 PM
Barium	ND	0.20		mg/L	1	3/25/2016 12:57:12 PM
Cadmium	ND	0.020		mg/L	1	3/25/2016 12:57:12 PM
Chromium	ND	0.060		mg/L	1	3/25/2016 12:57:12 PM
Lead	ND	0.050		mg/L	1	3/25/2016 12:57:12 PM
Selenium	ND	0.50		mg/L	1	3/25/2016 12:57:12 PM
Silver	ND	0.050		mg/L	1	3/25/2016 12:57:12 PM
EPA METHOD 8270C TCLP						Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/17/2016 6:41:51 PM
3+4-Methylphenol	ND	200		mg/L	1	3/17/2016 6:41:51 PM
Phenol	ND	200		mg/L	1	3/17/2016 6:41:51 PM
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/17/2016 6:41:51 PM
Hexachlorobenzene	ND	0.13		mg/L	1	3/17/2016 6:41:51 PM
Hexachlorobutadiene	ND	0.50		mg/L	1	3/17/2016 6:41:51 PM
Hexachloroethane	ND	3.0		mg/L	1	3/17/2016 6:41:51 PM
Nitrobenzene	ND	2.0		mg/L	1	3/17/2016 6:41:51 PM
Pentachlorophenol	ND	100		mg/L	1	3/17/2016 6:41:51 PM
Pyridine	ND	5.0		mg/L	1	3/17/2016 6:41:51 PM
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/17/2016 6:41:51 PM
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/17/2016 6:41:51 PM
Cresols, Total	ND	200		mg/L	1	3/17/2016 6:41:51 PM
Surr: 2-Fluorophenol	58.9	15-124		%Rec	1	3/17/2016 6:41:51 PM
Surr: Phenol-d5	43.1	15-118		%Rec	1	3/17/2016 6:41:51 PM
Surr: 2,4,6-Tribromophenol	102	15-148		%Rec	1	3/17/2016 6:41:51 PM
Surr: Nitrobenzene-d5	94.1	40.6-124		%Rec	1	3/17/2016 6:41:51 PM
Surr: 2-Fluorobiphenyl	103	35.7-128		%Rec	1	3/17/2016 6:41:51 PM
Surr: 4-Terphenyl-d14	69.4	18.8-115		%Rec	1	3/17/2016 6:41:51 PM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Toluene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Ethylbenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/22/2016 9:49:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 08, 2016

Ashley Maxwell

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX

RE: Negro Canyon CS

OrderNo.: 1603833

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Sandstone Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL I Section 32 Township 31 North Range 8 West; 36.853298, -107.690996

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 95 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

TITLE: Operator

DATE: 11/2/17

SIGNATURE: Adrian Hudson

TELEPHONE NO.: (505) 774-6186

Surface Waste Management Facility Authorized Agent

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603831

RcpID: 1

Received by/date: Lina 3/16/16

Logged By: Anne Thorne 3/16/2016 7:45:00 AM

Completed By: Anne Thorne 3/16/2016

Reviewed By: AT 3-16-16

Anne Thorne

Anne Thorne

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Cooler

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 5.0° C? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization) Yes ☒ No ☐

of preserved bottles checked for pH 1
(2 or >12 unless noted)
Adjusted? No
Checked by: AS

Special Handling (If applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603831

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID	MB-24322	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24322	RunNo:	32920					
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009590	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24322	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24322	RunNo:	32920					
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009591	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.020	0.5000	0	96.0	80	120			
Barium	0.46	0.020	0.5000	0	92.0	80	120			
Cadmium	0.47	0.0020	0.5000	0	93.6	80	120			
Chromium	0.46	0.0060	0.5000	0	91.5	80	120			
Lead	0.46	0.0050	0.5000	0	91.4	80	120			
Selenium	0.46	0.050	0.5000	0	91.6	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603831

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID	MB-24317	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24317	RunNo:	32894					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008338	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24317		SampType:	LCS		TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW		Batch ID:	24317		RunNo:	32894				
Prep Date:	3/17/2016		Analysis Date:	3/18/2016		SeqNo:	1008339		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0051	0.00020	0.005000	0	102	80	120				

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603831

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID	rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	PBW	Batch ID: R32949	RunNo: 32949							
Prep Date:		Analysis Date: 3/21/2016	SeqNo: 1010388 Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603831

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R32949			RunNo: 32949					
Prep Date:		Analysis Date: 3/21/2016			SeqNo: 1010387		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	19	1.0	20.00	0	94.7	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	97.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R32949		RunNo: 32949						
Prep Date:		Analysis Date: 3/21/2016		SeqNo: 1010388		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603831

Date Reported: 3/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Sandstone Non Exempt

Project: Sandstone CS

Collection Date: 3/15/2016 10:05:00 AM

Lab ID: 1603831-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: AG		
n-Propylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
sec-Butylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Styrene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
tert-Butylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
trans-1,2-DCE	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Trichlorofluoromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Vinyl chloride	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Xylenes, Total	ND	0.30		mg/L	200	3/21/2016 5:55:36 PM	R32949
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949
Surr: Dibromofluoromethane	112	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949
Surr: Toluene-d8	104	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified
		Page 3 of 8

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603831

Date Reported: 3/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Sandstone Non Exempt

Project: Sandstone CS

Collection Date: 3/15/2016 10:05:00 AM

Lab ID: 1603831-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Naphthalene	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
1-Methylnaphthalene	ND	0.80		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Methylnaphthalene	ND	0.80		mg/L	200	3/21/2016 5:55:36 PM	R32949
Acetone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromodichloromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromoform	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromomethane	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Butanone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Carbon disulfide	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Carbon Tetrachloride	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chloroethane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chloroform	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chloromethane	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Chlorotoluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
4-Chlorotoluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
cis-1,2-DCE	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Dibromochloromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Dibromomethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1-Dichloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1-Dichloroethene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dichloropropane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,3-Dichloropropane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
2,2-Dichloropropane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1-Dichloropropene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Hexachlorobutadiene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Hexanone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Isopropylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
4-Isopropyltoluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Methylene Chloride	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949
n-Butylbenzene	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603831

Date Reported: 3/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Sandstone Non Exempt

Project: Sandstone CS

Collection Date: 3/15/2016 10:05:00 AM

Lab ID: 1603831-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
3+4-Methylphenol	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Phenol	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
2,4-Dinitrotoluene	ND	0.25	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Hexachlorobenzene	ND	0.25	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Hexachlorobutadiene	ND	0.50	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Hexachloroethane	ND	3.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Nitrobenzene	ND	2.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Pentachlorophenol	ND	100	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Pyridine	ND	5.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
2,4,5-Trichlorophenol	ND	400	D	mg/L	1	3/17/2016 8:12:20 PM	24302
2,4,6-Trichlorophenol	ND	2.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Cresols, Total	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Surr: 2-Fluorophenol	14.8	15-124	SD	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: Phenol-d5	16.1	15-118	D	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: 2,4,6-Tribromophenol	42.8	15-148	D	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: Nitrobenzene-d5	35.2	40.6-124	SD	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: 2-Fluorobiphenyl	41.0	35.7-128	D	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: 4-Terphenyl-d14	90.3	18.8-115	D	%Rec	1	3/17/2016 8:12:20 PM	24302
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	0.0014	0.00080		mg/L	1	3/18/2016 11:05:44 AM	24317
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/21/2016 8:57:49 AM	24322
Barium	9.4	0.20		mg/L	1	3/21/2016 8:57:49 AM	24322
Cadmium	0.28	0.020		mg/L	1	3/21/2016 8:57:49 AM	24322
Chromium	0.60	0.060		mg/L	1	3/21/2016 8:57:49 AM	24322
Lead	0.97	0.050		mg/L	1	3/21/2016 8:57:49 AM	24322
Selenium	ND	0.50		mg/L	1	3/21/2016 8:57:49 AM	24322
Silver	ND	0.050		mg/L	1	3/21/2016 8:57:49 AM	24322
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Toluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Ethylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 25, 2016

Ashley Maxwell

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX

RE: Sandstone CS

OrderNo.: 1603831

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Buena Vista Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL B Section 13 Township 30 North Range 9 West; 36.8173489, -107.729996

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 574 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Alvina Hudson

SIGNATURE: *Alvina Hudson*

TITLE: Operator

DATE: 1/2/17

TELEPHONE NO.: 505 334 6186

Surface Waste Management Facility Authorized Agent

Chain-of-Custody Record

Client:

SWA

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Buenavista CS

Billing Address: 401 N. Broadway

Project #:

Phone #: 505 325-7535

Fax #: 505 325-7535

Project Manager:

Mail or Fax #: Ashlynn Maxwell

Tom Lewis

AQC Package: Susan Willis, Com

Ashlynn Maxwell

Standard

☐ Level 4 (Full Validation)

Creditation

NELAP ☐ Other

EDD (Type)

Sampler: On Ice: ☒ Yes ☐ No

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

5-16 12:38 420 Buenavista ^{Not} Visions Visions 1603836 201

BTEX + MTBE + TMB's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	X
RCRA 8 Metals	X
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	X
8270 (Semi-VOA)	
Air Bubbles (Y or N)	



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Relinquished by: 3/17/05
Received by: 3/15/06 1735

Remarks: 8260 Full List: Report TELP
Compounds At TELP Limits
cc Tom Lewis/Enterspace



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1803836

RcptNo: 1

Received by/date:

LM 03/16/16

Logged By: Anne Thorne

3/16/2016 7:45:00 AM

Anne Thorne

Completed By: Anne Thorne

3/16/2016

Anne Thorne

Reviewed By:

pt 3-16-16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: 1
(<2 or >12 unless noted)
Adjusted? No
Checked by: aj

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603836

25-Mar-16

Client: Souder, Miller and Associates

Project: Buena Vista CS

Sample ID	1603836-001CMSD	SampType	MSD	TestCode	EPA 6010B: Total Recoverable Metals					
Client ID	Buena Vista Non Ex	Batch ID	24322	RunNo	32920					
Prep Date	3/17/2016	Analysis Date	3/21/2016	SeqNo	1009605	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	4.4	0.20	5.000	0	87.6	75	125	5.94	20	
Cadmium	4.4	0.020	5.000	0	88.7	75	125	5.81	20	
Chromium	4.4	0.060	5.000	0	87.6	75	125	6.37	20	
Lead	4.3	0.050	5.000	0	86.0	75	125	6.24	20	
Selenium	5.1	0.50	5.000	0	102	75	125	3.56	20	
Silver	0.92	0.050	1.000	0	91.9	75	125	4.47	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603836

25-Mar-16

Client: Souder, Miller and Associates

Project: Buena Vista CS

Sample ID	vsb dell	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R32989	RunNo:	32989					
Prep Date:		Analysis Date:	3/22/2016	SeqNo:	1011825	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	12		10.00		118	70	130			
Surr: Toluene-d8	9.3		10.00		92.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603836

25-Mar-16

Client: Souder, Miller and Associates

Project: Buena Vista CS

Sample ID vsb del	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R32989		RunNo: 32989							
Prep Date:	Analysis Date: 3/22/2016		SeqNo: 1011825		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603836

25-Mar-16

Client: Souder, Miller and Associates

Project: Bucna Vista CS

Sample ID	100ng ics2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	LCSW	Batch ID: R32989		RunNo: 32989						
Prep Date:		Analysis Date: 3/22/2016		SeqNo: 1011824		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	18	1.0	20.00	0	92.2	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	12		10.00		116	70	130			
Surr: Toluene-d8	9.2		10.00		91.7	70	130			

Sample ID	vsb dell	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32989			RunNo: 32989					
Prep Date:		Analysis Date: 3/22/2016			SeqNo: 1011825		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603836

Date Reported: 3/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Buena Vista Non Exempt

Project: Buena Vista CS

Collection Date: 3/15/2016 12:38:00 PM

Lab ID: 1603836-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
n-Propylbenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
sec-Butylbenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Styrene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
tert-Butylbenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/22/2016 3:22:44 PM	R32989
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
trans-1,2-DCE	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Trichlorofluoromethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/22/2016 3:22:44 PM	R32989
Vinyl chloride	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Xylenes, Total	ND	0.30		mg/L	200	3/22/2016 3:22:44 PM	R32989
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	200	3/22/2016 3:22:44 PM	R32989
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	200	3/22/2016 3:22:44 PM	R32989
Surr: Dibromofluoromethane	119	70-130		%Rec	200	3/22/2016 3:22:44 PM	R32989
Surr: Toluene-d8	101	70-130		%Rec	200	3/22/2016 3:22:44 PM	R32989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603836

Date Reported: 3/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Buena Vista Non Exempt

Project: Buena Vista CS

Collection Date: 3/15/2016 12:38:00 PM

Lab ID: 1603836-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Naphthalene	ND	0.40		mg/L	200	3/22/2016 3:22:44 PM	R32989
1-Methylnaphthalene	ND	0.80		mg/L	200	3/22/2016 3:22:44 PM	R32989
2-Methylnaphthalene	ND	0.80		mg/L	200	3/22/2016 3:22:44 PM	R32989
Acetone	ND	2.0		mg/L	200	3/22/2016 3:22:44 PM	R32989
Bromobenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Bromodichloromethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Bromoform	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Bromomethane	ND	0.60		mg/L	200	3/22/2016 3:22:44 PM	R32989
2-Butanone	ND	2.0		mg/L	200	3/22/2016 3:22:44 PM	R32989
Carbon disulfide	ND	2.0		mg/L	200	3/22/2016 3:22:44 PM	R32989
Carbon Tetrachloride	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Chlorobenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Chloroethane	ND	0.40		mg/L	200	3/22/2016 3:22:44 PM	R32989
Chloroform	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Chloromethane	ND	0.60		mg/L	200	3/22/2016 3:22:44 PM	R32989
2-Chlorotoluene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
4-Chlorotoluene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
cis-1,2-DCE	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/22/2016 3:22:44 PM	R32989
Dibromochloromethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Dibromomethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,1-Dichloroethane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,1-Dichloroethene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2-Dichloropropane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,3-Dichloropropane	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
2,2-Dichloropropane	ND	0.40		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,1-Dichloropropene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Hexachlorobutadiene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
2-Hexanone	ND	2.0		mg/L	200	3/22/2016 3:22:44 PM	R32989
Isopropylbenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
4-Isopropyltoluene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/22/2016 3:22:44 PM	R32989
Methylene Chloride	ND	0.60		mg/L	200	3/22/2016 3:22:44 PM	R32989
n-Butylbenzene	ND	0.60		mg/L	200	3/22/2016 3:22:44 PM	R32989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603836

Date Reported: 3/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Bucna Vista Non Exempt

Project: Buena Vista CS

Collection Date: 3/15/2016 12:38:00 PM

Lab ID: 1603836-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/17/2016 7:12:02 PM	24302
3+4-Methylphenol	ND	200		mg/L	1	3/17/2016 7:12:02 PM	24302
Phenol	ND	200		mg/L	1	3/17/2016 7:12:02 PM	24302
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/17/2016 7:12:02 PM	24302
Hexachlorobenzene	ND	0.13		mg/L	1	3/17/2016 7:12:02 PM	24302
Hexachlorobutadiene	ND	0.50		mg/L	1	3/17/2016 7:12:02 PM	24302
Hexachloroethane	ND	3.0		mg/L	1	3/17/2016 7:12:02 PM	24302
Nitrobenzene	ND	2.0		mg/L	1	3/17/2016 7:12:02 PM	24302
Pentachlorophenol	ND	100		mg/L	1	3/17/2016 7:12:02 PM	24302
Pyridine	ND	5.0		mg/L	1	3/17/2016 7:12:02 PM	24302
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/17/2016 7:12:02 PM	24302
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/17/2016 7:12:02 PM	24302
Cresols, Total	ND	200		mg/L	1	3/17/2016 7:12:02 PM	24302
Surr: 2-Fluorophenol	33.5	15-124		%Rec	1	3/17/2016 7:12:02 PM	24302
Surr: Phenol-d5	30.8	15-118		%Rec	1	3/17/2016 7:12:02 PM	24302
Surr: 2,4,6-Tribromophenol	95.0	15-148		%Rec	1	3/17/2016 7:12:02 PM	24302
Surr: Nitrobenzene-d5	60.9	40.6-124		%Rec	1	3/17/2016 7:12:02 PM	24302
Surr: 2-Fluorobiphenyl	67.0	35.7-128		%Rec	1	3/17/2016 7:12:02 PM	24302
Surr: 4-Terphenyl-d14	55.9	18.8-115		%Rec	1	3/17/2016 7:12:02 PM	24302
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.0040		mg/L	5	3/18/2016 12:15:49 PM	24317
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/21/2016 9:04:13 AM	24322
Barium	ND	0.20		mg/L	1	3/21/2016 9:04:13 AM	24322
Cadmium	ND	0.020		mg/L	1	3/21/2016 9:04:13 AM	24322
Chromium	ND	0.060		mg/L	1	3/21/2016 9:04:13 AM	24322
Lead	ND	0.050		mg/L	1	3/21/2016 9:04:13 AM	24322
Selenium	ND	0.50		mg/L	1	3/21/2016 9:04:13 AM	24322
Silver	ND	0.050		mg/L	1	3/21/2016 9:04:13 AM	24322
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Toluene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Ethylbenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/22/2016 3:22:44 PM	R32989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 25, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Buena Vista CS

OrderNo.: 1603836

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

San Juan Manzanaras Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL H Section 17 Township 29 North Range 9 West; 36.726358, -107.794560, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 80 yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 103 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Various Apporved Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Alvin Hobbs

TITLE: operator

DATE: 1/2/17

SIGNATURE: [Signature]

TELEPHONE NO.: (505) 334-6186

Surface Waste Management Facility Authorized Agent



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603245

RcptNo: 1

Received by/date:

JA 03/04/16

Logged By: Anne Thorne

3/4/2016 8:15:00 AM

Anne Thorne

Completed By: Anne Thorne

3/4/2016

Anne Thorne

Reviewed By:

TO

03/04/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

1 (<2 or >12 unless noted)

Adjusted? No

Checked by: *JA*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603245

06-Apr-16

Client: Souder, Miller and Associates

Project: Manzanares (SJ) CS

Sample ID	MB-24136	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24136	RunNo:	32664					
Prep Date:	3/8/2016	Analysis Date:	3/9/2016	SeqNo:	999450	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24136	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24136	RunNo:	32664					
Prep Date:	3/8/2016	Analysis Date:	3/9/2016	SeqNo:	999451	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	103	80	120			
Barium	0.49	0.020	0.5000	0	98.0	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.1	80	120			
Chromium	0.49	0.0060	0.5000	0	98.8	80	120			
Lead	0.49	0.0050	0.5000	0	97.6	80	120			
Selenium	0.50	0.050	0.5000	0	100	80	120			
Silver	0.10	0.0050	0.1000	0	102	80	120			

Sample ID	LCSD-24136	SampType:	LCSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSS02	Batch ID:	24136	RunNo:	32664					
Prep Date:	3/8/2016	Analysis Date:	3/9/2016	SeqNo:	999452	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	101	80	120	1.64	20	
Barium	0.49	0.020	0.5000	0	97.7	80	120	0.323	20	
Cadmium	0.49	0.0020	0.5000	0	98.6	80	120	0.577	20	
Chromium	0.49	0.0060	0.5000	0	98.6	80	120	0.203	20	
Lead	0.49	0.0050	0.5000	0	97.9	80	120	0.315	20	
Selenium	0.51	0.050	0.5000	0	101	80	120	1.30	20	
Silver	0.10	0.0050	0.1000	0	101	80	120	0.757	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603245

06-Apr-16

Client: Souder, Miller and Associates

Project: Manzanares (SJ) CS

Sample ID	MB-24111	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998810	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24111	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998811	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	101	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603245

06-Apr-16

Client: Souder, Miller and Associates

Project: Manzanares (SJ) CS

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: C32762			RunNo: 32762						
Prep Date:	Analysis Date: 3/12/2016			SeqNo: 1003118		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.4	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603245

06-Apr-16

Client: Souder, Miller and Associates

Project: Manzanares (SJ) CS

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	C32762	RunNo:	32762					
Prep Date:		Analysis Date:	3/12/2016	SeqNo:	1003117	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.8	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	C32762	RunNo:	32762					
Prep Date:		Analysis Date:	3/12/2016	SeqNo:	1003118	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.9	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603245

06-Apr-16

Client: Souder, Miller and Associates

Project: Manzanares (SJ) CS

Sample ID	rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: C32762			RunNo: 32762					
Prep Date:		Analysis Date: 3/12/2016			SeqNo: 1003117		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603245

Date Reported: 4/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Manzanares T4 -5 Non Exempt

Project: Manzanares (SJ) CS

Collection Date: 3/3/2016 10:49:00 AM

Lab ID: 1603245-001

Matrix: AQUEOUS

Received Date: 3/4/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: DJF		
n-Propylbenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
sec-Butylbenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
Styrene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
tert-Butylbenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/12/2016 11:20:06 AM	C32762
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
trans-1,2-DCE	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
Trichlorofluoromethane	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/12/2016 11:20:06 AM	C32762
Vinyl chloride	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
Xylenes, Total	ND	0.30		mg/L	200	3/12/2016 11:20:06 AM	C32762
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	200	3/12/2016 11:20:06 AM	C32762
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	200	3/12/2016 11:20:06 AM	C32762
Surr: Dibromofluoromethane	92.8	70-130		%Rec	200	3/12/2016 11:20:06 AM	C32762
Surr: Toluene-d8	96.6	70-130		%Rec	200	3/12/2016 11:20:06 AM	C32762

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 3 of 8
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603245

Date Reported: 4/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Manzanares T4 -5 Non Exempt

Project: Manzanares (SJ) CS

Collection Date: 3/3/2016 10:49:00 AM

Lab ID: 1603245-001

Matrix: AQUEOUS

Received Date: 3/4/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/12/2016 11:11:54 PM	24087
3+4-Methylphenol	ND	200		mg/L	1	3/12/2016 11:11:54 PM	24087
Phenol	ND	200		mg/L	1	3/12/2016 11:11:54 PM	24087
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/12/2016 11:11:54 PM	24087
Hexachlorobenzene	ND	0.13		mg/L	1	3/12/2016 11:11:54 PM	24087
Hexachlorobutadiene	ND	0.50		mg/L	1	3/12/2016 11:11:54 PM	24087
Hexachloroethane	ND	3.0		mg/L	1	3/12/2016 11:11:54 PM	24087
Nitrobenzene	ND	2.0		mg/L	1	3/12/2016 11:11:54 PM	24087
Pentachlorophenol	ND	100		mg/L	1	3/12/2016 11:11:54 PM	24087
Pyridine	ND	5.0		mg/L	1	3/12/2016 11:11:54 PM	24087
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/12/2016 11:11:54 PM	24087
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/12/2016 11:11:54 PM	24087
Cresols, Total	ND	200		mg/L	1	3/12/2016 11:11:54 PM	24087
Surr: 2-Fluorophenol	66.1	15-124		%Rec	1	3/12/2016 11:11:54 PM	24087
Surr: Phenol-d5	50.5	15-118		%Rec	1	3/12/2016 11:11:54 PM	24087
Surr: 2,4,6-Tribromophenol	66.7	15-148		%Rec	1	3/12/2016 11:11:54 PM	24087
Surr: Nitrobenzene-d5	102	40.6-124		%Rec	1	3/12/2016 11:11:54 PM	24087
Surr: 2-Fluorobiphenyl	95.8	35.7-128		%Rec	1	3/12/2016 11:11:54 PM	24087
Surr: 4-Terphenyl-d14	72.7	18.8-115		%Rec	1	3/12/2016 11:11:54 PM	24087
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	0.024	0.0020		mg/L	10	3/8/2016 11:42:44 AM	24111
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/16/2016 7:55:46 AM	24136
Barium	ND	0.20		mg/L	1	3/16/2016 7:55:46 AM	24136
Cadmium	ND	0.020		mg/L	1	3/16/2016 7:55:46 AM	24136
Chromium	ND	0.060		mg/L	1	3/16/2016 7:55:46 AM	24136
Lead	0.060	0.050		mg/L	1	3/16/2016 7:55:46 AM	24136
Selenium	ND	0.50		mg/L	1	3/16/2016 7:55:46 AM	24136
Silver	ND	0.050		mg/L	1	3/16/2016 7:55:46 AM	24136
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
Toluene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
Ethylbenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/12/2016 11:20:06 AM	C32762

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

April 06, 2016

Ashley Maxwell

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX

RE: Manzanares (SJ) CS

OrderNo.: 1603245

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/4/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Hart Canyon #1 Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL H Section 29 Township 31 North Range 10 West; 36.872934, -107.900317, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt Waste Water Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ bbbls Known Volume (to be entered by the operator at the end of the haul) 75 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long* 3-22-16, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hudson

SIGNATURE: [Signature]

Surface Waste Management Facility Authorized Agent

TITLE: Operator

TELEPHONE NO.: (505) 334 6186

DATE: 1/2/17



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 21, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Hart Canyon #1

OrderNo.: 1603699

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
1901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603699

ReptNo: 1

Received by/date: [Signature] 03/15/16
Logged By: Lindsay Mangin 3/15/2016 8:00:00 AM
Completed By: Lindsay Mangin 3/15/2016 8:13:56 AM
Reviewed By: [Signature] 03/15/16

[Signature]
[Signature]

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603699

21-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon #1

Sample ID	Icsd-24298	SampType:	LCSD	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	LCSS02	Batch ID:	24298	RunNo:	32871					
Prep Date:	3/17/2016	Analysis Date:	3/17/2016	SeqNo:	1007480	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	520		625.0		83.2	32	199	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603699

21-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon #1

Sample ID	ics-24298	SampType: LCS		TestCode: SEMIVOLATILE ORGANICS by 8270C						
Client ID:	LCSW	Batch ID: 24298		RunNo: 32871						
Prep Date:	3/17/2016	Analysis Date: 3/17/2016		SeqNo: 1007479		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	610	62	625.0	0	98.1	75.6	115			
4-Chloro-3-methylphenol	1300	120	1250	0	105	83.2	125			
2-Chlorophenol	1200	62	1250	0	98.1	77.9	120			
1,4-Dichlorobenzene	590	62	625.0	0	94.8	73.2	117			
2,4-Dinitrotoluene	460	62	625.0	0	72.9	60.2	104			
N-Nitrosodi-n-propylamine	660	62	625.0	0	106	71.4	132			
4-Nitrophenol	1100	62	1250	0	86.8	69.8	121			
Pentachlorophenol	1100	120	1250	0	86.9	51.3	106			
Phenol	1300	62	1250	0	104	81.2	116			
Pyrene	550	62	625.0	0	87.7	71	113			
1,2,4-Trichlorobenzene	670	62	625.0	0	107	68.6	133			
Surr: 2-Fluorophenol	1100		1250		89.0	52.1	148			
Surr: Phenol-d5	1300		1250		103	58.2	135			
Surr: 2,4,6-Tribromophenol	1200		1250		99.5	63.8	129			
Surr: Nitrobenzene-d5	630		625.0		102	43.5	189			
Surr: 2-Fluorobiphenyl	580		625.0		92.3	76.8	130			
Surr: 4-Terphenyl-d14	460		625.0		73.2	32	199			

Sample ID	icsd-24298	SampType: LCSD			TestCode: SEMIVOLATILE ORGANICS by 8270C					
Client ID:	LCSS02	Batch ID: 24298			RunNo: 32871					
Prep Date:	3/17/2016	Analysis Date: 3/17/2016			SeqNo: 1007480		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	640	62	625.0	0	102	75.6	115	4.19	20	
4-Chloro-3-methylphenol	1300	120	1250	0	105	83.2	125	0.152	20	
2-Chlorophenol	1300	62	1250	0	104	77.9	120	5.38	20	
1,4-Dichlorobenzene	620	62	625.0	0	98.6	73.2	117	3.93	20	
2,4-Dinitrotoluene	490	62	625.0	0	78.8	60.2	104	7.70	20	
N-Nitrosodi-n-propylamine	660	62	625.0	0	105	71.4	132	1.21	20	
4-Nitrophenol	1100	62	1250	0	90.7	69.8	121	4.42	20	
Pentachlorophenol	1100	120	1250	0	89.3	51.3	106	2.79	20	
Phenol	1300	62	1250	0	104	81.2	116	0.173	20	
Pyrene	590	62	625.0	0	93.6	71	113	6.53	20	
1,2,4-Trichlorobenzene	700	62	625.0	0	111	68.6	133	4.11	20	
Surr: 2-Fluorophenol	1200		1250		96.9	52.1	148	0	0	
Surr: Phenol-d5	1300		1250		105	58.2	135	0	0	
Surr: 2,4,6-Tribromophenol	1300		1250		101	63.8	129	0	0	
Surr: Nitrobenzene-d5	630		625.0		101	43.5	189	0	0	
Surr: 2-Fluorobiphenyl	590		625.0		94.2	76.8	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603699

21-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon #1

Sample ID: mb-24298	SampType: MBLK		TestCode: SEMIVOLATILE ORGANICS by 8270C							
Client ID: PBW	Batch ID: 24298		RunNo: 32871							
Prep Date: 3/17/2016	Analysis Date: 3/17/2016		SeqNo: 1007478		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	62								
2,6-Dinitrotoluene	ND	62								
Fluoranthene	ND	62								
Fluorene	ND	62								
Hexachlorobenzene	ND	62								
Hexachlorobutadiene	ND	62								
Hexachlorocyclopentadiene	ND	62								
Hexachloroethane	ND	62								
Indeno(1,2,3-cd)pyrene	ND	62								
Isophorone	ND	62								
1-Methylnaphthalene	ND	62								
2-Methylnaphthalene	ND	62								
2-Methylphenol	ND	62								
3+4-Methylphenol	ND	62								
N-Nitrosodi-n-propylamine	ND	62								
N-Nitrosodimethylamine	ND	120								
N-Nitrosodiphenylamine	ND	62								
Naphthalene	ND	62								
2-Nitroaniline	ND	120								
3-Nitroaniline	ND	120								
4-Nitroaniline	ND	120								
Nitrobenzene	ND	62								
2-Nitrophenol	ND	62								
4-Nitrophenol	ND	62								
Pentachlorophenol	ND	120								
Phenanthrene	ND	62								
Phenol	ND	62								
Pyrene	ND	62								
Pyridine	ND	120								
1,2,4-Trichlorobenzene	ND	62								
2,4,5-Trichlorophenol	ND	62								
2,4,6-Trichlorophenol	ND	62								
Surr: 2-Fluorophenol	1300		1250		100	52.1	148			
Surr: Phenol-d5	1300		1250		106	58.2	135			
Surr: 2,4,6-Tribromophenol	1200		1250		99.6	63.8	129			
Surr: Nitrobenzene-d5	630		625.0		100	43.5	189			
Surr: 2-Fluorobiphenyl	610		625.0		97.7	76.8	130			
Surr: 4-Terphenyl-d14	470		625.0		75.5	32	199			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603699

21-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon #1

Sample ID	mb-24298	SampType: MBLK		TestCode: SEMIVOLATILE ORGANICS by 8270C						
Client ID:	PBW	Batch ID: 24298		RunNo: 32871						
Prep Date:	3/17/2016	Analysis Date: 3/17/2016		SeqNo: 1007478		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	62								
Acenaphthylene	ND	62								
Aniline	ND	62								
Anthracene	ND	62								
Benz(a)anthracene	ND	62								
Benzidine	ND	120								
Benzo(a)pyrene	ND	62								
Benzo(b)fluoranthene	ND	62								
Benzo(g,h,i)perylene	ND	62								
Benzo(k)fluoranthene	ND	62								
Benzoic acid	ND	120								
Benzyl alcohol	ND	120								
Bis(2-chloroethoxy)methane	ND	62								
Bis(2-chloroethyl)ether	ND	62								
Bis(2-chloroisopropyl)ether	ND	120								
Bis(2-ethylhexyl)phthalate	ND	62								
4-Bromophenyl phenyl ether	ND	62								
Butyl benzyl phthalate	ND	62								
Carbazole	ND	62								
4-Chloro-3-methylphenol	ND	120								
4-Chloroaniline	ND	120								
2-Chloronaphthalene	ND	62								
2-Chlorophenol	ND	62								
4-Chlorophenyl phenyl ether	ND	62								
Chrysene	ND	62								
Di-n-butyl phthalate	ND	62								
Di-n-octyl phthalate	ND	62								
Dibenz(a,h)anthracene	ND	75								
Dibenzofuran	ND	62								
1,2-Dichlorobenzene	ND	62								
1,3-Dichlorobenzene	ND	62								
1,4-Dichlorobenzene	ND	62								
3,3'-Dichlorobenzidine	ND	62								
Diethyl phthalate	ND	62								
Dimethyl phthalate	ND	75								
2,4-Dichlorophenol	ND	120								
2,4-Dimethylphenol	ND	62								
4,6-Dinitro-2-methylphenol	ND	120								
2,4-Dinitrophenol	ND	120								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603699

21-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon #1

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R32817		RunNo: 32817						
Prep Date:	Analysis Date: 3/15/2016		SeqNo: 1005585		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.3	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	12		10.00		116	70	130			
Surr: Toluene-d8	9.9		10.00		98.5	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603699

21-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon #1

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32817			RunNo: 32817					
Prep Date:		Analysis Date: 3/15/2016			SeqNo: 1005585		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603699

21-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon #1

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R32817		RunNo: 32817							
Prep Date:	Analysis Date: 3/15/2016		SeqNo: 1005584		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	19	1.0	20.00	0	92.9	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	23	1.0	20.00	0	114	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	12		10.00		122	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R32817		RunNo: 32817							
Prep Date:	Analysis Date: 3/15/2016		SeqNo: 1005585		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified



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Billings, MT 800.735.4489 • Casper, WY 888.235.0515
College Station, TX 888.690.2218 • Giffelle, WY 866.686.7175 • Helena, MT 877.472.0711**QA/QC Summary Report**

Prepared by Billings, MT Branch

Client: Hall Environmental

Report Date: 03/21/16

Project: Not Indicated

Work Order: B16031365

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW7471B										
Lab ID: ICV		Initial Calibration Verification Standard								Analytical Run: HGCV202-B_160318B
Mercury		0.00208	mg/kg	1.0	104	90	110			03/18/16 18:37
Method: SW7471B										Batch: 97712
Lab ID: MB-97712		Method Blank								Run: HGCV202-B_160318B
Mercury		0.002	mg/kg	0.0003						03/18/16 16:42
Lab ID: LCS3-97712		Laboratory Control Sample								Run: HGCV202-B_160318B
Mercury		0.207	mg/kg	1.0	102	80	120			03/18/16 18:44
Lab ID: B16031273-001ADIL		Serial Dilution								Run: HGCV202-B_160318B
Mercury		787	mg/kg	120		0	0	3.5		03/18/16 16:53
Lab ID: B16031482-001AMS3		Sample Matrix Spike								Run: HGCV202-B_160318B
Mercury		0.119	mg/kg	1.0	61	80	120			03/18/16 17:05
Lab ID: B16031482-001AMSD		Sample Matrix Spike Duplicate								Run: HGCV202-B_160318B
Mercury		0.131	mg/kg	1.0	74	80	120			03/18/16 17:06
										20 S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



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College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711**QA/QC Summary Report**

Prepared by Billings, MT Branch

Client: Hall Environmental

Report Date: 03/21/16

Project: Not Indicated

Work Order: B16031365

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 97662
Lab ID: B16031171-006APDS1	5	Post Digestion/Distillation Spike								03/18/16 19:07
Selenium		24.7	mg/kg	1.0	96	75	125			
Silver		11.0	mg/kg	1.0	106	75	125			
Lab ID: B16031171-006AMS3	5	Sample Matrix Spike								03/18/16 19:18
Arsenic		108	mg/kg	1.0	105	75	125			
Cadmium		49.3	mg/kg	1.0	99	75	125			
Lead		123	mg/kg	1.0	118	75	125			
Selenium		98.2	mg/kg	1.0	99	75	125			
Silver		60.6	mg/kg	1.0	122	75	125			
Lab ID: B16031171-006AMSD	5	Sample Matrix Spike Duplicate								03/18/16 19:21
Arsenic		106	mg/kg	1.0	104	75	125	1.4	20	
Cadmium		48.7	mg/kg	1.0	98	75	125	1.1	20	
Lead		124	mg/kg	1.0	119	75	125	0.7	20	
Selenium		96.2	mg/kg	1.0	97	75	125	2.0	20	
Silver		59.5	mg/kg	1.0	120	75	125	1.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Report Date: 03/21/16

Project: Not Indicated

Work Order: B16031365

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020		Analytical Run: ICPMS202-B_160318A								
Lab ID: QCS	5	Initial Calibration Verification Standard							03/18/16 11:55	
Arsenic		0.0511	mg/L	0.0010	102	90	110			
Cadmium		0.0246	mg/L	0.0010	98	90	110			
Lead		0.0479	mg/L	0.0010	96	90	110			
Selenium		0.0499	mg/L	0.0010	100	90	110			
Silver		0.0250	mg/L	0.0010	100	90	110			
Lab ID: ICSA	5	Interference Check Sample A							03/18/16 12:07	
Arsenic		0.000450	mg/L	0.0010						
Cadmium		0.000230	mg/L	0.0010						
Lead		0.000230	mg/L	0.0010						
Selenium		0.000140	mg/L	0.0010						
Silver		8.00E-05	mg/L	0.0010						
Lab ID: ICSAB	5	Interference Check Sample AB							03/18/16 12:10	
Arsenic		0.0106	mg/L	0.0010	106	70	130			
Cadmium		0.00933	mg/L	0.0010	93	70	130			
Lead		0.000240	mg/L	0.0010		0	0			
Selenium		0.0100	mg/L	0.0010	100	70	130			
Silver		0.0180	mg/L	0.0010	90	70	130			
Method: SW6020		Batch: 97662								
Lab ID: MB-97662	5	Method Blank				Run: ICPMS202-B_160318A			03/18/16 18:48	
Arsenic		ND	mg/kg	0.05						
Cadmium		0.03	mg/kg	0.008						
Lead		0.03	mg/kg	0.007						
Selenium		ND	mg/kg	0.06						
Silver		0.07	mg/kg	0.01						
Lab ID: B16031171-006ADIL	5	Serial Dilution				Run: ICPMS202-B_160318A			03/18/16 18:54	
Arsenic		3.08	mg/kg	1.3		0	0		10	N
Cadmium		0.493	mg/kg	1.0		0	0		10	N
Lead		6.71	mg/kg	1.0		0	0	1.0	10	
Selenium		ND	mg/kg	1.5		0	0		10	
Silver		ND	mg/kg	1.0		0	0		10	
Lab ID: SRM2-97662	5	Standard Reference Material				Run: ICPMS202-B_160318A			03/18/16 19:05	
Arsenic		ND	mg/kg	1.0		50	130			
Cadmium		98.9	mg/kg	1.0	99	70	130			
Lead		111	mg/kg	1.0	111	70	130			
Selenium		ND	mg/kg	1.0		70	130			
Silver		118	mg/kg	1.0	118	70	130			
Lab ID: B16031171-006APDS1	5	Post Digestion/Distillation Spike				Run: ICPMS202-B_160318A			03/18/16 19:07	
Arsenic		28.4	mg/kg	1.0	99	75	125			
Cadmium		24.1	mg/kg	1.0	93	75	125			
Lead		33.3	mg/kg	1.0	104	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B16031365-001
Client Sample ID: 1603699-001C Hart Canyon Non Exempt

Report Date: 03/21/16
Collection Date: 03/14/16 10:37
Date Received: 03/16/16
Matrix: Oil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		0.2		SW6020	03/18/16 18:59 / mas
Barium	4.6	mg/kg		0.5		SW6010B	03/17/16 23:33 / mas
Cadmium	0.12	mg/kg		0.05		SW6020	03/18/16 18:59 / mas
Chromium	0.7	mg/kg		0.1		SW6010B	03/17/16 23:33 / mas
Lead	2.8	mg/kg		0.1		SW8020	03/18/16 18:59 / mas
Mercury	ND	mg/kg		0.01		SW7471B	03/18/16 18:59 / ser
Selenium	ND	mg/kg		0.2		SW6020	03/18/16 18:59 / mas
Silver	ND	mg/kg	D	0.08		SW6020	03/18/16 18:59 / mas

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Analytical Report

Lab Order 1603699

Date Reported: 3/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: Hart Canyon #1

Lab ID: 1603699-001

Client Sample ID: Hart #1 Non Exempt

Collection Date: 3/14/2016 10:37:00 AM

Received Date: 3/15/2016 8:00:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: AG		
1,1-Dichloropropene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Hexachlorobutadiene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
2-Hexanone	ND	2.0		mg/L	200	3/15/2016 6:40:00 PM	R32817
Isopropylbenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
4-Isopropyltoluene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/15/2016 6:40:00 PM	R32817
Methylene Chloride	ND	0.60		mg/L	200	3/15/2016 6:40:00 PM	R32817
n-Butylbenzene	ND	0.60		mg/L	200	3/15/2016 6:40:00 PM	R32817
n-Propylbenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
sec-Butylbenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Styrene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
tert-Butylbenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/15/2016 6:40:00 PM	R32817
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
trans-1,2-DCE	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Trichlorofluoromethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/15/2016 6:40:00 PM	R32817
Vinyl chloride	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Xylenes, Total	ND	0.30		mg/L	200	3/15/2016 6:40:00 PM	R32817
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	200	3/15/2016 6:40:00 PM	R32817
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	200	3/15/2016 6:40:00 PM	R32817
Surr: Dibromofluoromethane	118	70-130		%Rec	200	3/15/2016 6:40:00 PM	R32817
Surr: Toluene-d8	107	70-130		%Rec	200	3/15/2016 6:40:00 PM	R32817

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603699

Date Reported: 3/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Hart #1 Non Exempt

Project: Hart Canyon #1

Collection Date: 3/14/2016 10:37:00 AM

Lab ID: 1603699-001

Matrix: AQUEOUS

Received Date: 3/15/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Toluene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Ethylbenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Naphthalene	ND	0.40		mg/L	200	3/15/2016 6:40:00 PM	R32817
1-Methylnaphthalene	ND	0.80		mg/L	200	3/15/2016 6:40:00 PM	R32817
2-Methylnaphthalene	ND	0.80		mg/L	200	3/15/2016 6:40:00 PM	R32817
Acetone	ND	2.0		mg/L	200	3/15/2016 6:40:00 PM	R32817
Bromobenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Bromodichloromethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Bromoform	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Bromomethane	ND	0.60		mg/L	200	3/15/2016 6:40:00 PM	R32817
2-Butanone	ND	2.0		mg/L	200	3/15/2016 6:40:00 PM	R32817
Carbon disulfide	ND	2.0		mg/L	200	3/15/2016 6:40:00 PM	R32817
Carbon Tetrachloride	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Chlorobenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Chloroethane	ND	0.40		mg/L	200	3/15/2016 6:40:00 PM	R32817
Chloroform	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Chloromethane	ND	0.60		mg/L	200	3/15/2016 6:40:00 PM	R32817
2-Chlorotoluene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
4-Chlorotoluene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
cis-1,2-DCE	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/15/2016 6:40:00 PM	R32817
Dibromochloromethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Dibromomethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,1-Dichloroethane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,1-Dichloroethene	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,2-Dichloropropane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
1,3-Dichloropropane	ND	0.20		mg/L	200	3/15/2016 6:40:00 PM	R32817
2,2-Dichloropropane	ND	0.40		mg/L	200	3/15/2016 6:40:00 PM	R32817

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603699

Date Reported: 3/21/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hart #1 Non Exempt

Project: Hart Canyon #1

Collection Date: 3/14/2016 10:37:00 AM

Lab ID: 1603699-001

Matrix: AQUEOUS

Received Date: 3/15/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SEMIVOLATILE ORGANICS BY 8270C							Analyst: DAM
2,4-Dinitrotoluene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2,6-Dinitrotoluene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Fluoranthene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Fluorene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Hexachlorobenzene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Hexachlorobutadiene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Hexachlorocyclopentadiene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Hexachloroethane	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Indeno(1,2,3-cd)pyrene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Isophorone	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
1-Methylnaphthalene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2-Methylnaphthalene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2-Methylphenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
3+4-Methylphenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
N-Nitrosodi-n-propylamine	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
N-Nitrosodimethylamine	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
N-Nitrosodiphenylamine	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Naphthalene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2-Nitroaniline	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
3-Nitroaniline	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
4-Nitroaniline	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Nitrobenzene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2-Nitrophenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
4-Nitrophenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Pentachlorophenol	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Phenanthrene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Phenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Pyrene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Pyridine	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
1,2,4-Trichlorobenzene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2,4,5-Trichlorophenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2,4,6-Trichlorophenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Surr: 2-Fluorophenol	123	52.1-148	D	%Rec	10	3/17/2016 12:09:40 PM	24298
Surr: Phenol-d5	126	58.2-135	D	%Rec	10	3/17/2016 12:09:40 PM	24298
Surr: 2,4,6-Tribromophenol	126	63.8-129	D	%Rec	10	3/17/2016 12:09:40 PM	24298
Surr: Nitrobenzene-d5	128	43.5-189	D	%Rec	10	3/17/2016 12:09:40 PM	24298
Surr: 2-Fluorobiphenyl	120	76.8-130	D	%Rec	10	3/17/2016 12:09:40 PM	24298
Surr: 4-Terphenyl-d14	90.9	32-199	D	%Rec	10	3/17/2016 12:09:40 PM	24298

EPA METHOD 8260B: VOLATILES

Analyst: AG

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603699

Date Reported: 3/21/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hart #1 Non Exempt

Project: Hart Canyon #1

Collection Date: 3/14/2016 10:37:00 AM

Lab ID: 1603699-001

Matrix: AQUEOUS

Received Date: 3/15/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SEMIVOLATILE ORGANICS BY 8270C							Analyst: DAM
Acenaphthene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Acenaphthylene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Aniline	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Anthracene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benz(a)anthracene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benzidine	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benzo(a)pyrene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benzo(b)fluoranthene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benzo(g,h,i)perylene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benzo(k)fluoranthene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benzoic acid	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Benzyl alcohol	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Bis(2-chloroethoxy)methane	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Bis(2-chloroethyl)ether	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Bis(2-chloroisopropyl)ether	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Bis(2-ethylhexyl)phthalate	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
4-Bromophenyl phenyl ether	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Butyl benzyl phthalate	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Carbazole	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
4-Chloro-3-methylphenol	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
4-Chloroaniline	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2-Chloronaphthalene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2-Chlorophenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
4-Chlorophenyl phenyl ether	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Chrysene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Di-n-butyl phthalate	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Di-n-octyl phthalate	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Dibenz(a,h)anthracene	ND	380	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Dibenzofuran	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
1,2-Dichlorobenzene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
1,3-Dichlorobenzene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
1,4-Dichlorobenzene	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
3,3'-Dichlorobenzidine	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Diethyl phthalate	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
Dimethyl phthalate	ND	380	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2,4-Dichlorophenol	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2,4-Dimethylphenol	ND	320	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
4,6-Dinitro-2-methylphenol	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298
2,4-Dinitrophenol	ND	640	D	mg/Kg	10	3/17/2016 12:09:40 PM	24298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

2/26/16

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Western Refining Pipeline, LLC.
111 County Road 4990
Bloomfield, NM 87413

2. Originating Site:

Same as generator address

3. Location of Material (Street Address, City, State or ULSTR):

Cottonwood Wash 16-inch TexNewMex Pipeline ROW location
SE,SE,SW T21N, R8W, Sec1

4. Source and Description of Waste:

Un-refined crude oil impacted soil general maintenance cleanup at the facility.

Estimated Volume 120 bbls Known Volume (to be entered by the operator at the end of the haul) 106 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Kelly Robinson *Kelly Robinson*, representative or authorized agent for Western Refining Pipeline, LLC do hereby
PRINT & SIGN NAME **COMPANY NAME**

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency** ☐ Monthly ☐ Weekly ☒ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Kelly Robinson *Kelly Robinson*, representative for Western Refining Pipeline, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:

To be determined.

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss

Permit #: UICI-005

Address of Facility: 345 Rd 350, Aztec, NM, 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☒ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: *Alvin Hudson*

TITLE: *Operator* DATE: *1/16/17*

SIGNATURE: *[Signature]*
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: *(505) 344 686*

CHAIN OF CUSTODY RECORD

16177

Client: WESTERN REFINING			Project Name / Location: STAR LAKE			ANALYSIS / PARAMETERS																																											
Email results to: Kelly.Robinson@wnr.com			Sampler Name: TERRY HOPKIN			<table border="1"> <tr> <th>TPH (Method 8015)</th> <th>BTEX (Method 8021)</th> <th>VOC (Method 8260)</th> <th>PCRA 8 Metals</th> <th>Cation / Anion</th> <th>RCI</th> <th>TCLP with HYP</th> <th>CO Table 910-1</th> <th>TPH (418.1)</th> <th>CHLORIDE</th> <th>Ignitability</th> <th>Corrosivity</th> <th>Reactivity</th> <th>Sample Cool</th> <th>Sample Intact</th> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>														TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	PCRA 8 Metals	Cation / Anion	RCI	TCLP with HYP	CO Table 910-1	TPH (418.1)	CHLORIDE	Ignitability	Corrosivity	Reactivity	Sample Cool	Sample Intact															
TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	PCRA 8 Metals	Cation / Anion	RCI															TCLP with HYP	CO Table 910-1	TPH (418.1)	CHLORIDE	Ignitability	Corrosivity	Reactivity	Sample Cool	Sample Intact																					
Client Phone No.: (505) 632-4166			Client No.: 96012-0115																																														
Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative																																												
					HNO ₃	HCl	H ₂ O ₂																																										
TEST WATER	1/29/15	17:00	P501081-01	1-500mL			X																																										
↓	↓	↓	↓	1-500mL																																													
↓	↓	↓	↓	1-500mL	X																																												
Relinquished by: (Signature) <i>Kelly Robinson</i>					Date	Time	Received by: (Signature) <i>[Signature]</i>					Date	Time																																				
Relinquished by: (Signature)							Received by: (Signature)																																										
Sample Matrix																																																	
Soil ☐ Solid ☐ Sludge ☐ Aqueous ☒ Other ☐																																																	
☐ Sample(s) dropped off after hours to secure drop off area.																																																	
P.O. 12610466					envirotech Analytical Laboratory RUSH ASAP - Please Call w/ Verbal																																												
5795 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 • laboratory@envirotechinc.com					14.3, 7.1 5.4 Page 7 of 7																																												



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Notes and Definitions

FP1 >95
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Total Mercury by EPA 7470A - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505028 - Mercury Water/TCLP Digestion KMNO4										
Blank (1505028-BLK1)				Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	ND	0.0002	mg/L							
LCS (1505028-BS1)				Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229		98.6	80-120			
Matrix Spike (1505028-MS1)				Source: P501081-01 Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	97.7	75-125			
Matrix Spike Dup (1505028-MSD1)				Source: P501081-01 Prepared: 30-Jan-15 Analyzed: 02-Feb-15						
Mercury	0.002	0.0002	mg/L	0.00229	ND	98.1	75-125	0.383	15	

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Ph (970) 259-0615 Fr (800) 362-1879

envirotech inc.com
laboratory@envirotech inc.com



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Total Metals by 6010 - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1505025 - Metal Water/TCLP (EPA 1311) Digestion EPA 3015A

Blank (1505025-BLK1)

Prepared & Analyzed: 30-Jan-15

Arsenic	ND	0.01	mg/L
Barium	ND	0.05	"
Cadmium	ND	0.01	"
Chromium	ND	0.01	"
Lead	ND	0.01	"
Selenium	ND	0.01	"
Silver	ND	0.01	"

Duplicate (1505025-DUP1)

Source: P501081-01

Prepared & Analyzed: 30-Jan-15

Arsenic	ND	0.01	mg/L	ND			30
Barium	0.09	0.05	"	0.09		1.81	30
Cadmium	ND	0.01	"	ND			30
Chromium	ND	0.01	"	ND			30
Lead	ND	0.01	"	ND			30
Selenium	ND	0.01	"	ND			30
Silver	ND	0.01	"	ND			30

Matrix Spike (1505025-MS1)

Source: P501081-01

Prepared & Analyzed: 30-Jan-15

Arsenic	0.24		mg/L	0.250	0.003	96.1	75-125
Barium	5.72		"	5.00	0.08	113	75-125
Cadmium	0.25		"	0.250	0.0005	98.8	75-125
Chromium	0.51		"	0.500	0.002	101	75-125
Lead	0.49		"	0.500	-0.001	97.5	75-125
Selenium	0.09		"	0.100	ND	89.5	75-125
Silver	0.10		"	0.100	-0.0005	96.6	75-125

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

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laboratory@envirotech-inc.com



Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Test Water
P501081-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Metals by 6010									
Arsenic	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Barium	0.09	0.05	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Cadmium	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Chromium	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Lead	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Selenium	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Silver	ND	0.01	mg/L	1	1505025	01/30/15	01/30/15	EPA 6010C	
Cation/Anion Analysis									
pH @7.3°C	7.51		pH Units	1	1505024	01/30/15 09:50	01/30/15 09:50	150.1/4500H	
Suspected Hazardous Waste									
Flash Point	>95		°C	1	1505027	01/30/15	01/30/15	ASTM D93-10a	
Reactivity	Negative		N/A	1	1505024	01/30/15	01/30/15		
Total Mercury by EPA 7470A									
Mercury	ND	0.0002	mg/L	1	1505028	01/30/15	02/02/15	EPA 7470A	

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Western Refining Southwest, Inc.
PO Box 159
Bloomfield NM, 87413

Project Name: Star Lake
Project Number: 96012-0115
Project Manager: Kelly Robinson

Reported:
03-Feb-15 12:40

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Test Water	P501081-01A	Aqueous	01/29/15	01/30/15	Poly 500mL
	P501081-01B	Aqueous	01/29/15	01/30/15	Poly 500mL; HNO3
	P501081-01C	Aqueous	01/29/15	01/30/15	Poly 500mL; NaOH

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Analytical Report

Report Summary

Client: Western Refining Southwest, Inc.

Chain Of Custody Number: 16177

Samples Received: 1/30/2015 7:55:00AM

Job Number: 96012-0115

Work Order: P501081

Project Name/Location: Star Lake

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 2/3/15

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Sims Mesa Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL A Section 22, T30N, R7W; 36.802403, -107.551985, San Juan County, NM

4. Source and Description of Waste:

Source: Water from the Non Exempt Water Tanks and from the compressor skid drains.

Description: Non Exempt/Non-Hazardous Water from the compressor skids.

Estimated Volume 60 yd³ 0 bbls Known Volume (to be entered by the operator at the end of the haul) 0 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: Triple S Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Alfonso Hoban

TITLE: Operator

DATE: 1/2/17

SIGNATURE: [Signature]

TELEPHONE NO.: (505) 334-6886

Surface Waste Management Facility Authorized Agent

Chain-of-Custody Record

Turn-Around Time:

Client: SMA

☒ Standard ☐ Rush

Project Name:

Mailing Address: 401 W Broadway

Sims

Project #:

Phone #: 505-325-7535

mail or Fax#: Ashley Maxwell @ scudermiller.com

Project Manager:

Tom Long / Ashley Maxwell

AQC Package: ☐ Level 4 (Full Validation)

Standard

Accreditation: ☐ NELAP ☐ Other

EDD (Type)

Sampler: Randy Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

10 11:10 Aquas Sims Non Emerg Varis Varis

1603447

-001

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH 8015B (GRO / DRO / MRO)

TPH (Method 418.1)

EDB (Method 504.1)

☒ PAH's (8310 or 8270 SIMS)

☒ RCRA 8 Metals TCLP

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

☒ 8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date Time

Relinquished by

Received by

Date Time

Remarks:

1816 1700

[Signature]

[Signature]

3/8/16 1700

8260 Full List: Report + TCLP components at TCLP limits

116 1829

[Signature]

[Signature]

03/09/16 0715

Invoice Enterprise CC: Tom Long / Enterprise



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4197
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603447

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

3/9/2016 7:15:00 AM

Completed By: Lindsay Mangin

3/9/2016 8:20:03 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? as Yes ☒ No ☒
9. Was preservative added to bottles? 3/9 Yes ☒ No ☒ as NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

1
(<2 or >12 unless noted)

Adjusted? Yes

Checked by: as

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks: For metals analysis: added 1 ML HNO_3 to -001C

18 Cooler Information

For acceptable pH

3/09 @ 0940
as

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1603447
01-Apr-16

Client: Souder, Miller and Associates
Project: Sims

Sample ID	MB-24322	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24322	RunNo:	32920					
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009590	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24322	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24322	RunNo:	32920					
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009591	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.020	0.5000	0	96.0	80	120			
Barium	0.46	0.020	0.5000	0	92.0	80	120			
Cadmium	0.47	0.0020	0.5000	0	93.6	80	120			
Chromium	0.46	0.0060	0.5000	0	91.5	80	120			
Lead	0.46	0.0050	0.5000	0	91.4	80	120			
Selenium	0.46	0.050	0.5000	0	91.6	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

- Qualifiers:
- * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix
 - H Holding times for preparation or analysis exceeded
 - ND Not Detected at the Reporting Limit
 - R RPD outside accepted recovery limits
 - S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - P Sample pH Not In Range
 - RL Reporting Detection Limit
 - W Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1603447
01-Apr-16

Client: Souder, Miller and Associates
Project: Sims

Sample ID	MB-24205	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004533	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24205	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004534	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1603447
01-Apr-16

Client: Souder, Miller and Associates
Project: Sims

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32763			RunNo: 32763					
Prep Date:		Analysis Date: 3/11/2016			SeqNo: 1003149		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
vinyl chloride	ND	1.0								
xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.3	70	130			
Surr: Dibromofluoromethane	12		10.00		122	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Qualifiers:	
* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603447

01-Apr-16

Client: Souder, Miller and Associates

Project: Sims

Sample ID rb		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R32763		RunNo: 32763							
Prep Date:	Analysis Date: 3/11/2016		SeqNo: 1003149		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
1-Isopropyltoluene	ND	1.0								
1-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:	
* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603447

01-Apr-16

Client: Souder, Miller and Associates

Project: Sims

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R32763	RunNo:	32763					
Prep Date:		Analysis Date:	3/11/2016	SeqNo:	1003148	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	120	70	130			
Toluene	22	1.0	20.00	0	108	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32763			RunNo: 32763					
Prep Date:		Analysis Date: 3/11/2016			SeqNo: 1003149		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:		
* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
D Sample Diluted Due to Matrix	E Value above quantitation range	
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
R RPD outside accepted recovery limits	RL Reporting Detection Limit	
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Analytical Report

Lab Order 1603447

Date Reported: 4/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Sims Non Exempt

Project: Sims

Collection Date: 3/8/2016 11:10:00 AM

Lab ID: 1603447-001

Matrix: AQUEOUS

Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: AG
n-Propylbenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
sec-Butylbenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
Styrene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
tert-Butylbenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/11/2016 1:47:13 PM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
trans-1,2-DCE	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
Trichlorofluoromethane	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/11/2016 1:47:13 PM
Vinyl chloride	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
Xylenes, Total	ND	0.30		mg/L	200	3/11/2016 1:47:13 PM
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%Rec	200	3/11/2016 1:47:13 PM
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	200	3/11/2016 1:47:13 PM
Surr: Dibromofluoromethane	101	70-130		%Rec	200	3/11/2016 1:47:13 PM
Surr: Toluene-d8	93.7	70-130		%Rec	200	3/11/2016 1:47:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 4 of 9
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Analytical Report

Lab Order 1603447

Date Reported: 4/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Sims Non Exempt

Project: Sims

Collection Date: 3/8/2016 11:10:00 AM

Lab ID: 1603447-001

Matrix: AQUEOUS

Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: pmf
Mercury	ND	0.00080		mg/L	1	3/14/2016 4:18:24 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/21/2016 8:56:14 AM
Barium	ND	0.20		mg/L	1	3/21/2016 8:56:14 AM
Cadmium	ND	0.020		mg/L	1	3/21/2016 8:56:14 AM
Chromium	ND	0.060		mg/L	1	3/21/2016 8:56:14 AM
Lead	ND	0.050		mg/L	1	3/21/2016 8:56:14 AM
Selenium	ND	2.5		mg/L	5	3/25/2016 12:52:29 PM
Silver	ND	0.050		mg/L	1	3/21/2016 8:56:14 AM
EPA METHOD 8270C TCLP						Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/13/2016 12:11:34 AM
3+4-Methylphenol	ND	200		mg/L	1	3/13/2016 12:11:34 AM
Phenol	ND	200		mg/L	1	3/13/2016 12:11:34 AM
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/13/2016 12:11:34 AM
Hexachlorobenzene	ND	0.13		mg/L	1	3/13/2016 12:11:34 AM
Hexachlorobutadiene	ND	0.50		mg/L	1	3/13/2016 12:11:34 AM
Hexachloroethane	ND	3.0		mg/L	1	3/13/2016 12:11:34 AM
Nitrobenzene	ND	2.0		mg/L	1	3/13/2016 12:11:34 AM
Pentachlorophenol	ND	100		mg/L	1	3/13/2016 12:11:34 AM
Pyridine	ND	5.0		mg/L	1	3/13/2016 12:11:34 AM
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/13/2016 12:11:34 AM
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/13/2016 12:11:34 AM
Cresols, Total	ND	200		mg/L	1	3/13/2016 12:11:34 AM
Surr: 2-Fluorophenol	1.35	15-124	S	%Rec	1	3/13/2016 12:11:34 AM
Surr: Phenol-d5	3.82	15-118	S	%Rec	1	3/13/2016 12:11:34 AM
Surr: 2,4,6-Tribromophenol	5.41	15-148	S	%Rec	1	3/13/2016 12:11:34 AM
Surr: Nitrobenzene-d5	6.40	40.6-124	S	%Rec	1	3/13/2016 12:11:34 AM
Surr: 2-Fluorobiphenyl	38.4	35.7-128		%Rec	1	3/13/2016 12:11:34 AM
Surr: 4-Terphenyl-d14	69.2	18.8-115		%Rec	1	3/13/2016 12:11:34 AM
EPA METHOD 8260B: VOLATILES						Analyst: AG
Benzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
Toluene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
Ethylbenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/11/2016 1:47:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 1603447
Date: 4/1/2016

CLIENT: Souder, Miller and Associates
Project: Sims

8270 Analysis: Sample damaged instrument. Poor surrogate recovery due to matrix interference. Unable to rerun due to instrument damage. Reporting as is but phenol compound data should be considered as estimated. DAM 03/13/2016.



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

April 01, 2016

Ashley Maxwell

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX

RE: Sims

OrderNo.: 1603447

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/9/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Kutz Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL N Section 31 Township 29 North Range 12 West; 36.723088, -108.088655, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ bbbs Known Volume (to be entered by the operator at the end of the haul) 215 yd³ / bbls

5.

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long* 3-21-16, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Triple S Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hobbs

SIGNATURE: *Adrian Hobbs*

TITLE: Operator

DATE: 1/2/17

TELEPHONE NO.: (505) 554-6180

Surface Waste Management Facility Authorized Agent



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 18, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Kutz CS

OrderNo.: 1603530

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/10/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603530

18-Mar-16

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32783			RunNo: 32783					
Prep Date:		Analysis Date: 3/14/2016			SeqNo: 1004412		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.0	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID	100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	LCSW	Batch ID: R32783	RunNo: 32783							
Prep Date:	Analysis Date: 3/14/2016		SeqNo: 1004413		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.3	70	130			
Toluene	23	1.0	20.00	0	117	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603530

18-Mar-16

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32783			RunNo: 32783					
Prep Date:		Analysis Date: 3/14/2016			SeqNo: 1004412		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603530

Date Reported: 3/18/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Kutz Non Exempt

Project: Kutz CS

Collection Date: 3/9/2016 8:53:00 AM

Lab ID: 1603530-001

Matrix: AQUEOUS

Received Date: 3/10/2016 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
n-Propylbenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
sec-Butylbenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Styrene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
tert-Butylbenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/14/2016 9:10:23 PM	R32783
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
trans-1,2-DCE	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Trichlorofluoromethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/14/2016 9:10:23 PM	R32783
Vinyl chloride	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Xylenes, Total	0.38	0.30		mg/L	200	3/14/2016 9:10:23 PM	R32783
Surr: 1,2-Dichloroethane-d4	89.2	70-130		%Rec	200	3/14/2016 9:10:23 PM	R32783
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	200	3/14/2016 9:10:23 PM	R32783
Surr: Dibromofluoromethane	95.0	70-130		%Rec	200	3/14/2016 9:10:23 PM	R32783
Surr: Toluene-d8	94.5	70-130		%Rec	200	3/14/2016 9:10:23 PM	R32783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603530

Date Reported: 3/18/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Kutz Non Exempt

Project: Kutz CS

Collection Date: 3/9/2016 8:53:00 AM

Lab ID: 1603530-001

Matrix: AQUEOUS

Received Date: 3/10/2016 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Naphthalene	ND	0.40		mg/L	200	3/14/2016 9:10:23 PM	R32783
1-Methylnaphthalene	ND	0.80		mg/L	200	3/14/2016 9:10:23 PM	R32783
2-Methylnaphthalene	ND	0.80		mg/L	200	3/14/2016 9:10:23 PM	R32783
Acetone	ND	2.0		mg/L	200	3/14/2016 9:10:23 PM	R32783
Bromobenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Bromodichloromethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Bromoform	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Bromomethane	ND	0.60		mg/L	200	3/14/2016 9:10:23 PM	R32783
2-Butanone	ND	2.0		mg/L	200	3/14/2016 9:10:23 PM	R32783
Carbon disulfide	ND	2.0		mg/L	200	3/14/2016 9:10:23 PM	R32783
Carbon Tetrachloride	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Chlorobenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Chloroethane	ND	0.40		mg/L	200	3/14/2016 9:10:23 PM	R32783
Chloroform	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Chloromethane	ND	0.60		mg/L	200	3/14/2016 9:10:23 PM	R32783
2-Chlorotoluene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
4-Chlorotoluene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
cis-1,2-DCE	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/14/2016 9:10:23 PM	R32783
Dibromochloromethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Dibromomethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,1-Dichloroethane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,1-Dichloroethene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2-Dichloropropane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,3-Dichloropropane	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
2,2-Dichloropropane	ND	0.40		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,1-Dichloropropene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Hexachlorobutadiene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
2-Hexanone	ND	2.0		mg/L	200	3/14/2016 9:10:23 PM	R32783
Isopropylbenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
4-Isopropyltoluene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/14/2016 9:10:23 PM	R32783
Methylene Chloride	ND	0.60		mg/L	200	3/14/2016 9:10:23 PM	R32783
n-Butylbenzene	ND	0.60		mg/L	200	3/14/2016 9:10:23 PM	R32783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603530

Date Reported: 3/18/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Kutz Non Exempt

Project: Kutz CS

Collection Date: 3/9/2016 8:53:00 AM

Lab ID: 1603530-001

Matrix: AQUEOUS

Received Date: 3/10/2016 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/16/2016 4:27:41 PM	24177
3+4-Methylphenol	ND	200		mg/L	1	3/16/2016 4:27:41 PM	24177
Phenol	ND	200		mg/L	1	3/16/2016 4:27:41 PM	24177
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/16/2016 4:27:41 PM	24177
Hexachlorobenzene	ND	0.13		mg/L	1	3/16/2016 4:27:41 PM	24177
Hexachlorobutadiene	ND	0.50		mg/L	1	3/16/2016 4:27:41 PM	24177
Hexachloroethane	ND	3.0		mg/L	1	3/16/2016 4:27:41 PM	24177
Nitrobenzene	ND	2.0		mg/L	1	3/16/2016 4:27:41 PM	24177
Pentachlorophenol	ND	100		mg/L	1	3/16/2016 4:27:41 PM	24177
Pyridine	ND	5.0		mg/L	1	3/16/2016 4:27:41 PM	24177
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/16/2016 4:27:41 PM	24177
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/16/2016 4:27:41 PM	24177
Cresols, Total	ND	200		mg/L	1	3/16/2016 4:27:41 PM	24177
Surr: 2-Fluorophenol	17.2	15-124		%Rec	1	3/16/2016 4:27:41 PM	24177
Surr: Phenol-d5	24.6	15-118		%Rec	1	3/16/2016 4:27:41 PM	24177
Surr: 2,4,6-Tribromophenol	32.4	15-148		%Rec	1	3/16/2016 4:27:41 PM	24177
Surr: Nitrobenzene-d5	99.0	40.6-124		%Rec	1	3/16/2016 4:27:41 PM	24177
Surr: 2-Fluorobiphenyl	105	35.7-128		%Rec	1	3/16/2016 4:27:41 PM	24177
Surr: 4-Terphenyl-d14	113	18.8-115		%Rec	1	3/16/2016 4:27:41 PM	24177
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.0040		mg/L	5	3/14/2016 5:20:44 PM	24205
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.020		mg/L	1	3/16/2016 8:11:07 AM	24202
Barium	0.11	0.020		mg/L	1	3/16/2016 8:11:07 AM	24202
Cadmium	0.0037	0.0020		mg/L	1	3/16/2016 8:11:07 AM	24202
Chromium	ND	0.0060		mg/L	1	3/16/2016 8:11:07 AM	24202
Lead	0.016	0.0050		mg/L	1	3/16/2016 8:11:07 AM	24202
Selenium	ND	0.050		mg/L	1	3/16/2016 8:11:07 AM	24202
Silver	ND	0.0050		mg/L	1	3/16/2016 8:11:07 AM	24202
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	0.42	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Toluene	0.97	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Ethylbenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/14/2016 9:10:23 PM	R32783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603530

RcptNo: 1

Received by/date: 87 03/10/16

Logged By: Lindsay Mangin 3/10/2016 7:25:00 AM

Completed By: Lindsay Mangin 3/10/2016 8:50:04 AM

Reviewed By: JM 03/10/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

UNIT-ALBUQUERQUE

Client:

SMA

☒ Standard☐ Rush

Billing Address:

421 W. Broadway

Project #:

Kutz CS

Phone #:

505 325-7535

Mail or Fax#:

A/QC Package:

☐ Level 4 (Full Validation)

Accreditation

☐ Other

NELAP

Project Manager:

Tom Long

Ashley Maxwell

Sampler:

Randy Watson

On Ice:

Yes

☐ No

Sample Temperature:

1.0

HEAL No.

Date

Time

Matrix

Sample Request ID

Container Type and #

Preservative Type

HEAL No.

Time

9/16 8:53

1120

Kutz

Nov 2001

Various

Various

1103530

-001

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH 8015B (GRO / DRO / MRO)

TPH (Method 418.1)

EDB (Method 504.1)

PAH's (8310 or 8270 SIMS)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Relinquished by:

Time:

Date:

Time:

Received by:

Date:

Time:

Remarks:

9/16 1704

Relinquished by:

Time:

Date:

Received by:

Date:

Time:

Remarks:

8260 Full List; Report TELP

Compare At TELP Limits

Indicate Exceedance

Exceedance

9/16 1814

Relinquished by:

Time:

Date:

Received by:

Date:

Time:

Remarks:

8260 Full List; Report TELP

Compare At TELP Limits

Indicate Exceedance

Exceedance

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.


**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**
www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603530

18-Mar-16

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R32783		RunNo: 32783							
Prep Date:	Analysis Date: 3/14/2016		SeqNo: 1004413		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.1	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.4	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603530

18-Mar-16

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID	MB-24205	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004533	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24205	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004534	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

Sample ID	1603530-001CMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury					
Client ID:	Kutz Non Exempt	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004572	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.011	0.0040	0.02000	0.001462	47.9	75	125			S

Sample ID	1603530-001CMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury					
Client ID:	Kutz Non Exempt	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004573	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.011	0.0040	0.02000	0.001462	48.4	75	125	0.806	20	S

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603530

18-Mar-16

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID	MB-24202	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004070	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24202	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004071	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.50	0.020	0.5000	0	99.4	80	120			
Barium	0.48	0.020	0.5000	0	96.5	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.0	80	120			
Chromium	0.48	0.0060	0.5000	0	95.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.1	80	120			
Selenium	0.49	0.050	0.5000	0	99.0	80	120			
Silver	0.099	0.0050	0.1000	0	99.2	80	120			

Sample ID	LCSD-24202	SampType:	LCSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSS02	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004072	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.52	0.020	0.5000	0	104	80	120	4.47	20	
Barium	0.49	0.020	0.5000	0	98.5	80	120	2.12	20	
Cadmium	0.50	0.0020	0.5000	0	101	80	120	2.63	20	
Chromium	0.50	0.0060	0.5000	0	99.3	80	120	3.48	20	
Lead	0.50	0.0050	0.5000	0	100	80	120	3.12	20	
Selenium	0.52	0.050	0.5000	0	103	80	120	4.11	20	
Silver	0.10	0.0050	0.1000	0	101	80	120	1.48	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. **Originating Site:**
Frances Mesa Compressor Station
3. **Location of Material (Street Address, City, State or ULSTR):**
UL L Section 27 Township 30 North Range 7 West; 36.780869, -107.562974

4. **Source and Description of Waste:**

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non-Hazardous Water from the compressor skids.

Estimated Volume 80 yd³ bbbs Known Volume (to be entered by the operator at the end of the haul) // yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. **Operator Use Only: Waste Acceptance Frequency** ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. **Transporter: To Be Determined**

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Bob Van Holston

TITLE: Operator DATE: 1/2/12

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 334-6180

Sample Log-In Check List

Client Name **SMA-FARM** Work Order Number: **1606C98** Rep/No **1**
Received by/date **K-117 06/23/16**
Logged By **Ashley Gallegos** 6/23/2016 7:35:00 AM **AJ**
Completed By **Ashley Gallegos** 6/23/2016 1:18:56 PM **AJ**
Reviewed By **IO** **06/23/16**

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
of preserved bottles checked for pH: **2**
Adjusted? **NO**
Checked by **AJ**

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks: **For metals analysis: added 1 mL HNO₃ to -cool for acceptable pH.**

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

6/23
AJ

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98
06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	MB-26095	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	26095	RunNo:	35250					
Prep Date:	6/27/2016	Analysis Date:	6/28/2016	SeqNo:	1090195	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-26095	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	26095	RunNo:	35250					
Prep Date:	6/27/2016	Analysis Date:	6/28/2016	SeqNo:	1090196	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	103	80	120			
Barium	0.49	0.020	0.5000	0	98.2	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.6	80	120			
Chromium	0.49	0.0060	0.5000	0	98.1	80	120			
Lead	0.49	0.0050	0.5000	0	97.4	80	120			
Selenium	0.51	0.050	0.5000	0	102	80	120			
Silver	0.10	0.0050	0.1000	0	99.7	80	120			

Qualifiers:

- | | |
|---|---|
| • Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98
06-Jul-16

Client: Souder, Miller and Associates
Project: Frances Mesa

Sample ID	MB-26106	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	26106	RunNo:	35280					
Prep Date:	6/27/2016	Analysis Date:	6/28/2016	SeqNo:	1091038	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-26106		SampType:	LCS		TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW		Batch ID:	26106		RunNo:	35280				
Prep Date:	6/27/2016		Analysis Date:	6/28/2016		SeqNo:	1091039		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercurv	0.0046	0.00020	0.005000	0	92.6	80	120				

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	Icsd-26121	SampType: LCSD			TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID: 26121			RunNo: 35369					
Prep Date:	6/28/2016	Analysis Date: 6/30/2016			SeqNo: 1094090		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	93		100.0		92.9	15	146	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	ics-26121	SampType:	LCS	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSW	Batch ID:	26121	RunNo:	35369					
Prep Date:	6/28/2016	Analysis Date:	6/30/2016	SeqNo:	1094089	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	67.0	35	113			
4-Chloro-3-methylphenol	130	10	200.0	0	66.3	40.7	114			
2-Chlorophenol	110	10	200.0	0	56.9	37.6	113			
1,4-Dichlorobenzene	53	10	100.0	0	53.0	37.7	106			
2,4-Dinitrotoluene	65	10	100.0	0	64.6	37	91			
N-Nitrosodi-n-propylamine	57	10	100.0	0	56.8	45.4	105			
4-Nitrophenol	140	10	200.0	0	69.7	33.4	104			
Pentachlorophenol	120	20	200.0	0	59.3	29.5	94.9			
Phenol	110	10	200.0	0	57.0	30.6	119			
Pyrene	67	10	100.0	0	67.3	26.2	120			
1,2,4-Trichlorobenzene	62	10	100.0	0	62.4	39.9	125			
Surr: 2-Fluorophenol	96		200.0		48.1	15	123			
Surr: Phenol-d5	110		200.0		53.0	4.13	124			
Surr: 2,4,6-Tribromophenol	130		200.0		64.9	18.4	134			
Surr: Nitrobenzene-d5	59		100.0		58.7	28.8	134			
Surr: 2-Fluorobiphenyl	66		100.0		65.7	35.9	125			
Surr: 4-Terphenyl-d14	67		100.0		67.1	15	146			

Sample ID	icsd-26121	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	26121	RunNo:	35369					
Prep Date:	6/28/2016	Analysis Date:	6/30/2016	SeqNo:	1094090	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.1	35	113	10.0	46.7	
4-Chloro-3-methylphenol	150	10	200.0	0	74.9	40.7	114	12.1	29.4	
2-Chlorophenol	120	10	200.0	0	60.6	37.6	113	6.36	38.7	
1,4-Dichlorobenzene	55	10	100.0	0	54.8	37.7	106	3.41	25.3	
2,4-Dinitrotoluene	77	10	100.0	0	77.0	37	91	17.5	34.7	
N-Nitrosodi-n-propylamine	65	10	100.0	0	64.8	45.4	105	13.2	30.2	
4-Nitrophenol	150	10	200.0	0	76.2	33.4	104	8.99	42.2	
Pentachlorophenol	130	20	200.0	0	64.0	29.5	94.9	7.69	35.5	
Phenol	130	10	200.0	0	63.3	30.6	119	10.4	25.5	
Pyrene	84	10	100.0	0	83.6	26.2	120	21.6	27.1	
1,2,4-Trichlorobenzene	64	10	100.0	0	64.0	39.9	125	2.53	43.3	
Surr: 2-Fluorophenol	110		200.0		54.8	15	123	0	0	
Surr: Phenol-d5	130		200.0		64.7	4.13	124	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		75.1	18.4	134	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.1	28.8	134	0	0	
Surr: 2-Fluorobiphenyl	79		100.0		79.3	35.9	125	0	0	

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	mb-26121	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	26121	RunNo:	35369					
Prep Date:	6/28/2016	Analysis Date:	6/30/2016	SeqNo:	1094087	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Polychlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	60		200.0		30.0	15	123			
Surr: Phenol-d5	68		200.0		33.9	4.13	124			
Surr: 2,4,6-Tribromophenol	76		200.0		37.8	18.4	134			
Surr: Nitrobenzene-d5	31		100.0		31.2	28.8	134			
Surr: 2-Fluorobiphenyl	35		100.0		34.6	35.9	125			S
Surr: 4-Terphenyl-d14	59		100.0		58.7	15	146			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	mb-26121	SampType:	MBLK	TestCode: EPA Method 8270C: Semivolatiles						
Client ID:	PBW	Batch ID:	26121	RunNo: 35369						
Prep Date:	6/28/2016	Analysis Date:	6/30/2016	SeqNo:	1094087	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	Icsd-26194	SampType:	LCSD	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	LCSS02	Batch ID:	26194	RunNo:	35407					
Prep Date:	7/1/2016	Analysis Date:	7/1/2016	SeqNo:	1095510	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	810		625.0		129	32	199	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	Ics-26194	SampType:	LCS	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	LCSW	Batch ID:	26194	RunNo:	35407					
Prep Date:	7/1/2016	Analysis Date:	7/1/2016	SeqNo:	1095509	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	550	62	625.0	0	88.4	75.6	115			
4-Chloro-3-methylphenol	1200	120	1250	0	97.1	83.2	125			
2-Chlorophenol	1200	62	1250	0	99.8	77.9	120			
1,4-Dichlorobenzene	620	62	625.0	0	99.9	73.2	117			
2,4-Dinitrotoluene	480	62	625.0	0	76.2	60.2	104			
N-Nitrosodi-n-propylamine	580	62	625.0	0	92.0	71.4	132			
4-Nitrophenol	1000	62	1250	0	79.9	69.8	121			
Pentachlorophenol	1100	120	1250	0	84.4	51.3	106			
Phenol	1200	62	1250	0	94.5	81.2	116			
Pyrene	610	62	625.0	0	98.4	71	113			
1,2,4-Trichlorobenzene	630	62	625.0	0	101	68.6	133			
Surr: 2-Fluorophenol	1300		1250		101	52.1	148			
Surr: Phenol-d5	1300		1250		106	58.2	135			
Surr: 2,4,6-Tribromophenol	1300		1250		104	63.8	129			
Surr: Nitrobenzene-d5	610		625.0		97.6	43.5	189			
Surr: 2-Fluorobiphenyl	610		625.0		97.8	76.8	130			
Surr: 4-Terphenyl-d14	840		625.0		135	32	199			

Sample ID	Icsd-26194	SampType:	LCSD	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	LCSS02	Batch ID:	26194	RunNo:	35407					
Prep Date:	7/1/2016	Analysis Date:	7/1/2016	SeqNo:	1095510	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	550	62	625.0	0	88.4	75.6	115	0	20	
4-Chloro-3-methylphenol	1200	120	1250	0	99.2	83.2	125	2.12	20	
2-Chlorophenol	1200	62	1250	0	96.6	77.9	120	3.24	20	
1,4-Dichlorobenzene	610	62	625.0	0	98.3	73.2	117	1.61	20	
2,4-Dinitrotoluene	520	62	625.0	0	82.7	60.2	104	8.21	20	
N-Nitrosodi-n-propylamine	580	62	625.0	0	92.4	71.4	132	0.434	20	
4-Nitrophenol	1000	62	1250	0	83.7	69.8	121	4.65	20	
Pentachlorophenol	1100	120	1250	0	84.5	51.3	106	0.166	20	
Phenol	1200	62	1250	0	95.1	81.2	116	0.633	20	
Pyrene	580	62	625.0	0	92.3	71	113	6.34	20	
1,2,4-Trichlorobenzene	640	62	625.0	0	102	68.6	133	0.984	20	
Surr: 2-Fluorophenol	1200		1250		96.5	52.1	148	0	0	
Surr: Phenol-d5	1300		1250		106	58.2	135	0	0	
Surr: 2,4,6-Tribromophenol	1300		1250		102	63.8	129	0	0	
Surr: Nitrobenzene-d5	610		625.0		98.0	43.5	189	0	0	
Surr: 2-Fluorobiphenyl	630		625.0		101	76.8	130	0	0	

Qualifiers:		
* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
D Sample Diluted Due to Matrix	E Value above quantitation range	
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 16 of 23
ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
R RPD outside accepted recovery limits	RL Reporting Detection Limit	
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	mb-26194	SampType:	MBLK	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	PBW	Batch ID:	26194	RunNo:	35407					
Prep Date:	7/1/2016	Analysis Date:	7/1/2016	SeqNo:	1095508	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	62								
2,6-Dinitrotoluene	ND	62								
Fluoranthene	ND	62								
Fluorene	ND	62								
Hexachlorobenzene	ND	62								
Hexachlorobutadiene	ND	62								
Hexachlorocyclopentadiene	ND	62								
Hexachloroethane	ND	62								
Indeno(1,2,3-cd)pyrene	ND	62								
Isophorone	ND	62								
1-Methylnaphthalene	ND	62								
2-Methylnaphthalene	ND	62								
2-Methylphenol	ND	62								
3+4-Methylphenol	ND	62								
N-Nitrosodi-n-propylamine	ND	62								
N-Nitrosodimethylamine	ND	120								
N-Nitrosodiphenylamine	ND	62								
Naphthalene	ND	62								
2-Nitroaniline	ND	120								
3-Nitroaniline	ND	120								
4-Nitroaniline	ND	120								
Nitrobenzene	ND	62								
2-Nitrophenol	ND	62								
4-Nitrophenol	ND	62								
Pentachlorophenol	ND	120								
Phenanthrene	ND	62								
Phenol	ND	62								
Pyrene	ND	62								
Pyridine	ND	120								
1,2,4-Trichlorobenzene	ND	62								
2,4,5-Trichlorophenol	ND	62								
2,4,6-Trichlorophenol	ND	62								
Surr: 2-Fluorophenol	1300		1250		101	52.1	148			
Surr: Phenol-d5	1300		1250		105	58.2	135			
Surr: 2,4,6-Tribromophenol	1200		1250		98.6	63.8	129			
Surr: Nitrobenzene-d5	620		625.0		99.6	43.5	189			
Surr: 2-Fluorobiphenyl	620		625.0		99.0	76.8	130			
Surr: 4-Terphenyl-d14	660		625.0		105	32	199			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	mb-26194	SampType:	MBLK	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	PBW	Batch ID:	26194	RunNo:	35407					
Prep Date:	7/1/2016	Analysis Date:	7/1/2016	SeqNo:	1095508	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	62								
Acenaphthylene	ND	62								
Aniline	ND	62								
Anthracene	ND	62								
Benz(a)anthracene	ND	62								
Benztidine	ND	120								
Benzo(a)pyrene	ND	62								
Benzo(b)fluoranthene	ND	62								
Benzo(g,h,i)perylene	ND	62								
Benzo(k)fluoranthene	ND	62								
Benzoic acid	ND	120								
Benzyl alcohol	ND	120								
Bis(2-chloroethoxy)methane	ND	62								
Bis(2-chloroethyl)ether	ND	62								
Bis(2-chloroisopropyl)ether	ND	120								
Bis(2-ethylhexyl)phthalate	ND	62								
4-Bromophenyl phenyl ether	ND	62								
Butyl benzyl phthalate	ND	62								
Carbazole	ND	62								
4-Chloro-3-methylphenol	ND	120								
4-Chloroaniline	ND	120								
2-Chloronaphthalene	ND	62								
2-Chlorophenol	ND	62								
4-Chlorophenyl phenyl ether	ND	62								
Chrysene	ND	62								
Di-n-butyl phthalate	ND	62								
Di-n-octyl phthalate	ND	62								
Dibenz(a,h)anthracene	ND	75								
Dibenzofuran	ND	62								
1,2-Dichlorobenzene	ND	62								
1,3-Dichlorobenzene	ND	62								
1,4-Dichlorobenzene	ND	62								
3,3'-Dichlorobenzidine	ND	62								
Diethyl phthalate	ND	62								
Dimethyl phthalate	ND	150								
2,4-Dichlorophenol	ND	120								
2,4-Dimethylphenol	ND	62								
4,6-Dinitro-2-methylphenol	ND	120								
2,4-Dinitrophenol	ND	120								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	LCSW	Batch ID:	B35402	RunNo: 35402						
Prep Date:	Analysis Date: 7/1/2016			SeqNo: 1095493		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	23	1.0	20.00	0	115	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.6		10.00		95.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: B35402		RunNo: 35402						
Prep Date:		Analysis Date: 7/1/2016		SeqNo: 1095492		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.4	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	B35402	RunNo:	35402					
Prep Date:		Analysis Date:	7/1/2016	SeqNo:	1095493	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	70	130			
Toluene	20	1.0	20.00	0	98.5	70	130			
Chlorobenzene	19	1.0	20.00	0	94.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C98

06-Jul-16

Client: Souder, Miller and Associates

Project: Frances Mesa

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: B35402			RunNo: 35402					
Prep Date:		Analysis Date: 7/1/2016			SeqNo: 1095492		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: AST

Project: Frances Mesa

Collection Date: 6/21/2016 10:55:00 AM

Lab ID: 1606C98-002

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Surr: Dibromofluoromethane	97.3	70-130	D	%Rec	20	7/1/2016 9:35:59 PM	B35402
Surr: Toluene-d8	95.8	70-130	D	%Rec	20	7/1/2016 9:35:59 PM	B35402

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: AST

Project: Frances Mesa

Collection Date: 6/21/2016 10:55:00 AM

Lab ID: 1606C98-002

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Dibromochloromethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Dibromomethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2-Dichlorobenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,3-Dichlorobenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,4-Dichlorobenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Dichlorodifluoromethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,1-Dichloroethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,1-Dichloroethene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2-Dichloropropane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,3-Dichloropropane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
2,2-Dichloropropane	ND	40	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,1-Dichloropropene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Hexachlorobutadiene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
2-Hexanone	ND	200	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Isopropylbenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
4-Isopropyltoluene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
4-Methyl-2-pentanone	ND	200	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Methylene Chloride	ND	60	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
n-Butylbenzene	ND	60	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
n-Propylbenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
sec-Butylbenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Styrene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
tert-Butylbenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,1,1,2-Tetrachloroethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,1,2,2-Tetrachloroethane	ND	40	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Tetrachloroethene (PCE)	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
trans-1,2-DCE	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
trans-1,3-Dichloropropene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2,3-Trichlorobenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2,4-Trichlorobenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,1,1-Trichloroethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,1,2-Trichloroethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Trichloroethene (TCE)	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Trichlorofluoromethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2,3-Trichloropropane	ND	40	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Vinyl chloride	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Xylenes, Total	110	30	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Surr: 1,2-Dichloroethane-d4	104	70-130	D	%Rec	20	7/1/2016 9:35:59 PM	B35402
Surr: 4-Bromofluorobenzene	97.7	70-130	D	%Rec	20	7/1/2016 9:35:59 PM	B35402

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: AST

Project: Frances Mesa

Collection Date: 6/21/2016 10:55:00 AM

Lab ID: 1606C98-002

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SEMIVOLATILE ORGANICS BY 8270C							Analyst: DAM
Pyridine	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
1,2,4-Trichlorobenzene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2,4,5-Trichlorophenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2,4,6-Trichlorophenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Surr: 2-Fluorophenol	97.5	52.1-148		%Rec	2	7/1/2016 4:22:32 PM	26194
Surr: Phenol-d5	96.5	58.2-135		%Rec	2	7/1/2016 4:22:32 PM	26194
Surr: 2,4,6-Tribromophenol	102	63.8-129		%Rec	2	7/1/2016 4:22:32 PM	26194
Surr: Nitrobenzene-d5	97.4	43.5-189		%Rec	2	7/1/2016 4:22:32 PM	26194
Surr: 2-Fluorobiphenyl	100	76.8-130		%Rec	2	7/1/2016 4:22:32 PM	26194
Surr: 4-Terphenyl-d14	115	32-199		%Rec	2	7/1/2016 4:22:32 PM	26194
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	62	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Toluene	130	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Ethylbenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Methyl tert-butyl ether (MTBE)	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2,4-Trimethylbenzene	86	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,3,5-Trimethylbenzene	29	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2-Dichloroethane (EDC)	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2-Dibromoethane (EDB)	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Naphthalene	ND	40	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1-Methylnaphthalene	ND	80	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
2-Methylnaphthalene	ND	80	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Acetone	230	200	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Bromobenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Bromodichloromethane	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Bromoform	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Bromomethane	ND	60	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
2-Butanone	ND	200	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Carbon disulfide	ND	200	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Carbon Tetrachloride	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Chlorobenzene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Chloroethane	ND	40	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Chloroform	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
Chloromethane	ND	60	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
2-Chlorotoluene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
4-Chlorotoluene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
cis-1,2-DCE	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
cis-1,3-Dichloropropene	ND	20	D	µg/L	20	7/1/2016 9:35:59 PM	B35402
1,2-Dibromo-3-chloropropane	ND	40	D	µg/L	20	7/1/2016 9:35:59 PM	B35402

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: AST

Project: Frances Mesa

Collection Date: 6/21/2016 10:55:00 AM

Lab ID: 1606C98-002

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SEMIVOLATILE ORGANICS BY 8270C							Analyst: DAM
Dibenzofuran	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
1,2-Dichlorobenzene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
1,3-Dichlorobenzene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
1,4-Dichlorobenzene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
3,3'-Dichlorobenzidine	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Diethyl phthalate	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Dimethyl phthalate	ND	150		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2,4-Dichlorophenol	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2,4-Dimethylphenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
4,6-Dinitro-2-methylphenol	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2,4-Dinitrophenol	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2,4-Dinitrotoluene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2,6-Dinitrotoluene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Fluoranthene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Fluorene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Hexachlorobenzene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Hexachlorobutadiene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Hexachlorocyclopentadiene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Hexachloroethane	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Indeno(1,2,3-cd)pyrene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Isophorone	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
1-Methylnaphthalene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2-Methylnaphthalene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2-Methylphenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
3+4-Methylphenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
N-Nitrosodi-n-propylamine	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
N-Nitrosodimethylamine	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
N-Nitrosodiphenylamine	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Naphthalene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2-Nitroaniline	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
3-Nitroaniline	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
4-Nitroaniline	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Nitrobenzene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2-Nitrophenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
4-Nitrophenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Pentachlorophenol	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Phenanthrene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Phenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Pyrene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: AST

Project: Frances Mesa

Collection Date: 6/21/2016 10:55:00 AM

Lab ID: 1606C98-002

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.0010		mg/L	1	6/28/2016 1:45:02 PM	26106
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.25		mg/L	1	6/28/2016 8:24:50 AM	26095
Barium	ND	0.25		mg/L	1	6/28/2016 8:24:50 AM	26095
Cadmium	ND	0.025		mg/L	1	6/28/2016 8:24:50 AM	26095
Chromium	ND	0.075		mg/L	1	6/28/2016 8:24:50 AM	26095
Lead	ND	0.062		mg/L	1	6/28/2016 8:24:50 AM	26095
Selenium	ND	0.62		mg/L	1	6/28/2016 8:24:50 AM	26095
Silver	ND	0.062		mg/L	1	6/28/2016 8:24:50 AM	26095
SEMIVOLATILE ORGANICS BY 8270C							Analyst: DAM
Acenaphthene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Acenaphthylene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Aniline	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Anthracene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benz(a)anthracene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benzidine	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benzo(a)pyrene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benzo(b)fluoranthene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benzo(g,h,i)perylene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benzo(k)fluoranthene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benzoic acid	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Benzyl alcohol	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Bis(2-chloroethoxy)methane	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Bis(2-chloroethyl)ether	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Bis(2-chloroisopropyl)ether	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Bis(2-ethylhexyl)phthalate	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
4-Bromophenyl phenyl ether	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Butyl benzyl phthalate	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Carbazole	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
4-Chloro-3-methylphenol	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
4-Chloroaniline	ND	120		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2-Chloronaphthalene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
2-Chlorophenol	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
4-Chlorophenyl phenyl ether	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Chrysene	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Di-n-butyl phthalate	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Di-n-octyl phthalate	ND	62		mg/Kg	2	7/1/2016 4:22:32 PM	26194
Dibenz(a,h)anthracene	ND	74		mg/Kg	2	7/1/2016 4:22:32 PM	26194

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1606C98
Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: BGT

Project: Frances Mesa

Collection Date: 6/21/2016 9:50:00 AM

Lab ID: 1606C98-001

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Surr: Dibromofluoromethane	101	70-130	D	%Rec	20	7/1/2016 8:39:29 PM	B35402
Surr: Toluene-d8	95.1	70-130	D	%Rec	20	7/1/2016 8:39:29 PM	B35402

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: BGT

Project: Frances Mesa

Collection Date: 6/21/2016 9:50:00 AM

Lab ID: 1606C98-001

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Dibromochloromethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Dibromomethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2-Dichlorobenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,3-Dichlorobenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,4-Dichlorobenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Dichlorodifluoromethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,1-Dichloroethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,1-Dichloroethene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2-Dichloropropane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,3-Dichloropropane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
2,2-Dichloropropane	ND	40	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,1-Dichloropropene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Hexachlorobutadiene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
2-Hexanone	ND	200	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Isopropylbenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
4-Isopropyltoluene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
4-Methyl-2-pentanone	ND	200	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Methylene Chloride	ND	60	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
n-Butylbenzene	ND	60	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
n-Propylbenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
sec-Butylbenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Styrene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
tert-Butylbenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,1,1,2-Tetrachloroethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,1,2,2-Tetrachloroethane	ND	40	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Tetrachloroethene (PCE)	110	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
trans-1,2-DCE	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
trans-1,3-Dichloropropene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2,3-Trichlorobenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2,4-Trichlorobenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,1,1-Trichloroethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,1,2-Trichloroethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Trichloroethene (TCE)	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Trichlorofluoromethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2,3-Trichloropropane	ND	40	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Vinyl chloride	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Xylenes, Total	ND	30	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Surr: 1,2-Dichloroethane-d4	107	70-130	D	%Rec	20	7/1/2016 8:39:29 PM	B35402
Surr: 4-Bromofluorobenzene	104	70-130	D	%Rec	20	7/1/2016 8:39:29 PM	B35402

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: BGT

Project: Frances Mesa

Collection Date: 6/21/2016 9:50:00 AM

Lab ID: 1606C98-001

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Pyridine	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
1,2,4-Trichlorobenzene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2,4,5-Trichlorophenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2,4,6-Trichlorophenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Surr: 2-Fluorophenol	0	15-123	SD	%Rec	10	6/30/2016 1:15:20 PM	26121
Surr: Phenol-d5	0	4.13-124	SD	%Rec	10	6/30/2016 1:15:20 PM	26121
Surr: 2,4,6-Tribromophenol	0	18.4-134	SD	%Rec	10	6/30/2016 1:15:20 PM	26121
Surr: Nitrobenzene-d5	0	28.8-134	SD	%Rec	10	6/30/2016 1:15:20 PM	26121
Surr: 2-Fluorobiphenyl	0	35.9-125	SD	%Rec	10	6/30/2016 1:15:20 PM	26121
Surr: 4-Terphenyl-d14	0	15-146	SD	%Rec	10	6/30/2016 1:15:20 PM	26121
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Toluene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Ethylbenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Methyl tert-butyl ether (MTBE)	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2,4-Trimethylbenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,3,5-Trimethylbenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2-Dichloroethane (EDC)	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2-Dibromoethane (EDB)	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Naphthalene	ND	40	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1-Methylnaphthalene	ND	80	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
2-Methylnaphthalene	ND	80	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Acetone	5900	2000		µg/L	200	7/1/2016 8:11:05 PM	B35402
Bromobenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Bromodichloromethane	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Bromoform	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Bromomethane	ND	60	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
2-Butanone	ND	200	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Carbon disulfide	ND	200	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Carbon Tetrachloride	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Chlorobenzene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Chloroethane	ND	40	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Chloroform	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
Chloromethane	ND	60	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
2-Chlorotoluene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
4-Chlorotoluene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
cis-1,2-DCE	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
cis-1,3-Dichloropropene	ND	20	D	µg/L	20	7/1/2016 8:39:29 PM	B35402
1,2-Dibromo-3-chloropropane	ND	40	D	µg/L	20	7/1/2016 8:39:29 PM	B35402

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: BGT

Project: Frances Mesa

Collection Date: 6/21/2016 9:50:00 AM

Lab ID: 1606C98-001

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Dibenzofuran	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
1,2-Dichlorobenzene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
1,3-Dichlorobenzene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
1,4-Dichlorobenzene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
3,3'-Dichlorobenzidine	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Diethyl phthalate	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Dimethyl phthalate	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2,4-Dichlorophenol	ND	2000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2,4-Dimethylphenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
4,6-Dinitro-2-methylphenol	ND	2000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2,4-Dinitrophenol	ND	2000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2,4-Dinitrotoluene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2,6-Dinitrotoluene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Fluoranthene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Fluorene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Hexachlorobenzene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Hexachlorobutadiene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Hexachlorocyclopentadiene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Hexachloroethane	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Indeno(1,2,3-cd)pyrene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Isophorone	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
1-Methylnaphthalene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2-Methylnaphthalene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2-Methylphenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
3+4-Methylphenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
N-Nitrosodi-n-propylamine	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
N-Nitrosodimethylamine	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
N-Nitrosodiphenylamine	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Naphthalene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2-Nitroaniline	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
3-Nitroaniline	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
4-Nitroaniline	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Nitrobenzene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2-Nitrophenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
4-Nitrophenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Pentachlorophenol	ND	2000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Phenanthrene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Phenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Pyrene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1606C98

Date Reported: 7/6/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: BGT

Project: Frances Mesa

Collection Date: 6/21/2016 9:50:00 AM

Lab ID: 1606C98-001

Matrix: AQUEOUS

Received Date: 6/23/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.0010		mg/L	1	6/28/2016 1:38:44 PM	26106
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.25		mg/L	1	6/28/2016 8:23:39 AM	26095
Barium	2.7	0.25		mg/L	1	6/28/2016 8:23:39 AM	26095
Cadmium	0.087	0.025		mg/L	1	6/28/2016 8:23:39 AM	26095
Chromium	0.22	0.075		mg/L	1	6/28/2016 8:23:39 AM	26095
Lead	0.38	0.062		mg/L	1	6/28/2016 8:23:39 AM	26095
Selenium	ND	0.62		mg/L	1	6/28/2016 8:23:39 AM	26095
Silver	ND	0.062		mg/L	1	6/28/2016 8:23:39 AM	26095
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Acenaphthylene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Aniline	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Anthracene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Azobenzene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Benz(a)anthracene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Benzo(a)pyrene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Benzo(b)fluoranthene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Benzo(g,h,i)perylene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Benzo(k)fluoranthene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Benzoic acid	ND	2000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Benzyl alcohol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Bis(2-chloroethoxy)methane	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Bis(2-chloroethyl)ether	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Bis(2-chloroisopropyl)ether	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Bis(2-ethylhexyl)phthalate	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
4-Bromophenyl phenyl ether	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Butyl benzyl phthalate	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Carbazole	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
4-Chloro-3-methylphenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
4-Chloroaniline	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2-Chloronaphthalene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
2-Chlorophenol	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
4-Chlorophenyl phenyl ether	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Chrysene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Di-n-butyl phthalate	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Di-n-octyl phthalate	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121
Dibenz(a,h)anthracene	ND	1000	D	µg/L	10	6/30/2016 1:15:20 PM	26121

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 06, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Frances Mesa

OrderNo.: 1606C98

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/23/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Pump Canyon Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL K Section 24 Township 30 North Range 9 West; 36.795082, -107.733534

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 257 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. **Operator Use Only: Waste Acceptance Frequency** ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete
Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Nelson

SIGNATURE: Adrian Nelson

Surface Waste Management Facility Authorized Agent

TITLE: Operator

DATE: 11/2/17

TELEPHONE NO.: (505) 354-6186

Chain-of-Custody Record

Turn-Around Time:

Client: SMA

☒ Standard ☐ Rush

Project Name:

Billing Address: 461 W. Broadway

Project #:

Pump Canyon CS

Phone #: 505-325-7535

Fax or Email: ASHLEY.WATSON@100

Project Manager:

Standard ☐ Level 4 (Full Validation)

Tom Lyons
ASHLEY WATSON

Accreditation

NELAP ☐ Other

Sampler: Ruby Watson

On Ice: ☒ Yes ☐ No

EDD (Type)

Sample Temperature: 7.3-10.0°C = 1.3

Date Time Matrix Sample Request ID

Container Type and # Preservative Type

HEAL No.

BTEX + MTBE + TMB's (8021)
BTEX + MTBE + TPH (Gas only)
TPH 8015B (GRO / DRO / MRO)
TPH (Method 418.1)
EDB (Method 504.1)
PAH's (8310 or 8270 SIMS)
RCRA 8 Metals TECP
Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)
8081 Pesticides / 8082 PCB's
8260B (VOA)
8270 (Semi-VOA)

Air Bubbles (Y or N)

10 13:11 H2O Pump Canyon CS
Various Vials
201

Relinquished by:

Received by:

Date Time

Remarks:

Relinquished by:

Received by:

Date Time

Remarks:

1847 Michael D. Jones

3/15/10 1735

8260 Full List of Report Tels
In. Extraordinary ATTEN: Lismith
CC: Tom Lyons / Extraordinary

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603839

RcptNo: 1

Received by/date: *im* *03/16/14*

Logged By: Anne Thorne 3/16/2016 7:45:00 AM

Completed By: Anne Thorne 3/16/2016

Reviewed By: *03/16/14*

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: *1*
(*2* or >12 unless noted)
Adjusted? *NO*
Checked by: *aj*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID	MB-24322	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24322	RunNo:	32920					
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009590	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24322	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24322	RunNo:	32920					
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009591	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.020	0.5000	0	96.0	80	120			
Barium	0.46	0.020	0.5000	0	92.0	80	120			
Cadmium	0.47	0.0020	0.5000	0	93.6	80	120			
Chromium	0.46	0.0060	0.5000	0	91.5	80	120			
Lead	0.46	0.0050	0.5000	0	91.4	80	120			
Selenium	0.46	0.050	0.5000	0	91.6	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID	MB-24317	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24317	RunNo:	32894					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008338	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24317	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24317	RunNo:	32894					
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008339	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1603839
25-Mar-16

Client: Souder, Miller and Associates
Project: Pump Canyon CS

Sample ID 100ng lcs b		SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW		Batch ID: R33024			RunNo: 33024					
Prep Date:		Analysis Date: 3/23/2016			SeqNo: 1013064		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Dichloroethene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

- Qualifiers:
- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ID Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R33024		RunNo: 33024						
Prep Date:	Analysis Date: 3/23/2016		SeqNo: 1013063		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
1-Chlorotoluene	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603839

Date Reported: 3/25/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Pump Canyon Non Exempt

Project: Pump Canyon CS

Collection Date: 3/15/2016 1:11:00 PM

Lab ID: 1603839-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
n-Propylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
sec-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Styrene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
tert-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
trans-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Trichlorofluoromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Vinyl chloride	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Xylenes, Total	ND	0.30		mg/L	200	3/23/2016 8:08:35 PM	R33024
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024
Surr: Dibromofluoromethane	98.6	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024
Surr: Toluene-d8	99.1	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 8
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Analytical Report

Lab Order 1603839

Date Reported: 3/25/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Pump Canyon Non Exempt

Project: Pump Canyon CS

Collection Date: 3/15/2016 1:11:00 PM

Lab ID: 1603839-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Naphthalene	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
1-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 8:08:35 PM	R33024
Acetone	4.8	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromodichloromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromoform	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromomethane	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Butanone	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Carbon disulfide	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Carbon Tetrachloride	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chloroethane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chloroform	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chloromethane	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
4-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
cis-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Dibromochloromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Dibromomethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1-Dichloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1-Dichloroethene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,3-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
2,2-Dichloropropane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Hexachlorobutadiene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Hexanone	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Isopropylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
4-Isopropyltoluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Methylene Chloride	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024
n-Butylbenzene	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603839

Date Reported: 3/25/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Pump Canyon Non Exempt

Project: Pump Canyon CS

Collection Date: 3/15/2016 1:11:00 PM

Lab ID: 1603839-001

Matrix: AQUEOUS

Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
3+4-Methylphenol	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
Phenol	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/17/2016 7:42:15 PM	24302
Hexachlorobenzene	ND	0.13		mg/L	1	3/17/2016 7:42:15 PM	24302
Hexachlorobutadiene	ND	0.50		mg/L	1	3/17/2016 7:42:15 PM	24302
Hexachloroethane	ND	3.0		mg/L	1	3/17/2016 7:42:15 PM	24302
Nitrobenzene	ND	2.0		mg/L	1	3/17/2016 7:42:15 PM	24302
Pentachlorophenol	ND	100		mg/L	1	3/17/2016 7:42:15 PM	24302
Pyridine	ND	5.0		mg/L	1	3/17/2016 7:42:15 PM	24302
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/17/2016 7:42:15 PM	24302
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/17/2016 7:42:15 PM	24302
Cresols, Total	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
Surr: 2-Fluorophenol	48.5	15-124		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: Phenol-d5	37.5	15-118		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: 2,4,6-Tribromophenol	55.5	15-148		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: Nitrobenzene-d5	86.4	40.6-124		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: 2-Fluorobiphenyl	81.6	35.7-128		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: 4-Terphenyl-d14	64.1	18.8-115		%Rec	1	3/17/2016 7:42:15 PM	24302
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.00080		mg/L	1	3/18/2016 11:09:50 AM	24317
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.20		mg/L	1	3/21/2016 9:08:53 AM	24322
Barium	ND	0.20		mg/L	1	3/21/2016 9:08:53 AM	24322
Cadmium	0.043	0.020		mg/L	1	3/21/2016 9:08:53 AM	24322
Chromium	0.067	0.060		mg/L	1	3/21/2016 9:08:53 AM	24322
Lead	0.089	0.050		mg/L	1	3/21/2016 9:08:53 AM	24322
Selenium	ND	0.50		mg/L	1	3/21/2016 9:08:53 AM	24322
Silver	ND	0.050		mg/L	1	3/21/2016 9:08:53 AM	24322
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Toluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Ethylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
				Page 1 of 8



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

March 25, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Pump Canyon CS

OrderNo.: 1603839

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Cedar Hill Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL N Section 29 Township 32 North Range 10 West; 36.949607, -107.907590, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ bbbls Known Volume (to be entered by the operator at the end of the haul) 16 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete
Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

6. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME:

Adrian Hobbs

TITLE:

Operator

DATE:

1/2/17

SIGNATURE:

[Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.:

(505) 544-6186



Hall Environmental Analysis Laboratory
4901 Hawks NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1803195

RcptNo: 1

Received by/date: AT 03/13/16

Logged By: Anne Thorne

3/3/2016 7:10:00 AM

Anne Thorne

Completed By: Anne Thorne

3/3/2016

Anne Thorne

Reviewed By: JB

3/4/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? ~~Yes~~ ☒ No ☒
9. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 1
(or >12 unless noted)
Adjusted? YES
Checked by: *[Signature]*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603195

22-Mar-16

Client: Souder, Miller and Associates

Project: Cedar Hill Station

Sample ID	MB-24202	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004070	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24202	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004071	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.4	80	120			
Barium	0.48	0.020	0.5000	0	96.5	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.0	80	120			
Chromium	0.48	0.0060	0.5000	0	95.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.1	80	120			
Selenium	0.49	0.050	0.5000	0	99.0	80	120			
Silver	0.099	0.0050	0.1000	0	99.2	80	120			

Sample ID	LCSD-24202	SampType:	LCSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSS02	Batch ID:	24202	RunNo:	32775					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004072	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	104	80	120	4.47	20	
Barium	0.49	0.020	0.5000	0	98.5	80	120	2.12	20	
Cadmium	0.50	0.0020	0.5000	0	101	80	120	2.63	20	
Chromium	0.50	0.0060	0.5000	0	99.3	80	120	3.48	20	
Lead	0.50	0.0050	0.5000	0	100	80	120	3.12	20	
Selenium	0.52	0.050	0.5000	0	103	80	120	4.11	20	
Silver	0.10	0.0050	0.1000	0	101	80	120	1.48	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603195

22-Mar-16

Client: Souder, Miller and Associates

Project: Cedar Hill Station

Sample ID	MB-24111	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998810	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24111	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998811	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	101	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603195

22-Mar-16

Client: Souder, Miller and Associates

Project: Cedar Hill Station

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R32688			RunNo: 32688						
Prep Date:	Analysis Date: 3/9/2016			SeqNo: 1000462			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	97.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.9	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603195

22-Mar-16

Client: Souder, Miller and Associates

Project: Cedar Hill Station

Sample ID	rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32688			RunNo: 32688					
Prep Date:		Analysis Date: 3/9/2016			SeqNo: 1000461	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603195

Date Reported: 3/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Cedar Hill Non Exempt

Project: Cedar Hill Station

Collection Date: 3/2/2016 9:50:00 AM

Lab ID: 1603195-001

Matrix: AQUEOUS

Received Date: 3/3/2016 7:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
n-Propylbenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
sec-Butylbenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
Styrene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
tert-Butylbenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/9/2016 9:09:31 PM	R32688
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
trans-1,2-DCE	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
Trichlorofluoromethane	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/9/2016 9:09:31 PM	R32688
Vinyl chloride	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
Xylenes, Total	ND	0.30		mg/L	200	3/9/2016 9:09:31 PM	R32688
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%Rec	200	3/9/2016 9:09:31 PM	R32688
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	200	3/9/2016 9:09:31 PM	R32688
Surr: Dibromofluoromethane	95.9	70-130		%Rec	200	3/9/2016 9:09:31 PM	R32688
Surr: Toluene-d8	100	70-130		%Rec	200	3/9/2016 9:09:31 PM	R32688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1603195

Date Reported: 3/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Cedar Hill Non Exempt

Project: Cedar Hill Station

Collection Date: 3/2/2016 9:50:00 AM

Lab ID: 1603195-001

Matrix: AQUEOUS

Received Date: 3/3/2016 7:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/12/2016 9:43:21 PM	24087
3+4-Methylphenol	ND	200		mg/L	1	3/12/2016 9:43:21 PM	24087
Phenol	ND	200		mg/L	1	3/12/2016 9:43:21 PM	24087
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/12/2016 9:43:21 PM	24087
Hexachlorobenzene	ND	0.13		mg/L	1	3/12/2016 9:43:21 PM	24087
Hexachlorobutadiene	ND	0.50		mg/L	1	3/12/2016 9:43:21 PM	24087
Hexachloroethane	ND	3.0		mg/L	1	3/12/2016 9:43:21 PM	24087
Nitrobenzene	ND	2.0		mg/L	1	3/12/2016 9:43:21 PM	24087
Pentachlorophenol	ND	100		mg/L	1	3/12/2016 9:43:21 PM	24087
Pyridine	ND	5.0		mg/L	1	3/12/2016 9:43:21 PM	24087
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/12/2016 9:43:21 PM	24087
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/12/2016 9:43:21 PM	24087
Cresols, Total	ND	200		mg/L	1	3/12/2016 9:43:21 PM	24087
Surr: 2-Fluorophenol	5.73	15-124	S	%Rec	1	3/12/2016 9:43:21 PM	24087
Surr: Phenol-d5	20.9	15-118		%Rec	1	3/12/2016 9:43:21 PM	24087
Surr: 2,4,6-Tribromophenol	19.1	15-148		%Rec	1	3/12/2016 9:43:21 PM	24087
Surr: Nitrobenzene-d5	109	40.6-124		%Rec	1	3/12/2016 9:43:21 PM	24087
Surr: 2-Fluorobiphenyl	108	35.7-128		%Rec	1	3/12/2016 9:43:21 PM	24087
Surr: 4-Terphenyl-d14	70.9	18.8-115		%Rec	1	3/12/2016 9:43:21 PM	24087
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.00020		mg/L	1	3/8/2016 10:23:35 AM	24111
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	1.0		mg/L	50	3/18/2016 9:38:56 AM	24202
Barium	0.028	0.020		mg/L	1	3/16/2016 8:00:31 AM	24202
Cadmium	ND	0.0020		mg/L	1	3/16/2016 8:00:31 AM	24202
Chromium	ND	0.30		mg/L	50	3/18/2016 9:38:56 AM	24202
Lead	0.015	0.0050		mg/L	1	3/16/2016 8:00:31 AM	24202
Selenium	ND	2.5		mg/L	50	3/18/2016 9:38:56 AM	24202
Silver	ND	0.0050		mg/L	1	3/16/2016 8:00:31 AM	24202
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
Toluene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
Ethylbenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/9/2016 9:09:31 PM	R32688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

March 22, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Cedar Hill Station

OrderNo.: 1603195

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/3/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Wright Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL I Section 14 Township 29 North Range 10 West; 36.722803, -107.848700, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 100 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 24 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete
Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Holman

TITLE: Operator

DATE: 1/2/17

SIGNATURE: [Signature]

TELEPHONE NO.: (505) 534-6186

Surface Waste Management Facility Authorized Agent



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603158

RcptNo: 1

Received by/date:

AS 03/03/16

Logged By: Anne Thorne

3/3/2016 7:10:00 AM

Anne Thorne

Completed By: Anne Thorne

3/3/2016

Anne Thorne

Reviewed By:

AT

3/4/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 5.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 1
(2 or >12 unless noted)
Adjusted? NO
Checked by: *[Signature]*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603158

22-Mar-16

Client: Souder, Miller and Associates

Project: Wright CS

Sample ID	MB-24136	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24136	RunNo:	32664					
Prep Date:	3/8/2016	Analysis Date:	3/9/2016	SeqNo:	999450	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24136	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24136	RunNo:	32664					
Prep Date:	3/8/2016	Analysis Date:	3/9/2016	SeqNo:	999451	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	103	80	120			
Barium	0.49	0.020	0.5000	0	98.0	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.1	80	120			
Chromium	0.49	0.0060	0.5000	0	98.8	80	120			
Lead	0.49	0.0050	0.5000	0	97.6	80	120			
Selenium	0.50	0.050	0.5000	0	100	80	120			
Silver	0.10	0.0050	0.1000	0	102	80	120			

Sample ID	LCSD-24136	SampType:	LCSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSS02	Batch ID:	24136	RunNo:	32664					
Prep Date:	3/8/2016	Analysis Date:	3/9/2016	SeqNo:	999452	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	101	80	120	1.64	20	
Barium	0.49	0.020	0.5000	0	97.7	80	120	0.323	20	
Cadmium	0.49	0.0020	0.5000	0	98.6	80	120	0.577	20	
Chromium	0.49	0.0060	0.5000	0	98.6	80	120	0.203	20	
Lead	0.49	0.0050	0.5000	0	97.9	80	120	0.315	20	
Selenium	0.51	0.050	0.5000	0	101	80	120	1.30	20	
Silver	0.10	0.0050	0.1000	0	101	80	120	0.757	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603158

22-Mar-16

Client: Souder, Miller and Associates

Project: Wright CS

Sample ID	MB-24111	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998810	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24111	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998811	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	101	80	120			

Sample ID	1603158-001CMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury					
Client ID:	Wright Non Exempt	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998851	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0034	0.0010	0.005000	0	67.1	75	125			S

Sample ID	1603158-001CMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury					
Client ID:	Wright Non Exempt	Batch ID:	24111	RunNo:	32641					
Prep Date:	3/7/2016	Analysis Date:	3/8/2016	SeqNo:	998852	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0035	0.0010	0.005000	0	69.3	75	125	3.16	20	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603158

22-Mar-16

Client: Souder, Miller and Associates

Project: Wright CS

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B32660		RunNo: 32660							
Prep Date:	Analysis Date: 3/9/2016		SeqNo: 999335		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.5	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603158

22-Mar-16

Client: Souder, Miller and Associates

Project: Wright CS

Sample ID	rb4	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: B32660		RunNo: 32660						
Prep Date:		Analysis Date: 3/9/2016		SeqNo: 999331		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.6	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	B32660	RunNo:	32660					
Prep Date:		Analysis Date:	3/9/2016	SeqNo:	999335	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.0	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603158

22-Mar-16

Client: Souder, Miller and Associates

Project: Wright CS

Sample ID rb4		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B32660		RunNo: 32660							
Prep Date:	Analysis Date: 3/9/2016		SeqNo: 999331		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603158

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Wright Non Exempt

Project: Wright CS

Collection Date: 3/2/2016 11:50:00 AM

Lab ID: 1603158-001

Matrix: AQUEOUS

Received Date: 3/3/2016 7:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
n-Propylbenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
sec-Butylbenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Styrene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
tert-Butylbenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/9/2016 7:21:43 AM	B32660
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
trans-1,2-DCE	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Trichlorofluoromethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/9/2016 7:21:43 AM	B32660
Vinyl chloride	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Xylenes, Total	ND	0.30		mg/L	200	3/9/2016 7:21:43 AM	B32660
Surr: 1,2-Dichloroethane-d4	93.2	70-130		%Rec	200	3/9/2016 7:21:43 AM	B32660
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	200	3/9/2016 7:21:43 AM	B32660
Surr: Dibromofluoromethane	88.6	70-130		%Rec	200	3/9/2016 7:21:43 AM	B32660
Surr: Toluene-d8	93.0	70-130		%Rec	200	3/9/2016 7:21:43 AM	B32660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603158

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Wright Non Exempt

Project: Wright CS

Collection Date: 3/2/2016 11:50:00 AM

Lab ID: 1603158-001

Matrix: AQUEOUS

Received Date: 3/3/2016 7:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: DJF		
Naphthalene	ND	0.40		mg/L	200	3/9/2016 7:21:43 AM	B32660
1-Methylnaphthalene	ND	0.80		mg/L	200	3/9/2016 7:21:43 AM	B32660
2-Methylnaphthalene	ND	0.80		mg/L	200	3/9/2016 7:21:43 AM	B32660
Acetone	ND	2.0		mg/L	200	3/9/2016 7:21:43 AM	B32660
Bromobenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Bromodichloromethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Bromoform	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Bromomethane	ND	0.60		mg/L	200	3/9/2016 7:21:43 AM	B32660
2-Butanone	ND	2.0		mg/L	200	3/9/2016 7:21:43 AM	B32660
Carbon disulfide	ND	2.0		mg/L	200	3/9/2016 7:21:43 AM	B32660
Carbon Tetrachloride	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Chlorobenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Chloroethane	ND	0.40		mg/L	200	3/9/2016 7:21:43 AM	B32660
Chloroform	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Chloromethane	ND	0.60		mg/L	200	3/9/2016 7:21:43 AM	B32660
2-Chlorotoluene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
4-Chlorotoluene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
cis-1,2-DCE	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/9/2016 7:21:43 AM	B32660
Dibromochloromethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Dibromomethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,1-Dichloroethane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,1-Dichloroethene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2-Dichloropropane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,3-Dichloropropane	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
2,2-Dichloropropane	ND	0.40		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,1-Dichloropropene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Hexachlorobutadiene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
2-Hexanone	ND	2.0		mg/L	200	3/9/2016 7:21:43 AM	B32660
Isopropylbenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
4-Isopropyltoluene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/9/2016 7:21:43 AM	B32660
Methylene Chloride	ND	0.60		mg/L	200	3/9/2016 7:21:43 AM	B32660
n-Butylbenzene	ND	0.60		mg/L	200	3/9/2016 7:21:43 AM	B32660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603158

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Wright Non Exempt

Project: Wright CS

Collection Date: 3/2/2016 11:50:00 AM

Lab ID: 1603158-001

Matrix: AQUEOUS

Received Date: 3/3/2016 7:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	10	3/12/2016 11:41:43 PM	24087
3+4-Methylphenol	ND	200		mg/L	10	3/12/2016 11:41:43 PM	24087
Phenol	ND	200		mg/L	10	3/12/2016 11:41:43 PM	24087
2,4-Dinitrotoluene	ND	0.50		mg/L	10	3/12/2016 11:41:43 PM	24087
Hexachlorobenzene	ND	0.50		mg/L	10	3/12/2016 11:41:43 PM	24087
Hexachlorobutadiene	ND	5.0		mg/L	10	3/12/2016 11:41:43 PM	24087
Hexachloroethane	ND	3.0		mg/L	10	3/12/2016 11:41:43 PM	24087
Nitrobenzene	ND	2.0		mg/L	10	3/12/2016 11:41:43 PM	24087
Pentachlorophenol	ND	100		mg/L	10	3/12/2016 11:41:43 PM	24087
Pyridine	ND	5.0		mg/L	10	3/12/2016 11:41:43 PM	24087
2,4,5-Trichlorophenol	ND	400		mg/L	10	3/12/2016 11:41:43 PM	24087
2,4,6-Trichlorophenol	ND	2.0		mg/L	10	3/12/2016 11:41:43 PM	24087
Cresols, Total	ND	200		mg/L	10	3/12/2016 11:41:43 PM	24087
Surr: 2-Fluorophenol	55.7	15-124		%Rec	10	3/12/2016 11:41:43 PM	24087
Surr: Phenol-d5	31.9	15-118		%Rec	10	3/12/2016 11:41:43 PM	24087
Surr: 2,4,6-Tribromophenol	103	15-148		%Rec	10	3/12/2016 11:41:43 PM	24087
Surr: Nitrobenzene-d5	104	40.6-124		%Rec	10	3/12/2016 11:41:43 PM	24087
Surr: 2-Fluorobiphenyl	111	35.7-128		%Rec	10	3/12/2016 11:41:43 PM	24087
Surr: 4-Terphenyl-d14	0	18.8-115	S	%Rec	10	3/12/2016 11:41:43 PM	24087
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.0010		mg/L	5	3/8/2016 11:36:35 AM	24111
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.10		mg/L	5	3/18/2016 9:34:15 AM	24136
Barium	ND	0.020		mg/L	1	3/16/2016 7:52:55 AM	24136
Cadmium	0.021	0.0020		mg/L	1	3/16/2016 7:52:55 AM	24136
Chromium	ND	0.030		mg/L	5	3/18/2016 9:34:15 AM	24136
Lead	0.0050	0.0050		mg/L	1	3/16/2016 7:52:55 AM	24136
Selenium	ND	0.050		mg/L	1	3/16/2016 7:52:55 AM	24136
Silver	ND	0.0050		mg/L	1	3/16/2016 7:52:55 AM	24136
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Toluene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Ethylbenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/9/2016 7:21:43 AM	B32660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 22, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Wright CS

OrderNo.: 1603158

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/3/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. **Originating Site:**

Manzanares Val Verde OL Compressor Station

3. **Location of Material (Street Address, City, State or ULSTR):**

UL O Section 4 Township 28 North Range 8 West; 36.747812, -107.675701, San Juan County, NM

4. **Source and Description of Waste:**

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non-Hazardous Water from the compressor skids.

Estimated Volume 60 yd³ 0 bbls Known Volume (to be entered by the operator at the end of the haul) 0 yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter: To Be Determined**

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Abraham Hudson

SIGNATURE: [Signature]

TITLE: Operator

DATE: 1/2/17

TELEPHONE NO.: (505) 534 6186

Surface Waste Management Facility Authorized Agent

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1603C87

RcptNo: 1

Received by/date:	LM 03/25/16		
Logged By:	Anne Thome	3/25/2016 7:15:00 AM	Anne Thome
Completed By:	Anne Thome	3/25/2016	Anne Thome
Reviewed By:	Ju	03/28/16	

Chain of Custody

- Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
- Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
- How was the sample delivered? Courier

Log In

- Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
- Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
- Sample(s) in proper container(s)? Yes ☒ No ☐
- Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
- Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
- Was preservative added to bottles? Yes ☐ No ☒ NA ☐
- VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
- Were any sample containers received broken? Yes ☐ No ☒
- Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
- Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
- Is it clear what analyses were requested? Yes ☒ No ☐
- Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603C87

12-Apr-16

Client: Souder, Miller and Associates

Project: Manzanarez OL VV

Sample ID	MB-24526	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24526	RunNo:	33198					
Prep Date:	3/30/2016	Analysis Date:	3/31/2016	SeqNo:	1019631	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24526	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24526	RunNo:	33198					
Prep Date:	3/30/2016	Analysis Date:	3/31/2016	SeqNo:	1019632	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	101	80	120			
Barium	0.49	0.020	0.5000	0	98.1	80	120			
Cadmium	0.50	0.0020	0.5000	0	100	80	120			
Chromium	0.49	0.0060	0.5000	0	97.8	80	120			
Lead	0.49	0.0050	0.5000	0	98.8	80	120			
Selenium	0.52	0.050	0.5000	0	103	80	120			
Silver	0.10	0.0050	0.1000	0	102	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603C87

12-Apr-16

Client: Souder, Miller and Associates

Project: Manzanarez OL VV

Sample ID	MB-24493	SampType:	mblk	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24493	RunNo:	33149					
Prep Date:	3/29/2016	Analysis Date:	3/29/2016	SeqNo:	1017864	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24493	SampType:	lcs	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24493	RunNo:	33149					
Prep Date:	3/29/2016	Analysis Date:	3/29/2016	SeqNo:	1017865	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	103	80	120			

Sample ID	LCSD-24493	SampType:	lcsd	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSS02	Batch ID:	24493	RunNo:	33149					
Prep Date:	3/29/2016	Analysis Date:	3/29/2016	SeqNo:	1017866	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120	1.26	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603C87

12-Apr-16

Client: Souder, Miller and Associates

Project: Manzanarez OL VV

Sample ID	ics-24543	SampType: LCS	TestCode: EPA Method 8270C TCLP							
Client ID:	LCSS	Batch ID: 24543	RunNo: 33230							
Prep Date:	3/31/2016	Analysis Date: 3/31/2016	SeqNo: 1020595		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	0.17		0.2000		84.0	15	148			
Surr: Nitrobenzene-d5	0.092		0.1000		91.9	40.6	124			
Surr: 2-Fluorobiphenyl	0.083		0.1000		83.2	35.7	128			
Surr: 4-Terphenyl-d14	0.070		0.1000		70.1	18.8	115			

Sample ID	Icsd-24543		SampType: LCSD		TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS02		Batch ID: 24543		RunNo: 33230					
Prep Date:	3/31/2016		Analysis Date: 3/31/2016		SeqNo: 1020596		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.12	0.010	0.1000	0	116	32.1	120	25.9	20	R
3+4-Methylphenol	0.30	0.010	0.2000	0	150	10.9	204	28.7	20	R
2,4-Dinitrotoluene	0.087	0.010	0.1000	0	86.6	41.9	116	15.2	20	
Hexachlorobenzene	0.089	0.010	0.1000	0	89.2	37.7	99.4	16.3	20	
Hexachlorobutadiene	0.10	0.010	0.1000	0	104	30.6	107	19.7	20	
Hexachloroethane	0.093	0.010	0.1000	0	93.0	27.4	121	24.8	20	R
Nitrobenzene	0.10	0.010	0.1000	0	102	28.6	134	19.8	20	
Pentachlorophenol	0.083	0.010	0.1000	0	82.9	7.71	111	13.0	20	
Pyridine	0.094	0.010	0.1000	0	94.4	8.54	92.4	24.9	20	RS
2,4,5-Trichlorophenol	0.12	0.010	0.1000	0	122	25.3	146	24.9	20	R
2,4,6-Trichlorophenol	0.11	0.010	0.1000	0	109	21.5	145	21.1	20	R
Cresols, Total	0.42	0.010	0.3000	0	139	30	136	27.9	20	RS
Surr: 2-Fluorophenol	0.18		0.2000		89.2	15	124	0	20	
Surr: Phenol-d5	0.22		0.2000		110	15	118	0	20	
Surr: 2,4,6-Tribromophenol	0.19		0.2000		94.1	15	148	0	20	
Surr: Nitrobenzene-d5	0.11		0.1000		110	40.6	124	0	20	
Surr: 2-Fluorobiphenyl	0.11		0.1000		108	35.7	128	0	20	
Surr: 4-Terphenyl-d14	0.067		0.1000		66.5	18.8	115	0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603C87

12-Apr-16

Client: Souder, Miller and Associates

Project: Manzanarez OL VV

Sample ID	mb-24543	SampType: MBLK		TestCode: EPA Method 8270C TCLP						
Client ID:	PBS	Batch ID: 24543		RunNo: 33230						
Prep Date:	3/31/2016	Analysis Date: 3/31/2016		SeqNo: 1020594		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								
Phenol	ND	200								
2,4-Dinitrotoluene	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND	0.50								
Hexachloroethane	ND	3.0								
Nitrobenzene	ND	2.0								
Pentachlorophenol	ND	100								
Pyridine	ND	5.0								
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.15		0.2000		73.4	15	124			
Surr: Phenol-d5	0.17		0.2000		84.7	15	118			
Surr: 2,4,6-Tribromophenol	0.15		0.2000		75.5	15	148			
Surr: Nitrobenzene-d5	0.078		0.1000		78.3	40.6	124			
Surr: 2-Fluorobiphenyl	0.072		0.1000		72.0	35.7	128			
Surr: 4-Terphenyl-d14	0.087		0.1000		87.2	18.8	115			

Sample ID	ics-24543	SampType: LCS			TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS	Batch ID: 24543			RunNo: 33230					
Prep Date:	3/31/2016	Analysis Date: 3/31/2016			SeqNo: 1020595		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.089	0.010	0.1000	0	89.4	32.1	120			
3+4-Methylphenol	0.23	0.010	0.2000	0	113	10.9	204			
2,4-Dinitrotoluene	0.074	0.010	0.1000	0	74.3	41.9	116			
Hexachlorobenzene	0.076	0.010	0.1000	0	75.8	37.7	99.4			
Hexachlorobutadiene	0.085	0.010	0.1000	0	85.3	30.6	107			
Hexachloroethane	0.072	0.010	0.1000	0	72.5	27.4	121			
Nitrobenzene	0.084	0.010	0.1000	0	83.5	28.6	134			
Pentachlorophenol	0.073	0.010	0.1000	0	72.8	7.71	111			
Pyridine	0.073	0.010	0.1000	0	73.5	8.54	92.4			
2,4,5-Trichlorophenol	0.095	0.010	0.1000	0	95.1	25.3	146			
2,4,6-Trichlorophenol	0.089	0.010	0.1000	0	88.6	21.5	145			
Cresols, Total	0.31	0.010	0.3000	0	105	30	136			
Surr: 2-Fluorophenol	0.14		0.2000		70.6	15	124			
Surr: Phenol-d5	0.17		0.2000		83.9	15	118			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603C87

12-Apr-16

Client: Souder, Miller and Associates

Project: Manzanarez OL VV

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: A33100			RunNo: 33100					
Prep Date:		Analysis Date: 4/1/2016			SeqNo: 1020465		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.5	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603C87

12-Apr-16

Client: Souder, Miller and Associates

Project: Manzanarez OL VV

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: A33100			RunNo: 33100					
Prep Date:		Analysis Date: 4/1/2016			SeqNo: 1020465 Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603C87

12-Apr-16

Client: Souder, Miller and Associates

Project: Manzanarez OL VV

Sample ID 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: A33100			RunNo: 33100						
Prep Date:	Analysis Date: 3/31/2016			SeqNo: 1020457			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	19	1.0	20.00	0	96.6	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.2	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	9.3		10.00		92.5	70	130			

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A33100			RunNo: 33100						
Prep Date:	Analysis Date: 4/1/2016			SeqNo: 1020465			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603C87

Date Reported: 4/12/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Manzanarez OL VV

Project: Manzanarez OL VV

Collection Date: 3/24/2016 1:21:00 PM

Lab ID: 1603C87-001

Matrix: AQUEOUS

Received Date: 3/25/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: AG		
n-Propylbenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
sec-Butylbenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Styrene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
tert-Butylbenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	4/1/2016 5:11:29 AM	A33100
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
trans-1,2-DCE	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,1,1-Trichloroethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,1,2-Trichloroethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Trichloroethene (TCE)	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Trichlorofluoromethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2,3-Trichloropropane	ND	0.40		mg/L	200	4/1/2016 5:11:29 AM	A33100
Vinyl chloride	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Xylenes, Total	ND	0.30		mg/L	200	4/1/2016 5:11:29 AM	A33100
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	200	4/1/2016 5:11:29 AM	A33100
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	200	4/1/2016 5:11:29 AM	A33100
Surr: Dibromofluoromethane	93.8	70-130		%Rec	200	4/1/2016 5:11:29 AM	A33100
Surr: Toluene-d8	93.5	70-130		%Rec	200	4/1/2016 5:11:29 AM	A33100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603C87

Date Reported: 4/12/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Manzanarez OL VV

Project: Manzanarez OL VV

Collection Date: 3/24/2016 1:21:00 PM

Lab ID: 1603C87-001

Matrix: AQUEOUS

Received Date: 3/25/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Naphthalene	ND	0.40		mg/L	200	4/1/2016 5:11:29 AM	A33100
1-Methylnaphthalene	ND	0.80		mg/L	200	4/1/2016 5:11:29 AM	A33100
2-Methylnaphthalene	ND	0.80		mg/L	200	4/1/2016 5:11:29 AM	A33100
Acetone	ND	2.0		mg/L	200	4/1/2016 5:11:29 AM	A33100
Bromobenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Bromodichloromethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Bromoform	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Bromomethane	ND	0.60		mg/L	200	4/1/2016 5:11:29 AM	A33100
2-Butanone	ND	2.0		mg/L	200	4/1/2016 5:11:29 AM	A33100
Carbon disulfide	ND	2.0		mg/L	200	4/1/2016 5:11:29 AM	A33100
Carbon Tetrachloride	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Chlorobenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Chloroethane	ND	0.40		mg/L	200	4/1/2016 5:11:29 AM	A33100
Chloroform	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Chloromethane	ND	0.60		mg/L	200	4/1/2016 5:11:29 AM	A33100
2-Chlorotoluene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
4-Chlorotoluene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
cis-1,2-DCE	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	4/1/2016 5:11:29 AM	A33100
Dibromochloromethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Dibromomethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2-Dichlorobenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,3-Dichlorobenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,4-Dichlorobenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Dichlorodifluoromethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,1-Dichloroethane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,1-Dichloroethene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2-Dichloropropane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,3-Dichloropropane	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
2,2-Dichloropropane	ND	0.40		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,1-Dichloropropene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Hexachlorobutadiene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
2-Hexanone	ND	2.0		mg/L	200	4/1/2016 5:11:29 AM	A33100
Isopropylbenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
4-Isopropyltoluene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
4-Methyl-2-pentanone	ND	2.0		mg/L	200	4/1/2016 5:11:29 AM	A33100
Methylene Chloride	ND	0.60		mg/L	200	4/1/2016 5:11:29 AM	A33100
n-Butylbenzene	ND	0.60		mg/L	200	4/1/2016 5:11:29 AM	A33100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603C87

Date Reported: 4/12/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Manzanarez OL VV

Project: Manzanarez OL VV

Collection Date: 3/24/2016 1:21:00 PM

Lab ID: 1603C87-001

Matrix: AQUEOUS

Received Date: 3/25/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/31/2016 3:20:13 PM	24543
3+4-Methylphenol	ND	200		mg/L	1	3/31/2016 3:20:13 PM	24543
Phenol	ND	200		mg/L	1	3/31/2016 3:20:13 PM	24543
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/31/2016 3:20:13 PM	24543
Hexachlorobenzene	ND	0.13		mg/L	1	3/31/2016 3:20:13 PM	24543
Hexachlorobutadiene	ND	0.50		mg/L	1	3/31/2016 3:20:13 PM	24543
Hexachloroethane	ND	3.0		mg/L	1	3/31/2016 3:20:13 PM	24543
Nitrobenzene	ND	2.0		mg/L	1	3/31/2016 3:20:13 PM	24543
Pentachlorophenol	ND	100		mg/L	1	3/31/2016 3:20:13 PM	24543
Pyridine	ND	5.0		mg/L	1	3/31/2016 3:20:13 PM	24543
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/31/2016 3:20:13 PM	24543
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/31/2016 3:20:13 PM	24543
Cresols, Total	ND	200		mg/L	1	3/31/2016 3:20:13 PM	24543
Surr: 2-Fluorophenol	1.84	15-124	S	%Rec	1	3/31/2016 3:20:13 PM	24543
Surr: Phenol-d5	4.18	15-118	S	%Rec	1	3/31/2016 3:20:13 PM	24543
Surr: 2,4,6-Tribromophenol	5.66	15-148	S	%Rec	1	3/31/2016 3:20:13 PM	24543
Surr: Nitrobenzene-d5	103	40.6-124		%Rec	1	3/31/2016 3:20:13 PM	24543
Surr: 2-Fluorobiphenyl	97.2	35.7-128		%Rec	1	3/31/2016 3:20:13 PM	24543
Surr: 4-Terphenyl-d14	67.8	18.8-115		%Rec	1	3/31/2016 3:20:13 PM	24543
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.00020		mg/L	1	3/29/2016 7:11:17 PM	24493
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	0.020		mg/L	1	3/31/2016 8:53:23 AM	24526
Barium	0.045	0.020		mg/L	1	3/31/2016 8:53:23 AM	24526
Cadmium	0.0021	0.0020		mg/L	1	3/31/2016 8:53:23 AM	24526
Chromium	0.0083	0.0060		mg/L	1	3/31/2016 8:53:23 AM	24526
Lead	0.017	0.0050		mg/L	1	3/31/2016 8:53:23 AM	24526
Selenium	ND	0.050		mg/L	1	3/31/2016 8:53:23 AM	24526
Silver	ND	0.0050		mg/L	1	3/31/2016 8:53:23 AM	24526
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.50		mg/L	200	4/1/2016 5:11:29 AM	A33100
Toluene	0.36	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Ethylbenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	4/1/2016 5:11:29 AM	A33100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 12, 2016

Ashley Maxwell

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX

RE: Manzanarez OL VV

OrderNo.: 1603C87

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/25/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Hart Canyon Val Verde Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL I Section 20 Township 31 North Range 10 West; 36.881168, -107.901603, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 60 yd³ 0 bbls Known Volume (to be entered by the operator at the end of the haul) 0 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. **Operator Use Only: Waste Acceptance Frequency** ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete
Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

5. Transporter: To be determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Wilson

SIGNATURE: [Signature]

Surface Waste Management Facility Authorized Agent

TITLE: Operator

TELEPHONE NO.: (505) 554-6186

DATE: 11/2/13



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1803723

RcptNo: 1

Received by/date:

03/15/16

Logged By: Lindsay Mangin

3/15/2016 8:00:00 AM

Completed By: Lindsay Mangin

3/15/2016 10:39:52 AM

Reviewed By:

AT 03/15/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603723

22-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon VV

Sample ID	lcsd-24298	SampType	LCSD	TestCode	SEMIVOLATILE ORGANICS by 8270C					
Client ID	LCSS02	Batch ID	24298	RunNo	32871					
Prep Date	3/17/2016	Analysis Date	3/17/2016	SeqNo	1007480	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	520		625.0		83.2	32	199	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603723

22-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon VV

Sample ID	ics-24298	SampType:	LCS	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	LCSW	Batch ID:	24298	RunNo:	32871					
Prep Date:	3/17/2016	Analysis Date:	3/17/2016	SeqNo:	1007479	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	610	62	625.0	0	98.1	75.6	115			
4-Chloro-3-methylphenol	1300	120	1250	0	105	83.2	125			
2-Chlorophenol	1200	62	1250	0	98.1	77.9	120			
1,4-Dichlorobenzene	590	62	625.0	0	94.8	73.2	117			
2,4-Dinitrotoluene	460	62	625.0	0	72.9	60.2	104			
N-Nitrosodi-n-propylamine	660	62	625.0	0	106	71.4	132			
4-Nitrophenol	1100	62	1250	0	86.8	69.8	121			
Pentachlorophenol	1100	120	1250	0	86.9	51.3	106			
Phenol	1300	62	1250	0	104	81.2	116			
Pyrene	550	62	625.0	0	87.7	71	113			
1,2,4-Trichlorobenzene	670	62	625.0	0	107	68.6	133			
Surr: 2-Fluorophenol	1100		1250		89.0	52.1	148			
Surr: Phenol-d5	1300		1250		103	58.2	135			
Surr: 2,4,6-Tribromophenol	1200		1250		99.5	63.8	129			
Surr: Nitrobenzene-d5	630		625.0		102	43.5	189			
Surr: 2-Fluorobiphenyl	580		625.0		92.3	76.8	130			
Surr: 4-Terphenyl-d14	460		625.0		73.2	32	199			

Sample ID	icsd-24298	SampType:	LCSD	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	LCSS02	Batch ID:	24298	RunNo:	32871					
Prep Date:	3/17/2016	Analysis Date:	3/17/2016	SeqNo:	1007480	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	640	62	625.0	0	102	75.6	115	4.19	20	
4-Chloro-3-methylphenol	1300	120	1250	0	105	83.2	125	0.152	20	
2-Chlorophenol	1300	62	1250	0	104	77.9	120	5.38	20	
1,4-Dichlorobenzene	620	62	625.0	0	98.6	73.2	117	3.93	20	
2,4-Dinitrotoluene	490	62	625.0	0	78.8	60.2	104	7.70	20	
N-Nitrosodi-n-propylamine	660	62	625.0	0	105	71.4	132	1.21	20	
4-Nitrophenol	1100	62	1250	0	90.7	69.8	121	4.42	20	
Pentachlorophenol	1100	120	1250	0	89.3	51.3	106	2.79	20	
Phenol	1300	62	1250	0	104	81.2	116	0.173	20	
Pyrene	590	62	625.0	0	93.6	71	113	6.53	20	
1,2,4-Trichlorobenzene	700	62	625.0	0	111	68.6	133	4.11	20	
Surr: 2-Fluorophenol	1200		1250		96.9	52.1	148	0	0	
Surr: Phenol-d5	1300		1250		105	58.2	135	0	0	
Surr: 2,4,6-Tribromophenol	1300		1250		101	63.8	129	0	0	
Surr: Nitrobenzene-d5	630		625.0		101	43.5	189	0	0	
Surr: 2-Fluorobiphenyl	590		625.0		94.2	76.8	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603723

22-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon VV

Sample ID	mb-24298	SampType:	MBLK	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	PBW	Batch ID:	24298	RunNo:	32871					
Prep Date:	3/17/2016	Analysis Date:	3/17/2016	SeqNo:	1007478	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	62								
2,6-Dinitrotoluene	ND	62								
Fluoranthene	ND	62								
Fluorene	ND	62								
Hexachlorobenzene	ND	62								
Hexachlorobutadiene	ND	62								
Hexachlorocyclopentadiene	ND	62								
Hexachloroethane	ND	62								
Indeno(1,2,3-cd)pyrene	ND	62								
Isophorone	ND	62								
1-Methylnaphthalene	ND	62								
2-Methylnaphthalene	ND	62								
2-Methylphenol	ND	62								
3+4-Methylphenol	ND	62								
N-Nitrosodi-n-propylamine	ND	62								
N-Nitrosodimethylamine	ND	120								
N-Nitrosodiphenylamine	ND	62								
Naphthalene	ND	62								
2-Nitroaniline	ND	120								
3-Nitroaniline	ND	120								
4-Nitroaniline	ND	120								
Nitrobenzene	ND	62								
2-Nitrophenol	ND	62								
4-Nitrophenol	ND	62								
Pentachlorophenol	ND	120								
Phenanthrene	ND	62								
Phenol	ND	62								
Pyrene	ND	62								
Pyridine	ND	120								
1,2,4-Trichlorobenzene	ND	62								
2,4,5-Trichlorophenol	ND	62								
2,4,6-Trichlorophenol	ND	62								
Surr: 2-Fluorophenol	1300		1250		100	52.1	148			
Surr: Phenol-d5	1300		1250		106	58.2	135			
Surr: 2,4,6-Tribromophenol	1200		1250		99.6	63.8	129			
Surr: Nitrobenzene-d5	630		625.0		100	43.5	189			
Surr: 2-Fluorobiphenyl	610		625.0		97.7	76.8	130			
Surr: 4-Terphenyl-d14	470		625.0		75.5	32	199			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603723

22-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon VV

Sample ID	mb-24298	SampType:	MBLK	TestCode:	SEMIVOLATILE ORGANICS by 8270C					
Client ID:	PBW	Batch ID:	24298	RunNo:	32871					
Prep Date:	3/17/2016	Analysis Date:	3/17/2016	SeqNo:	1007478	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	62								
Acenaphthylene	ND	62								
Aniline	ND	62								
Anthracene	ND	62								
Benz(a)anthracene	ND	62								
Benzidine	ND	120								
Benzo(a)pyrene	ND	62								
Benzo(b)fluoranthene	ND	62								
Benzo(g,h,i)perylene	ND	62								
Benzo(k)fluoranthene	ND	62								
Benzoic acid	ND	120								
Benzyl alcohol	ND	120								
Bis(2-chloroethoxy)methane	ND	62								
Bis(2-chloroethyl)ether	ND	62								
Bis(2-chloroisopropyl)ether	ND	120								
Bis(2-ethylhexyl)phthalate	ND	62								
4-Bromophenyl phenyl ether	ND	62								
Butyl benzyl phthalate	ND	62								
Carbazole	ND	62								
4-Chloro-3-methylphenol	ND	120								
4-Chloroaniline	ND	120								
2-Chloronaphthalene	ND	62								
2-Chlorophenol	ND	62								
4-Chlorophenyl phenyl ether	ND	62								
Chrysene	ND	62								
Di-n-butyl phthalate	ND	62								
Di-n-octyl phthalate	ND	62								
Dibenz(a,h)anthracene	ND	75								
Dibenzofuran	ND	62								
1,2-Dichlorobenzene	ND	62								
1,3-Dichlorobenzene	ND	62								
1,4-Dichlorobenzene	ND	62								
3,3'-Dichlorobenzidine	ND	62								
Diethyl phthalate	ND	62								
Dimethyl phthalate	ND	75								
2,4-Dichlorophenol	ND	120								
2,4-Dimethylphenol	ND	62								
4,6-Dinitro-2-methylphenol	ND	120								
2,4-Dinitrophenol	ND	120								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603723

22-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon VV

Sample ID	lcs-24275		SampType:	LCS		TestCode:	EPA Method 8260B: Volatiles				
Client ID:	LCSW		Batch ID:	24275		RunNo:	32872				
Prep Date:	3/16/2016		Analysis Date:	3/17/2016		SeqNo:	1007797		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	1.1	0.050	1.000	0	114	70	130				
Trichloroethene (TCE)	1.1	0.050	1.000	0	108	70	130				
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130				
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		103	70	130				
Surr: Toluene-d8	0.50		0.5000		101	70	130				
Surr: 4-Bromofluorobenzene	0.56		0.5000		112	70	130				

Sample ID	lcsd-24275		SampType: LCSD		TestCode: EPA Method 8260B: Volatiles					
Client ID:	LCSS02		Batch ID: 24275		RunNo: 32872					
Prep Date:	3/16/2016		Analysis Date: 3/17/2016		SeqNo: 1007799		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	103	70	130	2.44	20	
Toluene	1.1	0.050	1.000	0	109	70	130	3.67	20	
Chlorobenzene	1.0	0.050	1.000	0	103	70	130	0.00193	20	
1,1-Dichloroethene	1.1	0.050	1.000	0	107	70	130	5.80	20	
Trichloroethene (TCE)	1.0	0.050	1.000	0	101	70	130	6.30	20	
Surr: Dibromofluoromethane	0.50		0.5000		100	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.8	70	130	0	0	
Surr: Toluene-d8	0.52		0.5000		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.52		0.5000		104	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603723

22-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon VV

Sample ID	mb-24275	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles					
Client ID:	PBW	Batch ID:	24275	RunNo:	32872					
Prep Date:	3/16/2016	Analysis Date:	3/17/2016	SeqNo:	1007796	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.050								
Hexachlorobutadiene	ND	0.050								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene Chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.050								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.050								
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.2	70	130			
Surr: Toluene-d8	0.54		0.5000		107	70	130			
Surr: 4-Bromofluorobenzene	0.56		0.5000		112	70	130			

Sample ID	lcs-24275	SampType:	LCS	TestCode:	EPA Method 8260B: Volatiles					
Client ID:	LCSW	Batch ID:	24275	RunNo:	32872					
Prep Date:	3/16/2016	Analysis Date:	3/17/2016	SeqNo:	1007797	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	105	70	130			
Toluene	1.0	0.050	1.000	0	105	70	130			
Chlorobenzene	1.0	0.050	1.000	0	103	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603723

22-Mar-16

Client: Souder, Miller and Associates

Project: Hart Canyon VV

Sample ID	mb-24275	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles					
Client ID:	PBW	Batch ID:	24275	RunNo:	32872					
Prep Date:	3/16/2016	Analysis Date:	3/17/2016	SeqNo:	1007796	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.50								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon Tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.050								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Project: Not Indicated

Report Date: 03/21/16

Work Order: B16031369

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW7471B					Analytical Run: HGCV202-B_160318B				
Lab ID: ICV	Initial Calibration Verification Standard								03/18/16 16:37
Mercury	0.00208	mg/kg	1.0	104	90	110			
Method: SW7471B					Batch: 97712				
Lab ID: MB-97712	Method Blank								Run: HGCV202-B_160318B 03/18/16 16:42
Mercury	0.002	mg/kg	0.0003						
Lab ID: LCS3-97712	Laboratory Control Sample								Run: HGCV202-B_160318B 03/18/16 16:44
Mercury	0.207	mg/kg	1.0	102	80	120			
Lab ID: B16031273-001ADIL	Serial Dilution								Run: HGCV202-B_160318B 03/18/16 16:53
Mercury	787	mg/kg	120		0	0	3.5	10	
Lab ID: B16031482-001AMS3	Sample Matrix Spike								Run: HGCV202-B_160318B 03/18/16 17:05
Mercury	0.119	mg/kg	1.0	61	80	120			S
Lab ID: B16031482-001AMSD3	Sample Matrix Spike Duplicate								Run: HGCV202-B_160318B 03/18/16 17:06
Mercury	0.131	mg/kg	1.0	74	80	120		20	S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Report Date: 03/21/16

Project: Not Indicated

Work Order: B16031369

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8020							Batch: 97662		
Lab ID: SRM2-97662	Standard Reference Material			Run: ICPMS202-B_160318A			03/18/16 19:05		
Lead	111	mg/kg	1.0	111	70	130			
Selenium	ND	mg/kg	1.0		70	130			
Silver	118	mg/kg	1.0	118	70	130			
Lab ID: B16031171-006APDS1	Post Digestion/Distillation Spike			Run: ICPMS202-B_160318A			03/18/16 19:07		
Arsenic	28.4	mg/kg	1.0	99	75	125			
Cadmium	24.1	mg/kg	1.0	93	75	125			
Chromium	33.3	mg/kg	1.0	108	75	125			
Lead	33.3	mg/kg	1.0	104	75	125			
Selenium	24.7	mg/kg	1.0	96	75	125			
Silver	11.0	mg/kg	1.0	106	75	125			
Lab ID: B16031171-006AMS3	Sample Matrix Spike			Run: ICPMS202-B_160318A			03/18/16 19:18		
Arsenic	108	mg/kg	1.0	105	75	125			
Cadmium	49.3	mg/kg	1.0	99	75	125			
Chromium	114	mg/kg	1.0	109	75	125			
Lead	123	mg/kg	1.0	118	75	125			
Selenium	98.2	mg/kg	1.0	99	75	125			
Silver	60.6	mg/kg	1.0	122	75	125			
Lab ID: B16031171-006AMSD3	Sample Matrix Spike Duplicate			Run: ICPMS202-B_160318A			03/18/16 19:21		
Arsenic	106	mg/kg	1.0	104	75	125	1.4	20	
Cadmium	48.7	mg/kg	1.0	98	75	125	1.1	20	
Chromium	122	mg/kg	1.0	118	75	125	7.0	20	
Lead	124	mg/kg	1.0	119	75	125	0.7	20	
Selenium	96.2	mg/kg	1.0	97	75	125	2.0	20	
Silver	59.5	mg/kg	1.0	120	75	125	1.9	20	

Qualifiers:

RL - Analyte reporting limit

ND - Not detected at the reporting limit.



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Project: Not Indicated

Report Date: 03/21/16

Work Order: B16031369

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020		Analytical Run: ICPMS202-B_160318A							
Lab ID: QCS	Initial Calibration Verification Standard							03/18/16 11:55	
Arsenic	0.0511	mg/L	0.0010	102	90	110			
Cadmium	0.0246	mg/L	0.0010	98	90	110			
Chromium	0.0518	mg/L	0.0010	104	90	110			
Lead	0.0479	mg/L	0.0010	96	90	110			
Selenium	0.0499	mg/L	0.0010	100	90	110			
Silver	0.0250	mg/L	0.0010	100	90	110			
Lab ID: ICSA	Interference Check Sample A							03/18/16 12:07	
Arsenic	0.000450	mg/L	0.0010						
Cadmium	0.000230	mg/L	0.0010						
Chromium	0.00110	mg/L	0.0010						
Lead	0.000230	mg/L	0.0010						
Selenium	0.000140	mg/L	0.0010						
Silver	8.00E-05	mg/L	0.0010						
Lab ID: ICSAB	Interference Check Sample AB							03/18/16 12:10	
Arsenic	0.0106	mg/L	0.0010	106	70	130			
Cadmium	0.00933	mg/L	0.0010	93	70	130			
Chromium	0.0188	mg/L	0.0010	94	70	130			
Lead	0.000240	mg/L	0.0010		0	0			
Selenium	0.0100	mg/L	0.0010	100	70	130			
Silver	0.0180	mg/L	0.0010	90	70	130			
Method: SW6020		Batch: 97662							
Lab ID: MB-97662	Method Blank		Run: ICPMS202-B_160318A			03/18/16 18:48			
Arsenic	ND	mg/kg	0.05						
Cadmium	0.03	mg/kg	0.008						
Chromium	0.2	mg/kg	0.2						
Lead	0.03	mg/kg	0.007						
Selenium	ND	mg/kg	0.06						
Silver	0.07	mg/kg	0.01						
Lab ID: B16031171-006ADIL	Serial Dilution		Run: ICPMS202-B_160318A			03/18/16 18:54			
Arsenic	3.08	mg/kg	1.3		0	0		10	N
Cadmium	0.493	mg/kg	1.0		0	0		10	N
Chromium	5.28	mg/kg	4.1		0	0		10	N
Lead	6.71	mg/kg	1.0		0	0	1.0	10	
Selenium	ND	mg/kg	1.5		0	0		10	
Silver	ND	mg/kg	1.0		0	0		10	
Lab ID: SRM2-97662	Standard Reference Material		Run: ICPMS202-B_160318A			03/18/16 19:05			
Arsenic	ND	mg/kg	1.0		50	130			
Cadmium	98.9	mg/kg	1.0	99	70	130			
Chromium	108	mg/kg	1.0	108	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Project: Not Indicated

Report Date: 03/21/16

Work Order: B16031369

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B	Analytical Run: ICP203-B_160317A								
Lab ID: QCS	Initial Calibration Verification Standard								03/17/16 11:01
Barium	0.804	mg/L	0.10	101	90	110			
Lab ID: ICSA	Interference Check Sample A								03/17/16 11:04
Barium	ND	mg/L	0.10						
Lab ID: ICSAB	Interference Check Sample AB								03/17/16 11:08
Barium	0.472	mg/L	0.10	94	80	120			
Method: SW6010B	Batch: 97662								
Lab ID: MB-97662	Method Blank								03/17/16 22:02
Barium	0.02	mg/kg	0.01						
Lab ID: SRM2-97662	Standard Reference Material								03/17/16 22:37
Barium	89.8	mg/kg	5.0	90	70	130			
Lab ID: SRM3-97662	Standard Reference Material								03/17/16 22:41
Barium	162	mg/kg	5.0	87	78	120			
Lab ID: B16031171-006ADIL	Serial Dilution								03/17/16 23:09
Barium	42.4	mg/kg	1.0		0	0	6.6	10	
Lab ID: B16031171-006APDS	Post Digestion/Distillation Spike								03/17/16 23:19
Barium	133	mg/kg	1.0	91	75	125			
Lab ID: B16031171-006AMS3	Sample Matrix Spike								03/17/16 23:22
Barium	153	mg/kg	1.0	114	75	125			
Lab ID: B16031171-006AMSD3	Sample Matrix Spike Duplicate								03/17/16 23:26
Barium	129	mg/kg	1.0	91	75	125	17	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B16031369-001
Client Sample ID: 1603723-001C Hart Canyon VV

Report Date: 03/21/16
Collection Date: 03/14/16 09:20
Date Received: 03/16/16
Matrix: Oil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		0.2		SW6020	03/18/16 19:02 / mas
Barium	6.4	mg/kg		0.5		SW6010B	03/17/16 23:37 / mas
Cadmium	1.07	mg/kg		0.05		SW6020	03/18/16 19:02 / mas
Chromium	1.7	mg/kg	D	0.2		SW6020	03/18/16 19:02 / mas
Lead	4.1	mg/kg		0.1		SW6020	03/18/16 19:02 / mas
Mercury	ND	mg/kg		0.01		SW7471B	03/18/16 17:00 / ser
Selenium	ND	mg/kg		0.2		SW6020	03/18/16 19:02 / mas
Silver	0.12	mg/kg	D	0.08		SW6020	03/18/16 19:02 / mas

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603723

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hart Canyon VV

Project: Hart Canyon VV

Collection Date: 3/14/2016 9:20:00 AM

Lab ID: 1603723-001

Matrix: PRODUCT

Received Date: 3/15/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Hexachlorobutadiene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
2-Hexanone	ND	5.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Isopropylbenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
4-Isopropyltoluene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
4-Methyl-2-pentanone	ND	5.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Methylene Chloride	ND	1.5		mg/Kg	10	3/17/2016 8:05:55 PM	24275
n-Butylbenzene	ND	1.5		mg/Kg	10	3/17/2016 8:05:55 PM	24275
n-Propylbenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
sec-Butylbenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Styrene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
tert-Butylbenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,1,1,2-Tetrachloroethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,1,2,2-Tetrachloroethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Tetrachloroethene (PCE)	14	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
trans-1,2-DCE	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
trans-1,3-Dichloropropene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2,3-Trichlorobenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2,4-Trichlorobenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,1,1-Trichloroethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,1,2-Trichloroethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Trichloroethene (TCE)	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Trichlorofluoromethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2,3-Trichloropropane	ND	1.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Vinyl chloride	ND	0.20		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Xylenes, Total	0.70	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Surr: Dibromofluoromethane	100	70-130		%Rec	10	3/17/2016 8:05:55 PM	24275
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%Rec	10	3/17/2016 8:05:55 PM	24275
Surr: Toluene-d8	99.3	70-130		%Rec	10	3/17/2016 8:05:55 PM	24275
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	10	3/17/2016 8:05:55 PM	24275

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603723

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hart Canyon VV

Project: Hart Canyon VV

Collection Date: 3/14/2016 9:20:00 AM

Lab ID: 1603723-001

Matrix: PRODUCT

Received Date: 3/15/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Toluene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Ethylbenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2,4-Trimethylbenzene	1.1	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,3,5-Trimethylbenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2-Dichloroethane (EDC)	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2-Dibromoethane (EDB)	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Naphthalene	ND	1.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1-Methylnaphthalene	ND	2.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
2-Methylnaphthalene	ND	2.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Acetone	ND	5.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Bromobenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Bromodichloromethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Bromoform	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Bromomethane	ND	1.5		mg/Kg	10	3/17/2016 8:05:55 PM	24275
2-Butanone	ND	5.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Carbon disulfide	ND	5.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Carbon Tetrachloride	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Chlorobenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Chloroethane	ND	1.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Chloroform	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Chloromethane	ND	1.5		mg/Kg	10	3/17/2016 8:05:55 PM	24275
2-Chlorotoluene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
4-Chlorotoluene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
cis-1,2-DCE	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
cis-1,3-Dichloropropene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2-Dibromo-3-chloropropane	ND	1.0		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Dibromochloromethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Dibromomethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2-Dichlorobenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,3-Dichlorobenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,4-Dichlorobenzene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
Dichlorodifluoromethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,1-Dichloroethane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,1-Dichloroethene	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,2-Dichloropropane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
1,3-Dichloropropane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275
2,2-Dichloropropane	ND	0.50		mg/Kg	10	3/17/2016 8:05:55 PM	24275

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603723

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hart Canyon VV

Project: Hart Canyon VV

Collection Date: 3/14/2016 9:20:00 AM

Lab ID: 1603723-001

Matrix: PRODUCT

Received Date: 3/15/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SEMIVOLATILE ORGANICS BY 8270C							Analyst: DAM
2,4-Dinitrotoluene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2,6-Dinitrotoluene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Fluoranthene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Fluorene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Hexachlorobenzene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Hexachlorobutadiene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Hexachlorocyclopentadiene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Hexachloroethane	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Indeno(1,2,3-cd)pyrene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Isophorone	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
1-Methylnaphthalene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2-Methylnaphthalene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2-Methylphenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
3+4-Methylphenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
N-Nitrosodi-n-propylamine	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
N-Nitrosodimethylamine	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
N-Nitrosodiphenylamine	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Naphthalene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2-Nitroaniline	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
3-Nitroaniline	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
4-Nitroaniline	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Nitrobenzene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2-Nitrophenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
4-Nitrophenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Pentachlorophenol	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Phenanthrene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Phenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Pyrene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Pyridine	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
1,2,4-Trichlorobenzene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2,4,5-Trichlorophenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2,4,6-Trichlorophenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Surr: 2-Fluorophenol	119	52.1-148	D	%Rec	10	3/17/2016 12:39:30 PM	24298
Surr: Phenol-d5	124	58.2-135	D	%Rec	10	3/17/2016 12:39:30 PM	24298
Surr: 2,4,6-Tribromophenol	120	63.8-129	D	%Rec	10	3/17/2016 12:39:30 PM	24298
Surr: Nitrobenzene-d5	127	43.5-189	D	%Rec	10	3/17/2016 12:39:30 PM	24298
Surr: 2-Fluorobiphenyl	132	76.8-130	SD	%Rec	10	3/17/2016 12:39:30 PM	24298
Surr: 4-Terphenyl-d14	91.8	32-199	D	%Rec	10	3/17/2016 12:39:30 PM	24298

EPA METHOD 8260B: VOLATILES

Analyst: DJF

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
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	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
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	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1603723

Date Reported: 3/22/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Hart Canyon VV

Project: Hart Canyon VV

Collection Date: 3/14/2016 9:20:00 AM

Lab ID: 1603723-001

Matrix: PRODUCT

Received Date: 3/15/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SEMIVOLATILE ORGANICS BY 8270C							Analyst: DAM
Acenaphthene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Acenaphthylene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Aniline	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Anthracene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benz(a)anthracene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benzidine	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benzo(a)pyrene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benzo(b)fluoranthene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benzo(g,h,i)perylene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benzo(k)fluoranthene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benzoic acid	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Benzyl alcohol	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Bis(2-chloroethoxy)methane	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Bis(2-chloroethyl)ether	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Bis(2-chloroisopropyl)ether	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Bis(2-ethylhexyl)phthalate	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
4-Bromophenyl phenyl ether	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Butyl benzyl phthalate	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Carbazole	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
4-Chloro-3-methylphenol	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
4-Chloroaniline	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2-Chloronaphthalene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2-Chlorophenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
4-Chlorophenyl phenyl ether	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Chrysene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Di-n-butyl phthalate	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Di-n-octyl phthalate	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Dibenz(a,h)anthracene	ND	320	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Dibenzofuran	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
1,2-Dichlorobenzene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
1,3-Dichlorobenzene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
1,4-Dichlorobenzene	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
3,3'-Dichlorobenzidine	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Diethyl phthalate	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
Dimethyl phthalate	ND	320	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2,4-Dichlorophenol	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2,4-Dimethylphenol	ND	270	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
4,6-Dinitro-2-methylphenol	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298
2,4-Dinitrophenol	ND	530	D	mg/Kg	10	3/17/2016 12:39:30 PM	24298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
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	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

March 22, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Hart Canyon VV

OrderNo.: 1603723

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Rattlesnake Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):

UL H Section 16, T32N, R9W; 36.987603, -1070.77771, San Juan County, NM

4. Source and Description of Waste:

Source: Water from the Non Exempt Water Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 160 yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 762 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Triple S Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Adrian Hernandez

TITLE: Operator

DATE: 1/2/17

SIGNATURE: [Signature]

TELEPHONE NO.: (505) 537-6186

Surface Waste Management Facility Authorized Agent



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1602801

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

2/19/2016 8:00:00 AM

Completed By: Lindsay Mangin

2/19/2016 8:57:54 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of >0° C to 6.0°C

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☒

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☒

No ☐

No VOA Vials ☐

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:

(2 or >12 unless noted)

Adjusted?

Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	1602801-001CMSD	SampType:	MSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Non Exempt Waste	Batch ID:	23874	RunNo:	32402					
Prep Date:	2/22/2016	Analysis Date:	2/25/2016	SeqNo:	990810	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0.2242	91.9	75	125	0	20	
Cadmium	ND	1.0	0.5000	0	95.8	75	125	0	20	
Chromium	ND	5.0	0.5000	0	89.8	75	125	0	20	
Lead	ND	5.0	0.5000	0	93.8	75	125	0	20	
Selenium	ND	1.0	0.5000	0	96.8	75	125	0	20	
Silver	ND	5.0	0.1000	0	92.2	75	125	0	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	MB-23874	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	23874	RunNo:	32402					
Prep Date:	2/22/2016	Analysis Date:	2/25/2016	SeqNo:	990798	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-23874	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	23874	RunNo:	32402					
Prep Date:	2/22/2016	Analysis Date:	2/25/2016	SeqNo:	990799	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120			
Barium	0.48	0.020	0.5000	0	95.6	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.4	80	120			
Chromium	0.47	0.0060	0.5000	0	94.7	80	120			
Lead	0.48	0.0050	0.5000	0	96.1	80	120			
Selenium	0.50	0.050	0.5000	0	101	80	120			
Silver	0.099	0.0050	0.1000	0	98.5	80	120			

Sample ID	1602801-001CMS	SampType:	MS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Non Exempt Waste	Batch ID:	23874	RunNo:	32402					
Prep Date:	2/22/2016	Analysis Date:	2/25/2016	SeqNo:	990807	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	97.8	75	125			
Barium	ND	100	0.5000	0.2242	92.2	75	125			
Cadmium	ND	1.0	0.5000	0	96.4	75	125			
Chromium	ND	5.0	0.5000	0	90.6	75	125			
Lead	ND	5.0	0.5000	0	94.0	75	125			
Selenium	ND	1.0	0.5000	0	98.2	75	125			
Silver	ND	5.0	0.1000	0	90.8	75	125			

Sample ID	1602801-001CMSD	SampType:	MSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Non Exempt Waste	Batch ID:	23874	RunNo:	32402					
Prep Date:	2/22/2016	Analysis Date:	2/25/2016	SeqNo:	990810	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	95.8	75	125	0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	MB-23897	SampType:	mblk	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	23897	RunNo:	32351					
Prep Date:	2/23/2016	Analysis Date:	2/24/2016	SeqNo:	988871	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-23897	SampType:	lcs	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	23897	RunNo:	32351					
Prep Date:	2/23/2016	Analysis Date:	2/24/2016	SeqNo:	988872	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.6	80	120			

Sample ID	1602801-001CMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury					
Client ID:	Non Exempt Waste	Batch ID:	23897	RunNo:	32351					
Prep Date:	2/23/2016	Analysis Date:	2/24/2016	SeqNo:	988893	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0020	0.0010	0.005000	0	39.1	75	125			S

Sample ID	1602801-001CMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury					
Client ID:	Non Exempt Waste	Batch ID:	23897	RunNo:	32351					
Prep Date:	2/23/2016	Analysis Date:	2/24/2016	SeqNo:	988894	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0018	0.0010	0.005000	0	36.7	75	125	6.48	20	S

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	LCS-23879		SampType: LCS		TestCode: EPA Method 8310: PAHs					
Client ID:	LCSW		Batch ID: 23879		RunNo: 32316					
Prep Date:	2/23/2016		Analysis Date: 2/23/2016		SeqNo: 987907		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(a)pyrene	0.51	0.070	0.5020	0	102	62	107			
Dibenz(a,h)anthracene	1.0	0.12	1.002	0	101	54.8	108			
Benzo(g,h,i)perylene	1.0	0.12	1.000	0	100	56.9	110			
Indeno(1,2,3-cd)pyrene	2.0	0.25	2.004	0	101	55.2	109			
Surr: Benzo(e)pyrene	9.9		20.00		49.4	33.4	129			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	MB-23879	SampType: MBLK		TestCode: EPA Method 8310: PAHs						
Client ID:	PBW	Batch ID: 23879		RunNo: 32316						
Prep Date:	2/23/2016	Analysis Date: 2/23/2016		SeqNo: 987798		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	2.0								
2-Methylnaphthalene	ND	2.0								
Acenaphthylene	ND	2.5								
Acenaphthene	ND	2.0								
Fluorene	ND	0.80								
Phenanthrene	ND	0.60								
Anthracene	ND	0.60								
Fluoranthene	ND	0.30								
Pyrene	ND	0.30								
Benz(a)anthracene	ND	0.070								
Chrysene	ND	0.20								
Benzo(b)fluoranthene	ND	0.10								
Benzo(k)fluoranthene	ND	0.070								
Benzo(a)pyrene	ND	0.070								
Dibenz(a,h)anthracene	ND	0.12								
Benzo(g,h,i)perylene	ND	0.12								
Indeno(1,2,3-cd)pyrene	ND	0.25								
Surr: Benzo(e)pyrene	9.8		20.00		49.1	33.4	129			

Sample ID	LCS-23879	SampType: LCS		TestCode: EPA Method 8310: PAHs						
Client ID:	LCSW	Batch ID: 23879		RunNo: 32316						
Prep Date:	2/23/2016	Analysis Date: 2/23/2016		SeqNo: 987907			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	77	2.0	80.00	0	96.7	54.6	110			
1-Methylnaphthalene	78	2.0	80.20	0	97.2	49.1	116			
2-Methylnaphthalene	79	2.0	80.00	0	98.2	52.5	111			
Acenaphthylene	75	2.5	80.20	0	93.6	63.7	122			
Acenaphthene	79	2.0	80.00	0	99.2	50.6	114			
Fluorene	8.2	0.80	8.020	0	103	48.9	106			
Phenanthrene	3.9	0.60	4.020	0	97.3	54.7	110			
Anthracene	3.8	0.60	4.020	0	94.8	52	106			
Fluoranthene	8.3	0.30	8.020	0	103	57.8	113			
Pyrene	7.7	0.30	8.020	0	95.8	59.7	118			
Benz(a)anthracene	0.82	0.070	0.8020	0	102	56.6	109			
Chrysene	4.0	0.20	4.020	0	99.0	57.6	110			
Benzo(b)fluoranthene	0.89	0.10	1.002	0	88.8	54.9	106			
Benzo(k)fluoranthene	0.50	0.070	0.5000	0	100	59.3	112			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32292			RunNo: 32292					
Prep Date:		Analysis Date: 2/19/2016			SeqNo: 987052		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	12		10.00		119	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32292			RunNo: 32292					
Prep Date:		Analysis Date: 2/19/2016			SeqNo: 987052		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602801

25-Feb-16

Client: Souder, Miller and Associates

Project: Rattlesnake Plant

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R32292	RunNo:	32292					
Prep Date:		Analysis Date:	2/19/2016	SeqNo:	987047	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	118	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	23	1.0	20.00	0	113	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	12		10.00		117	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R32292			RunNo: 32292					
Prep Date:		Analysis Date: 2/19/2016			SeqNo: 987052		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1602801

Date Reported: 2/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Non Exempt Waste Tank

Project: Rattlesnake Plant

Collection Date: 2/18/2016 12:45:00 PM

Lab ID: 1602801-001

Matrix: AQUEOUS

Received Date: 2/19/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
n-Propylbenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
sec-Butylbenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Styrene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
tert-Butylbenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,1,2,2-Tetrachloroethane	ND	40		µg/L	20	2/19/2016 4:38:31 PM	R32292
Tetrachloroethene (PCE)	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
trans-1,2-DCE	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
trans-1,3-Dichloropropene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2,3-Trichlorobenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2,4-Trichlorobenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,1,1-Trichloroethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,1,2-Trichloroethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Trichloroethene (TCE)	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Trichlorofluoromethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2,3-Trichloropropane	ND	40		µg/L	20	2/19/2016 4:38:31 PM	R32292
Vinyl chloride	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Xylenes, Total	ND	30		µg/L	20	2/19/2016 4:38:31 PM	R32292
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	20	2/19/2016 4:38:31 PM	R32292
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	20	2/19/2016 4:38:31 PM	R32292
Surr: Dibromofluoromethane	118	70-130		%Rec	20	2/19/2016 4:38:31 PM	R32292
Surr: Toluene-d8	101	70-130		%Rec	20	2/19/2016 4:38:31 PM	R32292

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1602801

Date Reported: 2/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Non Exempt Waste Tank

Project: Rattlesnake Plant

Collection Date: 2/18/2016 12:45:00 PM

Lab ID: 1602801-001

Matrix: AQUEOUS

Received Date: 2/19/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Naphthalene	ND	40		µg/L	20	2/19/2016 4:38:31 PM	R32292
1-Methylnaphthalene	ND	80		µg/L	20	2/19/2016 4:38:31 PM	R32292
2-Methylnaphthalene	ND	80		µg/L	20	2/19/2016 4:38:31 PM	R32292
Acetone	1200	200		µg/L	20	2/19/2016 4:38:31 PM	R32292
Bromobenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Bromodichloromethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Bromoform	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Bromomethane	ND	60		µg/L	20	2/19/2016 4:38:31 PM	R32292
2-Butanone	ND	200		µg/L	20	2/19/2016 4:38:31 PM	R32292
Carbon disulfide	ND	200		µg/L	20	2/19/2016 4:38:31 PM	R32292
Carbon Tetrachloride	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Chlorobenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Chloroethane	ND	40		µg/L	20	2/19/2016 4:38:31 PM	R32292
Chloroform	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Chloromethane	ND	60		µg/L	20	2/19/2016 4:38:31 PM	R32292
2-Chlorotoluene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
4-Chlorotoluene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
cis-1,2-DCE	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
cis-1,3-Dichloropropene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	2/19/2016 4:38:31 PM	R32292
Dibromochloromethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Dibromomethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2-Dichlorobenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,3-Dichlorobenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,4-Dichlorobenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Dichlorodifluoromethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,1-Dichloroethane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,1-Dichloroethene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2-Dichloropropane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,3-Dichloropropane	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
2,2-Dichloropropane	ND	40		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,1-Dichloropropene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Hexachlorobutadiene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
2-Hexanone	ND	200		µg/L	20	2/19/2016 4:38:31 PM	R32292
Isopropylbenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
4-Isopropyltoluene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
4-Methyl-2-pentanone	ND	200		µg/L	20	2/19/2016 4:38:31 PM	R32292
Methylene Chloride	ND	60		µg/L	20	2/19/2016 4:38:31 PM	R32292
n-Butylbenzene	ND	60		µg/L	20	2/19/2016 4:38:31 PM	R32292

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1602801

Date Reported: 2/25/2016

CLIENT: Souder, Miller and Associates

Client Sample ID: Non Exempt Waste Tank

Project: Rattlesnake Plant

Collection Date: 2/18/2016 12:45:00 PM

Lab ID: 1602801-001

Matrix: AQUEOUS

Received Date: 2/19/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	ND	0.0010		mg/L	5	2/24/2016 7:27:50 AM	23897
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	5.0		mg/L	1	2/25/2016 1:01:02 PM	23874
Barium	ND	100		mg/L	1	2/25/2016 1:01:02 PM	23874
Cadmium	ND	1.0		mg/L	1	2/25/2016 1:01:02 PM	23874
Chromium	ND	5.0		mg/L	1	2/25/2016 1:01:02 PM	23874
Lead	ND	5.0		mg/L	1	2/25/2016 1:01:02 PM	23874
Selenium	ND	1.0		mg/L	1	2/25/2016 1:01:02 PM	23874
Silver	ND	5.0		mg/L	1	2/25/2016 1:01:02 PM	23874
EPA METHOD 8310: PAHS							Analyst: SCC
Naphthalene	ND	2.0		µg/L	1	2/23/2016 9:05:02 AM	23879
1-Methylnaphthalene	ND	2.0		µg/L	1	2/23/2016 9:05:02 AM	23879
2-Methylnaphthalene	ND	2.0		µg/L	1	2/23/2016 9:05:02 AM	23879
Acenaphthylene	ND	2.5		µg/L	1	2/23/2016 9:05:02 AM	23879
Acenaphthene	ND	2.0		µg/L	1	2/23/2016 9:05:02 AM	23879
Fluorene	ND	0.80		µg/L	1	2/23/2016 9:05:02 AM	23879
Phenanthrene	ND	0.60		µg/L	1	2/23/2016 9:05:02 AM	23879
Anthracene	ND	0.60		µg/L	1	2/23/2016 9:05:02 AM	23879
Fluoranthene	ND	0.30		µg/L	1	2/23/2016 9:05:02 AM	23879
Pyrene	ND	0.30		µg/L	1	2/23/2016 9:05:02 AM	23879
Benz(a)anthracene	ND	0.070		µg/L	1	2/23/2016 9:05:02 AM	23879
Chrysene	ND	0.20		µg/L	1	2/23/2016 9:05:02 AM	23879
Benzo(b)fluoranthene	ND	0.10		µg/L	1	2/23/2016 9:05:02 AM	23879
Benzo(k)fluoranthene	ND	0.070		µg/L	1	2/23/2016 9:05:02 AM	23879
Benzo(a)pyrene	ND	0.070		µg/L	1	2/23/2016 9:05:02 AM	23879
Dibenz(a,h)anthracene	0.52	0.12		µg/L	1	2/23/2016 9:05:02 AM	23879
Benzo(g,h,i)perylene	ND	0.12		µg/L	1	2/23/2016 9:05:02 AM	23879
Indeno(1,2,3-cd)pyrene	ND	0.25		µg/L	1	2/23/2016 9:05:02 AM	23879
Surr: Benzo(e)pyrene	59.0	33.4-129		%Rec	1	2/23/2016 9:05:02 AM	23879
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Toluene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Ethylbenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
Methyl tert-butyl ether (MTBE)	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2,4-Trimethylbenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,3,5-Trimethylbenzene	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	2/19/2016 4:38:31 PM	R32292

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 25, 2016

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Rattlesnake Plant

OrderNo.: 1602801

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/19/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:

Chaco Gas Plant

3. Location of Material (Street Address, City, State or ULSTR):

UL M Section 16, T26N, R12W; 36.482905, -108.119193, San Juan County, NM

4. Source and Description of Waste:

Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.

Description: Non Exempt/Non Hazardous Water from the compressor skids.

Estimated Volume 120 yd³ (bbls) Known Volume (to be entered by the operator at the end of the haul) 2260 yd³ (bbls)

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long*, representative for Enterprise Products Operating authorize to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: Triple S Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: *Agua Moss, LLC - Permit #: NM-01-009

Address of Facility: SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Alfonso Herrera

TITLE: Operator

DATE: 1/2/17

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 534-6186



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 09, 2016

Thomas Long
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Chaco Plant

OrderNo.: 1604674

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Chain-of-Custody Record

Client: Enterprise Products

Mailing Address: 614 Reilly Ave.

Permitting NM 87401

Phone #: 505-399-2288

Email or Fax#: ELLeng

A/QC Package:

Standard ☐ Level 4 (Full Validation)

Accreditation

NELAP ☐ Other

EDD (Type)

Date Time Matrix Sample Request ID

14/1008 Solid Air Dry Desiccant
11 1045 Water Non Exempt Tank 1K

Turn-Around Time:

Standard ☒ Rush ☐

Project Name:

Chaco Plant

Project #:

Project Manager:

Thomas Long

Sampler:

DL

On Ice:

Yes ☒ No ☐

Sample Temperature: 2.5

Container Type and #

Preservative Type

HEAL No.

10041074

29oz

Cool

-001

Vials

Varies

-002

Date: 14/10/08

Relinquished by: Thomas Long

Received by:

Date: 14/10/08

Time: 1456

Remarks:

Report: Tap RCRA Limits

Date: 04/15/16

Time: 0720

Received by:

Christina Walker

Date: 04/15/16

Time: 0720

Received by:

Christina Walker

Date: 04/15/16

Time: 0720

Received by:

Christina Walker

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Time: 0720

Received by:

Christina Walker

Date: 04/15/16

Time: 0720

Received by:

Christina Walker

Date: 04/15/16

Sample Log-In Check List

Client Name: Enterprise Work Order Number: 1604674 RptNo: 1

Received by/date: LM 04/15/16

Logged By: Ashley Gallegos

4/15/2016 7:20:00 AM

Completed By: Ashley Gallegos

4/15/2016 12:10:09 PM

Reviewed By: [Signature]

04/15/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $\geq 0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and UNG) properly preserved? Yes ☒ No ☒
9. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH.

Adjusted? Yes

Checked by AS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: [Signature]

Date: [Signature]

By Whom: [Signature]

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: [Signature]

Client Instructions: [Signature]

17. Additional remarks: For metals analysis: added 1ml HNO₃ + 0.0020

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.5	Good	Yes			

4/15 @ 1529

AS

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	MB-24977	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24977	RunNo:	33820					
Prep Date:	4/25/2016	Analysis Date:	4/27/2016	SeqNo:	1041825	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Lead	ND	0.0050								

Sample ID	LCS-24977	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24977	RunNo:	33820					
Prep Date:	4/25/2016	Analysis Date:	4/27/2016	SeqNo:	1041826	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	102	80	120			
Lead	0.47	0.0050	0.5000	0	94.3	80	120			

Sample ID	MB-24977	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	24977	RunNo:	33997					
Prep Date:	4/25/2016	Analysis Date:	5/5/2016	SeqNo:	1047607	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24977	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	24977	RunNo:	33997					
Prep Date:	4/25/2016	Analysis Date:	5/5/2016	SeqNo:	1047608	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.020	0.5000	0	100	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.6	80	120			
Chromium	0.49	0.0060	0.5000	0	98.6	80	120			
Selenium	0.51	0.050	0.5000	0	102	80	120			
Silver	0.10	0.0050	0.1000	0	100	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	MB-24953	SampType:	MBLK	TestCode:	EPA Method 6010B: TCLP Metals					
Client ID:	PBW	Batch ID:	24953	RunNo:	33748					
Prep Date:	4/22/2016	Analysis Date:	4/25/2016	SeqNo:	1039448	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Barium	ND	100								
Cadmium	ND	1.0								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID	LCS-24953	SampType:	LCS	TestCode:	EPA Method 6010B: TCLP Metals					
Client ID:	LCSW	Batch ID:	24953	RunNo:	33748					
Prep Date:	4/22/2016	Analysis Date:	4/25/2016	SeqNo:	1039449	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	109	80	120			
Barium	ND	100	0.5000	0	98.0	80	120			
Cadmium	ND	1.0	0.5000	0	102	80	120			
Chromium	ND	5.0	0.5000	0	97.6	80	120			
Lead	ND	5.0	0.5000	0	98.4	80	120			
Selenium	ND	1.0	0.5000	0	110	80	120			
Silver	ND	5.0	0.1000	0	108	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	MB-24994	SampType:	MBLK	TestCode:	MERCURY, TCLP					
Client ID:	PBW	Batch ID:	24994	RunNo:	33798					
Prep Date:	4/26/2016	Analysis Date:	4/26/2016	SeqNo:	1040933	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID	LCS-24994	SampType:	LCS	TestCode:	MERCURY, TCLP					
Client ID:	LCSW	Batch ID:	24994	RunNo:	33798					
Prep Date:	4/26/2016	Analysis Date:	4/26/2016	SeqNo:	1040935	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	99.3	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	MB-25066	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	25066	RunNo:	33907					
Prep Date:	4/28/2016	Analysis Date:	4/29/2016	SeqNo:	1044543	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-25066	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	25066	RunNo:	33907					
Prep Date:	4/28/2016	Analysis Date:	4/29/2016	SeqNo:	1044544	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	Icsd-24921		SampType: LCSD		TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS02		Batch ID: 24921		RunNo: 33739					
Prep Date:	4/21/2016		Analysis Date: 4/22/2016		SeqNo: 1042555		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	0.079	0.010	0.1000	0	79.0	27.9	90.3	7.79	20	RS
Pyridine	0.017	0.010	0.1000	0	16.8	29.3	105	39.3	20	
2,4,5-Trichlorophenol	0.10	0.010	0.1000	0	103	34	118	5.40	20	
2,4,6-Trichlorophenol	0.097	0.010	0.1000	0	97.2	34.1	109	0.599	20	
Cresols, Total	0.25	0.010	0.3000	0	81.7	30	136	9.82	20	
Surr: 2-Fluorophenol	0.12		0.2000		61.6	19	121	0	20	
Surr: Phenol-d5	0.096		0.2000		48.2	31.8	117	0	20	
Surr: 2,4,6-Tribromophenol	0.19		0.2000		95.3	31.3	139	0	20	
Surr: Nitrobenzene-d5	0.085		0.1000		85.3	48.2	128	0	20	
Surr: 2-Fluorobiphenyl	0.087		0.1000		86.7	58.4	114	0	20	
Surr: 4-Terphenyl-d14	0.069		0.1000		69.3	17.4	141	0	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	ics-25008	SampType:	LCS	TestCode:	EPA Method 8270C TCLP					
Client ID:	LCSS	Batch ID:	25008	RunNo:	33838					
Prep Date:	4/27/2016	Analysis Date:	4/27/2016	SeqNo:	1042552	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.065		0.1000		65.1	48.2	128			
Surr: 2-Fluorobiphenyl	0.062		0.1000		61.7	58.4	114			
Surr: 4-Terphenyl-d14	0.056		0.1000		56.3	17.4	141			

Sample ID	ics-24921	SampType: LCS			TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS	Batch ID: 24921			RunNo: 33739					
Prep Date:	4/21/2016	Analysis Date: 4/22/2016			SeqNo: 1042554		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.074	0.010	0.1000	0	74.5	37.6	110			
3+4-Methylphenol	0.15	0.010	0.2000	0	73.9	30.5	149			
2,4-Dinitrotoluene	0.072	0.010	0.1000	0	71.8	24.9	93.7			
Hexachlorobenzene	0.087	0.010	0.1000	0	86.7	40	114			
Hexachlorobutadiene	0.066	0.010	0.1000	0	65.9	37.4	119			
Hexachloroethane	0.057	0.010	0.1000	0	57.2	33.8	105			
Nitrobenzene	0.077	0.010	0.1000	0	77.3	33.4	115			
Pentachlorophenol	0.073	0.010	0.1000	0	73.0	27.9	90.3			
Pyridine	0.011	0.010	0.1000	0	11.3	29.3	105			S
2,4,5-Trichlorophenol	0.098	0.010	0.1000	0	97.6	34	118			
2,4,6-Trichlorophenol	0.097	0.010	0.1000	0	96.6	34.1	109			
Cresols, Total	0.22	0.010	0.3000	0	74.1	30	136			
Surr: 2-Fluorophenol	0.10		0.2000		52.0	19	121			
Surr: Phenol-d5	0.082		0.2000		40.9	31.8	117			
Surr: 2,4,6-Tribromophenol	0.17		0.2000		85.4	31.3	139			
Surr: Nitrobenzene-d5	0.081		0.1000		81.3	48.2	128			
Surr: 2-Fluorobiphenyl	0.083		0.1000		83.0	58.4	114			
Surr: 4-Terphenyl-d14	0.069		0.1000		69.3	17.4	141			

Sample ID	icsd-24921	SampType: LCSD			TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS02	Batch ID: 24921			RunNo: 33739					
Prep Date:	4/21/2016	Analysis Date: 4/22/2016			SeqNo: 1042555		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.078	0.010	0.1000	0	77.6	37.6	110	4.13	20	
3+4-Methylphenol	0.17	0.010	0.2000	0	83.8	30.5	149	12.6	20	
2,4-Dinitrotoluene	0.074	0.010	0.1000	0	73.9	24.9	93.7	2.88	20	
Hexachlorobenzene	0.091	0.010	0.1000	0	90.8	40	114	4.57	20	
Hexachlorobutadiene	0.066	0.010	0.1000	0	65.9	37.4	119	0.0303	20	
Hexachloroethane	0.064	0.010	0.1000	0	64.2	33.8	105	11.6	20	
Nitrobenzene	0.081	0.010	0.1000	0	81.4	33.4	115	5.19	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	mb-24921		SampType: MBLK		TestCode: EPA Method 8270C TCLP					
Client ID:	PBS		Batch ID: 24921		RunNo: 33739					
Prep Date:	4/21/2016		Analysis Date: 4/22/2016		SeqNo: 1039149		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								
Phenol	ND	200								
2,4-Dinitrotoluene	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND	0.50								
Hexachloroethane	ND	3.0								
Nitrobenzene	ND	2.0								
Pentachlorophenol	ND	100								
Pyridine	ND	5.0								
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.12		0.2000		58.4	19	121			
Surr: Phenol-d5	0.087		0.2000		43.5	31.8	117			
Surr: 2,4,6-Tribromophenol	0.17		0.2000		84.1	31.3	139			
Surr: Nitrobenzene-d5	0.084		0.1000		84.3	48.2	128			
Surr: 2-Fluorobiphenyl	0.083		0.1000		82.8	58.4	114			
Surr: 4-Terphenyl-d14	0.067		0.1000		67.3	17.4	141			

Sample ID	mb-25008	SampType: MBLK	TestCode: EPA Method 8270C TCLP							
Client ID:	PBS	Batch ID: 25008	RunNo: 33838							
Prep Date:	4/27/2016	Analysis Date: 4/27/2016	SeqNo: 1042551		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	0.16		0.2000		80.7	19	121			
Surr: Phenol-d5	0.17		0.2000		82.7	31.8	117			
Surr: 2,4,6-Tribromophenol	0.17		0.2000		85.1	31.3	139			
Surr: Nitrobenzene-d5	0.081		0.1000		81.5	48.2	128			
Surr: 2-Fluorobiphenyl	0.088		0.1000		87.6	58.4	114			
Surr: 4-Terphenyl-d14	0.064		0.1000		64.0	17.4	141			

Sample ID	lcs-25008	SampType: LCS			TestCode: EPA Method 8270C TCLP					
Client ID:	LCSS	Batch ID: 25008			RunNo: 33838					
Prep Date:	4/27/2016	Analysis Date: 4/27/2016			SeqNo: 1042552		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	0.096		0.2000		47.9	19	121			
Surr: Phenol-d5	0.078		0.2000		39.1	31.8	117			
Surr: 2,4,6-Tribromophenol	0.16		0.2000		81.9	31.3	139			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID vsb dell	SampType: MBLK		TestCode: TCLP Volatiles by 8260B							
Client ID: PBW	Batch ID: B33807		RunNo: 33807							
Prep Date:	Analysis Date: 4/26/2016		SeqNo: 1041359		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.50								
1,2-Dichloroethane (EDC)	ND	0.50								
2-Butanone	ND	10								
Carbon Tetrachloride	ND	0.50								
Chloroform	ND	6.0								
1,4-Dichlorobenzene	ND	7.5								
1,1-Dichloroethene	ND	0.70								
Hexachlorobutadiene	ND	0.50								
Tetrachloroethene (PCE)	ND	0.70								
Trichloroethene (TCE)	ND	0.50								
Vinyl chloride	ND	0.20								
Chlorobenzene	ND	100								
Surr: 1,2-Dichloroethane-d4	0.0099		0.01000		98.9	70	130			
Surr: 4-Bromofluorobenzene	0.011		0.01000		107	70	130			
Surr: Dibromofluoromethane	0.011		0.01000		106	70	130			
Surr: Toluene-d8	0.0098		0.01000		98.4	70	130			

Sample ID 100ng lcs	SampType: LCS		TestCode: TCLP Volatiles by 8260B							
Client ID: LCSW	Batch ID: B33807		RunNo: 33807							
Prep Date:	Analysis Date: 4/26/2016		SeqNo: 1041360		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.022	0.0010	0.02000	0	112	70	130			
1,1-Dichloroethene	0.021	0.0010	0.02000	0	106	70	130			
Trichloroethene (TCE)	0.021	0.0010	0.02000	0	103	70	130			
Chlorobenzene	0.019	0.0010	0.02000	0	96.6	70	130			
Surr: 1,2-Dichloroethane-d4	0.010		0.01000		101	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		105	70	130			
Surr: Dibromofluoromethane	0.011		0.01000		107	70	130			
Surr: Toluene-d8	0.0095		0.01000		94.9	70	130			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604674

09-May-16

Client: Enterprise Field Services

Project: Chaco Plant

Sample ID	mb-24836	SampType:	MBLK	TestCode:	EPA Method 8260B: TCLP Compounds						
Client ID:	PBS	Batch ID:	24836	RunNo:	33608						
Prep Date:	4/15/2016	Analysis Date:	4/18/2016	SeqNo:	1034248	Units:	ppm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.050									
1,2-Dichloroethane (EDC)	ND	0.050									
2-Butanone	ND	20									
Carbon tetrachloride	ND	0.050									
Chlorobenzene	ND	10									
Chloroform	ND	0.60									
1,4-Dichlorobenzene	ND	0.75									
1,1-Dichloroethene	ND	0.070									
Tetrachloroethene (PCE)	ND	0.070									
Trichloroethene (TCE)	ND	0.050									
Vinyl chloride	ND	0.020									
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		101	70	130				
Surr: 4-Bromofluorobenzene	0.52		0.5000		105	70	130				
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130				
Surr: Toluene-d8	0.51		0.5000		101	70	130				

Sample ID	lcs-24836	SampType:	LCS	TestCode:	EPA Method 8260B: TCLP Compounds						
Client ID:	LCSS	Batch ID:	24836	RunNo:	33608						
Prep Date:	4/15/2016	Analysis Date:	4/18/2016	SeqNo:	1034249	Units:	ppm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.1	0.050	1.000	0	108	70	130				
Chlorobenzene	1.0	0.050	1.000	0	102	70	130				
1,1-Dichloroethene	1.1	0.050	1.000	0	107	70	130				
Trichloroethene (TCE)	1.0	0.050	1.000	0	104	70	130				
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130				
Surr: 4-Bromofluorobenzene	0.53		0.5000		106	70	130				
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130				
Surr: Toluene-d8	0.52		0.5000		105	70	130				

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1604674

Date Reported: 5/9/2016

CLIENT: Enterprise Field Services

Client Sample ID: Non Exempt Tank

Project: Chaco Plant

Collection Date: 4/14/2016 10:45:00 AM

Lab ID: 1604674-002

Matrix: AQUEOUS

Received Date: 4/15/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
TCLP VOLATILES BY 8260B							Analyst: DJF
Tetrachloroethene (PCE)	ND	0.70		mg/L	1	4/26/2016 9:15:00 PM	B33807
Trichloroethene (TCE)	ND	0.50		mg/L	1	4/26/2016 9:15:00 PM	B33807
Vinyl chloride	ND	0.20		mg/L	1	4/26/2016 9:15:00 PM	B33807
Chlorobenzene	ND	100		mg/L	1	4/26/2016 9:15:00 PM	B33807
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	4/26/2016 9:15:00 PM	B33807
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/26/2016 9:15:00 PM	B33807
Surr: Dibromofluoromethane	104	70-130		%Rec	1	4/26/2016 9:15:00 PM	B33807
Surr: Toluene-d8	94.2	70-130		%Rec	1	4/26/2016 9:15:00 PM	B33807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1604674

Date Reported: 5/9/2016

CLIENT: Enterprise Field Services

Client Sample ID: Non Exempt Tank

Project: Chaco Plant

Collection Date: 4/14/2016 10:45:00 AM

Lab ID: 1604674-002

Matrix: AQUEOUS

Received Date: 4/15/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	4/22/2016 6:54:25 PM	24921
3+4-Methylphenol	ND	200		mg/L	1	4/22/2016 6:54:25 PM	24921
Phenol	ND	200		mg/L	1	4/22/2016 6:54:25 PM	24921
2,4-Dinitrotoluene	ND	0.13		mg/L	1	4/22/2016 6:54:25 PM	24921
Hexachlorobenzene	ND	0.13		mg/L	1	4/22/2016 6:54:25 PM	24921
Hexachlorobutadiene	ND	0.50		mg/L	1	4/22/2016 6:54:25 PM	24921
Hexachloroethane	ND	3.0		mg/L	1	4/22/2016 6:54:25 PM	24921
Nitrobenzene	ND	2.0		mg/L	1	4/22/2016 6:54:25 PM	24921
Pentachlorophenol	ND	100		mg/L	1	4/22/2016 6:54:25 PM	24921
Pyridine	ND	5.0		mg/L	1	4/22/2016 6:54:25 PM	24921
2,4,5-Trichlorophenol	ND	400		mg/L	1	4/22/2016 6:54:25 PM	24921
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	4/22/2016 6:54:25 PM	24921
Cresols, Total	ND	200		mg/L	1	4/22/2016 6:54:25 PM	24921
Surr: 2-Fluorophenol	44.8	15-124		%Rec	1	4/22/2016 6:54:25 PM	24921
Surr: Phenol-d5	33.4	15-118		%Rec	1	4/22/2016 6:54:25 PM	24921
Surr: 2,4,6-Tribromophenol	74.4	15-148		%Rec	1	4/22/2016 6:54:25 PM	24921
Surr: Nitrobenzene-d5	64.0	40.6-124		%Rec	1	4/22/2016 6:54:25 PM	24921
Surr: 2-Fluorobiphenyl	67.4	35.7-128		%Rec	1	4/22/2016 6:54:25 PM	24921
Surr: 4-Terphenyl-d14	56.2	18.8-115		%Rec	1	4/22/2016 6:54:25 PM	24921
EPA METHOD 7470: MERCURY							Analyst: pmf
Mercury	0.0033	0.00020		mg/L	1	4/29/2016 11:25:07 AM	25066
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: MED
Arsenic	ND	5.0		mg/L	1	4/29/2016 11:45:10 AM	24977
Barium	ND	100		mg/L	1	5/5/2016 8:45:25 AM	24977
Cadmium	ND	1.0		mg/L	1	5/5/2016 8:45:25 AM	24977
Chromium	ND	5.0		mg/L	1	5/5/2016 8:45:25 AM	24977
Lead	ND	5.0		mg/L	1	4/29/2016 11:45:10 AM	24977
Selenium	ND	1.0		mg/L	1	5/5/2016 8:45:25 AM	24977
Silver	ND	5.0		mg/L	1	5/5/2016 8:45:25 AM	24977
TCLP VOLATILES BY 8260B							Analyst: DJF
Benzene	ND	0.50		mg/L	1	4/26/2016 9:15:00 PM	B33807
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	1	4/26/2016 9:15:00 PM	B33807
2-Butanone	ND	10		mg/L	1	4/26/2016 9:15:00 PM	B33807
Carbon Tetrachloride	ND	0.50		mg/L	1	4/26/2016 9:15:00 PM	B33807
Chloroform	ND	6.0		mg/L	1	4/26/2016 9:15:00 PM	B33807
1,4-Dichlorobenzene	ND	7.5		mg/L	1	4/26/2016 9:15:00 PM	B33807
1,1-Dichloroethene	ND	0.70		mg/L	1	4/26/2016 9:15:00 PM	B33807
Hexachlorobutadiene	ND	0.50		mg/L	1	4/26/2016 9:15:00 PM	B33807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1604674

Date Reported: 5/9/2016

CLIENT: Enterprise Field Services

Client Sample ID: Air Dy Dessicant

Project: Chaco Plant

Collection Date: 4/14/2016 10:08:00 AM

Lab ID: 1604674-001

Matrix: SOLID

Received Date: 4/15/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: TCLP COMPOUNDS							Analyst: DJF
Tetrachloroethene (PCE)	ND	0.70		ppm	10	4/18/2016 1:23:16 PM	24836
Trichloroethene (TCE)	ND	0.50		ppm	10	4/18/2016 1:23:16 PM	24836
Vinyl chloride	ND	0.20		ppm	10	4/18/2016 1:23:16 PM	24836
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	10	4/18/2016 1:23:16 PM	24836
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	10	4/18/2016 1:23:16 PM	24836
Surr: Dibromofluoromethane	103	70-130		%Rec	10	4/18/2016 1:23:16 PM	24836
Surr: Toluene-d8	99.8	70-130		%Rec	10	4/18/2016 1:23:16 PM	24836

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
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Matrix: SOLID

Received Date: 4/15/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
MERCURY, TCLP							Analyst: pmf
Mercury	ND	0.020		mg/L	1	4/26/2016 3:56:44 PM	24994
EPA METHOD 6010B: TCLP METALS							Analyst: MED
Arsenic	ND	5.0		mg/L	1	4/25/2016 11:02:11 AM	24953
Barium	ND	100		mg/L	1	4/25/2016 11:02:11 AM	24953
Cadmium	ND	1.0		mg/L	1	4/25/2016 11:02:11 AM	24953
Chromium	ND	5.0		mg/L	1	4/25/2016 11:02:11 AM	24953
Lead	ND	5.0		mg/L	1	4/25/2016 11:02:11 AM	24953
Selenium	ND	1.0		mg/L	1	4/25/2016 11:02:11 AM	24953
Silver	ND	5.0		mg/L	1	4/25/2016 11:02:11 AM	24953
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	4/22/2016 6:24:22 PM	24921
3+4-Methylphenol	ND	200		mg/L	1	4/22/2016 6:24:22 PM	24921
Phenol	ND	200		mg/L	1	4/22/2016 6:24:22 PM	24921
2,4-Dinitrotoluene	ND	0.13		mg/L	1	4/22/2016 6:24:22 PM	24921
Hexachlorobenzene	ND	0.13		mg/L	1	4/22/2016 6:24:22 PM	24921
Hexachlorobutadiene	ND	0.50		mg/L	1	4/22/2016 6:24:22 PM	24921
Hexachloroethane	ND	3.0		mg/L	1	4/22/2016 6:24:22 PM	24921
Nitrobenzene	ND	2.0		mg/L	1	4/22/2016 6:24:22 PM	24921
Pentachlorophenol	ND	100		mg/L	1	4/22/2016 6:24:22 PM	24921
Pyridine	ND	5.0		mg/L	1	4/22/2016 6:24:22 PM	24921
2,4,5-Trichlorophenol	ND	400		mg/L	1	4/22/2016 6:24:22 PM	24921
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	4/22/2016 6:24:22 PM	24921
Cresols, Total	ND	200		mg/L	1	4/22/2016 6:24:22 PM	24921
Surr: 2-Fluorophenol	58.1	19-121		%Rec	1	4/22/2016 6:24:22 PM	24921
Surr: Phenol-d5	41.6	31.8-117		%Rec	1	4/22/2016 6:24:22 PM	24921
Surr: 2,4,6-Tribromophenol	80.1	31.3-139		%Rec	1	4/22/2016 6:24:22 PM	24921
Surr: Nitrobenzene-d5	77.6	48.2-128		%Rec	1	4/22/2016 6:24:22 PM	24921
Surr: 2-Fluorobiphenyl	73.1	58.4-114		%Rec	1	4/22/2016 6:24:22 PM	24921
Surr: 4-Terphenyl-d14	60.6	17.4-141		%Rec	1	4/22/2016 6:24:22 PM	24921
EPA METHOD 8260B: TCLP COMPOUNDS							Analyst: DJF
Benzene	ND	0.50		ppm	10	4/18/2016 1:23:16 PM	24836
1,2-Dichloroethane (EDC)	ND	0.50		ppm	10	4/18/2016 1:23:16 PM	24836
2-Butanone	ND	200		ppm	10	4/18/2016 1:23:16 PM	24836
Carbon tetrachloride	ND	0.50		ppm	10	4/18/2016 1:23:16 PM	24836
Chlorobenzene	ND	100		ppm	10	4/18/2016 1:23:16 PM	24836
Chloroform	ND	6.0		ppm	10	4/18/2016 1:23:16 PM	24836
1,4-Dichlorobenzene	ND	7.5		ppm	10	4/18/2016 1:23:16 PM	24836
1,1-Dichloroethene	ND	0.70		ppm	10	4/18/2016 1:23:16 PM	24836

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
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	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

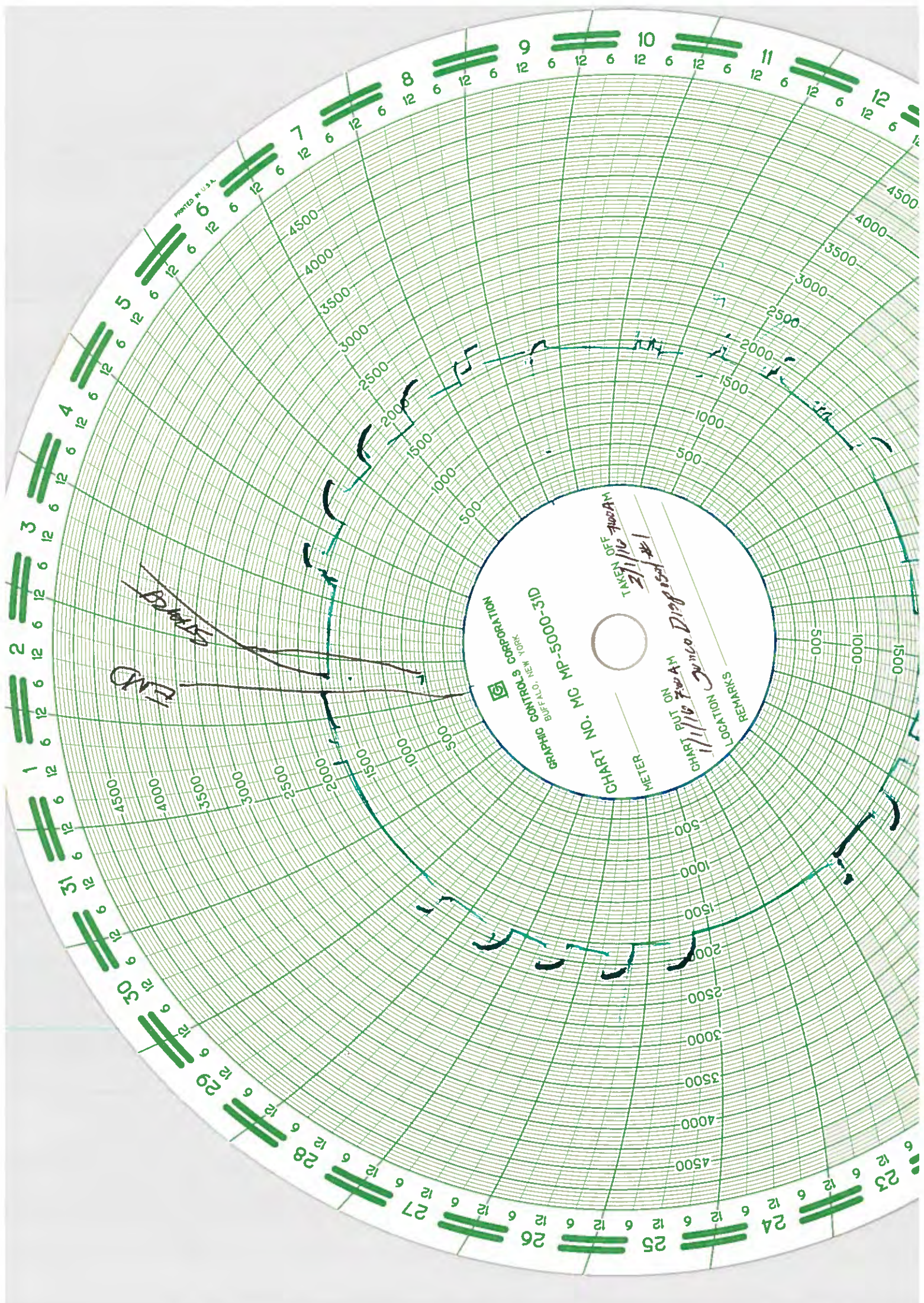
Case Narrative

WO#: 1604674
Date: 5/9/2016

CLIENT: Enterprise Field Services
Project: Chaco Plant

Analytical Notes Regarding EPA Method 8270 TCLP:

The recovery for pyridine in the LCS was low. The sample was reextracted and reanalyzed, past the holding time, and the initial result, ND, was confirmed.



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BUFFALO, NEW YORK

CHART NO. MC MP-5000-31D

TAKEN
OFF 7400A

METER

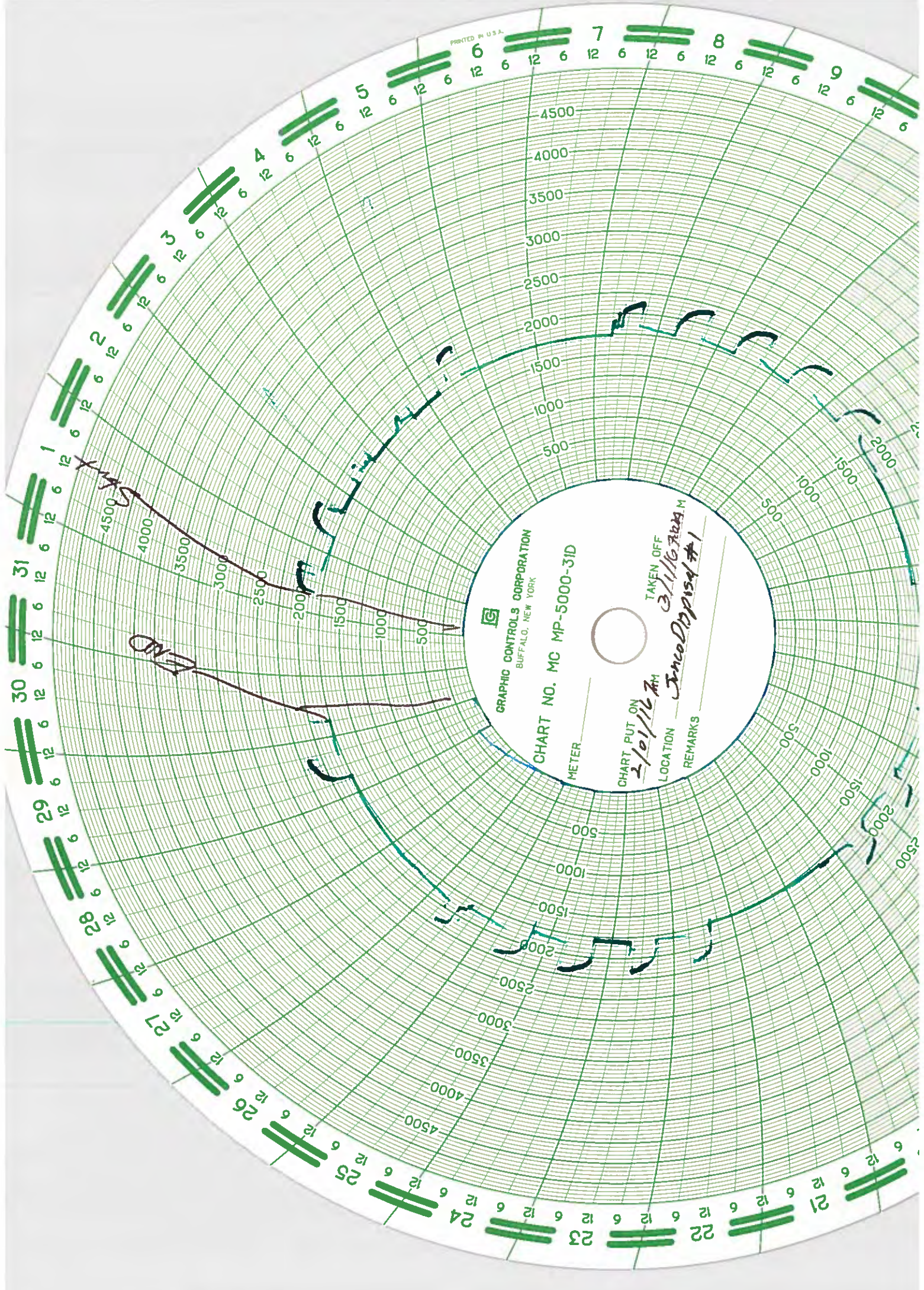
CHART PUT IN
11/16 For 4A

LOCATION

REMARKS

21/16 7400A
21/16 7400A
21/16 7400A

END
BOWTIE



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GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

CHART NO. MC MP-5000-31D

METER

CHART PUT ON

2/01/16 AM

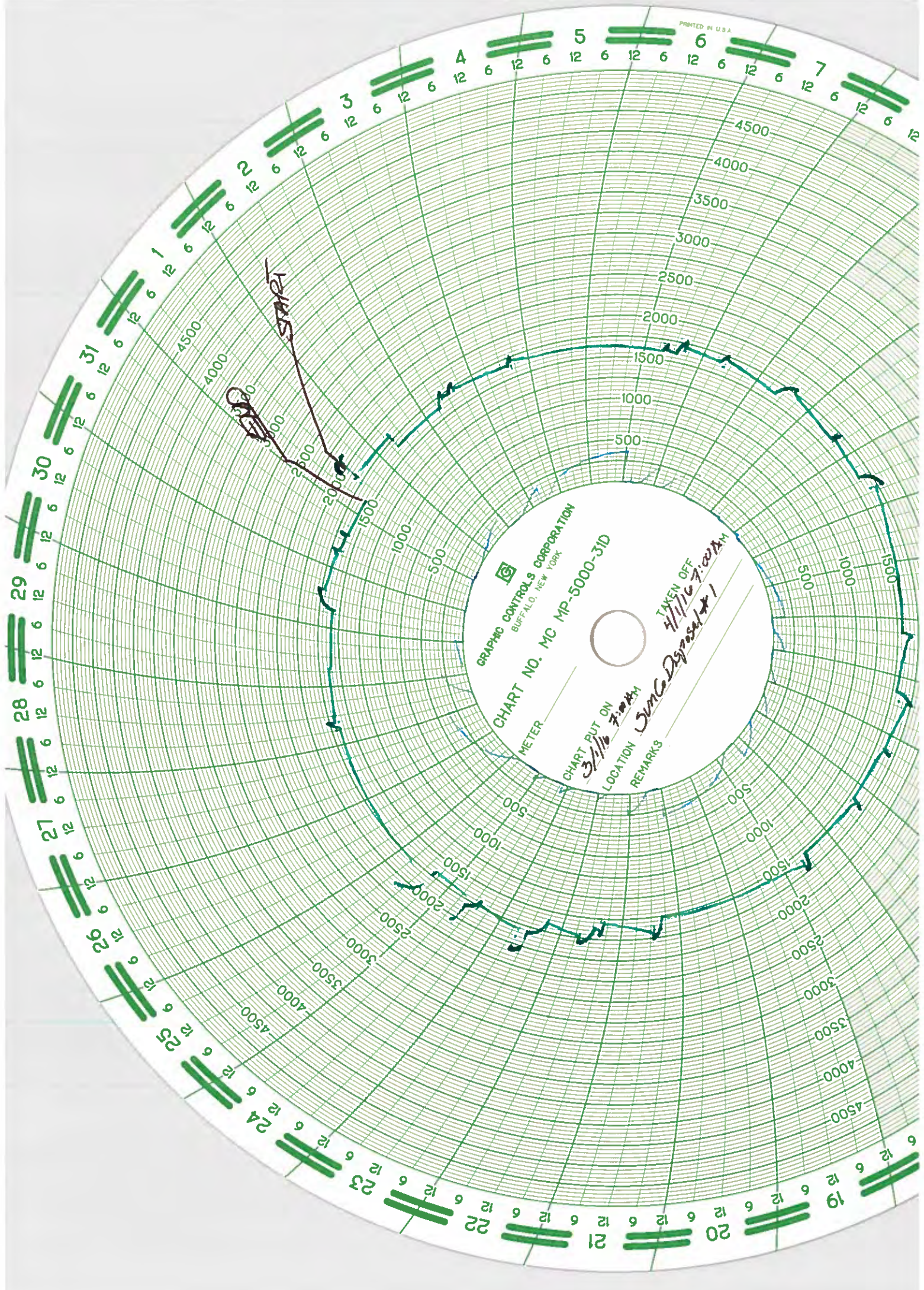
TAKEN OFF

3/1/16 AM

LOCATION

REMARKS

Inco Display #1



GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

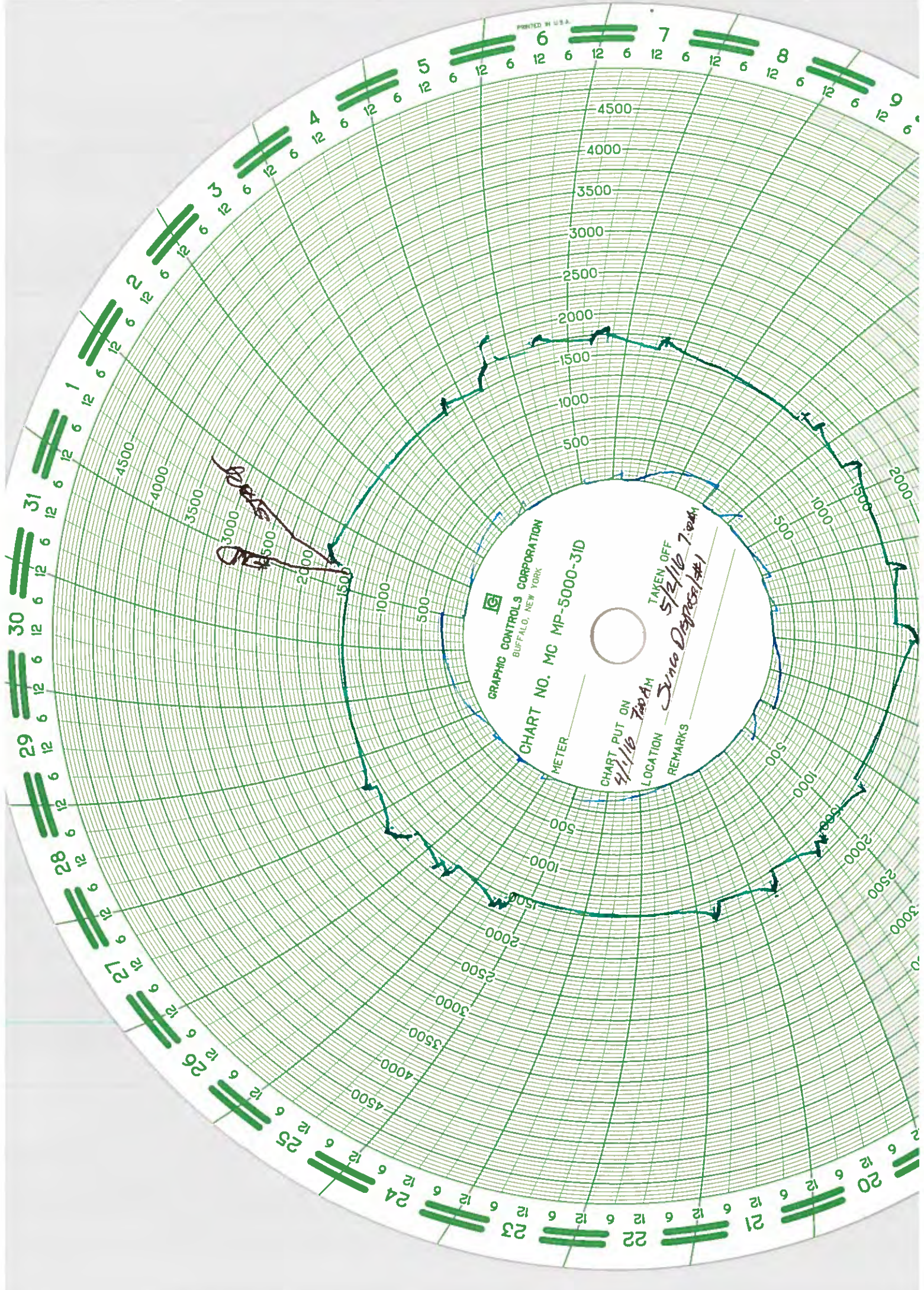
CHART NO. MC MP-5000-31D

CHART PUT ON
3/1/6 7:00 AM

TAKEN OFF
4/1/16 7:00 AM

LOCATION
REMARKS

Sung Dye-sal #1



GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

CHART NO. MC MP-5000-31D

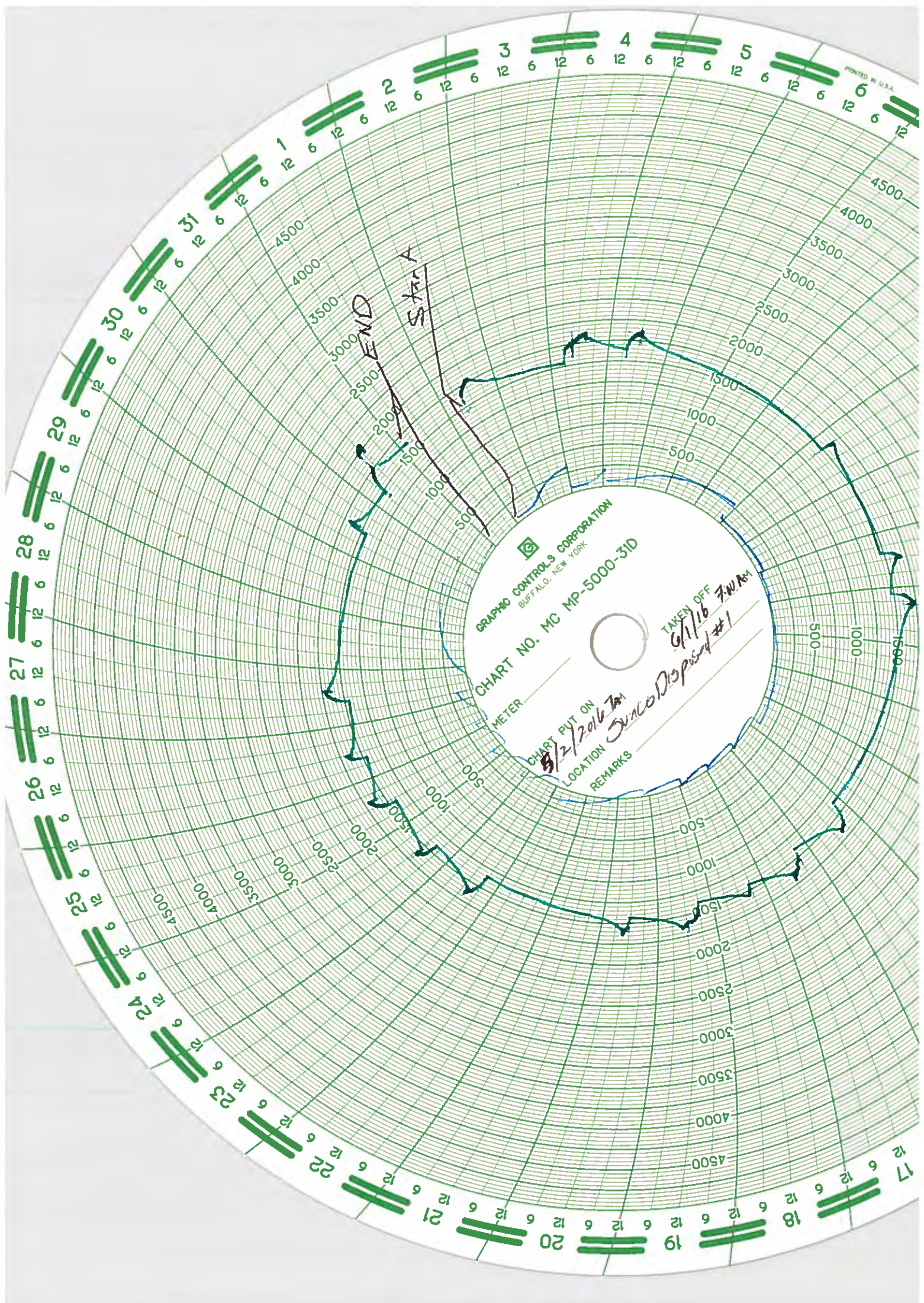
METER

CHART PUT ON
4/1/16 7:00 AM

LOCATION

REMARKS

TAKEN OFF
5/2/16 7:00 AM
Juno Display (#1)



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GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

CHART NO. MC MP-5000-31D

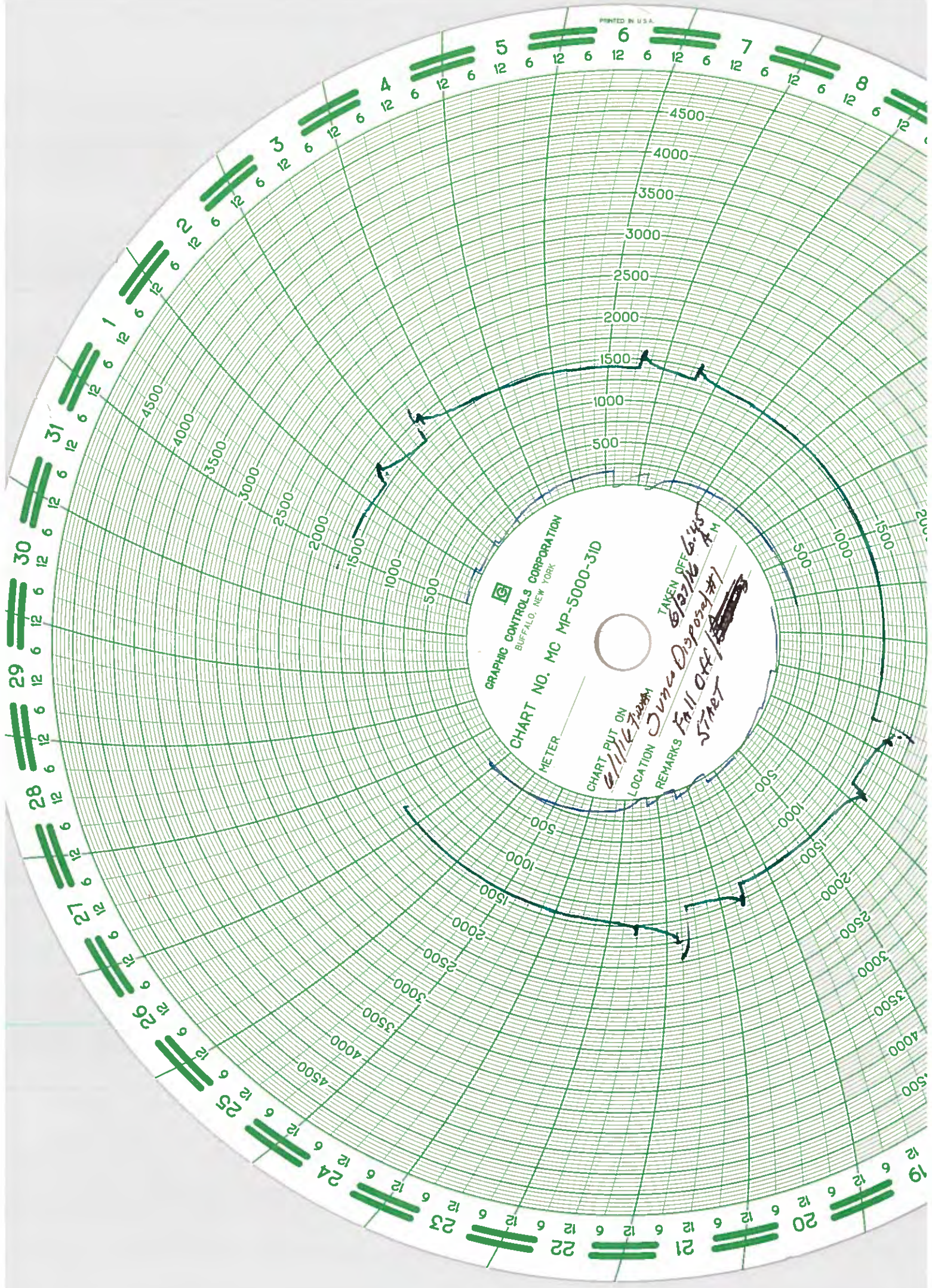
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5/2/2016

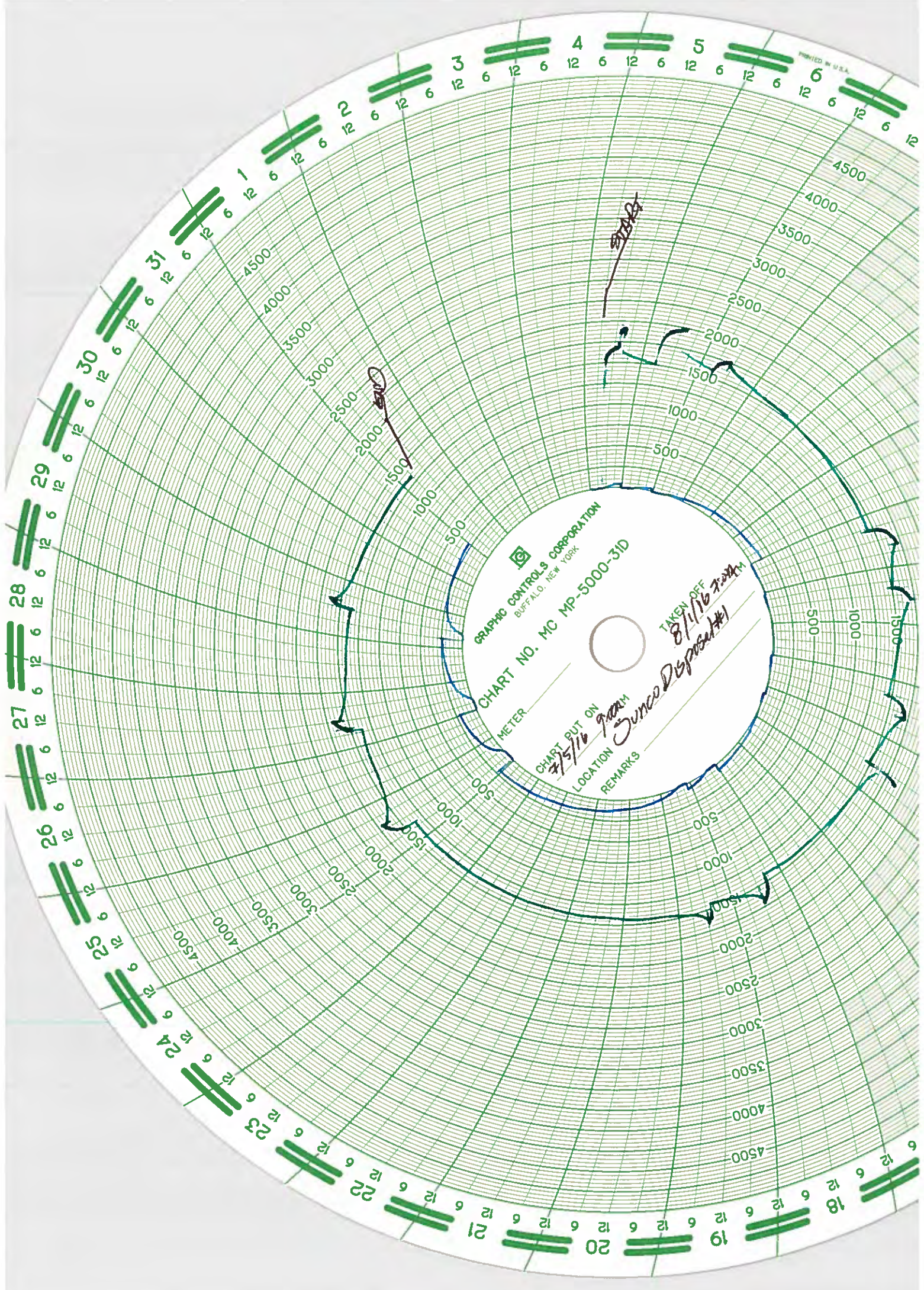
LOCATION
REMARKS

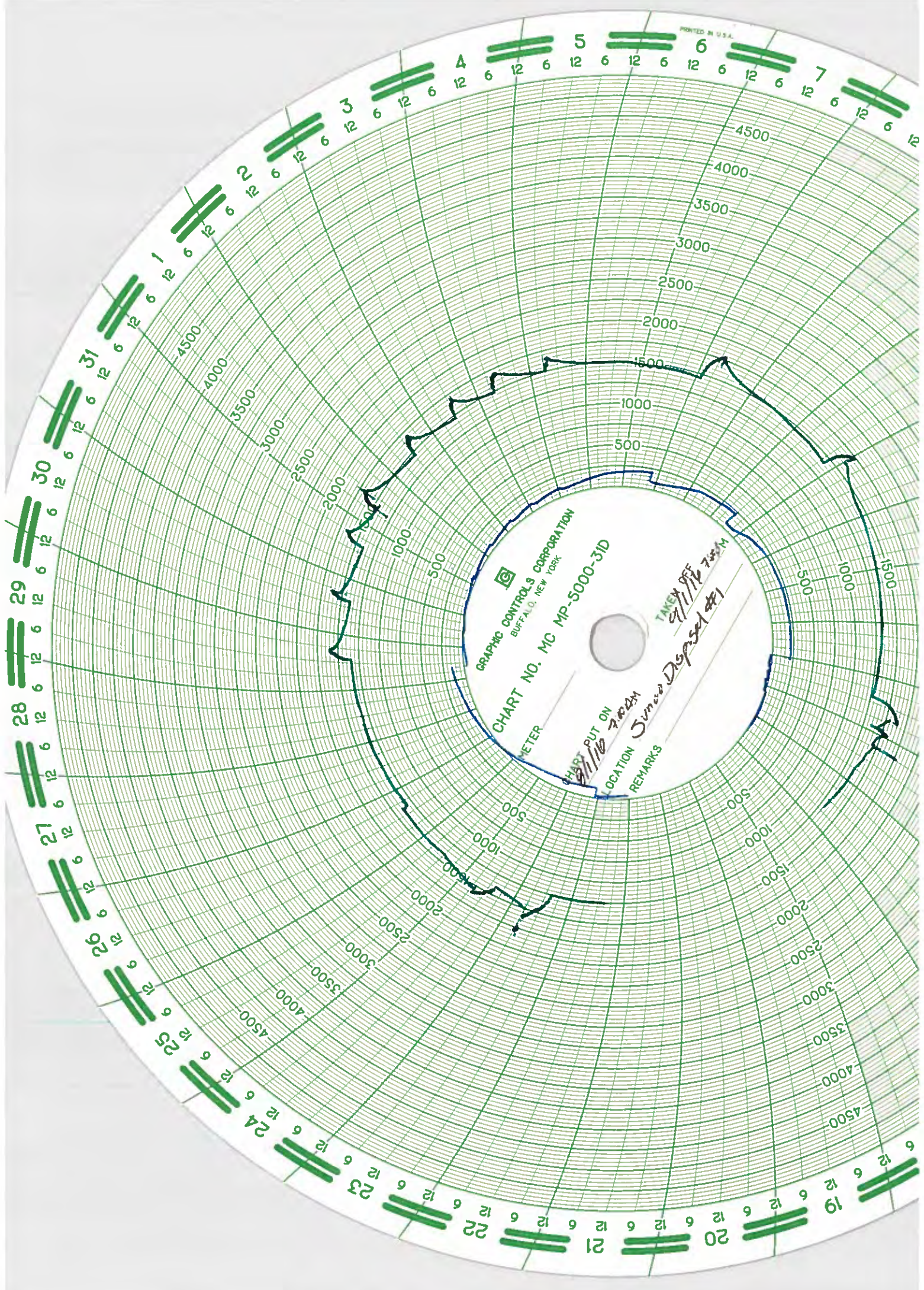
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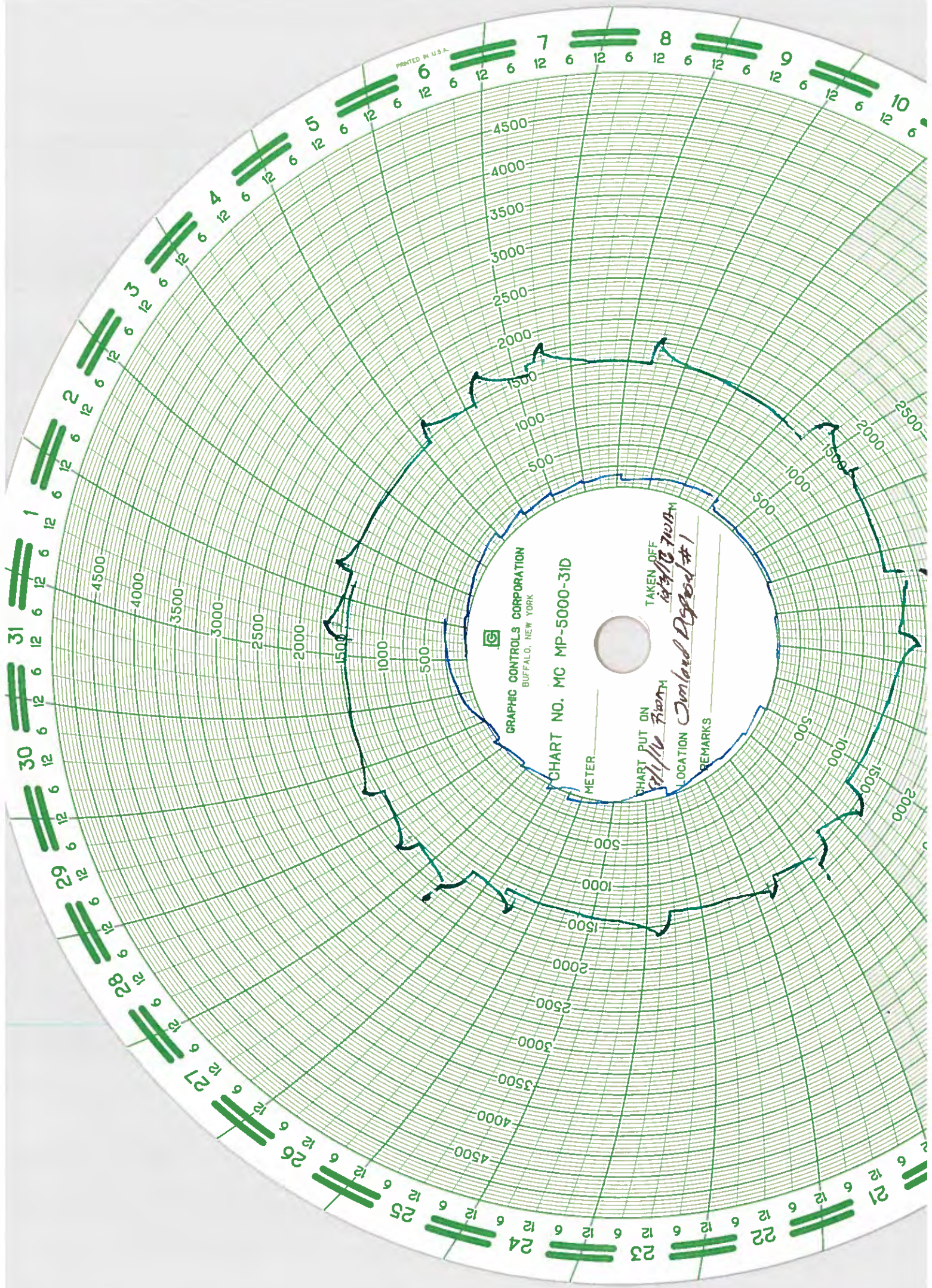
Start

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GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

CHART NO. MC MP-5000-31D

METER

CHART PUT ON

4/11/12 7:20 PM

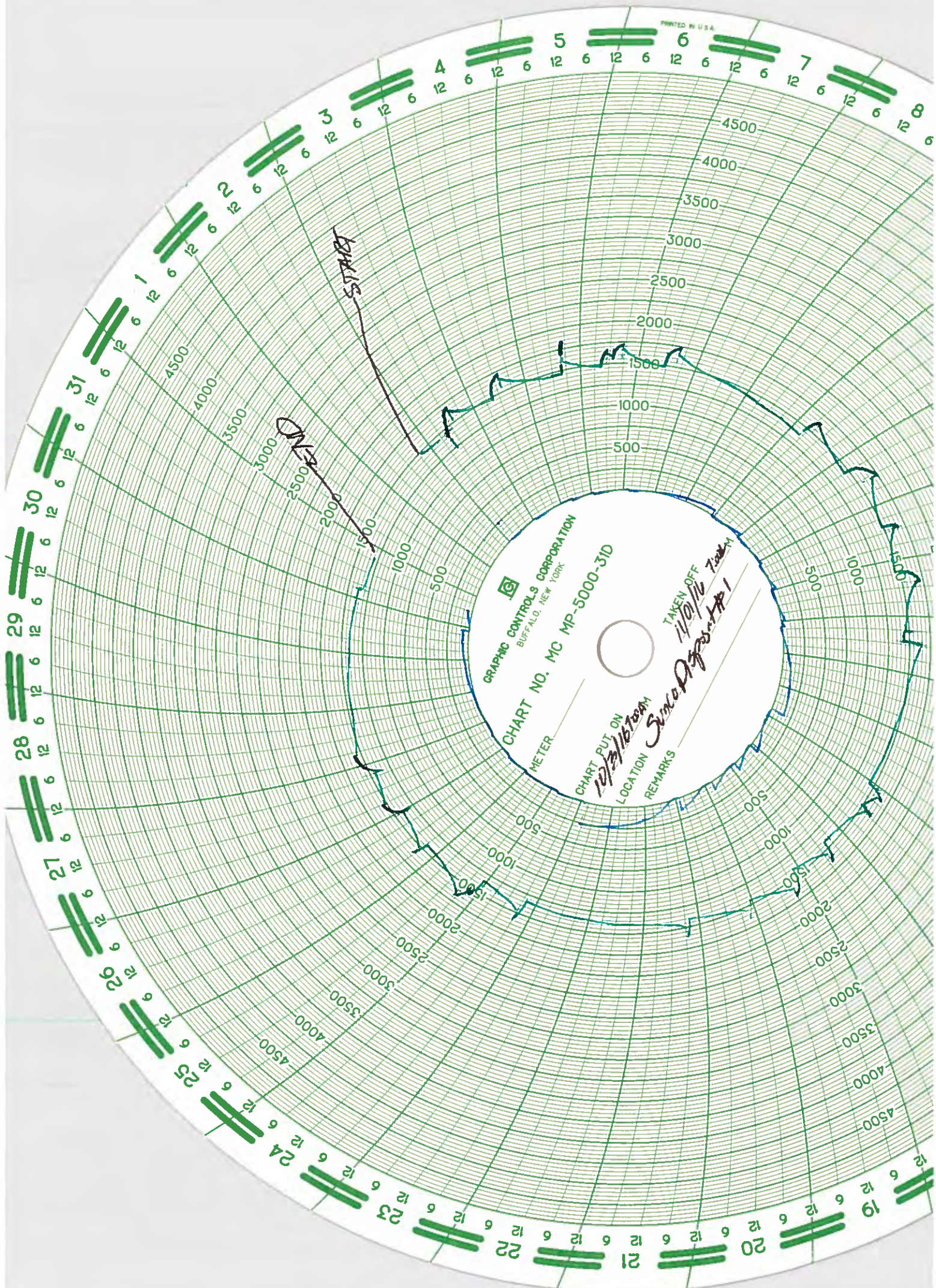
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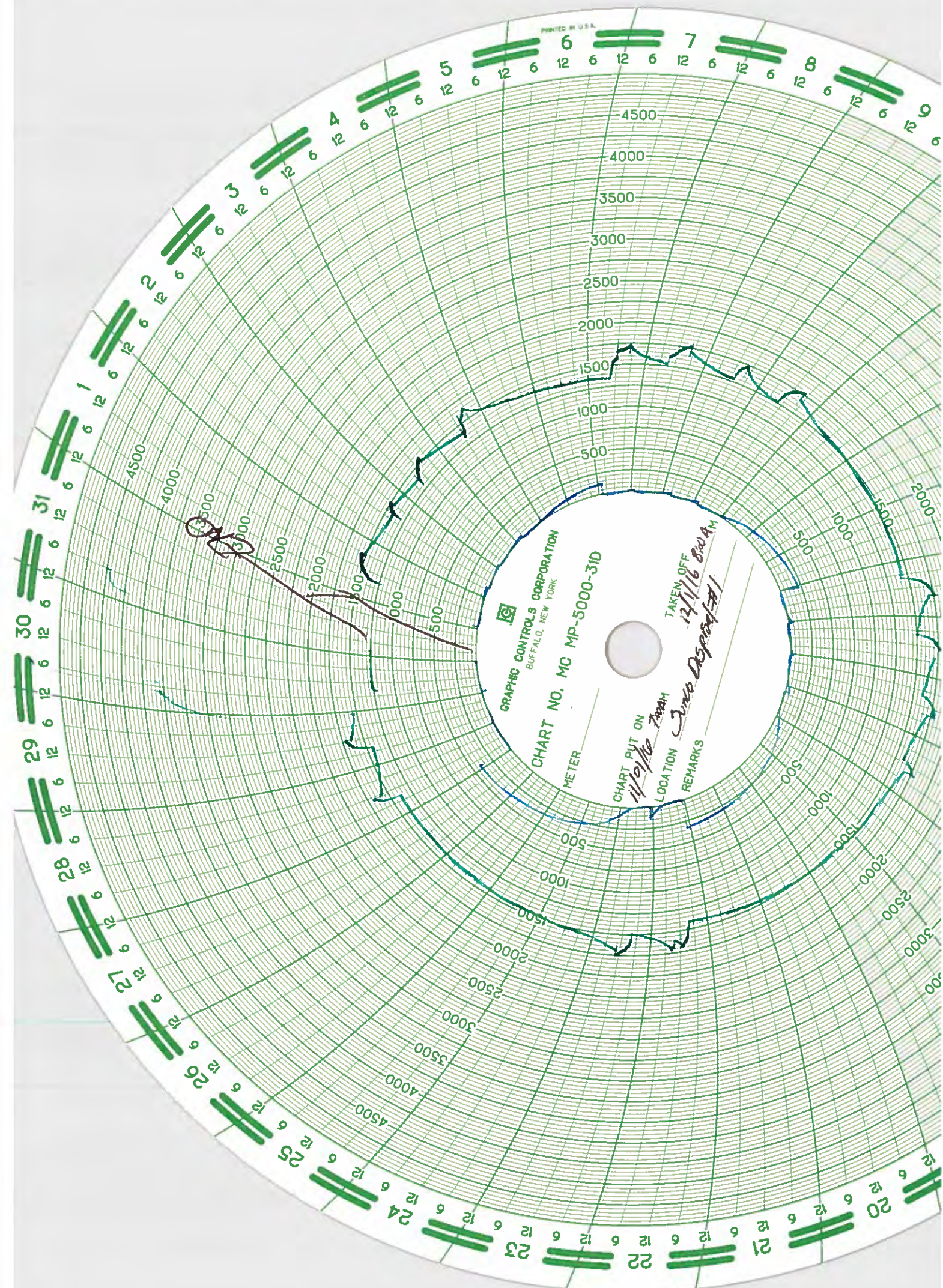
Donland Depot #1

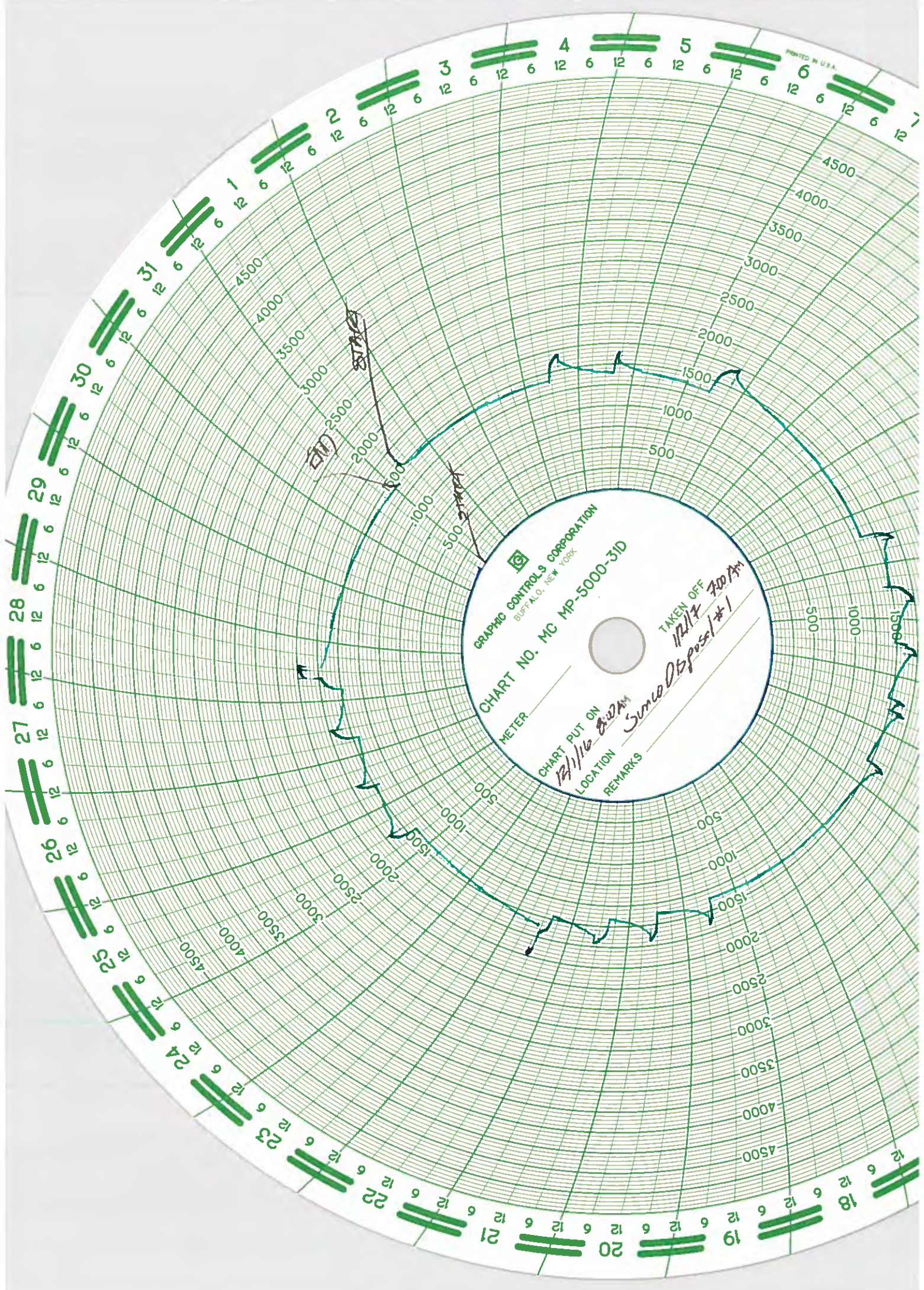
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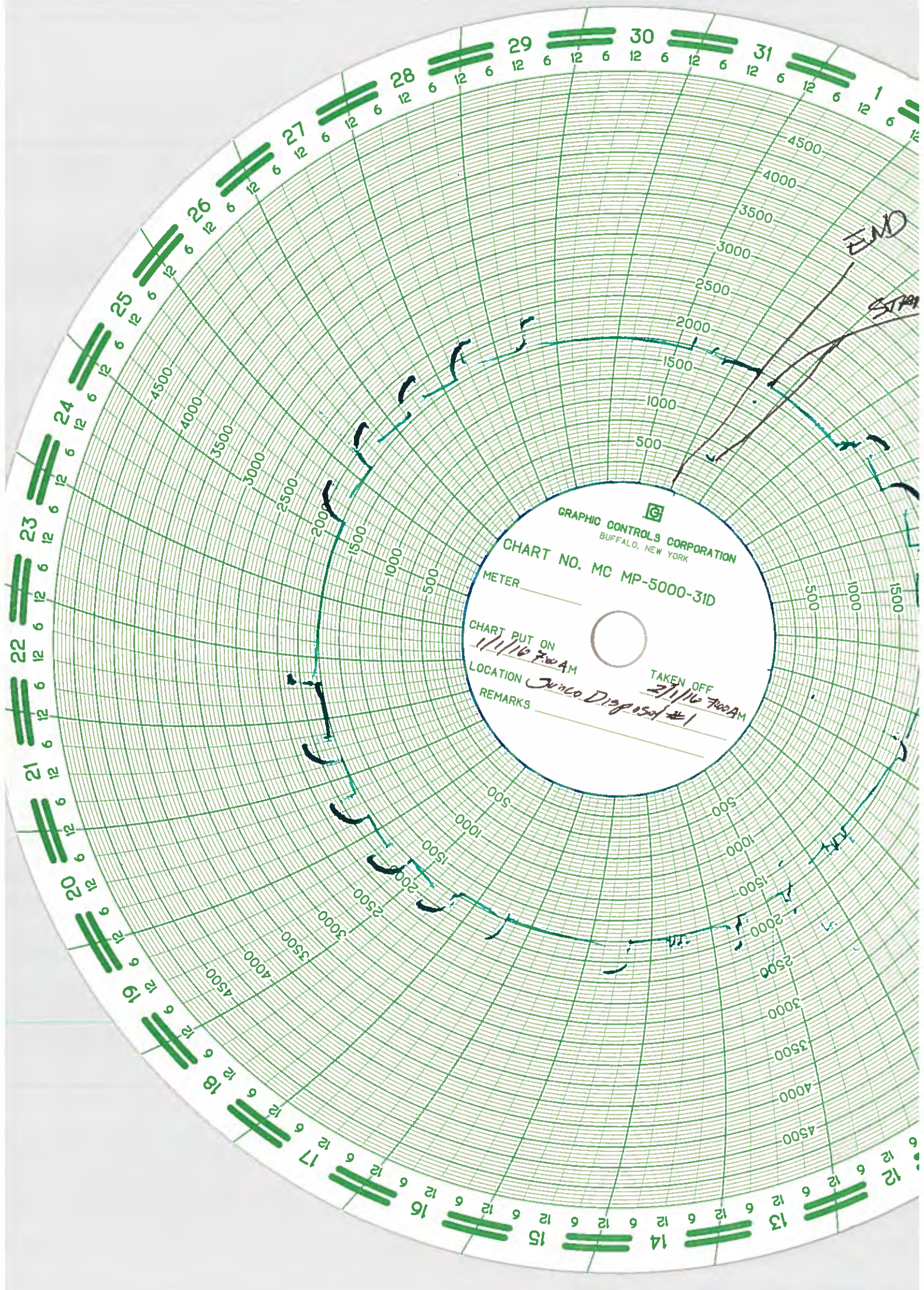
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4/11/12 7:20 PM









GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

CHART NO. MC MP-5000-31D

METER

CHART PUT ON
11/1/16 7:00 AM

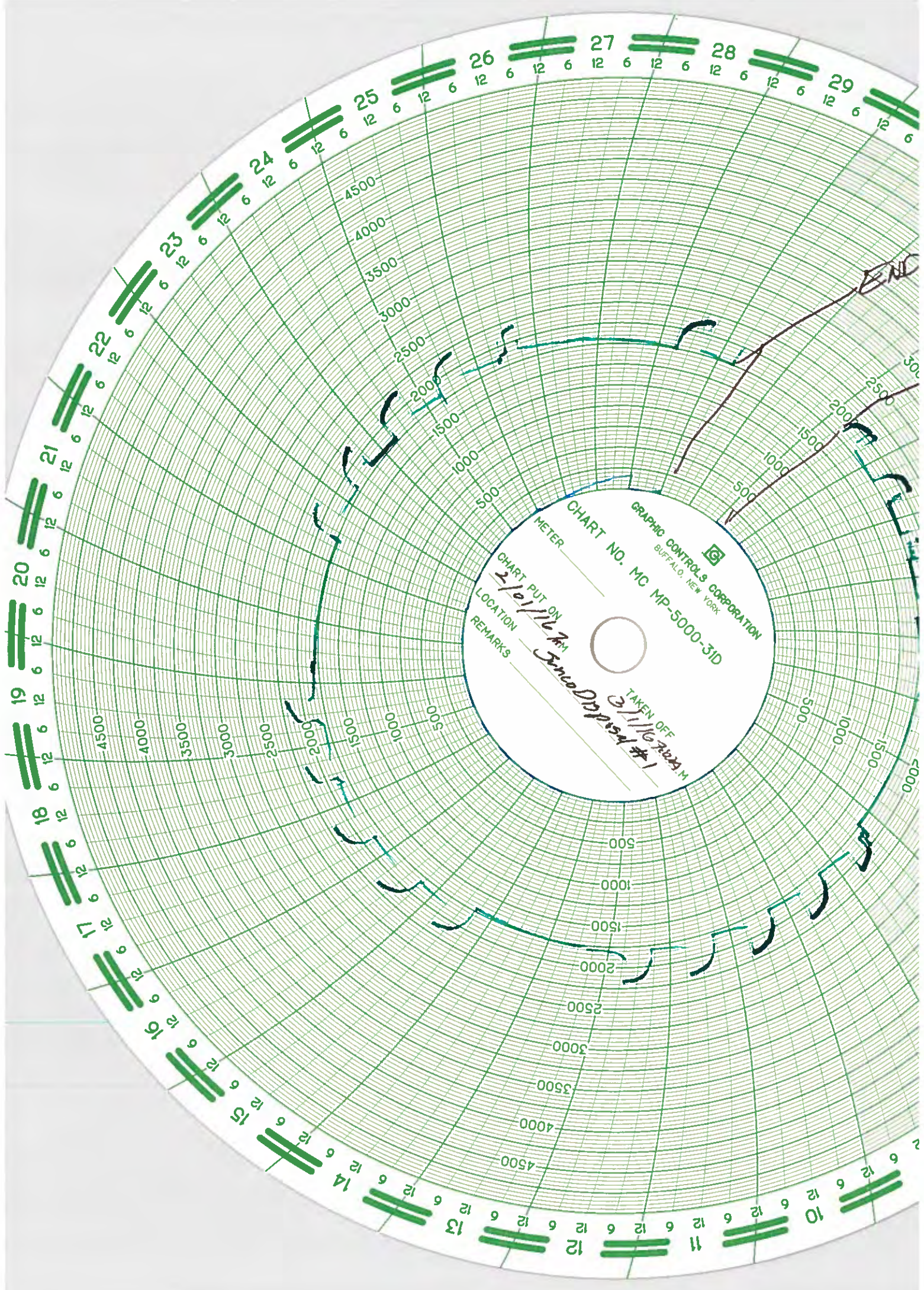
LOCATION
REMARKS

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2/1/16 7:00 AM

Unico Diagonal #1

END

START



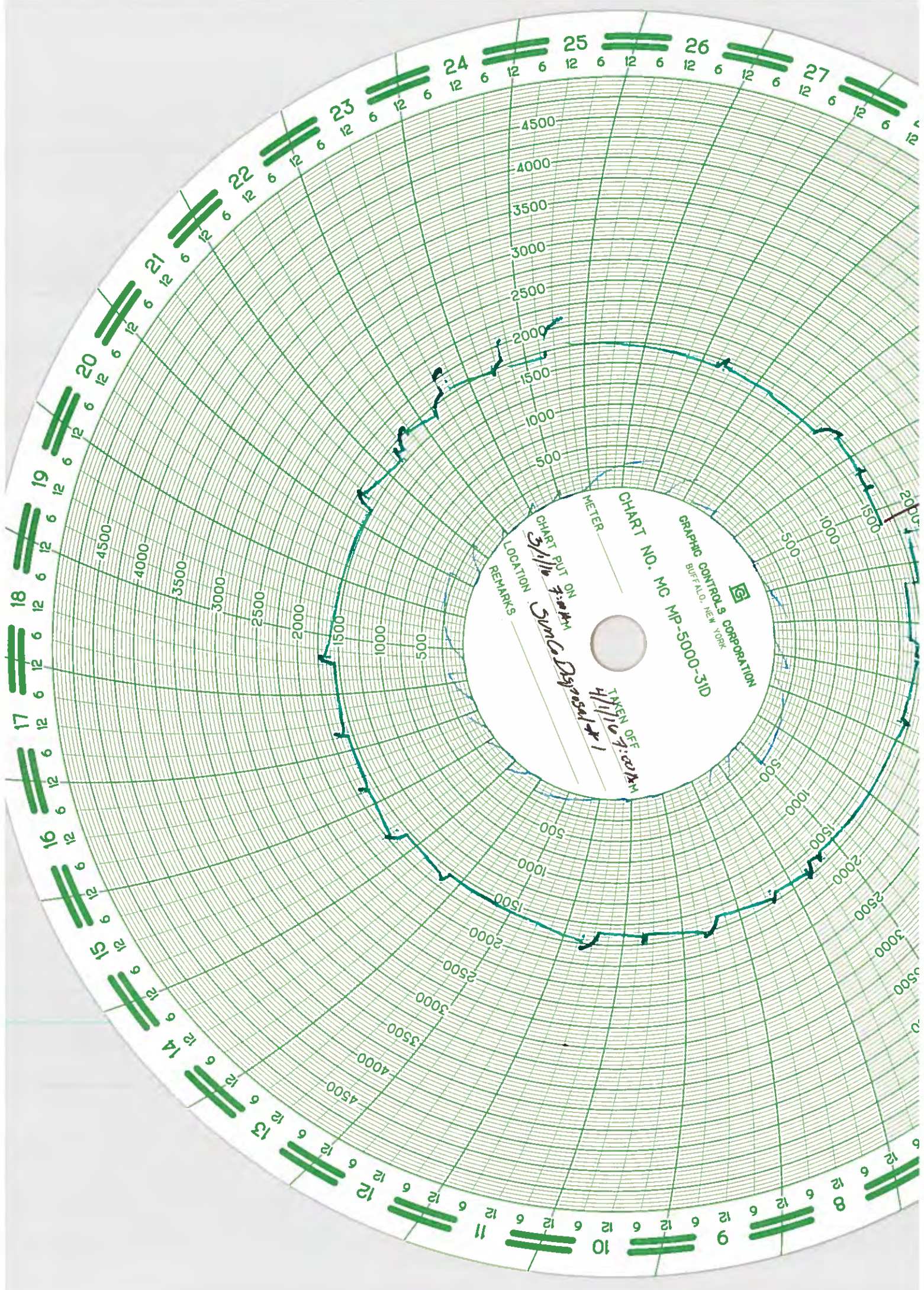
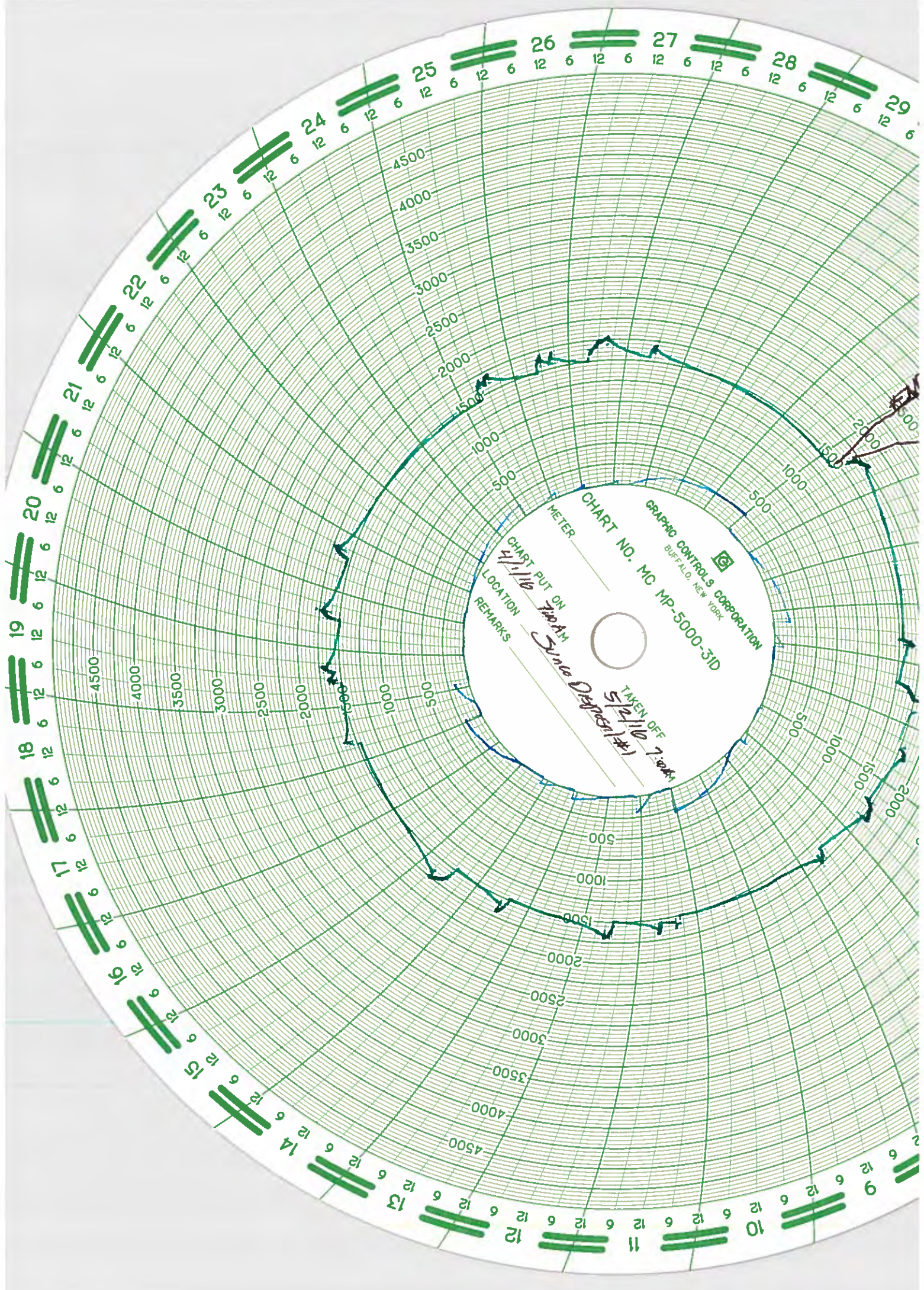


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GRAPHIC CONTROL'S CORPORATION
BUFFALO, NEW YORK
TAKEN OFF
4/11/64
CHART PUT ON
4/11/64
LOCATION
REMARKS
METER



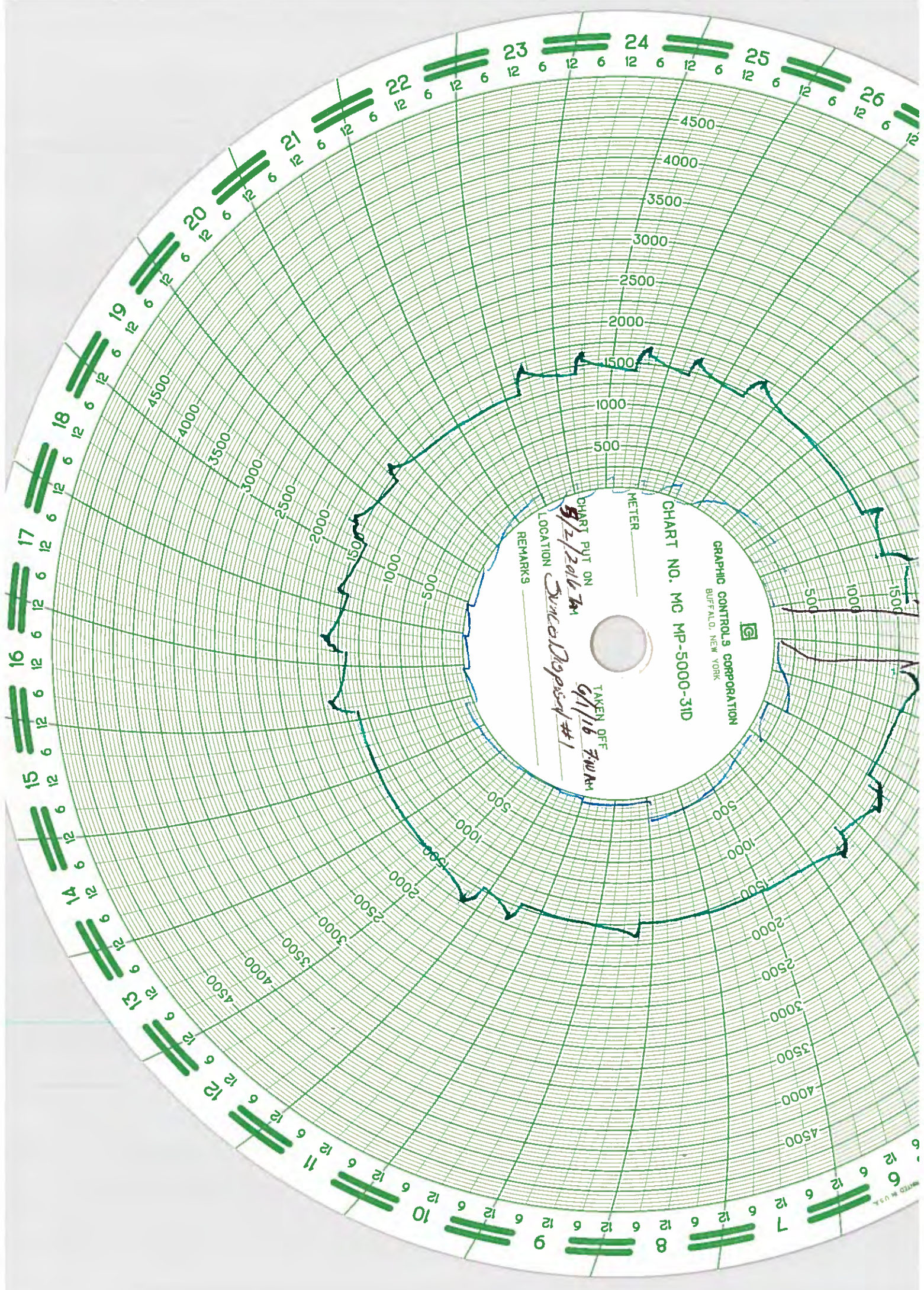


CHART NO. MC MP-5000-31D
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

METER

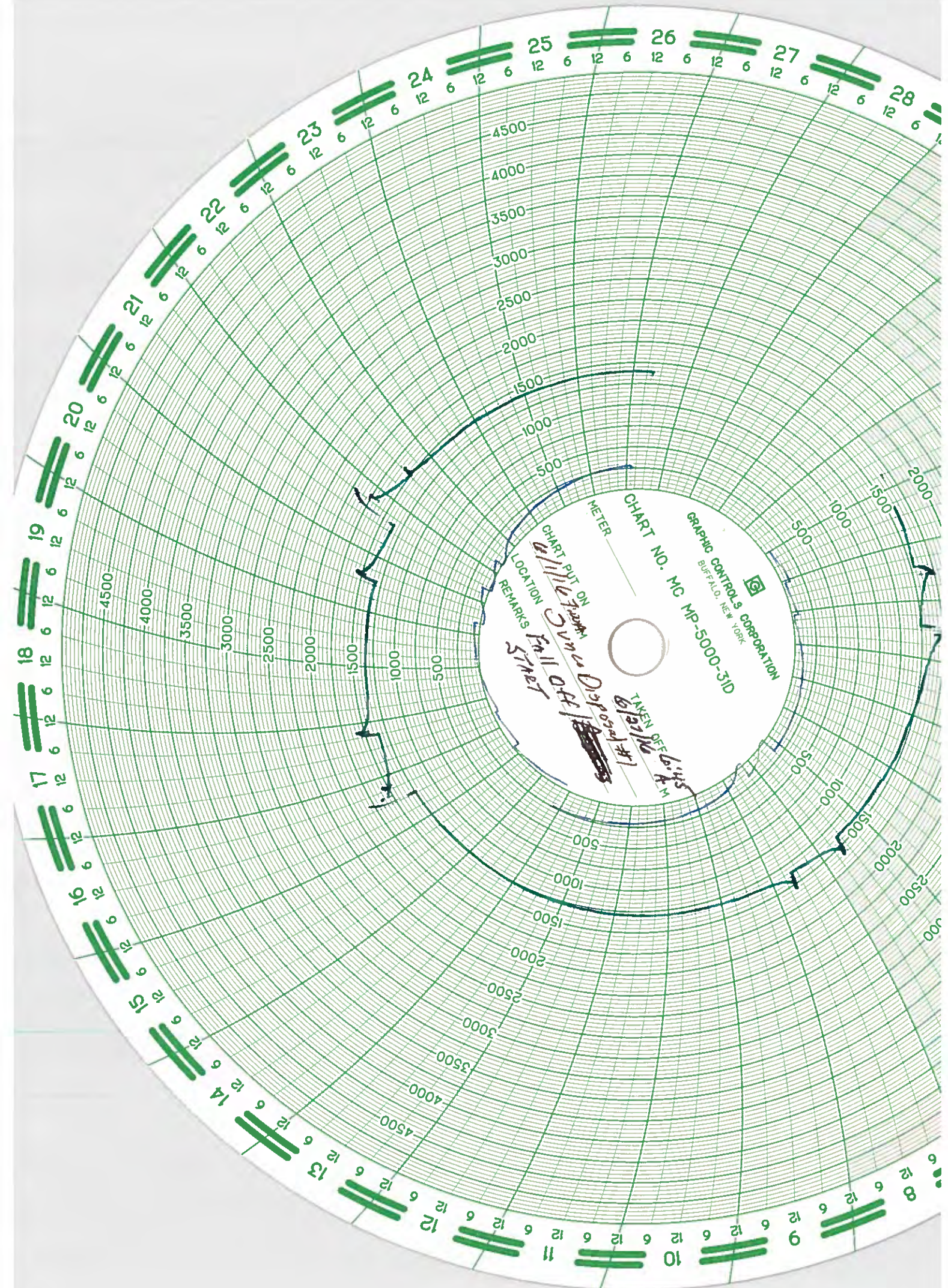
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5/2/2016 TM

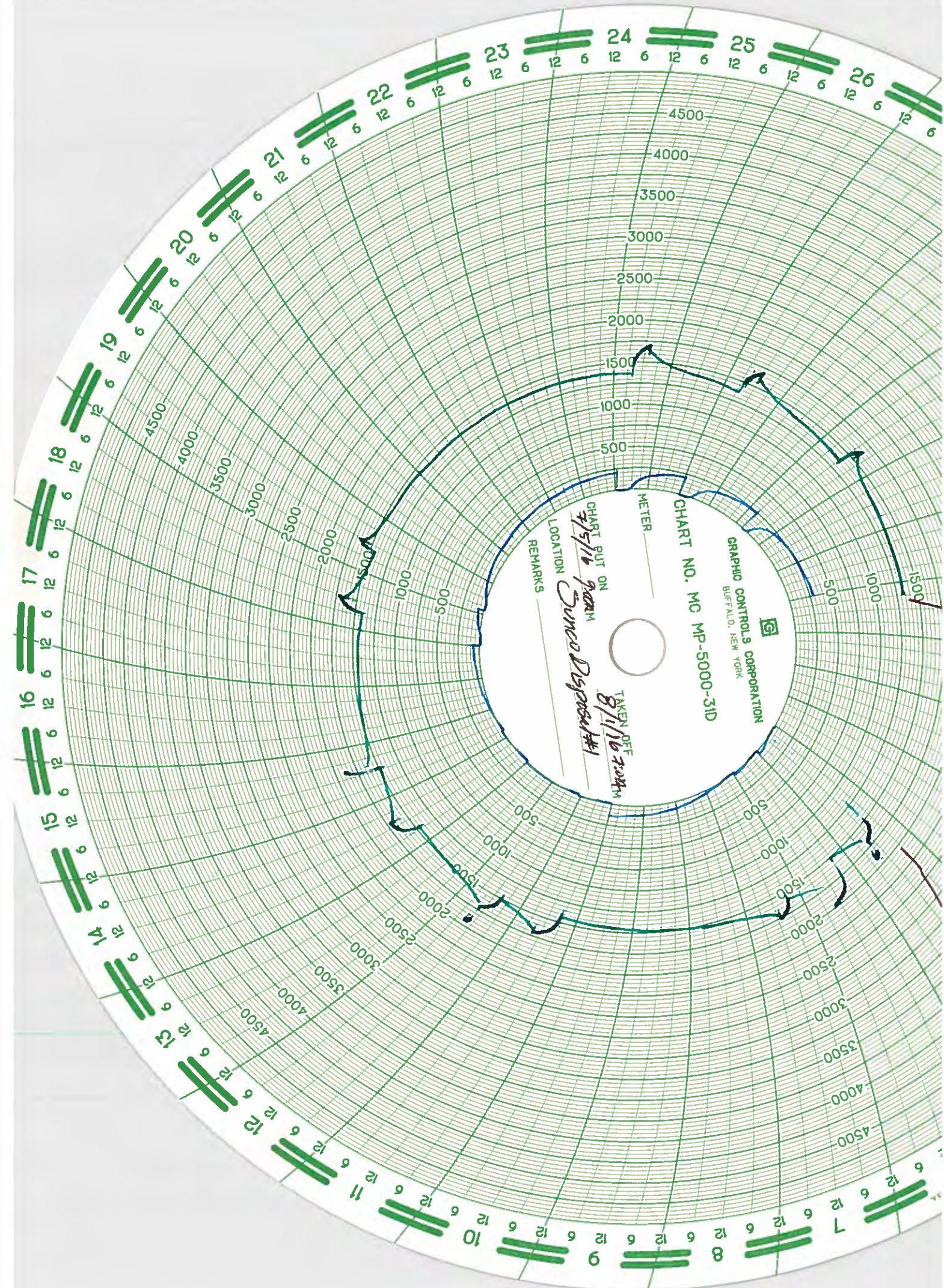
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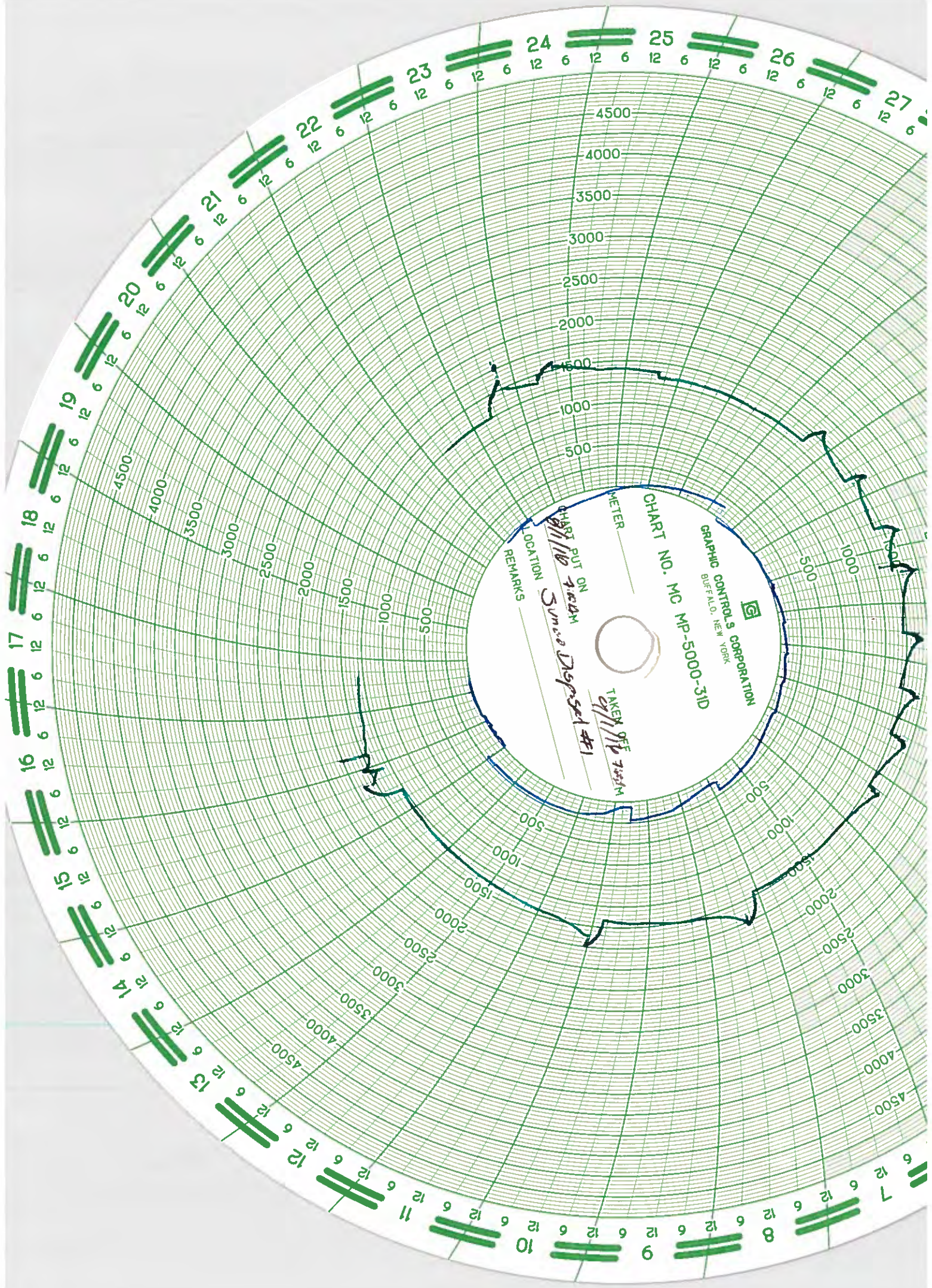
LOCATION

REMARKS

Discarded #1







GRAPHIC CONTROL'S CORPORATION
BUFFALO, NEW YORK

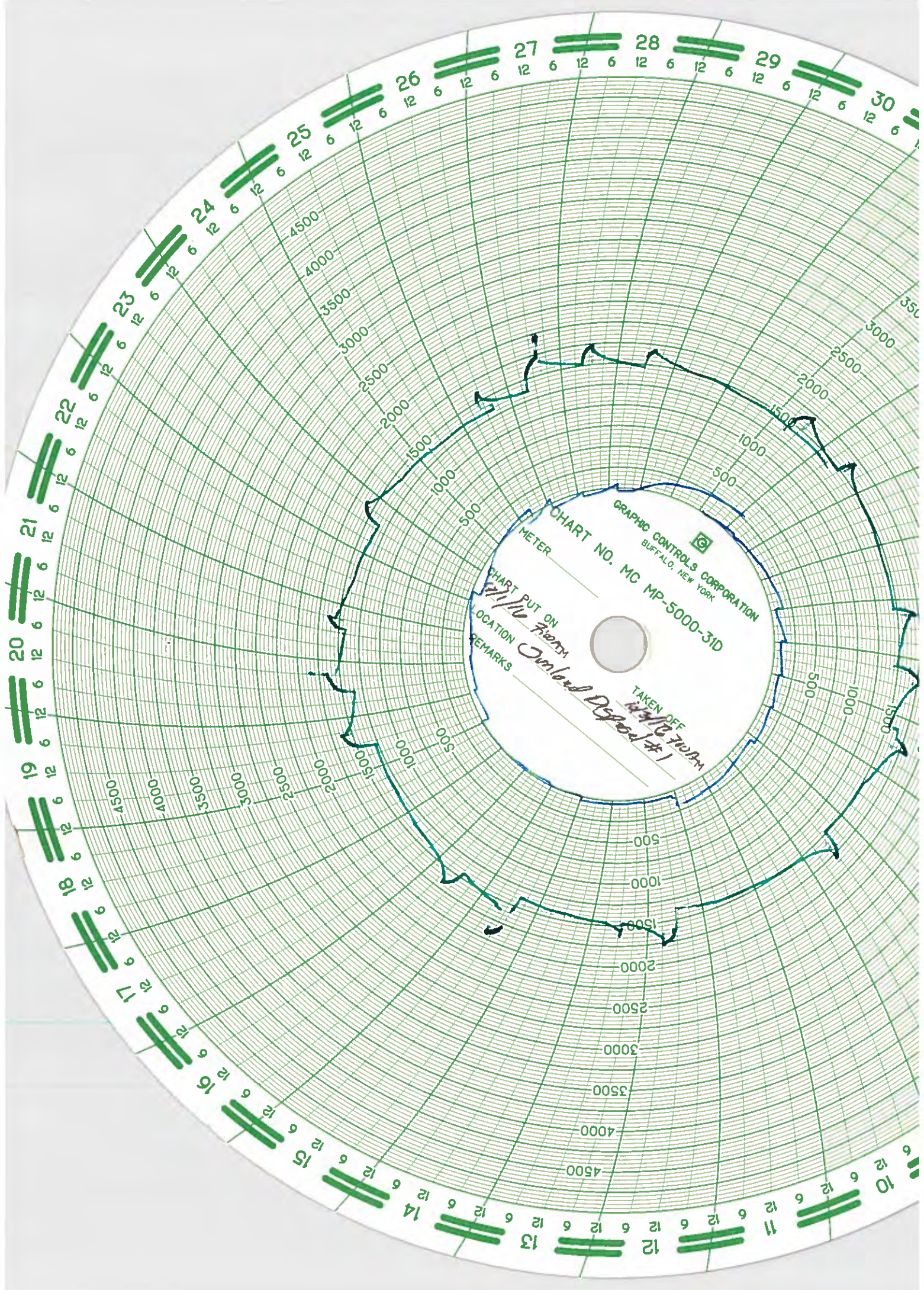
CHART NO. MC MP-5000-31D

METER

CHART PUT ON
8/1/16 7:00AM

TAKEN OFF
8/1/16 7:00AM

REMARKS
Sewer Disposal #1

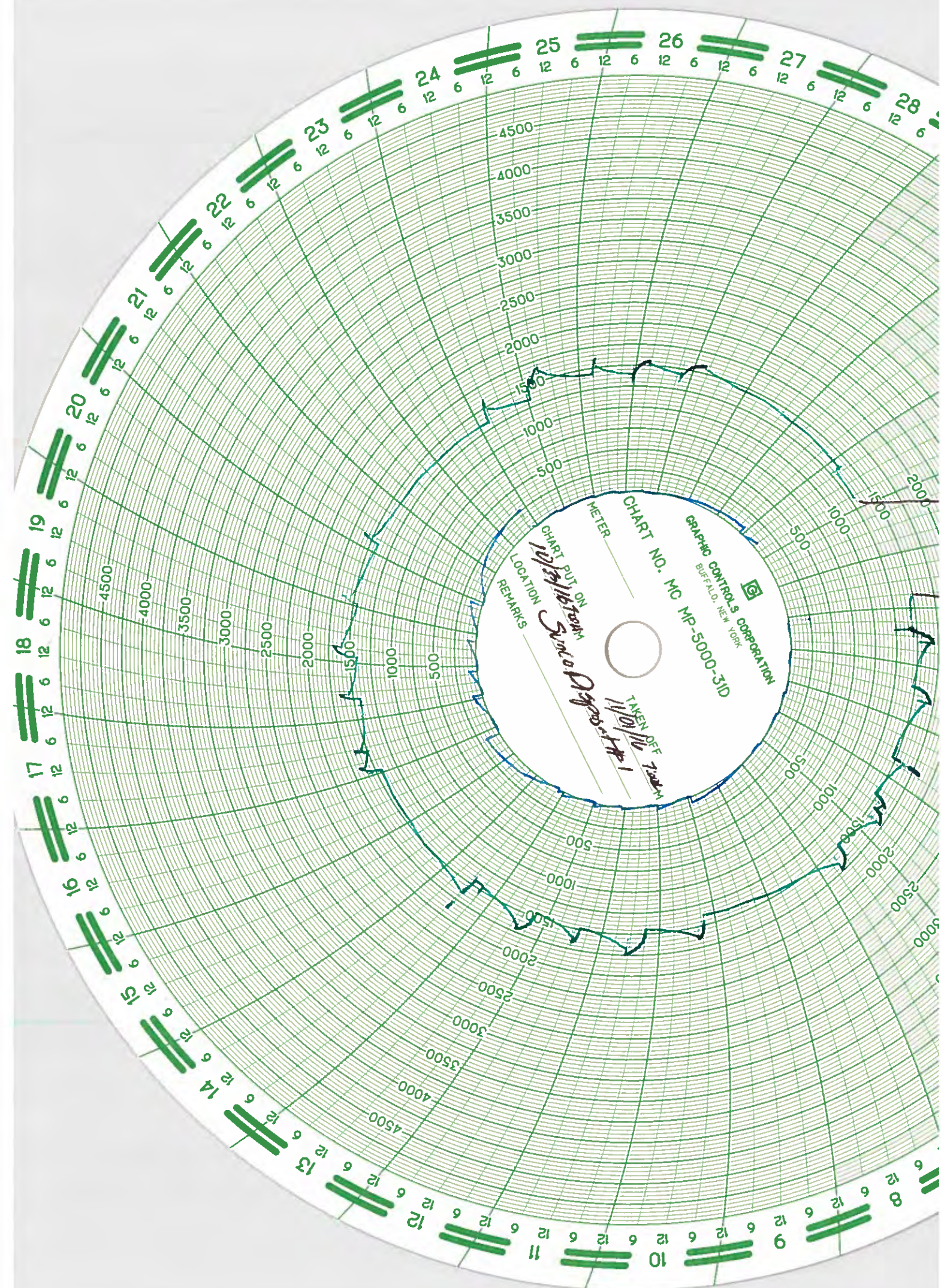


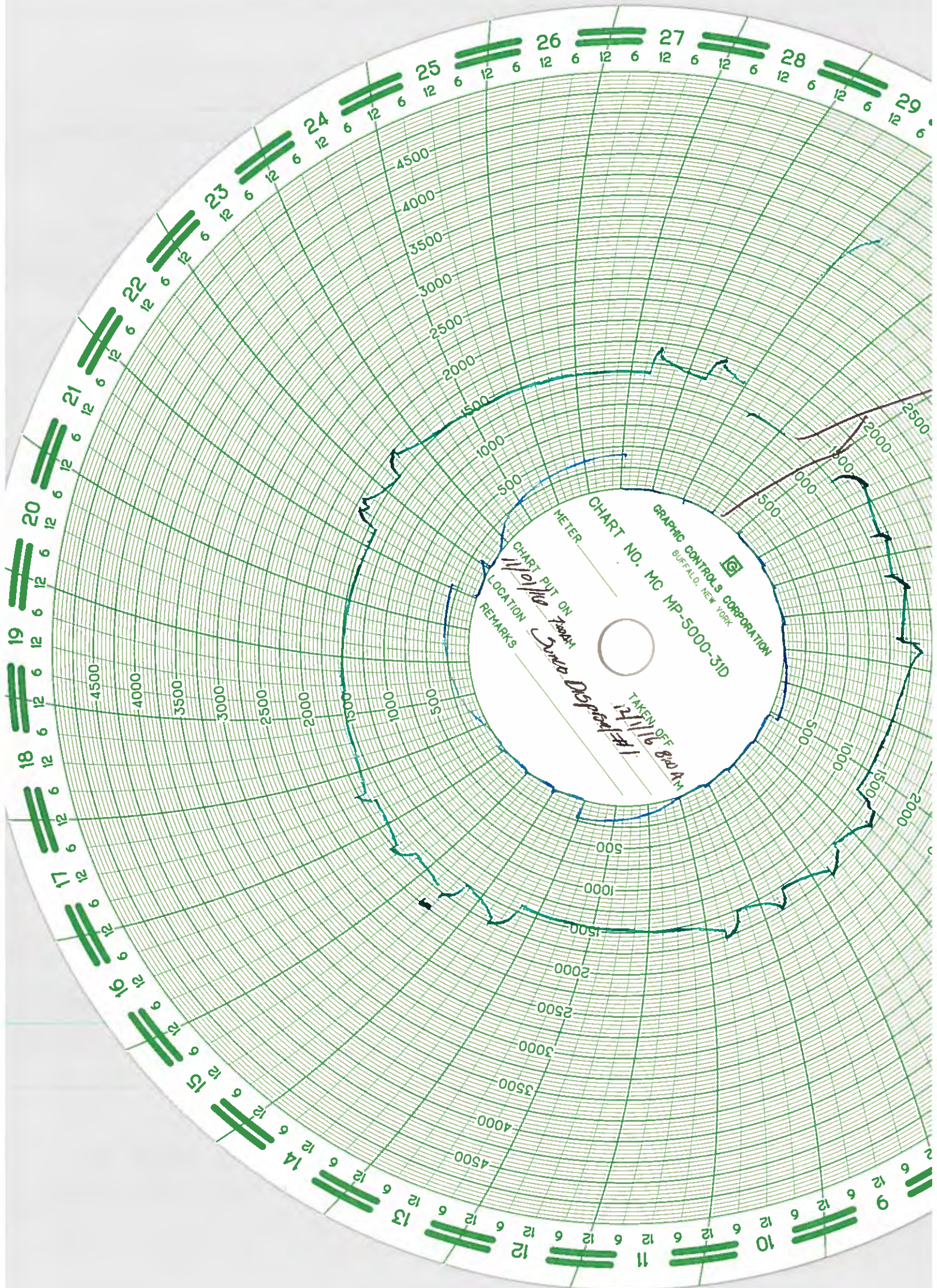
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

CHART NO. MC MP-5000-31D

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LOCATION *Amherst*
REMARKS *Amherst Depot #1*

TAKEN OFF *11/16/70*

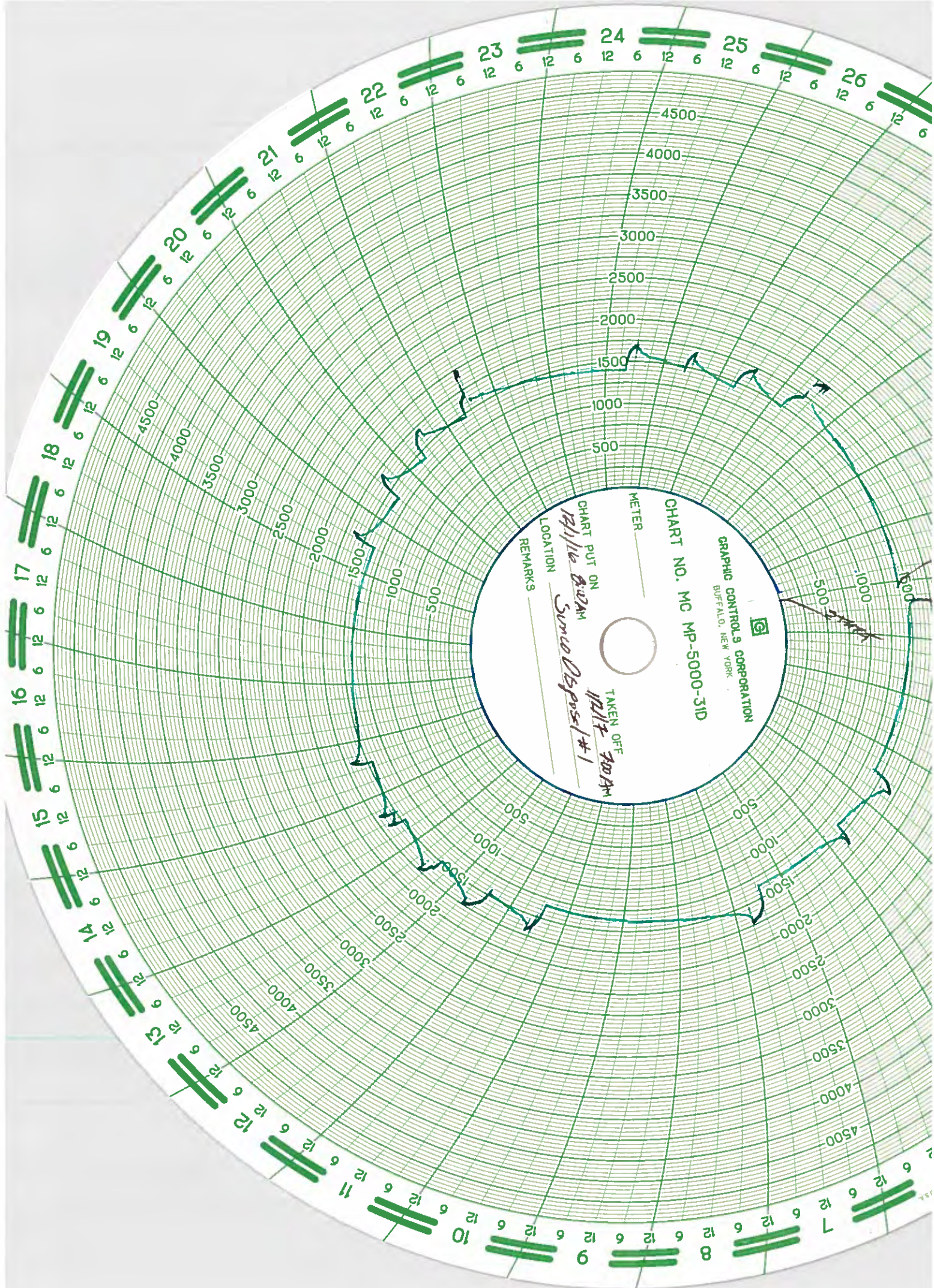




GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. MC MP-5000-31D

CHART PUT ON
LOCATION
REMARKS

TAKEN OFF
12/1/16 8:00 AM



Appendix E

2016 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 1-MILE AOR

Sec	TWN	RNG	UL	
1	29N	12W	DELM	
2	29N	12W	ALL	
3	29N	12W	ABCFGHIJKOP	
10	29N	12W	AB	
11	29N	12W	ABCDEF	
34	30N	12W	AGHIJKNOP	
35	30N	12W	DEFGHIJKLMNOP	
36	30N	12W	LM	

**All tracts within the AOR were reviewed for activity that
had ensued since 2015 Annual Report.**

													Surface Casing			INT Casing			Production Casing						
	API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC	Perfs	Packer	PLUGGED
x	30-045-08851	ALLEN A	#001	BP America	Gas	Private	Active	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		
x	30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
x	30-045-32346	CORNELL	#002R	Energen Resources	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
x	30-045-32241	BECK	#001R	Burlington	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
x	30-045-33811	BECK	#001S	Burlington	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
x	30-045-31580	CORNELL COM	#500	Burlington	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
x	30-045-08714	CORNELL SRC	#007	Burlington	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
x	30-045-08704	MCGRATH B	#001	Burlington	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
	30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
x	30-045-08839	YOUNG	#001	Burlington	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
x	30-045-33580	MCGRATH	#003S	Burlington	Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf				4.5	2112	289 surf	1692-1904		
x	30-045-08712	MCGRATH A	#001	Burlington	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
x	30-045-32931	WALKER	#100S	Burlington	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		NOI to PA 5/2014
x	30-045-23889	BECK A	#001E	Burlington	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		
x	30-045-30381	CORNELL	#100	Burlington	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1744-1800		
x	30-045-08615	CORNELL	#006	Thompson Engr & Prod	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
x	30-045-31581	CORNELL	#101	Burlington	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
x	30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
x	30-045-26141	DUFF GAS COM	#001E	Burlington	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04'RC to FC 1492-1870		TA'd 3/5/14
x	30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
x	30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
x	30-045-11770	HUDSON J	#003	Burlington	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01' RC to FC 1784-1994		
	30-045-28177	FC STATE COM	#024	Burlington	Gas	State	Plugged	36	30N	12W	M	10/9/1990	6608	8.625	316	250 surf				4.5	6609	6000 surf	1492-1870		3/26/2013
	30-045-08945	MCGRATH C	#001	Burlington	Gas	Federal	Plugged	34	30n	12W	p	2/7/1963	6637	8.625	323	225 surf				4.5	6637	925 surf	6367-6576		4/29/2009

30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136	13 & 10.75	550 & 864	2 sx mud 4 sx mud	8.625	1526	5 sx mud	5.50 & 3.50	2020 2136	12 sx mud 140 surf	2020-2136 2012-2078		1998
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125											2/23/1984	
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged, Not Released	2	29N	12W	J	3/23/2001	2235	8.625	53	12 surf				2.875	2228	425 surf	2010-2157		6/25/2010
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125											3/16/1948	
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996	8.625	97	75 surf				5.5	1950	100 surf	1711-1936		9/15/2005
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050	16	21	20 surf	5.5	1930		3.5	2050	175 surf	1938-1974		10/12/2009
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940											11/10/1964	
30-045-23758	Pre-Ongard		Southland	Gas	Federal	Plugged	10	29N	12W	A	12/19/1980	1870											2/10/1984	
30-045-08950	HUDSON	2	Burlington	Gas	Federal	Plugged	34	30N	12W	P	7/17/1946	2137	15.5	38	20 surf	10 & 8.625	1217 1618	99 surf	5.5	1961	40 surf	1728-1938 1962-2008	2128	9/26/2008
30-045-08955	Pre-Ongard		Aztec O&G	Gas	Private	Plugged	34	30N	12W	N	11/1/1944	1965											10/29/1977	
30-045-20140	Pre-Ongard		Southland	Gas	Federal	Plugged	35	30N	12W	L	9/7/1967	DH											6/9/1982	
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08709	MCGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040	13.375	675	2 surf	8.625 INT 1 5.5 INT 2	1460 1928	4 surf 58 surf	3.5	2011	110 surf	1872-1912 1922-1937	1871-1876	3/1/2013