UICI - 5

WASTE ANALYSES INFO

2019

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 10, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Manzanares OrderNo.: 1811D91

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/29/2018 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1811D91**
Date Reported: **12/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: Manzanares
Project: Manzanares
Collection Date: 11/28/2018 9:45:00 AM
Lab ID: 1811D91-001 **Matrix:** AQUEOUS **Received Date:** 11/29/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: **pmf**
Mercury	ND	0.020		mg/L	1	12/4/2018 1:18:53 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **ELS**
Arsenic	ND	5.0		mg/L	1	12/4/2018 9:09:30 AM
Barium	ND	100		mg/L	1	12/4/2018 9:09:30 AM
Cadmium	ND	1.0		mg/L	1	12/4/2018 9:09:30 AM
Chromium	ND	5.0		mg/L	1	12/4/2018 9:09:30 AM
Lead	ND	5.0		mg/L	1	12/4/2018 12:18:39 PM
Selenium	ND	1.0		mg/L	1	12/4/2018 9:09:30 AM
Silver	ND	5.0		mg/L	1	12/4/2018 9:09:30 AM
EPA METHOD 8270C: PAHS						Analyst: **DAM**
Naphthalene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
1-Methylnaphthalene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
2-Methylnaphthalene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Acenaphthylene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Acenaphthene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Fluorene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Phenanthrene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Anthracene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Fluoranthene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Pyrene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Benz(a)anthracene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Chrysene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Benzo(b)fluoranthene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Benzo(k)fluoranthene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Benzo(a)pyrene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	10	12/6/2018 12:28:04 PM
Surr: N-hexadecane	0	35.2-113	SD	%Rec	10	12/6/2018 12:28:04 PM
Surr: Benzo(e)pyrene	0	48.3-123	SD	%Rec	10	12/6/2018 12:28:04 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.50		mg/L	200	11/29/2018 4:07:00 PM
Toluene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Ethylbenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	11/29/2018 4:07:00 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
PQL	Practical Quanitative Limit	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 **1811D91**
Date Reported: **12/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Manzanares
Lab ID: 1811D91-001 **Matrix:** AQUEOUS

Client Sample ID: Manzanares
Collection Date: 11/28/2018 9:45:00 AM
Received Date: 11/29/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Naphthalene	ND	0.40		mg/L	200	11/29/2018 4:07:00 PM
1-Methylnaphthalene	ND	0.80		mg/L	200	11/29/2018 4:07:00 PM
2-Methylnaphthalene	ND	0.80		mg/L	200	11/29/2018 4:07:00 PM
Acetone	ND	2.0		mg/L	200	11/29/2018 4:07:00 PM
Bromobenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Bromodichloromethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Bromoform	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Bromomethane	ND	0.60		mg/L	200	11/29/2018 4:07:00 PM
2-Butanone	ND	2.0		mg/L	200	11/29/2018 4:07:00 PM
Carbon disulfide	ND	2.0		mg/L	200	11/29/2018 4:07:00 PM
Carbon Tetrachloride	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Chlorobenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Chloroethane	ND	0.40		mg/L	200	11/29/2018 4:07:00 PM
Chloroform	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Chloromethane	ND	0.60		mg/L	200	11/29/2018 4:07:00 PM
2-Chlorotoluene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
4-Chlorotoluene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
cis-1,2-DCE	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	11/29/2018 4:07:00 PM
Dibromochloromethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Dibromomethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Dichlorodifluoromethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,1-Dichloroethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,1-Dichloroethene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2-Dichloropropane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,3-Dichloropropane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
2,2-Dichloropropane	ND	0.40		mg/L	200	11/29/2018 4:07:00 PM
1,1-Dichloropropene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Hexachlorobutadiene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
2-Hexanone	ND	2.0		mg/L	200	11/29/2018 4:07:00 PM
Isopropylbenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
4-Isopropyltoluene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	11/29/2018 4:07:00 PM
Methylene Chloride	ND	0.60		mg/L	200	11/29/2018 4:07:00 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
PQL	Practical Quanitative Limit	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 **1811D91**
Date Reported: **12/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Manzanares
Lab ID: 1811D91-001 **Matrix:** AQUEOUS

Client Sample ID: Manzanares
Collection Date: 11/28/2018 9:45:00 AM
Received Date: 11/29/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Butylbenzene	ND	0.60		mg/L	200	11/29/2018 4:07:00 PM
n-Propylbenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
sec-Butylbenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Styrene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
tert-Butylbenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	11/29/2018 4:07:00 PM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
trans-1,2-DCE	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Trichloroethene (TCE)	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Trichlorofluoromethane	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	11/29/2018 4:07:00 PM
Vinyl chloride	ND	0.20		mg/L	200	11/29/2018 4:07:00 PM
Xylenes, Total	ND	0.30		mg/L	200	11/29/2018 4:07:00 PM
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%Rec	200	11/29/2018 4:07:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	200	11/29/2018 4:07:00 PM
Surr: Dibromofluoromethane	94.3	70-130		%Rec	200	11/29/2018 4:07:00 PM
Surr: Toluene-d8	94.1	70-130		%Rec	200	11/29/2018 4:07:00 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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

1811D91-001D MANZANARES
Collected date/time: 11/28/18 09:45

SAMPLE RESULTS - 01
L1048596

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.00500	1	12/05/2018 09:33	WG1203906

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	6.55	T8	1	12/01/2018 13:46	WG1204036

Sample Narrative:
L1048596-01 WG1204036: 6.55 at 13.4C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	12/01/2018 13:33	WG1204157

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	12/01/2018 14:40	WG1204067

WG1203906

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L1048596-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3365305-1 12/05/18 08:59

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

L1048039-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1048039-04 12/05/18 09:13 • (DUP) R3365305-5 12/05/18 09:14

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Reactive Cyanide	U	0.000	1	0.000		20

L1048259-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1048259-01 12/05/18 09:29 • (DUP) R3365305-8 12/05/18 09:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Reactive Cyanide	NC	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3365305-2 12/05/18 09:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.107	107	85.0-115	

L1048039-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1048039-01 12/05/18 09:06 • (MS) R3365305-3 12/05/18 09:07 • (MSD) R3365305-4 12/05/18 09:08

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	U	0.0593	0.0979	59.3	97.9	1	75.0-125	J6	J3	49.1	20

L1048252-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1048252-01 12/05/18 09:25 • (MS) R3365305-6 12/05/18 09:26 • (MSD) R3365305-7 12/05/18 09:27

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	0.00729	0.0988	0.0977	91.5	90.4	1	75.0-125			1.12	20

WG1204036

Wet Chemistry by Method 4500H+ B-2011

QUALITY CONTROL SUMMARY

L1048596-01

ONE LAB. NATIONWIDE

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

(LCS) R3364437-1 12/01/18 13:46 • (LCSD) R3364437-2 12/01/18 13:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
Corrosivity by pH	10.0	10.0	10.1	100	101	99.0-101			0.398	1

Sample Narrative:

LCS: 10.04 at 19.7C

LCSD: 10.08 at 19.8C

ACCOUNT:	PROJECT:	SDG:	DATE/TIME:
Hall Environmental Analysis Laboratory		L1048596	12/06/18 15:56

WG1204157

Wet Chemistry by Method 9034-9030B

QUALITY CONTROL SUMMARY

L1048596-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3364436-1 12/01/18 13:30

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)

(LCS) R3364436-2 12/01/18 13:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.459	91.8	85.0-115	

WG1204067

Wet Chemistry by Method D93/101CA

QUALITY CONTROL SUMMARY

L1048596-01

ONE LAB. NATIONWIDE.

L1048568-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1048568-02 12/01/18 14:40 • (DUP) R3364666-2 12/01/18 14:40

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3364666-1 12/01/18 14:40

	Spike Amount	LCS Result	LCS Rec	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	84.3	103	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1811D91
10-Dec-18

Client: Souder, Miller and Associates
Project: Manzanares

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R55969	RunNo: 55969							
Prep Date:	Analysis Date: 11/29/2018	SeqNo: 1868405	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	19	1.0	20.00	0	93.8	70	130			
Chlorobenzene	20	1.0	20.00	0	97.6	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	9.1		10.00		90.8	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R55969	RunNo: 55969							
Prep Date:	Analysis Date: 11/29/2018	SeqNo: 1868406	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
PQL	Practical Quanitative Limit	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#: 1811D91

10-Dec-18

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R55969	RunNo: 55969							
Prep Date:	Analysis Date: 11/29/2018	SeqNo: 1868406	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
PQL	Practical Quanitative Limit	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#: 1811D91
10-Dec-18

Client: Souder, Miller and Associates
Project: Manzanares

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R55969	RunNo: 55969						
Prep Date:	Analysis Date: 11/29/2018	SeqNo: 1868406	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		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID 1811d91-001ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: Manzanares	Batch ID: R55969	RunNo: 55969						
Prep Date:	Analysis Date: 11/29/2018	SeqNo: 1868419	Units: mg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.3	0.20	4.000	0	107	60.5	137			
Toluene	3.9	0.20	4.000	0	97.5	70	130			
Chlorobenzene	3.9	0.20	4.000	0	96.5	70	130			
1,1-Dichloroethene	4.3	0.20	4.000	0	107	67.6	130			
Trichloroethene (TCE)	4.0	0.20	4.000	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	2.1		2.000		105	70	130			
Surr: 4-Bromofluorobenzene	2.1		2.000		105	70	130			
Surr: Dibromofluoromethane	1.9		2.000		96.2	70	130			
Surr: Toluene-d8	1.9		2.000		93.2	70	130			

Sample ID 1811d91-001amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES						
Client ID: Manzanares	Batch ID: R55969	RunNo: 55969						
Prep Date:	Analysis Date: 11/29/2018	SeqNo: 1868420	Units: mg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.0	0.20	4.000	0	100	60.5	137	6.28	20	
Toluene	3.7	0.20	4.000	0	93.2	70	130	4.46	20	
Chlorobenzene	3.7	0.20	4.000	0	91.8	70	130	4.97	20	
1,1-Dichloroethene	3.8	0.20	4.000	0	95.1	67.6	130	11.6	20	
Trichloroethene (TCE)	3.8	0.20	4.000	0	95.9	70	130	5.02	20	
Surr: 1,2-Dichloroethane-d4	2.1		2.000		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	2.2		2.000		108	70	130	0	0	
Surr: Dibromofluoromethane	1.9		2.000		95.2	70	130	0	0	
Surr: Toluene-d8	1.9		2.000		93.9	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
PQL	Practical Quanitative Limit	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#: 1811D91

10-Dec-18

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID	lcs-41899	SampType:	LCS		TestCode:	EPA Method 8270C: PAHs				
Client ID:	LCSW	Batch ID:	41899		RunNo:	56156				
Prep Date:	12/4/2018	Analysis Date:	12/6/2018		SeqNo:	1875938	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	12	0.50	20.00	0	58.1	29.6	105			
1-Methylnaphthalene	13	0.50	20.00	0	62.8	33.4	112			
2-Methylnaphthalene	12	0.50	20.00	0	59.2	28.6	108			
Acenaphthylene	13	0.50	20.00	0	66.9	35.7	116			
Acenaphthene	14	0.50	20.00	0	69.8	32.4	118			
Fluorene	13	0.50	20.00	0	66.9	35.6	118			
Phenanthrene	17	0.50	20.00	0	86.5	36.3	130			
Anthracene	18	0.50	20.00	0	91.3	34.8	135			
Fluoranthene	20	0.50	20.00	0	99.6	41	136			
Pyrene	19	0.50	20.00	0	96.3	44.8	136			
Benz(a)anthracene	20	0.50	20.00	0	100	41.1	136			
Chrysene	17	0.50	20.00	0	84.1	37.9	132			
Benzo(b)fluoranthene	19	0.50	20.00	0	93.5	39	144			
Benzo(k)fluoranthene	18	0.50	20.00	0	91.6	40	144			
Benzo(a)pyrene	19	0.50	20.00	0	94.1	36.8	137			
Dibenz(a,h)anthracene	17	0.50	20.00	0	86.3	31.5	141			
Benzo(g,h,i)perylene	20	0.50	20.00	0	99.7	32.9	138			
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	98.4	40.9	143			
Surr: N-hexadecane	71		87.60		81.1	35.2	113			
Surr: Benzo(e)pyrene	34		20.00		170	48.3	123			S

Sample ID	lcsd-41899	SampType:	LCSD		TestCode:	EPA Method 8270C: PAHs				
Client ID:	LCSS02	Batch ID:	41899		RunNo:	56156				
Prep Date:	12/4/2018	Analysis Date:	12/6/2018		SeqNo:	1875939	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	13	0.50	20.00	0	63.9	29.6	105	9.51	68.7	
1-Methylnaphthalene	13	0.50	20.00	0	66.8	33.4	112	6.17	66	
2-Methylnaphthalene	12	0.50	20.00	0	58.5	28.6	108	1.19	68.7	
Acenaphthylene	14	0.50	20.00	0	69.7	35.7	116	4.10	64.9	
Acenaphthene	15	0.50	20.00	0	72.7	32.4	118	4.07	53.2	
Fluorene	15	0.50	20.00	0	75.8	35.6	118	12.5	62.4	
Phenanthrene	20	0.50	20.00	0	102	36.3	130	16.4	62.6	
Anthracene	21	0.50	20.00	0	104	34.8	135	12.5	62.4	
Fluoranthene	20	0.50	20.00	0	101	41	136	1.49	59.4	
Pyrene	19	0.50	20.00	0	96.5	44.8	136	0.207	55.4	
Benz(a)anthracene	20	0.50	20.00	0	101	41.1	136	0.695	56.6	
Chrysene	17	0.50	20.00	0	83.0	37.9	132	1.32	51.9	
Benzo(b)fluoranthene	20	0.50	20.00	0	97.8	39	144	4.50	59.1	

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
PQL	Practical Quanitative Limit	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#: 1811D91

10-Dec-18

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID	lcsd-41899	SampType:	LCSD	TestCode:	EPA Method 8270C: PAHs					
Client ID:	LCSS02	Batch ID:	41899	RunNo:	56156					
Prep Date:	12/4/2018	Analysis Date:	12/6/2018	SeqNo:	1875939	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	18	0.50	20.00	0	87.9	40	144	4.12	57	
Benzo(a)pyrene	19	0.50	20.00	0	94.4	36.8	137	0.318	60.2	
Dibenz(a,h)anthracene	17	0.50	20.00	0	84.0	31.5	141	2.70	64.7	
Benzo(g,h,i)perylene	20	0.50	20.00	0	101	32.9	138	1.39	61.5	
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	97.9	40.9	143	0.509	61.1	
Surr: N-hexadecane	82		87.60		94.0	35.2	113	0	0	
Surr: Benzo(e)pyrene	31		20.00		157	48.3	123	0	0	S

Sample ID	mb-41899	SampType:	MBLK	TestCode:	EPA Method 8270C: PAHs					
Client ID:	PBW	Batch ID:	41899	RunNo:	56156					
Prep Date:	12/4/2018	Analysis Date:	12/6/2018	SeqNo:	1875940	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	65		87.60		74.6	35.2	113			
Surr: Benzo(e)pyrene	20		20.00		101	48.3	123			

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
PQL	Practical Quanitative Limit	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#: 1811D91
10-Dec-18

Client: Souder, Miller and Associates
Project: Manzanares

Sample ID	MB-41861	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	41861	RunNo:	56066				
Prep Date:	12/3/2018	Analysis Date:	12/4/2018	SeqNo:	1872280	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-41861	SampType:	LCS	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	41861	RunNo:	56066				
Prep Date:	12/3/2018	Analysis Date:	12/4/2018	SeqNo:	1872287	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0042	0.00020	0.005000	0	83.3	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
PQL	Practical Quanitative Limit	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#: 1811D91

10-Dec-18

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID	MB-41840	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	41840	RunNo:	56059					
Prep Date:	12/2/2018	Analysis Date:	12/4/2018	SeqNo:	1872022	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								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-41840	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	41840	RunNo:	56059					
Prep Date:	12/2/2018	Analysis Date:	12/4/2018	SeqNo:	1872023	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	99.4	80	120			
Cadmium	0.50	0.0020	0.5000	0	100	80	120			
Chromium	0.50	0.0060	0.5000	0	101	80	120			
Selenium	0.51	0.050	0.5000	0	101	80	120			
Silver	0.099	0.0050	0.1000	0	99.4	80	120			

Sample ID	1811D91-001CMS	SampType:	MS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Manzanares	Batch ID:	41840	RunNo:	56059					
Prep Date:	12/2/2018	Analysis Date:	12/4/2018	SeqNo:	1872042	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	101	75	125			
Barium	0.53	0.020	0.5000	0.04512	96.3	75	125			
Cadmium	0.48	0.0020	0.5000	0	96.5	75	125			
Chromium	0.47	0.0060	0.5000	0	94.7	75	125			
Selenium	0.49	0.050	0.5000	0	97.1	75	125			
Silver	0.096	0.0050	0.1000	0	95.7	75	125			

Sample ID	1811D91-001CMSD	SampType:	MSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Manzanares	Batch ID:	41840	RunNo:	56059					
Prep Date:	12/2/2018	Analysis Date:	12/4/2018	SeqNo:	1872043	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	97.4	75	125	4.06	20	
Barium	0.54	0.020	0.5000	0.04512	98.2	75	125	1.71	20	
Cadmium	0.49	0.0020	0.5000	0	98.5	75	125	2.04	20	
Chromium	0.48	0.0060	0.5000	0	95.7	75	125	1.04	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
PQL	Practical Quanitative Limit	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#: 1811D91
10-Dec-18

Client: Souder, Miller and Associates
Project: Manzanares

Sample ID	1811D91-001CMSD	SampType:	MSD			TestCode:	EPA 6010B: Total Recoverable Metals			
Client ID:	Manzanares	Batch ID:	41840			RunNo:	56059			
Prep Date:	12/2/2018	Analysis Date:	12/4/2018			SeqNo:	1872043	Units:	mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.52	0.050	0.5000	0	104	75	125	6.96	20	
Silver	0.098	0.0050	0.1000	0	97.5	75	125	1.89	20	

Sample ID	MB-41840	SampType:	MBLK			TestCode:	EPA 6010B: Total Recoverable Metals			
Client ID:	PBW	Batch ID:	41840			RunNo:	56059			
Prep Date:	12/2/2018	Analysis Date:	12/4/2018			SeqNo:	1872094	Units:	mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Sample ID	LCS-41840	SampType:	LCS			TestCode:	EPA 6010B: Total Recoverable Metals			
Client ID:	LCSW	Batch ID:	41840			RunNo:	56059			
Prep Date:	12/2/2018	Analysis Date:	12/4/2018			SeqNo:	1872095	Units:	mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.49	0.0050	0.5000	0	97.4	80	120			

Sample ID	1811D91-001CMS	SampType:	MS			TestCode:	EPA 6010B: Total Recoverable Metals			
Client ID:	Manzanares	Batch ID:	41840			RunNo:	56059			
Prep Date:	12/2/2018	Analysis Date:	12/4/2018			SeqNo:	1872113	Units:	mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.48	0.0050	0.5000	0	95.7	75	125			

Sample ID	1811D91-001CMSD	SampType:	MSD			TestCode:	EPA 6010B: Total Recoverable Metals			
Client ID:	Manzanares	Batch ID:	41840			RunNo:	56059			
Prep Date:	12/2/2018	Analysis Date:	12/4/2018			SeqNo:	1872114	Units:	mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.49	0.0050	0.5000	0	98.1	75	125	2.47	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
PQL	Practical Quanitative Limit	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

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: 1811D91 RcptNo: 1

Received By: Anne Thorne 11/29/2018 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 11/29/2018 8:55:46 AM Anne Thorne

Reviewed By: IO 11/29/18

Labeled by: AT 11/29/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. 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? —
Checked by: AT 11/29/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			
2	2.4	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Client: SMA

Mailing Address: 401 W Broadway Farmington NM 87401

Phone #: 505 325 7535

email or Fax#: ashley maxwell

QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time: ☐ Standard ☐ Rush 5 day TAT No charge per Andy

Project Name: Manzanares

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: X Yes ☐ No

Sample Temperature: 2.3-CF-1.0=1.3 3.4-CF-1.0=2.4

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811D91	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,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	RCI				Air Bubbles (Y or N)
11/28/18	9:45	Aques	Manzanares	Various	Various	-001						X	X			X		X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/28/18	1641	[signature]	[signature]	11/28/18	1641
11/28/18	1814	[signature]	[signature]	11/29/18	0700

Remarks: 8260 Full List
Report TCLP compound @ TCLP limit
Invoice Enterprise CC Tom Long

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.

Landfill 2/26/20 EXP 26FEB22

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, -107.77771

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 yd^3 / 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, 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 Determine

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: _____ 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:
Rattlesnake Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL H Section 16, T32N, R9W; 36.987603, -107.77771

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 yd^3 / 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, 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 Determine

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: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 26, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX: (505) 327-1496

RE: Rattlesnake OrderNo.: 1902632

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/14/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1902632**
Date Reported: **2/26/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Rattlesnake
Lab ID: 1902632-001 **Matrix:** AQUEOUS

Client Sample ID: Rattlesnake Non Exempt
Collection Date: 2/13/2019 8:52:00 AM
Received Date: 2/14/2019 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **pmf**	
Mercury	ND	0.020		mg/L	1	2/21/2019 11:01:31 AM	43258
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **rde**	
Arsenic	ND	5.0		mg/L	1	2/21/2019 4:52:16 PM	43209
Barium	ND	100		mg/L	1	2/21/2019 4:52:16 PM	43209
Cadmium	ND	1.0		mg/L	1	2/21/2019 4:52:16 PM	43209
Chromium	ND	5.0		mg/L	1	2/21/2019 4:52:16 PM	43209
Lead	ND	5.0		mg/L	1	2/21/2019 4:52:16 PM	43209
Selenium	ND	1.0		mg/L	1	2/21/2019 4:52:16 PM	43209
Silver	ND	5.0		mg/L	1	2/21/2019 4:52:16 PM	43209
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
1-Methylnaphthalene	ND	100	D	µg/L	10	2/25/2019 1:37:43 PM	43179
2-Methylnaphthalene	ND	100	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Acenaphthylene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Acenaphthene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Fluorene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Phenanthrene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Anthracene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Fluoranthene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Pyrene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Benz(a)anthracene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Chrysene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Benzo(b)fluoranthene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Benzo(k)fluoranthene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Benzo(a)pyrene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Dibenz(a,h)anthracene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Benzo(g,h,i)perylene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Indeno(1,2,3-cd)pyrene	ND	50	D	µg/L	10	2/25/2019 1:37:43 PM	43179
Surr: N-hexadecane	0	20.4-126	SD	%Rec	10	2/25/2019 1:37:43 PM	43179
Surr: Benzo(e)pyrene	0	21.4-126	SD	%Rec	10	2/25/2019 1:37:43 PM	43179
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.50		mg/L	200	2/16/2019 12:44:00 AM	B57754
Toluene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Ethylbenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754

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
PQL	Practical Quanitative Limit	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 **1902632**
Date Reported: **2/26/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Rattlesnake
Lab ID: 1902632-001 **Matrix:** AQUEOUS

Client Sample ID: Rattlesnake Non Exempt
Collection Date: 2/13/2019 8:52:00 AM
Received Date: 2/14/2019 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Naphthalene	ND	0.40		mg/L	200	2/16/2019 12:44:00 AM	B57754
1-Methylnaphthalene	ND	0.80		mg/L	200	2/16/2019 12:44:00 AM	B57754
2-Methylnaphthalene	ND	0.80		mg/L	200	2/16/2019 12:44:00 AM	B57754
Acetone	ND	2.0		mg/L	200	2/16/2019 12:44:00 AM	B57754
Bromobenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Bromodichloromethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Bromoform	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Bromomethane	ND	0.60		mg/L	200	2/16/2019 12:44:00 AM	B57754
2-Butanone	ND	2.0		mg/L	200	2/16/2019 12:44:00 AM	B57754
Carbon disulfide	ND	2.0		mg/L	200	2/16/2019 12:44:00 AM	B57754
Carbon Tetrachloride	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Chlorobenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Chloroethane	ND	0.40		mg/L	200	2/16/2019 12:44:00 AM	B57754
Chloroform	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Chloromethane	ND	0.60		mg/L	200	2/16/2019 12:44:00 AM	B57754
2-Chlorotoluene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
4-Chlorotoluene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
cis-1,2-DCE	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	2/16/2019 12:44:00 AM	B57754
Dibromochloromethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Dibromomethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2-Dichlorobenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,3-Dichlorobenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,4-Dichlorobenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Dichlorodifluoromethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,1-Dichloroethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,1-Dichloroethene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2-Dichloropropane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,3-Dichloropropane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
2,2-Dichloropropane	ND	0.40		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,1-Dichloropropene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Hexachlorobutadiene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
2-Hexanone	ND	2.0		mg/L	200	2/16/2019 12:44:00 AM	B57754
Isopropylbenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
4-Isopropyltoluene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
4-Methyl-2-pentanone	ND	2.0		mg/L	200	2/16/2019 12:44:00 AM	B57754
Methylene Chloride	ND	0.60		mg/L	200	2/16/2019 12:44:00 AM	B57754

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
PQL	Practical Quanitative Limit	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 **1902632**
Date Reported: **2/26/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Rattlesnake
Lab ID: 1902632-001 **Matrix:** AQUEOUS

Client Sample ID: Rattlesnake Non Exempt
Collection Date: 2/13/2019 8:52:00 AM
Received Date: 2/14/2019 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
n-Butylbenzene	ND	0.60		mg/L	200	2/16/2019 12:44:00 AM	B57754
n-Propylbenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
sec-Butylbenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Styrene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
tert-Butylbenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	2/16/2019 12:44:00 AM	B57754
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
trans-1,2-DCE	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,1,1-Trichloroethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,1,2-Trichloroethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Trichloroethene (TCE)	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Trichlorofluoromethane	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
1,2,3-Trichloropropane	ND	0.40		mg/L	200	2/16/2019 12:44:00 AM	B57754
Vinyl chloride	ND	0.20		mg/L	200	2/16/2019 12:44:00 AM	B57754
Xylenes, Total	ND	0.30		mg/L	200	2/16/2019 12:44:00 AM	B57754
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	200	2/16/2019 12:44:00 AM	B57754
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	200	2/16/2019 12:44:00 AM	B57754
Surr: Dibromofluoromethane	104	70-130		%Rec	200	2/16/2019 12:44:00 AM	B57754
Surr: Toluene-d8	93.9	70-130		%Rec	200	2/16/2019 12:44:00 AM	B57754

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

1902632-001D RATTLESNAKE NON EXEMPT

Collected date/time: 02/13/19 08:52

SAMPLE RESULTS - 01

L1070772

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	0.00753		0.00500	1	02/22/2019 00:16	WG1239726

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	6.12	T8	1	02/16/2019 11:58	WG1238087

Sample Narrative:

L1070772-01 WG1238087: 6.12 at 12C

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	0.0640		0.0500	1	02/19/2019 11:48	WG1239965

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170		1	02/20/2019 14:00	WG1239348

Method Blank (MB)

(MB) R3386030-1 02/21/19 23:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Cyanide	U		0.00180	0.00500

Laboratory Control Sample (LCS)

(LCS) R3386030-2 02/21/19 23:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	0.100	0.0863	86.3	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R3384306-1 02/16/19 11:58

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:
LCS: 9.98 at 18.4C

WG1238965

Wet Chemistry by Method 9034-9030B

QUALITY CONTROL SUMMARY

L1070772-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3384956-1 02/19/19 11:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3384956-2 02/19/19 11:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Sulfide	0.500	0.516	103	85.0-115	

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

WG1239348

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1070772-01

ONE LAB. NATIONWIDE.

L1070764-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1070764-01 02/20/19 14:00 • (DUP) R3385441-2 02/20/19 14:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3385441-1 02/20/19 14:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	82.0	100	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R57754	RunNo: 57754						
Prep Date:	Analysis Date: 2/15/2019	SeqNo: 1933095	Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.3		10.00		92.9	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R57754	RunNo: 57754						
Prep Date:	Analysis Date: 2/15/2019	SeqNo: 1933096	Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.7	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID: 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: B57754	RunNo: 57754						
Prep Date:	Analysis Date: 2/15/2019	SeqNo: 1933134	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	19	1.0	20.00	0	96.3	70	130			
Chlorobenzene	19	1.0	20.00	0	95.8	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.4		10.00		93.6	70	130			

Sample ID: rb3	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B57754	RunNo: 57754						
Prep Date:	Analysis Date: 2/15/2019	SeqNo: 1933135	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								

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
PQL	Practical Quanitative Limit	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#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B57754**	RunNo: **57754**
Prep Date:	Analysis Date: **2/15/2019**	SeqNo: **1933135** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	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
PQL	Practical Quanitative Limit	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#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B57754**	RunNo: **57754**
Prep Date:	Analysis Date: **2/15/2019**	SeqNo: **1933135** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.4		10.00		94.2	70	130			

Sample ID: **1902632-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Rattlesnake Non Ex**	Batch ID: **B57754**	RunNo: **57754**
Prep Date:	Analysis Date: **2/16/2019**	SeqNo: **1933139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.5	0.20	4.000	0	112	70	130			
Toluene	3.8	0.20	4.000	0	94.2	70	130			
Chlorobenzene	3.7	0.20	4.000	0	93.4	70	130			
1,1-Dichloroethene	4.5	0.20	4.000	0	112	67.6	130			
Trichloroethene (TCE)	4.2	0.20	4.000	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	2.1		2.000		104	70	130			
Surr: 4-Bromofluorobenzene	2.0		2.000		100	70	130			
Surr: Dibromofluoromethane	2.1		2.000		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
PQL	Practical Quanitative Limit	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#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: 1902632-001ams	SampType: MS			TestCode: EPA Method 8260B: VOLATILES					
Client ID: Rattlesnake Non Ex	Batch ID: B57754			RunNo: 57754					
Prep Date:	Analysis Date: 2/16/2019			SeqNo: 1933139		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	1.9		2.000		93.3	70	130			

Sample ID: 1902632-001amsd	SampType: MSD			TestCode: EPA Method 8260B: VOLATILES					
Client ID: Rattlesnake Non Ex	Batch ID: B57754			RunNo: 57754					
Prep Date:	Analysis Date: 2/16/2019			SeqNo: 1933140		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.2	0.20	4.000	0	106	70	130	5.35	20	
Toluene	3.6	0.20	4.000	0	91.2	70	130	3.25	20	
Chlorobenzene	3.6	0.20	4.000	0	89.6	70	130	4.19	20	
1,1-Dichloroethene	4.3	0.20	4.000	0	107	67.6	130	4.42	20	
Trichloroethene (TCE)	4.0	0.20	4.000	0	101	70	130	3.51	20	
Surr: 1,2-Dichloroethane-d4	2.0		2.000		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	2.0		2.000		100	70	130	0	0	
Surr: Dibromofluoromethane	2.0		2.000		101	70	130	0	0	
Surr: Toluene-d8	1.9		2.000		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
PQL	Practical Quanitative Limit	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#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: **lcs-43179**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSW**	Batch ID: **43179**	RunNo: **57933**							
Prep Date: **2/15/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939943**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	74.0	29.6	105			
1-Methylnaphthalene	16	1.0	20.00	0	77.5	33.4	112			
2-Methylnaphthalene	15	1.0	20.00	0	74.6	28.6	108			
Acenaphthylene	16	0.50	20.00	0	78.7	35.7	116			
Acenaphthene	16	0.50	20.00	0	79.0	32.4	118			
Fluorene	16	0.50	20.00	0	81.1	35.6	118			
Phenanthrene	15	0.50	20.00	0	75.8	36.3	130			
Anthracene	15	0.50	20.00	0	76.6	34.8	135			
Fluoranthene	16	0.50	20.00	0	79.4	41	136			
Pyrene	17	0.50	20.00	0	84.3	44.8	136			
Benz(a)anthracene	17	0.50	20.00	0	85.1	41.1	136			
Chrysene	17	0.50	20.00	0	85.5	37.9	132			
Benzo(b)fluoranthene	17	0.50	20.00	0	82.7	39	144			
Benzo(k)fluoranthene	15	0.50	20.00	0	77.4	40	144			
Benzo(a)pyrene	15	0.50	20.00	0	76.5	36.8	137			
Dibenz(a,h)anthracene	17	0.50	20.00	0	85.3	31.5	141			
Benzo(g,h,i)perylene	17	0.50	20.00	0	85.3	32.9	138			
Indeno(1,2,3-cd)pyrene	17	0.50	20.00	0	83.3	40.9	143			
Surr: N-hexadecane	55		87.60		62.3	20.4	126			
Surr: Benzo(e)pyrene	13		20.00		62.8	21.4	126			

Sample ID: **lcs-43224**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSW**	Batch ID: **43224**	RunNo: **57933**							
Prep Date: **2/19/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939944**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: N-hexadecane	65		87.60		74.6	20.4	126			
Surr: Benzo(e)pyrene	17		20.00		86.5	21.4	126			

Sample ID: **lcsd-43179**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSS02**	Batch ID: **43179**	RunNo: **57933**							
Prep Date: **2/15/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939945**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	13	0.50	20.00	0	67.1	29.6	105	9.78	68.7	
1-Methylnaphthalene	13	1.0	20.00	0	65.2	33.4	112	17.2	66	
2-Methylnaphthalene	13	1.0	20.00	0	64.1	28.6	108	15.1	68.7	
Acenaphthylene	13	0.50	20.00	0	66.1	35.7	116	17.4	64.9	
Acenaphthene	13	0.50	20.00	0	64.5	32.4	118	20.2	53.2	
Fluorene	13	0.50	20.00	0	65.7	35.6	118	21.0	62.4	

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
- PQL Practical Quanitative Limit
- 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#: 1902632
26-Feb-19

Client: Souder, Miller and Associates
Project: Rattlesnake

Sample ID: **lcsd-43179**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSS02**	Batch ID: **43179**	RunNo: **57933**							
Prep Date: **2/15/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939945**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenanthrene	13	0.50	20.00	0	64.2	36.3	130	16.6	62.6	
Anthracene	12	0.50	20.00	0	62.5	34.8	135	20.3	62.4	
Fluoranthene	13	0.50	20.00	0	63.5	41	136	22.3	59.4	
Pyrene	13	0.50	20.00	0	67.2	44.8	136	22.6	55.4	
Benz(a)anthracene	13	0.50	20.00	0	66.7	41.1	136	24.2	56.6	
Chrysene	13	0.50	20.00	0	64.4	37.9	132	28.2	51.9	
Benzo(b)fluoranthene	13	0.50	20.00	0	66.1	39	144	22.3	59.1	
Benzo(k)fluoranthene	13	0.50	20.00	0	66.7	40	144	14.9	57	
Benzo(a)pyrene	13	0.50	20.00	0	63.9	36.8	137	17.9	60.2	
Dibenz(a,h)anthracene	13	0.50	20.00	0	66.1	31.5	141	25.4	64.7	
Benzo(g,h,i)perylene	13	0.50	20.00	0	66.0	32.9	138	25.5	61.5	
Indeno(1,2,3-cd)pyrene	13	0.50	20.00	0	64.8	40.9	143	25.0	61.1	
Surr: N-hexadecane	44		87.60		49.8	20.4	126	0	0	
Surr: Benzo(e)pyrene	11		20.00		54.2	21.4	126	0	0	

Sample ID: **lcsd-43224**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSS02**	Batch ID: **43224**	RunNo: **57933**							
Prep Date: **2/19/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939946**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: N-hexadecane	73		87.60		83.4	20.4	126	0	0	
Surr: Benzo(e)pyrene	18		20.00		91.9	21.4	126	0	0	

Sample ID: **mb-43179**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **PBW**	Batch ID: **43179**	RunNo: **57933**							
Prep Date: **2/15/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939947**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								

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
PQL	Practical Quanitative Limit	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#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: **mb-43179**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **PBW**	Batch ID: **43179**	RunNo: **57933**							
Prep Date: **2/15/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939947**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	55		87.60		62.4	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		68.4	21.4	126			

Sample ID: **mb-43224**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **PBW**	Batch ID: **43224**	RunNo: **57933**							
Prep Date: **2/19/2019**	Analysis Date: **2/25/2019**	SeqNo: **1939948**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: N-hexadecane	63		87.60		71.8	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		67.6	21.4	126			

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
PQL	Practical Quanitative Limit	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#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: **MB-43258**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**							
Client ID: **PBW**	Batch ID: **43258**	RunNo: **57857**							
Prep Date: **2/20/2019**	Analysis Date: **2/21/2019**	SeqNo: **1937038**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-43258**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**							
Client ID: **LCSW**	Batch ID: **43258**	RunNo: **57857**							
Prep Date: **2/20/2019**	Analysis Date: **2/21/2019**	SeqNo: **1937039**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0045	0.00020	0.005000	0	90.0	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
PQL	Practical Quanitative Limit	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#: 1902632

26-Feb-19

Client: Souder, Miller and Associates

Project: Rattlesnake

Sample ID: **MB-43209**	SampType: **MBLK**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW**	Batch ID: **43209**	RunNo: **57884**
Prep Date: **2/18/2019**	Analysis Date: **2/21/2019**	SeqNo: **1938053** 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-43209**	SampType: **LCS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW**	Batch ID: **43209**	RunNo: **57884**
Prep Date: **2/18/2019**	Analysis Date: **2/21/2019**	SeqNo: **1938054** 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	97.9	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.6	80	120			
Chromium	0.49	0.0060	0.5000	0	98.7	80	120			
Lead	0.50	0.0050	0.5000	0	99.8	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.	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
PQL	Practical Quanitative Limit	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

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: 1902632 RcptNo: 1

Received By: Erin Melendrez 2/14/2019 8:10:00 AM

Completed By: Erin Melendrez 2/14/2019 11:09:41 AM

Reviewed By: LB 2/14/19

LB. DAD 2/14/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ DAD 2/14/19
8. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 1:2 (<2 or >12 unless noted)
Adjusted? YES
Checked by: DAD 2/14/19

Special Handling (if applicable)

15. 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:

16. Additional remarks: Added approx. 1mL. HNO_3 to sample 001D for acceptable pH.
17. Cooler Information Held 24hrs. prior to Analysis.

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.7	Good	Yes			
2	2.4	Good	Yes			
3	1.5	Good	Yes			
4	3.1	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: ashley.maxwell

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☒ Rush 7 day TAT No charge per Andy

Project Name: Rattlesnake

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.7°C, 2.4°C, 1.5°C, 3.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1902632	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,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
2/13/19	8:52	Aqueous	Rattlesnake Non Exempt	Various	Various	-001						X	X			X		X RCT				

Date: 2/13/19 Time: 1605 Relinquished by: [signature]
Received by: [signature] Date 2/13/19 Time 1605

Date: 2/13/19 Time: 2016 Relinquished by: [signature]
Received by: [signature] Courier BJH 2/14/A2/14/A 0810

Remarks: 8260 Full List
TCLP compound at TCLP Limits
Invoice Enterprise CC Tom Long

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

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 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

Good till 3/19/2020

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 yd^3 / 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, 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, 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: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 19, 2019

Ashley Maxwell

Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Kutz OrderNo.: 1903284

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/7/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1903284**
Date Reported: **3/19/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Kutz
Lab ID: 1903284-001 **Matrix:** AQUEOUS

Client Sample ID: Kutz Non Exempt
Collection Date: 3/6/2019 9:48:00 AM
Received Date: 3/7/2019 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6020: TOTAL METALS						Analyst: **DBK**
Arsenic	ND	0.50		mg/L	5	3/13/2019 2:16:23 PM
Barium	ND	10		mg/L	5	3/13/2019 2:16:23 PM
Cadmium	ND	0.10		mg/L	5	3/12/2019 9:05:14 PM
Chromium	ND	0.50		mg/L	1	3/11/2019 11:27:14 PM
Lead	ND	0.50		mg/L	1	3/11/2019 11:27:14 PM
Selenium	ND	0.10		mg/L	5	3/13/2019 2:16:23 PM
Silver	ND	0.50		mg/L	1	3/18/2019 6:16:42 PM
EPA METHOD 7470: MERCURY						Analyst: **pmf**
Mercury	ND	0.020		mg/L	1	3/11/2019 7:07:05 PM
EPA METHOD 8270C: PAHS						Analyst: **DAM**
Naphthalene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
1-Methylnaphthalene	ND	50	D	µg/L	10	3/13/2019 6:20:51 PM
2-Methylnaphthalene	ND	50	D	µg/L	10	3/13/2019 6:20:51 PM
Acenaphthylene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Acenaphthene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Fluorene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Phenanthrene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Anthracene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Fluoranthene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Pyrene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Benz(a)anthracene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Chrysene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Benzo(b)fluoranthene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Benzo(k)fluoranthene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Benzo(a)pyrene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Dibenz(a,h)anthracene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Benzo(g,h,i)perylene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Indeno(1,2,3-cd)pyrene	ND	25	D	µg/L	10	3/13/2019 6:20:51 PM
Surr: N-hexadecane	0	20.4-126	SD	%Rec	10	3/13/2019 6:20:51 PM
Surr: Benzo(e)pyrene	0	21.4-126	SD	%Rec	10	3/13/2019 6:20:51 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.50		mg/L	200	3/12/2019 2:04:00 PM
Toluene	0.93	0.20		mg/L	200	3/12/2019 2:04:00 PM
Ethylbenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/12/2019 2:04:00 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
PQL	Practical Quanitative Limit	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 **1903284**
Date Reported: **3/19/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Kutz
Lab ID: 1903284-001 **Matrix:** AQUEOUS

Client Sample ID: Kutz Non Exempt
Collection Date: 3/6/2019 9:48:00 AM
Received Date: 3/7/2019 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Naphthalene	ND	0.40		mg/L	200	3/12/2019 2:04:00 PM
1-Methylnaphthalene	ND	0.80		mg/L	200	3/12/2019 2:04:00 PM
2-Methylnaphthalene	ND	0.80		mg/L	200	3/12/2019 2:04:00 PM
Acetone	ND	2.0		mg/L	200	3/12/2019 2:04:00 PM
Bromobenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Bromodichloromethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Bromoform	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Bromomethane	ND	0.60		mg/L	200	3/12/2019 2:04:00 PM
2-Butanone	ND	2.0		mg/L	200	3/12/2019 2:04:00 PM
Carbon disulfide	ND	2.0		mg/L	200	3/12/2019 2:04:00 PM
Carbon Tetrachloride	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Chlorobenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Chloroethane	ND	0.40		mg/L	200	3/12/2019 2:04:00 PM
Chloroform	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Chloromethane	ND	0.60		mg/L	200	3/12/2019 2:04:00 PM
2-Chlorotoluene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
4-Chlorotoluene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
cis-1,2-DCE	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/12/2019 2:04:00 PM
Dibromochloromethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Dibromomethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,1-Dichloroethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,1-Dichloroethene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2-Dichloropropane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,3-Dichloropropane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
2,2-Dichloropropane	ND	0.40		mg/L	200	3/12/2019 2:04:00 PM
1,1-Dichloropropene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Hexachlorobutadiene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
2-Hexanone	ND	2.0		mg/L	200	3/12/2019 2:04:00 PM
Isopropylbenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
4-Isopropyltoluene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/12/2019 2:04:00 PM
Methylene Chloride	ND	0.60		mg/L	200	3/12/2019 2:04:00 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
PQL	Practical Quanitative Limit	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 **1903284**
Date Reported: **3/19/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Kutz
Lab ID: 1903284-001 **Matrix:** AQUEOUS

Client Sample ID: Kutz Non Exempt
Collection Date: 3/6/2019 9:48:00 AM
Received Date: 3/7/2019 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Butylbenzene	ND	0.60		mg/L	200	3/12/2019 2:04:00 PM
n-Propylbenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
sec-Butylbenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Styrene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
tert-Butylbenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/12/2019 2:04:00 PM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
trans-1,2-DCE	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Trichlorofluoromethane	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/12/2019 2:04:00 PM
Vinyl chloride	ND	0.20		mg/L	200	3/12/2019 2:04:00 PM
Xylenes, Total	ND	0.30		mg/L	200	3/12/2019 2:04:00 PM
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%Rec	200	3/12/2019 2:04:00 PM
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	200	3/12/2019 2:04:00 PM
Surr: Dibromofluoromethane	93.9	70-130		%Rec	200	3/12/2019 2:04:00 PM
Surr: Toluene-d8	95.3	70-130		%Rec	200	3/12/2019 2:04:00 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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

1903284-001D KUTZ NON EXEMPT
Collected date/time: 03/06/19 09:48

SAMPLE RESULTS - 01
L1077049

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.00500	1	03/13/2019 15:13	WG1248453

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	6.33	T6	1	03/10/2019 09:00	WG1247550

Sample Narrative:
L1077049-01 WG1247550: 6.33 at 19.1C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	03/09/2019 11:40	WG1247121

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	03/14/2019 14:30	WG1250025

WG1248453

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L1077049-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3391267-1 03/13/19 12:59

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00160	0.00500

Laboratory Control Sample (LCS)

(LCS) R3391267-2 03/13/19 13:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.101	101	85.0-115	

WG1247650

Wet Chemistry by Method 4500H+ B-2011

QUALITY CONTROL SUMMARY

L1077049-01

ONE LAB. NATIONWIDE.

Laboratory Control Sample (LCS)

(LCS) R3390229-1 03/10/19 09:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	9.96	99.6	99.0-101	

Sample Narrative:

LCS: 9.96 at 19.1C

WG1247121

Wet Chemistry by Method 9034-9030B

QUALITY CONTROL SUMMARY

L1077049-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3390115-1 03/09/19 11:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Sulfide	U		0.00650	0.0500

L1076340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076340-01 03/09/19 11:35 • (DUP) R3390115-3 03/09/19 11:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Sulfide	ND	0.000	1	0.000		20

L1077167-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1077167-01 03/09/19 11:42 • (DUP) R3390115-6 03/09/19 11:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3390115-2 03/09/19 11:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.438	87.6	85.0-115	

WG1250025

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1077049-01

ONE LAB. NATIONWIDE

L1075108-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1075108-14 03/14/19 14:30 • (DUP) R3391647-2 03/14/19 14:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		°C

L1077890-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1077890-01 03/14/19 14:30 • (DUP) R3391647-3 03/14/19 14:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	131	134	1	2.26		10

Laboratory Control Sample (LCS)

(LCS) R3391647-1 03/14/19 14:30

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	85.0	104	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903284
19-Mar-19

Client: Souder, Miller and Associates
Project: Kutz

Sample ID: MB-43593	SampType: MBLK	TestCode: EPA Method 6020: Total Metals
Client ID: PBW	Batch ID: 43593	RunNo: 58277
Prep Date: 3/8/2019	Analysis Date: 3/11/2019	SeqNo: 1954831 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Chromium	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								

Sample ID: MSLLLCS-43593	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals
Client ID: BatchQC	Batch ID: 43593	RunNo: 58277
Prep Date: 3/8/2019	Analysis Date: 3/11/2019	SeqNo: 1954832 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	85.7	70	130			
Chromium	0.0011	0.0010	0.001000	0	111	70	130			
Lead	0.0011	0.0010	0.001000	0	113	70	130			
Selenium	ND	0.0010	0.001000	0	86.4	70	130			

Sample ID: MSLCS-43593	SampType: LCS	TestCode: EPA Method 6020: Total Metals
Client ID: LCSW	Batch ID: 43593	RunNo: 58277
Prep Date: 3/8/2019	Analysis Date: 3/11/2019	SeqNo: 1954833 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.047	0.0010	0.05000	0	94.3	80	120			
Chromium	0.053	0.0010	0.05000	0	106	80	120			
Lead	0.052	0.0010	0.05000	0	104	80	120			
Selenium	0.047	0.0010	0.05000	0	94.6	80	120			

Sample ID: 1903284-001CMSLL	SampType: MS	TestCode: EPA Method 6020: Total Metals
Client ID: Kutz Non Exempt	Batch ID: 43593	RunNo: 58277
Prep Date: 3/8/2019	Analysis Date: 3/11/2019	SeqNo: 1954838 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.054	0.0010	0.05000	0.002896	103	75	125			
Lead	0.050	0.0010	0.05000	0.003128	93.7	75	125			

Sample ID: 1903284-001CMSDL	SampType: MSD	TestCode: EPA Method 6020: Total Metals
Client ID: Kutz Non Exempt	Batch ID: 43593	RunNo: 58277
Prep Date: 3/8/2019	Analysis Date: 3/11/2019	SeqNo: 1954839 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.054	0.0010	0.05000	0.002896	102	75	125	0.844	20	
Lead	0.050	0.0010	0.05000	0.003128	93.5	75	125	0.204	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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: MB-43593	SampType: MBLK	TestCode: EPA Method 6020: Total Metals
Client ID: PBW	Batch ID: 43593	RunNo: 58320
Prep Date: 3/8/2019	Analysis Date: 3/12/2019	SeqNo: 1956214 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0010								

Sample ID: MSLLLCS-43593	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals
Client ID: BatchQC	Batch ID: 43593	RunNo: 58320
Prep Date: 3/8/2019	Analysis Date: 3/12/2019	SeqNo: 1956215 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0010	0.001000	0	99.7	70	130			

Sample ID: MSLCS-43593	SampType: LCS	TestCode: EPA Method 6020: Total Metals
Client ID: LCSW	Batch ID: 43593	RunNo: 58320
Prep Date: 3/8/2019	Analysis Date: 3/12/2019	SeqNo: 1956216 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.052	0.0010	0.05000	0	104	80	120			

Sample ID: 1903284-001CMSLL	SampType: MS	TestCode: EPA Method 6020: Total Metals
Client ID: Kutz Non Exempt	Batch ID: 43593	RunNo: 58320
Prep Date: 3/8/2019	Analysis Date: 3/12/2019	SeqNo: 1956218 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.057	0.0050	0.05000	0.004767	105	75	125			

Sample ID: 1903284-001CMSDL	SampType: MSD	TestCode: EPA Method 6020: Total Metals
Client ID: Kutz Non Exempt	Batch ID: 43593	RunNo: 58320
Prep Date: 3/8/2019	Analysis Date: 3/12/2019	SeqNo: 1956219 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.057	0.0050	0.05000	0.004767	104	75	125	0.821	20	

Sample ID: MB-43593	SampType: MBLK	TestCode: EPA Method 6020: Total Metals
Client ID: PBW	Batch ID: 43593	RunNo: 58341
Prep Date: 3/8/2019	Analysis Date: 3/13/2019	SeqNo: 1956953 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0010								

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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: MSLLLCS-43593	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals							
Client ID: BatchQC	Batch ID: 43593	RunNo: 58341							
Prep Date: 3/8/2019	Analysis Date: 3/13/2019	SeqNo: 1956954	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0012	0.0010	0.001000	0	115	70	130			

Sample ID: MSLCS-43593	SampType: LCS	TestCode: EPA Method 6020: Total Metals							
Client ID: LCSW	Batch ID: 43593	RunNo: 58341							
Prep Date: 3/8/2019	Analysis Date: 3/13/2019	SeqNo: 1956955	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.049	0.0010	0.05000	0	98.2	80	120			

Sample ID: 1903284-001CMSLL	SampType: MS	TestCode: EPA Method 6020: Total Metals							
Client ID: Kutz Non Exempt	Batch ID: 43593	RunNo: 58341							
Prep Date: 3/8/2019	Analysis Date: 3/13/2019	SeqNo: 1956957	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.048	0.0050	0.05000	0	97.0	75	125			
Barium	0.074	0.0050	0.05000	0.02166	105	75	125			
Selenium	0.045	0.0050	0.05000	0	90.4	75	125			

Sample ID: 1903284-001CMSDL	SampType: MSD	TestCode: EPA Method 6020: Total Metals							
Client ID: Kutz Non Exempt	Batch ID: 43593	RunNo: 58341							
Prep Date: 3/8/2019	Analysis Date: 3/13/2019	SeqNo: 1956958	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.049	0.0050	0.05000	0	98.6	75	125	1.70	20	
Barium	0.072	0.0050	0.05000	0.02166	101	75	125	2.31	20	
Selenium	0.046	0.0050	0.05000	0	92.1	75	125	1.95	20	

Sample ID: MB-43704	SampType: MBLK	TestCode: EPA Method 6020: Total Metals							
Client ID: PBW	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961412	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0010								

Sample ID: MSLLLCS-43704	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals							
Client ID: BatchQC	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961413	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0011	0.0010	0.001000	0	106	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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: MSLCS-43704	SampType: LCS	TestCode: EPA Method 6020: Total Metals							
Client ID: LCSW	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961414	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.041	0.0010	0.05000	0	82.6	80	120			

Sample ID: MSLCSD-43704	SampType: LCSD	TestCode: EPA Method 6020: Total Metals							
Client ID: LCSS02	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961415	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.042	0.0010	0.05000	0	85.0	80	120	2.88	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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R58313	RunNo: 58313
Prep Date:	Analysis Date: 3/12/2019	SeqNo: 1955790 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.2	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	85.9	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.7	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.2	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R58313	RunNo: 58313
Prep Date:	Analysis Date: 3/12/2019	SeqNo: 1955793 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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R58313	RunNo: 58313
Prep Date:	Analysis Date: 3/12/2019	SeqNo: 1955793 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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R58313	RunNo: 58313
Prep Date:	Analysis Date: 3/12/2019	SeqNo: 1955793 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		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.6	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Sample ID: 1903284-001ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES
Client ID: Kutz Non Exempt	Batch ID: R58313	RunNo: 58313
Prep Date:	Analysis Date: 3/12/2019	SeqNo: 1955823 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.1	0.20	4.000	0.4436	91.0	70	130			
Toluene	4.7	0.20	4.000	0.9340	95.3	70	130			
Chlorobenzene	3.8	0.20	4.000	0	95.6	70	130			
1,1-Dichloroethene	3.5	0.20	4.000	0	86.6	67.6	130			
Trichloroethene (TCE)	3.3	0.20	4.000	0	83.7	70	130			
Surr: 1,2-Dichloroethane-d4	2.0		2.000		99.0	70	130			
Surr: 4-Bromofluorobenzene	2.0		2.000		97.9	70	130			
Surr: Dibromofluoromethane	1.9		2.000		93.1	70	130			
Surr: Toluene-d8	1.9		2.000		95.2	70	130			

Sample ID: 1903284-001amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES
Client ID: Kutz Non Exempt	Batch ID: R58313	RunNo: 58313
Prep Date:	Analysis Date: 3/12/2019	SeqNo: 1955824 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.9	0.20	4.000	0.4436	86.8	70	130	4.14	20	
Toluene	4.5	0.20	4.000	0.9340	90.1	70	130	4.46	20	
Chlorobenzene	3.6	0.20	4.000	0	91.2	70	130	4.67	20	
1,1-Dichloroethene	3.2	0.20	4.000	0	80.2	67.6	130	7.71	20	
Trichloroethene (TCE)	3.2	0.20	4.000	0	79.0	70	130	5.85	20	
Surr: 1,2-Dichloroethane-d4	2.0		2.000		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	2.0		2.000		101	70	130	0	0	
Surr: Dibromofluoromethane	1.9		2.000		94.0	70	130	0	0	
Surr: Toluene-d8	1.9		2.000		96.2	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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: lcs-43607	SampType: LCS	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSW	Batch ID: 43607	RunNo: 58352							
Prep Date: 3/11/2019	Analysis Date: 3/13/2019	SeqNo: 1957394		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	9.3	0.50	20.00	0	46.6	29.6	105			
1-Methylnaphthalene	9.5	1.0	20.00	0	47.4	33.4	112			
2-Methylnaphthalene	9.3	1.0	20.00	0	46.4	28.6	108			
Acenaphthylene	9.8	0.50	20.00	0	49.2	35.7	116			
Acenaphthene	9.8	0.50	20.00	0	49.0	32.4	118			
Fluorene	11	0.50	20.00	0	53.2	35.6	118			
Phenanthrene	11	0.50	20.00	0	54.6	36.3	130			
Anthracene	11	0.50	20.00	0	54.1	34.8	135			
Fluoranthene	11	0.50	20.00	0	56.2	41	136			
Pyrene	12	0.50	20.00	0	61.9	44.8	136			
Benz(a)anthracene	12	0.50	20.00	0	60.4	41.1	136			
Chrysene	12	0.50	20.00	0	58.3	37.9	132			
Benzo(b)fluoranthene	11	0.50	20.00	0	57.4	39	144			
Benzo(k)fluoranthene	11	0.50	20.00	0	53.9	40	144			
Benzo(a)pyrene	11	0.50	20.00	0	53.7	36.8	137			
Dibenz(a,h)anthracene	12	0.50	20.00	0	59.5	31.5	141			
Benzo(g,h,i)perylene	12	0.50	20.00	0	60.8	32.9	138			
Indeno(1,2,3-cd)pyrene	12	0.50	20.00	0	60.9	40.9	143			
Surr: N-hexadecane	46		87.60		52.6	20.4	126			
Surr: Benzo(e)pyrene	11		20.00		55.1	21.4	126			

Sample ID: lcsd-43607	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 43607	RunNo: 58352							
Prep Date: 3/11/2019	Analysis Date: 3/13/2019	SeqNo: 1957395		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	13	0.50	20.00	0	65.6	29.6	105	33.9	68.7	
1-Methylnaphthalene	13	1.0	20.00	0	66.7	33.4	112	33.8	66	
2-Methylnaphthalene	13	1.0	20.00	0	63.1	28.6	108	30.5	68.7	
Acenaphthylene	14	0.50	20.00	0	69.1	35.7	116	33.6	64.9	
Acenaphthene	14	0.50	20.00	0	68.6	32.4	118	33.3	53.2	
Fluorene	14	0.50	20.00	0	71.8	35.6	118	29.8	62.4	
Phenanthrene	14	0.50	20.00	0	71.3	36.3	130	26.5	62.6	
Anthracene	15	0.50	20.00	0	73.1	34.8	135	29.9	62.4	
Fluoranthene	15	0.50	20.00	0	74.0	41	136	27.3	59.4	
Pyrene	16	0.50	20.00	0	80.4	44.8	136	26.0	55.4	
Benz(a)anthracene	15	0.50	20.00	0	76.9	41.1	136	24.0	56.6	
Chrysene	15	0.50	20.00	0	77.2	37.9	132	27.9	51.9	
Benzo(b)fluoranthene	16	0.50	20.00	0	80.4	39	144	33.4	59.1	

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
PQL	Practical Quanitative Limit	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#: 1903284

19-Mar-19

Client: Souder, Miller and Associates

Project: Kutz

Sample ID: lcsd-43607	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 43607	RunNo: 58352
Prep Date: 3/11/2019	Analysis Date: 3/13/2019	SeqNo: 1957395 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	16	0.50	20.00	0	77.9	40	144	36.4	57	
Benzo(a)pyrene	15	0.50	20.00	0	75.5	36.8	137	33.7	60.2	
Dibenz(a,h)anthracene	16	0.50	20.00	0	82.5	31.5	141	32.4	64.7	
Benzo(g,h,i)perylene	18	0.50	20.00	0	87.7	32.9	138	36.2	61.5	
Indeno(1,2,3-cd)pyrene	17	0.50	20.00	0	84.9	40.9	143	32.9	61.1	
Surr: N-hexadecane	60		87.60		68.4	20.4	126	0	0	
Surr: Benzo(e)pyrene	15		20.00		74.3	21.4	126	0	0	

Sample ID: mb-43607	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 43607	RunNo: 58352
Prep Date: 3/11/2019	Analysis Date: 3/13/2019	SeqNo: 1957396 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	62		87.60		71.2	20.4	126			
Surr: Benzo(e)pyrene	16		20.00		81.3	21.4	126			

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
PQL	Practical Quanitative Limit	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#: **1903284**

19-Mar-19

Client: Souder, Miller and Associates
Project: Kutz

Sample ID: **MB-43610**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**							
Client ID: **PBW**	Batch ID: **43610**	RunNo: **58296**							
Prep Date: **3/11/2019**	Analysis Date: **3/11/2019**	SeqNo: **1955319**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-43610**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**							
Client ID: **LCSW**	Batch ID: **43610**	RunNo: **58296**							
Prep Date: **3/11/2019**	Analysis Date: **3/11/2019**	SeqNo: **1955320**	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	95.9	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
PQL	Practical Quanitative Limit	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

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: 1903284 | RcptNo: 1

Received By: Anne Thorne 3/7/2019 7:10:00 AM

Completed By: Anne Thorne 3/7/2019 8:07:26 AM

Reviewed By: JO 3/7/19

Labeled by: YG ~~3/7/19~~ YG 3/7/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

# of preserved bottles checked for pH: 1,1 (<2 or >12 unless noted)

Adjusted? NO

Checked by: YG 3/7/19

Special Handling (if applicable)

15. 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: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: ashley maxwell

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 7 day TAT
☐ Standard ☑ Rush No Charge

Project Name: Kutz

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1903284	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	ECT
3/6/19	9:48	Aqueous	Kutz Non Exempt	Various	Various	-001					X	X		X			X

Analysis Request

Remarks: 8260 Full List TCLP Compound at TCLP Limits

Invoice Enterprise CC Tom Long

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/6/19	1540		Christy Walls		3/6/19	1540
3/6/19	1814	Christy Walls				

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

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

March 28, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Hart #1 SJ East OrderNo.: 1903677

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/14/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1903677**
Date Reported: **3/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Hart #1 SJ East
Lab ID: 1903677-001 **Matrix:** AQUEOUS

Client Sample ID: Hart #1 SJ East
Collection Date: 3/13/2019 2:24:00 PM
Received Date: 3/14/2019 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6020: TOTAL METALS						Analyst: **DBK**
Arsenic	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
Barium	ND	10		mg/L	10	3/25/2019 5:47:37 PM
Cadmium	ND	0.10		mg/L	5	3/18/2019 6:20:25 PM
Chromium	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
Lead	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
Selenium	ND	0.10		mg/L	5	3/18/2019 6:20:25 PM
Silver	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
EPA METHOD 7470: MERCURY						Analyst: **pmf**
Mercury	ND	0.020		mg/L	1	3/20/2019 11:49:38 AM
EPA METHOD 8270C: PAHS						Analyst: **DAM**
Naphthalene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
1-Methylnaphthalene	ND	50	D	µg/L	10	3/21/2019 4:28:36 PM
2-Methylnaphthalene	ND	50	D	µg/L	10	3/21/2019 4:28:36 PM
Acenaphthylene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Acenaphthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Fluorene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Phenanthrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Anthracene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Fluoranthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Pyrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benz(a)anthracene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Chrysene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(b)fluoranthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(k)fluoranthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(a)pyrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Dibenz(a,h)anthracene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(g,h,i)perylene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Indeno(1,2,3-cd)pyrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Surr: N-hexadecane	0	20.4-126	SD	%Rec	10	3/21/2019 4:28:36 PM
Surr: Benzo(e)pyrene	0	21.4-126	SD	%Rec	10	3/21/2019 4:28:36 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.50		mg/L	200	3/15/2019 12:56:00 AM
Toluene	1.2	0.20		mg/L	200	3/15/2019 12:56:00 AM
Ethylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM

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

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1903677**
Date Reported: **3/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Hart #1 SJ East
Lab ID: 1903677-001 **Matrix:** AQUEOUS

Client Sample ID: Hart #1 SJ East
Collection Date: 3/13/2019 2:24:00 PM
Received Date: 3/14/2019 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Naphthalene	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
1-Methylnaphthalene	ND	0.80		mg/L	200	3/15/2019 12:56:00 AM
2-Methylnaphthalene	ND	0.80		mg/L	200	3/15/2019 12:56:00 AM
Acetone	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Bromobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Bromodichloromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Bromoform	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Bromomethane	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM
2-Butanone	ND	20		mg/L	200	3/15/2019 12:56:00 AM
Carbon disulfide	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Carbon Tetrachloride	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Chlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Chloroethane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Chloroform	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Chloromethane	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM
2-Chlorotoluene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
4-Chlorotoluene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
cis-1,2-DCE	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Dibromochloromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Dibromomethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1-Dichloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1-Dichloroethene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dichloropropane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,3-Dichloropropane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
2,2-Dichloropropane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
1,1-Dichloropropene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Hexachlorobutadiene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
2-Hexanone	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Isopropylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
4-Isopropyltoluene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Methylene Chloride	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM

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

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1903677**
Date Reported: **3/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Hart #1 SJ East
Lab ID: 1903677-001 **Matrix:** AQUEOUS

Client Sample ID: Hart #1 SJ East
Collection Date: 3/13/2019 2:24:00 PM
Received Date: 3/14/2019 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Butylbenzene	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM
n-Propylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
sec-Butylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Styrene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
tert-Butylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
trans-1,2-DCE	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Trichlorofluoromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Vinyl chloride	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Xylenes, Total	0.81	0.30		mg/L	200	3/15/2019 12:56:00 AM
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%Rec	200	3/15/2019 12:56:00 AM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	200	3/15/2019 12:56:00 AM
Surr: Dibromofluoromethane	91.0	70-130		%Rec	200	3/15/2019 12:56:00 AM
Surr: Toluene-d8	93.1	70-130		%Rec	200	3/15/2019 12:56:00 AM

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

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: MB-43704	SampType: MBLK	TestCode: EPA Method 6020: Total Metals
Client ID: PBW	Batch ID: 43704	RunNo: 58442
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961412 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Cadmium	ND	0.0010								
Chromium	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Silver	ND	0.0010								

Sample ID: MSLLLCS-43704	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals
Client ID: BatchQC	Batch ID: 43704	RunNo: 58442
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961413 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	89.1	70	130			
Cadmium	ND	0.0010	0.001000	0	95.1	70	130			
Chromium	0.0012	0.0010	0.001000	0	119	70	130			
Lead	ND	0.0010	0.001000	0	97.5	70	130			
Selenium	ND	0.0010	0.001000	0	82.6	70	130			
Silver	0.0011	0.0010	0.001000	0	106	70	130			

Sample ID: MSLCS-43704	SampType: LCS	TestCode: EPA Method 6020: Total Metals
Client ID: LCSW	Batch ID: 43704	RunNo: 58442
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961414 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.046	0.0010	0.05000	0	92.1	80	120			
Cadmium	0.050	0.0010	0.05000	0	99.6	80	120			
Chromium	0.050	0.0010	0.05000	0	101	80	120			
Lead	0.048	0.0010	0.05000	0	95.9	80	120			
Selenium	0.046	0.0010	0.05000	0	92.2	80	120			
Silver	0.041	0.0010	0.05000	0	82.6	80	120			

Sample ID: MSLCSD-43704	SampType: LCSD	TestCode: EPA Method 6020: Total Metals
Client ID: LCSS02	Batch ID: 43704	RunNo: 58442
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961415 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.047	0.0010	0.05000	0	93.3	80	120	1.22	20	
Cadmium	0.051	0.0010	0.05000	0	102	80	120	2.67	20	
Chromium	0.051	0.0010	0.05000	0	103	80	120	1.74	20	
Lead	0.047	0.0010	0.05000	0	94.8	80	120	1.07	20	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **MSLCSD-43704** SampType: **LCSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **LCSS02** Batch ID: **43704** RunNo: **58442**

Prep Date: **3/15/2019** Analysis Date: **3/18/2019** SeqNo: **1961415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.046	0.0010	0.05000	0	92.5	80	120	0.308	20	
Silver	0.042	0.0010	0.05000	0	85.0	80	120	2.88	20	

Sample ID: **MB-43704** SampType: **MBLK** TestCode: **EPA Method 6020: Total Metals**

Client ID: **PBW** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0010								

Sample ID: **MSLLLCS-43704** SampType: **LCSLL** TestCode: **EPA Method 6020: Total Metals**

Client ID: **BatchQC** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0012	0.0010	0.001000	0	117	70	130			

Sample ID: **MSLCS-43704** SampType: **LCS** TestCode: **EPA Method 6020: Total Metals**

Client ID: **LCSW** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.050	0.0010	0.05000	0	100	80	120			

Sample ID: **MSLCSD-43704** SampType: **LCSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **LCSS02** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.051	0.0010	0.05000	0	102	80	120	1.51	20	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R58384**	RunNo: **58384**
Prep Date:	Analysis Date: **3/14/2019**	SeqNo: **1958378** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	77.5	70	130			
Toluene	17	1.0	20.00	0	87.1	70	130			
Chlorobenzene	18	1.0	20.00	0	89.8	70	130			
1,1-Dichloroethene	15	1.0	20.00	0	72.6	70	130			
Trichloroethene (TCE)	14	1.0	20.00	0	71.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58384**	RunNo: **58384**
Prep Date:	Analysis Date: **3/14/2019**	SeqNo: **1958383** 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:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58384**	RunNo: **58384**
Prep Date:	Analysis Date: **3/14/2019**	SeqNo: **1958383** 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:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677
28-Mar-19

Client: Souder, Miller and Associates
Project: Hart #1 SJ East

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R58384	RunNo: 58384							
Prep Date:	Analysis Date: 3/14/2019	SeqNo: 1958383	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	9.5		10.00		95.5	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.7	70	130			
Surr: Toluene-d8	9.5		10.00		94.7	70	130			

Sample ID: 1903677-001ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: Hart #1 SJ East	Batch ID: R58384	RunNo: 58401							
Prep Date:	Analysis Date: 3/15/2019	SeqNo: 1960600	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.4	0.20	4.000	0.2872	78.7	70	130			
Toluene	4.6	0.20	4.000	1.218	84.4	70	130			
Chlorobenzene	3.6	0.20	4.000	0.06360	88.9	70	130			
1,1-Dichloroethene	3.0	0.20	4.000	0	75.6	67.6	130			
Trichloroethene (TCE)	2.9	0.20	4.000	0	73.5	70	130			
Surr: 1,2-Dichloroethane-d4	1.8		2.000		90.4	70	130			
Surr: 4-Bromofluorobenzene	1.9		2.000		97.5	70	130			
Surr: Dibromofluoromethane	1.8		2.000		89.7	70	130			
Surr: Toluene-d8	1.9		2.000		94.4	70	130			

Sample ID: 1903677-001amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID: Hart #1 SJ East	Batch ID: R58384	RunNo: 58401							
Prep Date:	Analysis Date: 3/15/2019	SeqNo: 1960601	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.2	0.20	4.000	0.2872	97.7	70	130	19.9	20	
Toluene	5.2	0.20	4.000	1.218	100	70	130	12.9	20	
Chlorobenzene	4.5	0.20	4.000	0.06360	111	70	130	22.1	20	R
1,1-Dichloroethene	3.7	0.20	4.000	0	92.3	67.6	130	19.8	20	
Trichloroethene (TCE)	3.6	0.20	4.000	0	90.9	70	130	21.1	20	R
Surr: 1,2-Dichloroethane-d4	1.9		2.000		92.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.9		2.000		97.4	70	130	0	0	
Surr: Dibromofluoromethane	1.8		2.000		92.1	70	130	0	0	
Surr: Toluene-d8	1.9		2.000		96.0	70	130	0	0	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677
28-Mar-19

Client: Souder, Miller and Associates
Project: Hart #1 SJ East

Sample ID: lcs-43758	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 43758	RunNo: 58550
Prep Date: 3/19/2019	Analysis Date: 3/21/2019	SeqNo: 1965840 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	16	0.50	20.00	0	80.1	29.6	105			
1-Methylnaphthalene	16	1.0	20.00	0	78.1	33.4	112			
2-Methylnaphthalene	15	1.0	20.00	0	77.2	28.6	108			
Acenaphthylene	17	0.50	20.00	0	83.9	35.7	116			
Acenaphthene	16	0.50	20.00	0	80.4	32.4	118			
Fluorene	16	0.50	20.00	0	80.9	35.6	118			
Phenanthrene	17	0.50	20.00	0	84.7	36.3	130			
Anthracene	17	0.50	20.00	0	84.8	34.8	135			
Fluoranthene	17	0.50	20.00	0	85.5	41	136			
Pyrene	18	0.50	20.00	0	91.1	44.8	136			
Benz(a)anthracene	18	0.50	20.00	0	91.0	41.1	136			
Chrysene	18	0.50	20.00	0	90.6	37.9	132			
Benzo(b)fluoranthene	19	0.50	20.00	0	94.3	39	144			
Benzo(k)fluoranthene	18	0.50	20.00	0	90.1	40	144			
Benzo(a)pyrene	18	0.50	20.00	0	87.6	36.8	137			
Dibenz(a,h)anthracene	18	0.50	20.00	0	91.9	31.5	141			
Benzo(g,h,i)perylene	20	0.50	20.00	0	97.6	32.9	138			
Indeno(1,2,3-cd)pyrene	19	0.50	20.00	0	95.6	40.9	143			
Surr: N-hexadecane	72		87.60		81.9	20.4	126			
Surr: Benzo(e)pyrene	17		20.00		85.8	21.4	126			

Sample ID: lcsd-43758	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 43758	RunNo: 58550
Prep Date: 3/19/2019	Analysis Date: 3/21/2019	SeqNo: 1965841 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	16	0.50	20.00	0	80.3	29.6	105	0.249	68.7	
1-Methylnaphthalene	16	1.0	20.00	0	80.1	33.4	112	2.53	66	
2-Methylnaphthalene	16	1.0	20.00	0	79.2	28.6	108	2.56	68.7	
Acenaphthylene	18	0.50	20.00	0	87.8	35.7	116	4.54	64.9	
Acenaphthene	18	0.50	20.00	0	87.7	32.4	118	8.69	53.2	
Fluorene	18	0.50	20.00	0	88.8	35.6	118	9.31	62.4	
Phenanthrene	19	0.50	20.00	0	93.4	36.3	130	9.77	62.6	
Anthracene	18	0.50	20.00	0	92.4	34.8	135	8.58	62.4	
Fluoranthene	20	0.50	20.00	0	99.1	41	136	14.7	59.4	
Pyrene	20	0.50	20.00	0	100	44.8	136	9.51	55.4	
Benz(a)anthracene	19	0.50	20.00	0	94.3	41.1	136	3.56	56.6	
Chrysene	19	0.50	20.00	0	95.2	37.9	132	4.95	51.9	
Benzo(b)fluoranthene	19	0.50	20.00	0	95.2	39	144	0.950	59.1	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **lcsd-43758**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **43758**	RunNo: **58550**
Prep Date: **3/19/2019**	Analysis Date: **3/21/2019**	SeqNo: **1965841** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	18	0.50	20.00	0	90.8	40	144	0.774	57	
Benzo(a)pyrene	18	0.50	20.00	0	90.4	36.8	137	3.15	60.2	
Dibenz(a,h)anthracene	19	0.50	20.00	0	94.6	31.5	141	2.90	64.7	
Benzo(g,h,i)perylene	20	0.50	20.00	0	102	32.9	138	4.51	61.5	
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	98.7	40.9	143	3.19	61.1	
Surr: N-hexadecane	72		87.60		82.5	20.4	126	0	0	
Surr: Benzo(e)pyrene	18		20.00		90.3	21.4	126	0	0	

Sample ID: **mb-43758**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBW**	Batch ID: **43758**	RunNo: **58550**
Prep Date: **3/19/2019**	Analysis Date: **3/21/2019**	SeqNo: **1965842** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	67		87.60		76.1	20.4	126			
Surr: Benzo(e)pyrene	15		20.00		77.3	21.4	126			

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **MB-43775** SampType: **MBLK** TestCode: **EPA Method 7470: Mercury**

Client ID: **PBW** Batch ID: **43775** RunNo: **58504**

Prep Date: **3/19/2019** Analysis Date: **3/20/2019** SeqNo: **1963758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-43775** SampType: **LCS** TestCode: **EPA Method 7470: Mercury**

Client ID: **LCSW** Batch ID: **43775** RunNo: **58504**

Prep Date: **3/19/2019** Analysis Date: **3/20/2019** SeqNo: **1963759** 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	101	80	120			

Sample ID: **LCSD-43775** SampType: **LCSD** TestCode: **EPA Method 7470: Mercury**

Client ID: **LCSS02** Batch ID: **43775** RunNo: **58504**

Prep Date: **3/19/2019** Analysis Date: **3/20/2019** SeqNo: **1963760** 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	100	80	120	0.516	20	

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

1903677-001D HART #1 SI EAST
Collected date/time: 03/13/19 14:24

SAMPLE RESULTS - 01

L1079321

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	0.0447		0.00500	1	03/20/2019 15:48	WG1257497

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	5.54	T8	1	03/15/2019 12:35	WG1250855

Sample Narrative:
L1079321-01 WG1250855: 5.54 at 15.9C

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	0.0880		0.0500	1	03/15/2019 12:01	WG1251593

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170		1	03/21/2019 18:47	WG1252539

ACCOUNT:	PROJECT:	SDG:	DATE/TIME:
Hall Environmental Analysis Laboratory		L1079321	03/27/19 14:33

WG1252497

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L1079321-01

ONE LAB. NATIONWIDE.

Tc | Ss | Cn | Sr | Qc | Gl | Al | Sc

Method Blank (MB)

(MB) R3393470-1 03/20/19 15:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

Laboratory Control Sample (LCS)

(LCS) R3393470-2 03/20/19 15:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.0940	94.0	85.0-115	

WG1251593

Wet Chemistry by Method 9034-9030B

QUALITY CONTROL SUMMARY

L1079321-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3392984-1 03/19/19 12:00

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)

(LCS) R3392984-2 03/19/19 12:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.512	102	85.0-115	

WG1252539

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1079321-01

ONE LAB. NATIONWIDE

L1079359-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1079359-04 03/21/19 18:47 • (DUP) R3393973-2 03/21/19 18:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		°C

L1079930-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1079930-02 03/21/19 18:47 • (DUP) R3393973-3 03/21/19 18:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	101	104	1	2.93		10

Laboratory Control Sample (LCS)

(LCS) R3393973-1 03/21/19 18:47

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	82.8	101	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1903677 RcptNo: 1

Received By: Anne Thorne 3/14/2019 7:00:00 AM
Completed By: Victoria Zellar 3/14/2019 8:34:16 AM
Reviewed By: ENM 3/14/19

Victoria Zellar labeled by YG 3/14/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

# of preserved bottles checked for pH: 1, 2 (<2 or >12 unless noted)
Adjusted? NO
Checked by: YG 3/14/19

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: SJMA

Mailing Address: 401 W. Broadway Farmington NM

Phone #: 505 325-7535

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 7 day TAT No charge
☐ Standard ☒ Rush ASAP

Project Name: Hart #1 SJ East

Project #:

Project Manager: Ashley Maxwell

Sampler: RM

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1903677	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Pat
3-13-19	14:24	Air	Hart #1 SJ East	Various	Various	-001					X	X		X			X

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/13/19	1628				3/13/19	1628
3/13/19	1806				03/14/19	0700

Remarks: 8260 Full List
TCLP Compounds At TCLP Limits
Invoice Enterprise CC Tom Long

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

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

March 28, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Hart #1 SJ East OrderNo.: 1903677

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/14/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1903677**
Date Reported: **3/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Hart #1 SJ East
Lab ID: 1903677-001 **Matrix:** AQUEOUS

Client Sample ID: Hart #1 SJ East
Collection Date: 3/13/2019 2:24:00 PM
Received Date: 3/14/2019 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6020: TOTAL METALS						Analyst: **DBK**
Arsenic	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
Barium	ND	10		mg/L	10	3/25/2019 5:47:37 PM
Cadmium	ND	0.10		mg/L	5	3/18/2019 6:20:25 PM
Chromium	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
Lead	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
Selenium	ND	0.10		mg/L	5	3/18/2019 6:20:25 PM
Silver	ND	0.50		mg/L	5	3/18/2019 6:20:25 PM
EPA METHOD 7470: MERCURY						Analyst: **pmf**
Mercury	ND	0.020		mg/L	1	3/20/2019 11:49:38 AM
EPA METHOD 8270C: PAHS						Analyst: **DAM**
Naphthalene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
1-Methylnaphthalene	ND	50	D	µg/L	10	3/21/2019 4:28:36 PM
2-Methylnaphthalene	ND	50	D	µg/L	10	3/21/2019 4:28:36 PM
Acenaphthylene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Acenaphthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Fluorene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Phenanthrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Anthracene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Fluoranthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Pyrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benz(a)anthracene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Chrysene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(b)fluoranthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(k)fluoranthene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(a)pyrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Dibenz(a,h)anthracene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Benzo(g,h,i)perylene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Indeno(1,2,3-cd)pyrene	ND	25	D	µg/L	10	3/21/2019 4:28:36 PM
Surr: N-hexadecane	0	20.4-126	SD	%Rec	10	3/21/2019 4:28:36 PM
Surr: Benzo(e)pyrene	0	21.4-126	SD	%Rec	10	3/21/2019 4:28:36 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.50		mg/L	200	3/15/2019 12:56:00 AM
Toluene	1.2	0.20		mg/L	200	3/15/2019 12:56:00 AM
Ethylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM

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

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1903677**
Date Reported: **3/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Hart #1 SJ East
Lab ID: 1903677-001 **Matrix:** AQUEOUS

Client Sample ID: Hart #1 SJ East
Collection Date: 3/13/2019 2:24:00 PM
Received Date: 3/14/2019 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Naphthalene	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
1-Methylnaphthalene	ND	0.80		mg/L	200	3/15/2019 12:56:00 AM
2-Methylnaphthalene	ND	0.80		mg/L	200	3/15/2019 12:56:00 AM
Acetone	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Bromobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Bromodichloromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Bromoform	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Bromomethane	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM
2-Butanone	ND	20		mg/L	200	3/15/2019 12:56:00 AM
Carbon disulfide	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Carbon Tetrachloride	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Chlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Chloroethane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Chloroform	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Chloromethane	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM
2-Chlorotoluene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
4-Chlorotoluene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
cis-1,2-DCE	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Dibromochloromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Dibromomethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1-Dichloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1-Dichloroethene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2-Dichloropropane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,3-Dichloropropane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
2,2-Dichloropropane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
1,1-Dichloropropene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Hexachlorobutadiene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
2-Hexanone	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Isopropylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
4-Isopropyltoluene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/15/2019 12:56:00 AM
Methylene Chloride	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM

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

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1903677**
Date Reported: **3/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Hart #1 SJ East
Lab ID: 1903677-001 **Matrix:** AQUEOUS

Client Sample ID: Hart #1 SJ East
Collection Date: 3/13/2019 2:24:00 PM
Received Date: 3/14/2019 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Butylbenzene	ND	0.60		mg/L	200	3/15/2019 12:56:00 AM
n-Propylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
sec-Butylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Styrene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
tert-Butylbenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
trans-1,2-DCE	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Trichlorofluoromethane	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/15/2019 12:56:00 AM
Vinyl chloride	ND	0.20		mg/L	200	3/15/2019 12:56:00 AM
Xylenes, Total	0.81	0.30		mg/L	200	3/15/2019 12:56:00 AM
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%Rec	200	3/15/2019 12:56:00 AM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	200	3/15/2019 12:56:00 AM
Surr: Dibromofluoromethane	91.0	70-130		%Rec	200	3/15/2019 12:56:00 AM
Surr: Toluene-d8	93.1	70-130		%Rec	200	3/15/2019 12:56:00 AM

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

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: MB-43704	SampType: MBLK	TestCode: EPA Method 6020: Total Metals							
Client ID: PBW	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961412	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Cadmium	ND	0.0010								
Chromium	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Silver	ND	0.0010								

Sample ID: MSLLLCS-43704	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals							
Client ID: BatchQC	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961413	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	89.1	70	130			
Cadmium	ND	0.0010	0.001000	0	95.1	70	130			
Chromium	0.0012	0.0010	0.001000	0	119	70	130			
Lead	ND	0.0010	0.001000	0	97.5	70	130			
Selenium	ND	0.0010	0.001000	0	82.6	70	130			
Silver	0.0011	0.0010	0.001000	0	106	70	130			

Sample ID: MSLCS-43704	SampType: LCS	TestCode: EPA Method 6020: Total Metals							
Client ID: LCSW	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961414	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.046	0.0010	0.05000	0	92.1	80	120			
Cadmium	0.050	0.0010	0.05000	0	99.6	80	120			
Chromium	0.050	0.0010	0.05000	0	101	80	120			
Lead	0.048	0.0010	0.05000	0	95.9	80	120			
Selenium	0.046	0.0010	0.05000	0	92.2	80	120			
Silver	0.041	0.0010	0.05000	0	82.6	80	120			

Sample ID: MSLCSD-43704	SampType: LCSD	TestCode: EPA Method 6020: Total Metals							
Client ID: LCSS02	Batch ID: 43704	RunNo: 58442							
Prep Date: 3/15/2019	Analysis Date: 3/18/2019	SeqNo: 1961415	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.047	0.0010	0.05000	0	93.3	80	120	1.22	20	
Cadmium	0.051	0.0010	0.05000	0	102	80	120	2.67	20	
Chromium	0.051	0.0010	0.05000	0	103	80	120	1.74	20	
Lead	0.047	0.0010	0.05000	0	94.8	80	120	1.07	20	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **MSLCSD-43704** SampType: **LCSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **LCSS02** Batch ID: **43704** RunNo: **58442**

Prep Date: **3/15/2019** Analysis Date: **3/18/2019** SeqNo: **1961415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.046	0.0010	0.05000	0	92.5	80	120	0.308	20	
Silver	0.042	0.0010	0.05000	0	85.0	80	120	2.88	20	

Sample ID: **MB-43704** SampType: **MBLK** TestCode: **EPA Method 6020: Total Metals**

Client ID: **PBW** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0010								

Sample ID: **MSLLLCS-43704** SampType: **LCSLL** TestCode: **EPA Method 6020: Total Metals**

Client ID: **BatchQC** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0012	0.0010	0.001000	0	117	70	130			

Sample ID: **MSLCS-43704** SampType: **LCS** TestCode: **EPA Method 6020: Total Metals**

Client ID: **LCSW** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.050	0.0010	0.05000	0	100	80	120			

Sample ID: **MSLCSD-43704** SampType: **LCSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **LCSS02** Batch ID: **43704** RunNo: **58622**

Prep Date: **3/15/2019** Analysis Date: **3/25/2019** SeqNo: **1968684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.051	0.0010	0.05000	0	102	80	120	1.51	20	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R58384**	RunNo: **58384**
Prep Date:	Analysis Date: **3/14/2019**	SeqNo: **1958378** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	77.5	70	130			
Toluene	17	1.0	20.00	0	87.1	70	130			
Chlorobenzene	18	1.0	20.00	0	89.8	70	130			
1,1-Dichloroethene	15	1.0	20.00	0	72.6	70	130			
Trichloroethene (TCE)	14	1.0	20.00	0	71.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58384**	RunNo: **58384**
Prep Date:	Analysis Date: **3/14/2019**	SeqNo: **1958383** 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:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58384**	RunNo: **58384**
Prep Date:	Analysis Date: **3/14/2019**	SeqNo: **1958383** 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:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58384**	RunNo: **58384**
Prep Date:	Analysis Date: **3/14/2019**	SeqNo: **1958383** 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	9.5		10.00		95.5	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.7	70	130			
Surr: Toluene-d8	9.5		10.00		94.7	70	130			

Sample ID: **1903677-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Hart #1 SJ East**	Batch ID: **R58384**	RunNo: **58401**
Prep Date:	Analysis Date: **3/15/2019**	SeqNo: **1960600** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.4	0.20	4.000	0.2872	78.7	70	130			
Toluene	4.6	0.20	4.000	1.218	84.4	70	130			
Chlorobenzene	3.6	0.20	4.000	0.06360	88.9	70	130			
1,1-Dichloroethene	3.0	0.20	4.000	0	75.6	67.6	130			
Trichloroethene (TCE)	2.9	0.20	4.000	0	73.5	70	130			
Surr: 1,2-Dichloroethane-d4	1.8		2.000		90.4	70	130			
Surr: 4-Bromofluorobenzene	1.9		2.000		97.5	70	130			
Surr: Dibromofluoromethane	1.8		2.000		89.7	70	130			
Surr: Toluene-d8	1.9		2.000		94.4	70	130			

Sample ID: **1903677-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Hart #1 SJ East**	Batch ID: **R58384**	RunNo: **58401**
Prep Date:	Analysis Date: **3/15/2019**	SeqNo: **1960601** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.2	0.20	4.000	0.2872	97.7	70	130	19.9	20	
Toluene	5.2	0.20	4.000	1.218	100	70	130	12.9	20	
Chlorobenzene	4.5	0.20	4.000	0.06360	111	70	130	22.1	20	R
1,1-Dichloroethene	3.7	0.20	4.000	0	92.3	67.6	130	19.8	20	
Trichloroethene (TCE)	3.6	0.20	4.000	0	90.9	70	130	21.1	20	R
Surr: 1,2-Dichloroethane-d4	1.9		2.000		92.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.9		2.000		97.4	70	130	0	0	
Surr: Dibromofluoromethane	1.8		2.000		92.1	70	130	0	0	
Surr: Toluene-d8	1.9		2.000		96.0	70	130	0	0	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **lcs-43758**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **43758**	RunNo: **58550**
Prep Date: **3/19/2019**	Analysis Date: **3/21/2019**	SeqNo: **1965840** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	16	0.50	20.00	0	80.1	29.6	105			
1-Methylnaphthalene	16	1.0	20.00	0	78.1	33.4	112			
2-Methylnaphthalene	15	1.0	20.00	0	77.2	28.6	108			
Acenaphthylene	17	0.50	20.00	0	83.9	35.7	116			
Acenaphthene	16	0.50	20.00	0	80.4	32.4	118			
Fluorene	16	0.50	20.00	0	80.9	35.6	118			
Phenanthrene	17	0.50	20.00	0	84.7	36.3	130			
Anthracene	17	0.50	20.00	0	84.8	34.8	135			
Fluoranthene	17	0.50	20.00	0	85.5	41	136			
Pyrene	18	0.50	20.00	0	91.1	44.8	136			
Benz(a)anthracene	18	0.50	20.00	0	91.0	41.1	136			
Chrysene	18	0.50	20.00	0	90.6	37.9	132			
Benzo(b)fluoranthene	19	0.50	20.00	0	94.3	39	144			
Benzo(k)fluoranthene	18	0.50	20.00	0	90.1	40	144			
Benzo(a)pyrene	18	0.50	20.00	0	87.6	36.8	137			
Dibenz(a,h)anthracene	18	0.50	20.00	0	91.9	31.5	141			
Benzo(g,h,i)perylene	20	0.50	20.00	0	97.6	32.9	138			
Indeno(1,2,3-cd)pyrene	19	0.50	20.00	0	95.6	40.9	143			
Surr: N-hexadecane	72		87.60		81.9	20.4	126			
Surr: Benzo(e)pyrene	17		20.00		85.8	21.4	126			

Sample ID: **lcsd-43758**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **43758**	RunNo: **58550**
Prep Date: **3/19/2019**	Analysis Date: **3/21/2019**	SeqNo: **1965841** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	16	0.50	20.00	0	80.3	29.6	105	0.249	68.7	
1-Methylnaphthalene	16	1.0	20.00	0	80.1	33.4	112	2.53	66	
2-Methylnaphthalene	16	1.0	20.00	0	79.2	28.6	108	2.56	68.7	
Acenaphthylene	18	0.50	20.00	0	87.8	35.7	116	4.54	64.9	
Acenaphthene	18	0.50	20.00	0	87.7	32.4	118	8.69	53.2	
Fluorene	18	0.50	20.00	0	88.8	35.6	118	9.31	62.4	
Phenanthrene	19	0.50	20.00	0	93.4	36.3	130	9.77	62.6	
Anthracene	18	0.50	20.00	0	92.4	34.8	135	8.58	62.4	
Fluoranthene	20	0.50	20.00	0	99.1	41	136	14.7	59.4	
Pyrene	20	0.50	20.00	0	100	44.8	136	9.51	55.4	
Benz(a)anthracene	19	0.50	20.00	0	94.3	41.1	136	3.56	56.6	
Chrysene	19	0.50	20.00	0	95.2	37.9	132	4.95	51.9	
Benzo(b)fluoranthene	19	0.50	20.00	0	95.2	39	144	0.950	59.1	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677
28-Mar-19

Client: Souder, Miller and Associates
Project: Hart #1 SJ East

Sample ID: lcsd-43758	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 43758	RunNo: 58550							
Prep Date: 3/19/2019	Analysis Date: 3/21/2019	SeqNo: 1965841			Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	18	0.50	20.00	0	90.8	40	144	0.774	57	
Benzo(a)pyrene	18	0.50	20.00	0	90.4	36.8	137	3.15	60.2	
Dibenz(a,h)anthracene	19	0.50	20.00	0	94.6	31.5	141	2.90	64.7	
Benzo(g,h,i)perylene	20	0.50	20.00	0	102	32.9	138	4.51	61.5	
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	98.7	40.9	143	3.19	61.1	
Surr: N-hexadecane	72		87.60		82.5	20.4	126	0	0	
Surr: Benzo(e)pyrene	18		20.00		90.3	21.4	126	0	0	

Sample ID: mb-43758	SampType: MBLK	TestCode: EPA Method 8270C: PAHs							
Client ID: PBW	Batch ID: 43758	RunNo: 58550							
Prep Date: 3/19/2019	Analysis Date: 3/21/2019	SeqNo: 1965842			Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	67		87.60		76.1	20.4	126			
Surr: Benzo(e)pyrene	15		20.00		77.3	21.4	126			

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903677

28-Mar-19

Client: Souder, Miller and Associates

Project: Hart #1 SJ East

Sample ID: **MB-43775** SampType: **MBLK** TestCode: **EPA Method 7470: Mercury**

Client ID: **PBW** Batch ID: **43775** RunNo: **58504**

Prep Date: **3/19/2019** Analysis Date: **3/20/2019** SeqNo: **1963758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-43775** SampType: **LCS** TestCode: **EPA Method 7470: Mercury**

Client ID: **LCSW** Batch ID: **43775** RunNo: **58504**

Prep Date: **3/19/2019** Analysis Date: **3/20/2019** SeqNo: **1963759** 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	101	80	120			

Sample ID: **LCSD-43775** SampType: **LCSD** TestCode: **EPA Method 7470: Mercury**

Client ID: **LCSS02** Batch ID: **43775** RunNo: **58504**

Prep Date: **3/19/2019** Analysis Date: **3/20/2019** SeqNo: **1963760** 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	100	80	120	0.516	20	

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix

1903677-001D HART #1 SI EAST
Collected date/time: 03/13/19 14:24

SAMPLE RESULTS - 01
L1079321

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	0.0447		0.00500	1	03/20/2019 15:48	WG1257497

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	5.54	T8	1	03/15/2019 12:35	WG1250855

Sample Narrative:
L1079321-01 WG1250855: 5.54 at 15.9C

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	0.0880		0.0500	1	03/15/2019 12:01	WG1251593

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170		1	03/21/2019 18:47	WG1252539

WG1252497

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L1079321-01

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3393470-1 03/20/19 15:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

Laboratory Control Sample (LCS)

(LCS) R3393470-2 03/20/19 15:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.0940	94.0	85.0-115	

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

WG1251593

Wet Chemistry by Method 9034-9030B

QUALITY CONTROL SUMMARY

L1079321-01

Method Blank (MB)

(MB) R3392984-1 03/19/19 12:00

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)

(LCS) R3392984-2 03/19/19 12:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.512	102	85.0-115	

WG1252539

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1079321-01

ONE LAB. NATIONWIDE

L1079359-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1079359-04 03/21/19 18:47 • (DUP) R3393973-2 03/21/19 18:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		°C

L1079930-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1079930-02 03/21/19 18:47 • (DUP) R3393973-3 03/21/19 18:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	101	104	1	2.93		10

Laboratory Control Sample (LCS)

(LCS) R3393973-1 03/21/19 18:47

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	82.8	101	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1903677 RcptNo: 1

Received By: Anne Thorne 3/14/2019 7:00:00 AM
Completed By: Victoria Zellar 3/14/2019 8:34:16 AM
Reviewed By: ENM 3/14/19

Victoria Zellar labeled by YG 3/14/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

# of preserved bottles checked for pH: 1, 2 (<2 or >12 unless noted)
Adjusted? NO
Checked by: YG 3/14/19

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: SJMA

Mailing Address: 401 W. Broadway Farmington NM

Phone #: 505 325-7535

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 7 day TAT no charge
☐ Standard ☒ Rush ASAP

Project Name: Hart #1 SJ East

Project #:

Project Manager: Ashley Maxwell

Sampler: RM

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1903677
3-13-19	14:24	Ag Gas	Hart #1 SJ East	VAriOus	VAriOus	-001

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Ext
				X	X		X			X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/13/19	1628				3/13/19	1628
3/13/19	1806				03/14/19	0700

Remarks: 8260 Full List
TCLP Compounds At TCLP Limits
Invoice Enterprise CC Tom Long

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.

~~2019~~ 28JUN22

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 500 yd³ / bbls Known Volu _____ yd³ / bbls

2016.
~~2017~~
2018, 18
2019

5. **GENERATOR CE**

I, Thomas Long Thomas Long, representative or authoriz
Generator Signature
certify that according to the Resource Conservation a tection Agency's July 1988 regulatory determination, the above described waste

☐ RCRA Exempt: Oil field wastes generated f d are not mixed with non-exempt waste. ***Operator Use Only: Waste A*** ***Load***

☒ RCRA Non-Exempt: Oil field waste which i ards for waste hazardous by characteristics established in RCRA regulations, ed in 40 CFR, part 261, subpart D, as amended. The following document e is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Wast description in Box 4)

GENERATOR 19.15.36.15 WASTE TE DFARMS

I, Thomas Long Thomas Long, 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: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 28, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Chaco Plant OrderNo.: 1906755

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/14/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1906755**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Chaco Plant
Lab ID: 1906755-001 **Matrix:** AQUEOUS

Client Sample ID: Chaco Non Exempt
Collection Date: 6/13/2019 8:31:00 AM
Received Date: 6/14/2019 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: **rde**
Mercury	0.0015	0.00020		mg/L	1	6/25/2019 6:13:08 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **ELS**
Arsenic	ND	0.10		mg/L	5	6/19/2019 8:38:52 AM
Barium	0.30	0.10		mg/L	5	6/19/2019 8:38:52 AM
Cadmium	ND	0.010		mg/L	5	6/19/2019 8:38:52 AM
Chromium	0.083	0.030		mg/L	5	6/19/2019 8:38:52 AM
Lead	ND	0.025		mg/L	5	6/19/2019 9:48:38 AM
Selenium	ND	0.25		mg/L	5	6/19/2019 8:38:52 AM
Silver	ND	0.025		mg/L	5	6/19/2019 8:38:52 AM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
1-Methylnaphthalene	ND	10		µg/L	1	6/20/2019 8:55:11 AM
2-Methylnaphthalene	ND	10		µg/L	1	6/20/2019 8:55:11 AM
Acenaphthylene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Acenaphthene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Fluorene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Phenanthrene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Anthracene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Fluoranthene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Pyrene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Benz(a)anthracene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Chrysene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	6/20/2019 8:55:11 AM
Surr: N-hexadecane	52.8	20.4-126		%Rec	1	6/20/2019 8:55:11 AM
Surr: Benzo(e)pyrene	57.7	21.4-126		%Rec	1	6/20/2019 8:55:11 AM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.50		mg/L	200	6/15/2019 12:51:00 AM
Toluene	0.45	0.20		mg/L	200	6/15/2019 12:51:00 AM
Ethylbenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	6/15/2019 12:51:00 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
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1906755**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Chaco Plant
Lab ID: 1906755-001 **Matrix:** AQUEOUS

Client Sample ID: Chaco Non Exempt
Collection Date: 6/13/2019 8:31:00 AM
Received Date: 6/14/2019 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Naphthalene	ND	0.40		mg/L	200	6/15/2019 12:51:00 AM
1-Methylnaphthalene	ND	0.80		mg/L	200	6/15/2019 12:51:00 AM
2-Methylnaphthalene	ND	0.80		mg/L	200	6/15/2019 12:51:00 AM
Acetone	ND	2.0		mg/L	200	6/15/2019 12:51:00 AM
Bromobenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Bromodichloromethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Bromoform	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Bromomethane	ND	0.60		mg/L	200	6/15/2019 12:51:00 AM
2-Butanone	ND	2.0		mg/L	200	6/15/2019 12:51:00 AM
Carbon disulfide	ND	2.0		mg/L	200	6/15/2019 12:51:00 AM
Carbon Tetrachloride	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Chlorobenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Chloroethane	ND	0.40		mg/L	200	6/15/2019 12:51:00 AM
Chloroform	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Chloromethane	ND	0.60		mg/L	200	6/15/2019 12:51:00 AM
2-Chlorotoluene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
4-Chlorotoluene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
cis-1,2-DCE	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	6/15/2019 12:51:00 AM
Dibromochloromethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Dibromomethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Dichlorodifluoromethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,1-Dichloroethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,1-Dichloroethene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2-Dichloropropane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,3-Dichloropropane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
2,2-Dichloropropane	ND	0.40		mg/L	200	6/15/2019 12:51:00 AM
1,1-Dichloropropene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Hexachlorobutadiene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
2-Hexanone	ND	2.0		mg/L	200	6/15/2019 12:51:00 AM
Isopropylbenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
4-Isopropyltoluene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	6/15/2019 12:51:00 AM
Methylene Chloride	ND	0.60		mg/L	200	6/15/2019 12:51:00 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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906755**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Chaco Plant
Lab ID: 1906755-001 **Matrix:** AQUEOUS

Client Sample ID: Chaco Non Exempt
Collection Date: 6/13/2019 8:31:00 AM
Received Date: 6/14/2019 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Butylbenzene	ND	0.60		mg/L	200	6/15/2019 12:51:00 AM
n-Propylbenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
sec-Butylbenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Styrene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
tert-Butylbenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	6/15/2019 12:51:00 AM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
trans-1,2-DCE	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Trichloroethene (TCE)	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Trichlorofluoromethane	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	6/15/2019 12:51:00 AM
Vinyl chloride	ND	0.20		mg/L	200	6/15/2019 12:51:00 AM
Xylenes, Total	ND	0.30		mg/L	200	6/15/2019 12:51:00 AM
Surr: 1,2-Dichloroethane-d4	97.1	70-130		%Rec	200	6/15/2019 12:51:00 AM
Surr: 4-Bromofluorobenzene	91.7	70-130		%Rec	200	6/15/2019 12:51:00 AM
Surr: Dibromofluoromethane	96.8	70-130		%Rec	200	6/15/2019 12:51:00 AM
Surr: Toluene-d8	90.8	70-130		%Rec	200	6/15/2019 12:51:00 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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

1906755-001D CHACO NON EXEMPT
Collected date/time: 06/13/19 08:31

SAMPLE RESULTS - 01
L1110050

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	0.0162		0.00500	1	06/28/2019 13:21	WG1302668

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	6.76	T8	1	06/19/2019 10:00	WG1298240

Sample Narrative:
L1110050-01 WG1298240: 6.76 at 15.6C

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	0.0780		0.0500	1	06/20/2019 18:26	WG1299038

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170		1	06/26/2019 17:41	WG1302077

WG1302668

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L1110050-01

Method Blank (MB)

(MB) R3425774-1 06/28/19 13:05

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

L1109503-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1109503-07 06/28/19 13:12 • (DUP) R3425774-3 06/28/19 13:13

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Reactive Cyanide	U	0.000	1	0.000		20

L1110263-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1110263-01 06/28/19 13:42 • (DUP) R3425774-8 06/28/19 13:43

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Reactive Cyanide	0.342	0.412	20	18.6		20

Laboratory Control Sample (LCS)

(LCS) R3425774-2 06/28/19 13:06

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.105	105	85.0-115	

L1109910-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1109910-01 06/28/19 13:15 • (MS) R3425774-4 06/28/19 13:18 • (MSD) R3425774-5 06/28/19 13:19

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	ND	0.0804	0.0618	80.4	61.8	1	75.0-125		J3 J6	26.2	20

L1110655-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1110655-02 06/28/19 13:33 • (MS) R3425774-6 06/28/19 13:34 • (MSD) R3425774-7 06/28/19 13:35

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	ND	0.104	0.0965	99.5	92.0	1	75.0-125			7.48	20

WG1298240

Wet Chemistry by Method 4500H+ B-2011

QUALITY CONTROL SUMMARY

L1110050-01

ONE LAB. NATIONWIDE.

Laboratory Control Sample (LCS)

(LCS) R3422350-1 06/19/19 10:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	9.95	99.5	99.0-101	

Sample Narrative:

LCS: 9.95 at 21.3C

WG1299038

Wet Chemistry by Method 9034-9030B

QUALITY CONTROL SUMMARY

L1110050-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3423170-1 06/20/19 18:16

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3423170-2 06/20/19 18:16

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.531	106	85.0-115	

WG1302077

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1110050-01

ONE LAB. NATIONWIDE.

L1109093-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1109093-02 06/26/19 17:41 • (DUP) R3425069-2 06/26/19 17:41

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3425069-1 06/26/19 17:41

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	83.5	102	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National 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.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

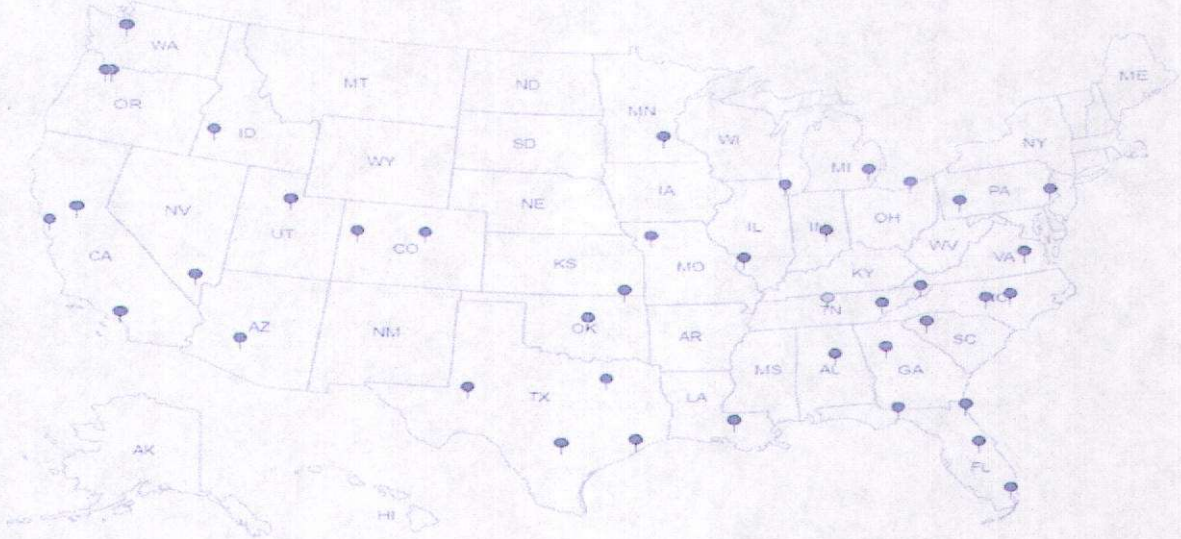
Third-Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: B60679	RunNo: 60679						
Prep Date:	Analysis Date: 6/15/2019	SeqNo: 2053350	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	22	1.0	20.00	0	110	70	130			
Chlorobenzene	23	1.0	20.00	0	115	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.2	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.5	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130			
Surr: Toluene-d8	9.1		10.00		90.7	70	130			

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B60679	RunNo: 60679						
Prep Date:	Analysis Date: 6/15/2019	SeqNo: 2053351	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B60679**	RunNo: **60679**
Prep Date:	Analysis Date: **6/15/2019**	SeqNo: **2053351** 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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B60679**	RunNo: **60679**
Prep Date:	Analysis Date: **6/15/2019**	SeqNo: **2053351** 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	9.6		10.00		96.4	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.1	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.9	70	130			
Surr: Toluene-d8	9.1		10.00		91.5	70	130			

Sample ID: **1906755-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Chaco Non Exempt**	Batch ID: **B60679**	RunNo: **60679**
Prep Date:	Analysis Date: **6/15/2019**	SeqNo: **2053353** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.4	0.20	4.000	0.1536	107	70	130			
Toluene	4.6	0.20	4.000	0.4532	105	70	130			
Chlorobenzene	4.5	0.20	4.000	0	111	70	130			
1,1-Dichloroethene	4.1	0.20	4.000	0	103	67.6	130			
Trichloroethene (TCE)	4.1	0.20	4.000	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	2.0		2.000		99.4	70	130			
Surr: 4-Bromofluorobenzene	1.9		2.000		95.1	70	130			
Surr: Dibromofluoromethane	2.0		2.000		99.0	70	130			
Surr: Toluene-d8	1.9		2.000		92.7	70	130			

Sample ID: **1906755-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Chaco Non Exempt**	Batch ID: **B60679**	RunNo: **60679**
Prep Date:	Analysis Date: **6/15/2019**	SeqNo: **2053354** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.3	0.20	4.000	0.1536	103	70	130	4.13	20	
Toluene	4.5	0.20	4.000	0.4532	100	70	130	3.78	20	
Chlorobenzene	4.2	0.20	4.000	0	106	70	130	4.89	20	
1,1-Dichloroethene	3.9	0.20	4.000	0	97.9	67.6	130	4.84	20	
Trichloroethene (TCE)	3.9	0.20	4.000	0	98.6	70	130	4.00	20	
Surr: 1,2-Dichloroethane-d4	1.9		2.000		96.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.9		2.000		95.3	70	130	0	0	
Surr: Dibromofluoromethane	2.0		2.000		98.6	70	130	0	0	
Surr: Toluene-d8	1.8		2.000		91.7	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
PQL	Practical Quantitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: **mb-45675**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBW**	Batch ID: **45675**	RunNo: **60788**
Prep Date: **6/19/2019**	Analysis Date: **6/20/2019**	SeqNo: **2057895** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	59		87.60		67.0	20.4	126			
Surr: Benzo(e)pyrene	15		20.00		76.4	21.4	126			

Sample ID: **lcs-45675**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **45675**	RunNo: **60788**
Prep Date: **6/19/2019**	Analysis Date: **6/20/2019**	SeqNo: **2057896** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluorene	7.3	0.50	8.032	0	91.1	35.6	118			
Phenanthrene	3.5	0.50	4.004	0	86.9	36.3	130			
Anthracene	3.6	0.50	4.004	0	88.9	34.8	135			
Fluoranthene	7.4	0.50	8.014	0	92.6	41	136			
Pyrene	7.5	0.50	8.032	0	93.9	44.8	136			
Benz(a)anthracene	0.70	0.50	0.8020	0	87.3	41.1	136			
Chrysene	3.3	0.50	4.000	0	83.5	37.9	132			
Benzo(b)fluoranthene	0.84	0.50	1.000	0	84.0	39	144			
Benzo(k)fluoranthene	ND	0.50	0.5000	0	88.0	40	144			
Benzo(a)pyrene	ND	0.50	0.5000	0	44.0	36.8	137			
Dibenz(a,h)anthracene	1.1	0.50	1.004	0	106	31.5	141			
Benzo(g,h,i)perylene	1.0	0.50	1.000	0	102	32.9	138			
Indeno(1,2,3-cd)pyrene	1.6	0.50	2.006	0	80.8	40.9	143			

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: **lcs-45675**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **45675**	RunNo: **60788**
Prep Date: **6/19/2019**	Analysis Date: **6/20/2019**	SeqNo: **2057896** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: N-hexadecane	60		87.60		68.6	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		72.2	21.4	126			

Sample ID: **lcs-45675**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **45675**	RunNo: **60788**
Prep Date: **6/19/2019**	Analysis Date: **6/20/2019**	SeqNo: **2057897** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	61	2.0	80.26	0	75.9	29.6	105			
1-Methylnaphthalene	72	4.0	80.14	0	89.5	33.4	112			
2-Methylnaphthalene	67	4.0	80.24	0	83.0	28.6	108			
Acenaphthylene	67	2.0	80.32	0	83.8	35.7	116			
Acenaphthene	66	2.0	80.30	0	82.4	32.4	118			

Sample ID: **lcsd-45675**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **45675**	RunNo: **60788**
Prep Date: **6/19/2019**	Analysis Date: **6/20/2019**	SeqNo: **2057898** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluorene	8.0	0.50	8.032	0	99.9	35.6	118	9.13	62.4	
Phenanthrene	3.9	0.50	4.004	0	98.4	36.3	130	12.4	62.6	
Anthracene	4.0	0.50	4.004	0	98.9	34.8	135	10.6	62.4	
Fluoranthene	7.9	0.50	8.014	0	98.6	41	136	6.27	59.4	
Pyrene	8.7	0.50	8.032	0	108	44.8	136	13.8	55.4	
Benz(a)anthracene	0.82	0.50	0.8020	0	102	41.1	136	15.8	56.6	
Chrysene	3.9	0.50	4.000	0	96.5	37.9	132	14.4	51.9	
Benzo(b)fluoranthene	1.0	0.50	1.000	0	100	39	144	17.4	59.1	
Benzo(k)fluoranthene	0.52	0.50	0.5000	0	104	40	144	16.7	57	
Benzo(a)pyrene	ND	0.50	0.5000	0	52.0	36.8	137	0	60.2	
Dibenz(a,h)anthracene	1.1	0.50	1.004	0	112	31.5	141	5.50	64.7	
Benzo(g,h,i)perylene	1.2	0.50	1.000	0	116	32.9	138	12.8	61.5	
Indeno(1,2,3-cd)pyrene	1.8	0.50	2.006	0	89.7	40.9	143	10.5	61.1	
Surr: N-hexadecane	68		87.60		78.0	20.4	126	0	0	
Surr: Benzo(e)pyrene	17		20.00		82.7	21.4	126	0	0	

Sample ID: **lcsd-45675**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **45675**	RunNo: **60788**
Prep Date: **6/19/2019**	Analysis Date: **6/20/2019**	SeqNo: **2057899** Units: **µg/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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: **lcsd-45675**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **45675**	RunNo: **60788**
Prep Date: **6/19/2019**	Analysis Date: **6/20/2019**	SeqNo: **2057899** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	50	2.0	80.26	0	62.1	29.6	105	27.8	68.7	
1-Methylnaphthalene	58	4.0	80.14	0	72.7	33.4	112	24.6	66	
2-Methylnaphthalene	55	4.0	80.24	0	68.5	28.6	108	22.7	68.7	
Acenaphthylene	56	2.0	80.32	0	69.4	35.7	116	20.5	64.9	
Acenaphthene	54	2.0	80.30	0	66.8	32.4	118	18.8	53.2	

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: **MB-45805**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW**	Batch ID: **45805**	RunNo: **60927**
Prep Date: **6/25/2019**	Analysis Date: **6/25/2019**	SeqNo: **2062499** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-45805**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW**	Batch ID: **45805**	RunNo: **60927**
Prep Date: **6/25/2019**	Analysis Date: **6/25/2019**	SeqNo: **2062500** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755
28-Jun-19

Client: Souder, Miller and Associates
Project: Chaco Plant

Sample ID: MB-45652	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 45652	RunNo: 60759
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056516 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								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-45652	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 45652	RunNo: 60759
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056517 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	95.7	80	120			
Barium	0.48	0.020	0.5000	0	95.5	80	120			
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Chromium	0.49	0.0060	0.5000	0	97.7	80	120			
Selenium	0.50	0.050	0.5000	0	101	80	120			
Silver	0.099	0.0050	0.1000	0	99.1	80	120			

Sample ID: 1906755-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Chaco Non Exempt	Batch ID: 45652	RunNo: 60759
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056520 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.10	0.5000	0	100	75	125			
Barium	0.75	0.10	0.5000	0.2959	91.1	75	125			
Cadmium	0.46	0.010	0.5000	0	92.0	75	125			
Chromium	0.55	0.030	0.5000	0.08303	93.8	75	125			
Selenium	0.56	0.25	0.5000	0	112	75	125			
Silver	0.056	0.025	0.1000	0	56.2	75	125			S

Sample ID: 1906755-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Chaco Non Exempt	Batch ID: 45652	RunNo: 60759
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056521 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.10	0.5000	0	103	75	125	3.12	20	
Barium	0.77	0.10	0.5000	0.2959	94.8	75	125	2.42	20	
Cadmium	0.47	0.010	0.5000	0	94.4	75	125	2.55	20	
Chromium	0.57	0.030	0.5000	0.08303	97.3	75	125	3.19	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906755

28-Jun-19

Client: Souder, Miller and Associates

Project: Chaco Plant

Sample ID: **1906755-001CMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **Chaco Non Exempt** Batch ID: **45652** RunNo: **60759**

Prep Date: **6/18/2019** Analysis Date: **6/19/2019** SeqNo: **2056521** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.54	0.25	0.5000	0	109	75	125	2.71	20	
Silver	0.057	0.025	0.1000	0	56.7	75	125	0.857	20	S

Sample ID: **MB-45652** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **PBW** Batch ID: **45652** RunNo: **60759**

Prep Date: **6/18/2019** Analysis Date: **6/19/2019** SeqNo: **2056550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Sample ID: **LCS-45652** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **LCSW** Batch ID: **45652** RunNo: **60759**

Prep Date: **6/18/2019** Analysis Date: **6/19/2019** SeqNo: **2056551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.50	0.0050	0.5000	0	99.5	80	120			

Sample ID: **1906755-001CMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **Chaco Non Exempt** Batch ID: **45652** RunNo: **60759**

Prep Date: **6/18/2019** Analysis Date: **6/19/2019** SeqNo: **2056554** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.52	0.025	0.5000	0.02383	98.3	75	125			

Sample ID: **1906755-001CMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **Chaco Non Exempt** Batch ID: **45652** RunNo: **60759**

Prep Date: **6/18/2019** Analysis Date: **6/19/2019** SeqNo: **2056555** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.56	0.025	0.5000	0.02383	108	75	125	8.88	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1906755 | RcptNo: 1

Received By: Desiree Dominguez 6/14/2019 7:55:00 AM DD

Completed By: Leah Baca 6/14/2019 8:26:18 AM Leah Baca

Reviewed By: JRS 6/14/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐ JJC 6-14-19
8. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 1 2 (<2 or >12 unless noted)
Adjusted? yes
Checked by: JJC 6-14-19

Special Handling (if applicable)

15. 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: ____

16. Additional remarks: 2 1.0ml HNO3 was added to 001C for <2 ph for metals analysis. JJC 6-14-19

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.0	Good	Yes			
2	1.9	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W. Broadway Farmington NM 87401

Phone #: 505 325-7535

email or Fax#: Ashley Maxwell

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
~~☐ Standard~~ @ ☒ Rush 7day TAT No Chase per Andy

Project Name: Chaco Plant

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ~~☒ Yes~~ ☐ No

# of Coolers: 2, 5.2 -0.2 = 5.0°c

Cooler Temp(including CF): 2.1 -0.2 = 1.9°c

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	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1906755	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI
6-13-19	8:31	Air	Chaco Non Exempt	Various	Various	-001					X	X		X			X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6-13-19	1500				6/13/19	1580
6/13/19	1826			Courier	6/14/19	7:55

Remarks: 8260 Full List
TCLP Compounds At TCLP Limits
Invoice: Enterprise cc Tom Long

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.

Good fill July 26, 2022

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:
MAPL San Luis Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL F Section 13 Township 17 North Range 3 East; 35.704883, -107.106298

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 yd^3 / 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, 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, 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: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 26, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX:

RE: San Luis OrderNo.: 1907731

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/16/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1907731**
Date Reported: **7/26/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: San Luis Non Exempt
Project: San Luis
Collection Date: 7/15/2019 12:10:00 PM
Lab ID: 1907731-001 **Matrix:** AQUEOUS **Received Date:** 7/16/2019 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 6020: TOTAL METALS						Analyst: **DBK**	
Arsenic	ND	0.0010		mg/L	1	7/23/2019 2:23:00 PM	46264
Barium	0.073	0.0050		mg/L	5	7/24/2019 12:14:38 PM	46246
Cadmium	0.0070	0.0010		mg/L	1	7/23/2019 2:23:00 PM	46264
Chromium	0.010	0.0010		mg/L	1	7/23/2019 2:23:00 PM	46264
Lead	0.0024	0.0010		mg/L	1	7/23/2019 2:23:00 PM	46264
Selenium	ND	0.0010		mg/L	1	7/23/2019 2:23:00 PM	46264
Silver	ND	0.0010		mg/L	1	7/23/2019 2:23:00 PM	46264
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.020		mg/L	1	7/22/2019 3:37:38 PM	46307
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
1-Methylnaphthalene	ND	10	D	µg/L	10	7/23/2019 1:29:55 PM	46261
2-Methylnaphthalene	ND	10	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Acenaphthylene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Acenaphthene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Fluorene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Phenanthrene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Anthracene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Fluoranthene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Pyrene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Benz(a)anthracene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Chrysene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Benzo(b)fluoranthene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Benzo(k)fluoranthene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Benzo(a)pyrene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	10	7/23/2019 1:29:55 PM	46261
Surr: N-hexadecane	0	20.4-126	SD	%Rec	10	7/23/2019 1:29:55 PM	46261
Surr: Benzo(e)pyrene	0	21.4-126	SD	%Rec	10	7/23/2019 1:29:55 PM	46261
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.50		mg/L	200	7/18/2019 11:37:00 PM	R61503
Toluene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Ethylbenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503

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
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1907731**
Date Reported: **7/26/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: San Luis
Lab ID: 1907731-001 **Matrix:** AQUEOUS

Client Sample ID: San Luis Non Exempt
Collection Date: 7/15/2019 12:10:00 PM
Received Date: 7/16/2019 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Naphthalene	ND	0.40		mg/L	200	7/18/2019 11:37:00 PM	R61503
1-Methylnaphthalene	ND	0.80		mg/L	200	7/18/2019 11:37:00 PM	R61503
2-Methylnaphthalene	ND	0.80		mg/L	200	7/18/2019 11:37:00 PM	R61503
Acetone	ND	2.0		mg/L	200	7/18/2019 11:37:00 PM	R61503
Bromobenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Bromodichloromethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Bromoform	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Bromomethane	ND	0.60		mg/L	200	7/18/2019 11:37:00 PM	R61503
2-Butanone	ND	2.0		mg/L	200	7/18/2019 11:37:00 PM	R61503
Carbon disulfide	ND	2.0		mg/L	200	7/18/2019 11:37:00 PM	R61503
Carbon Tetrachloride	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Chlorobenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Chloroethane	ND	0.40		mg/L	200	7/18/2019 11:37:00 PM	R61503
Chloroform	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Chloromethane	ND	0.60		mg/L	200	7/18/2019 11:37:00 PM	R61503
2-Chlorotoluene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
4-Chlorotoluene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
cis-1,2-DCE	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	7/18/2019 11:37:00 PM	R61503
Dibromochloromethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Dibromomethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2-Dichlorobenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,3-Dichlorobenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,4-Dichlorobenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Dichlorodifluoromethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,1-Dichloroethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,1-Dichloroethene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2-Dichloropropane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,3-Dichloropropane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
2,2-Dichloropropane	ND	0.40		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,1-Dichloropropene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Hexachlorobutadiene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
2-Hexanone	ND	2.0		mg/L	200	7/18/2019 11:37:00 PM	R61503
Isopropylbenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
4-Isopropyltoluene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
4-Methyl-2-pentanone	ND	2.0		mg/L	200	7/18/2019 11:37:00 PM	R61503
Methylene Chloride	ND	0.60		mg/L	200	7/18/2019 11:37:00 PM	R61503

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1907731**
Date Reported: **7/26/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: San Luis
Lab ID: 1907731-001 **Matrix:** AQUEOUS

Client Sample ID: San Luis Non Exempt
Collection Date: 7/15/2019 12:10:00 PM
Received Date: 7/16/2019 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
n-Butylbenzene	ND	0.60		mg/L	200	7/18/2019 11:37:00 PM	R61503
n-Propylbenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
sec-Butylbenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Styrene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
tert-Butylbenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	7/18/2019 11:37:00 PM	R61503
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
trans-1,2-DCE	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,1,1-Trichloroethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,1,2-Trichloroethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Trichloroethene (TCE)	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Trichlorofluoromethane	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
1,2,3-Trichloropropane	ND	0.40		mg/L	200	7/18/2019 11:37:00 PM	R61503
Vinyl chloride	ND	0.20		mg/L	200	7/18/2019 11:37:00 PM	R61503
Xylenes, Total	ND	0.30		mg/L	200	7/18/2019 11:37:00 PM	R61503
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	200	7/18/2019 11:37:00 PM	R61503
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	200	7/18/2019 11:37:00 PM	R61503
Surr: Dibromofluoromethane	97.6	70-130		%Rec	200	7/18/2019 11:37:00 PM	R61503
Surr: Toluene-d8	100	70-130		%Rec	200	7/18/2019 11:37:00 PM	R61503

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

1907731-001D ANGEL PEAK NON EXEMPT

Collected date/time: 07/15/19 12:10

SAMPLE RESULTS - 01

L1119921

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	ND		0.00500	1	07/25/2019 12:13	WG1316455

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	6.39	T6	1	07/19/2019 18:43	WG1313879

Sample Narrative:

L1119921-01 WG1313879: 6.39 at 21.8C

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	ND		0.0500	1	07/19/2019 18:26	WG1313956

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170		1	07/22/2019 16:27	WG1315291

WG1316455

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L1119921-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3434165-1 07/25/19 11:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Cyanide	U		0.00180	0.00500

L1119746-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1119746-02 07/25/19 12:10 • (DUP) R3434165-6 07/25/19 12:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3434165-2 07/25/19 11:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	0.100	0.107	107	85.0-115	

L1118891-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1118891-01 07/25/19 11:38 • (MS) R3434165-4 07/25/19 11:39 • (MSD) R3434165-5 07/25/19 11:40

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 %
Reactive Cyanide	0.100	0.00210	0.0149	0.0820	12.8	79.9	1	75.0-125	J6	J3	138	20

L1120035-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1120035-01 07/25/19 12:16 • (MS) R3434165-7 07/25/19 12:17 • (MSD) R3434165-8 07/25/19 12:19

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 %
Reactive Cyanide	0.100	ND	0.0362	ND	36.2	0.000	1	75.0-125	J6	J3 J6	200	20

WG1313879

Wet Chemistry by Method 4500H+ B-2011

QUALITY CONTROL SUMMARY

L1119921-01

ONE LAB. NATIONWIDE.

Laboratory Control Sample (LCS)

(LCS) R3432490-1 07/19/19 18:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	9.96	99.6	99.0-101	

Sample Narrative:

LCS: 9.96 at 23.1C

Method Blank (MB)

(MB) R3432489-1 07/19/19 18:22

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3432489-2 07/19/19 18:22

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.494	98.8	85.0-115	

WG1315291

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1119921-01

ONE LAB. NATIONWIDE.

L1119921-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1119921-01 07/22/19 16:27 • (DUP) R3433135-2 07/22/19 16:27

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3433135-1 07/22/19 16:27

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	81.8	99.7	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: MB-46264	SampType: MBLK	TestCode: EPA Method 6020: Total Metals
Client ID: PBW	Batch ID: 46264	RunNo: 61597
Prep Date: 7/18/2019	Analysis Date: 7/23/2019	SeqNo: 2087643 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Cadmium	ND	0.0010								
Chromium	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Silver	ND	0.0010								

Sample ID: MSLLLCS-46264	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals
Client ID: BatchQC	Batch ID: 46264	RunNo: 61597
Prep Date: 7/18/2019	Analysis Date: 7/23/2019	SeqNo: 2087644 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	96.9	70	130			
Cadmium	ND	0.0010	0.001000	0	98.2	70	130			
Chromium	0.0011	0.0010	0.001000	0	106	70	130			
Lead	0.0010	0.0010	0.001000	0	105	70	130			
Selenium	ND	0.0010	0.001000	0	82.5	70	130			
Silver	0.0011	0.0010	0.001000	0	106	70	130			

Sample ID: MSLCS-46264	SampType: LCS	TestCode: EPA Method 6020: Total Metals
Client ID: LCSW	Batch ID: 46264	RunNo: 61597
Prep Date: 7/18/2019	Analysis Date: 7/23/2019	SeqNo: 2087645 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.049	0.0010	0.05000	0	97.7	80	120			
Cadmium	0.051	0.0010	0.05000	0	103	80	120			
Chromium	0.052	0.0010	0.05000	0	104	80	120			
Lead	0.050	0.0010	0.05000	0	99.2	80	120			
Selenium	0.048	0.0010	0.05000	0	95.6	80	120			
Silver	0.050	0.0010	0.05000	0	99.4	80	120			

Sample ID: 1907731-001CMSLL	SampType: MS	TestCode: EPA Method 6020: Total Metals
Client ID: San Luis Non Exem	Batch ID: 46264	RunNo: 61597
Prep Date: 7/18/2019	Analysis Date: 7/23/2019	SeqNo: 2087647 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.049	0.0010	0.05000	0	98.4	75	125			
Cadmium	0.057	0.0010	0.05000	0.006959	100	75	125			
Chromium	0.062	0.0010	0.05000	0.009977	103	75	125			
Lead	0.051	0.0010	0.05000	0.002367	97.4	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: **1907731-001CMSLL** SampType: **MS** TestCode: **EPA Method 6020: Total Metals**

Client ID: **San Luis Non Exem** Batch ID: **46264** RunNo: **61597**

Prep Date: **7/18/2019** Analysis Date: **7/23/2019** SeqNo: **2087647** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.047	0.0010	0.05000	0	94.1	75	125			
Silver	0.051	0.0010	0.05000	0.0009169	99.4	75	125			

Sample ID: **1907731-001CMSDL** SampType: **MSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **San Luis Non Exem** Batch ID: **46264** RunNo: **61597**

Prep Date: **7/18/2019** Analysis Date: **7/23/2019** SeqNo: **2087648** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.049	0.0010	0.05000	0	98.4	75	125	0.0155	20	
Cadmium	0.057	0.0010	0.05000	0.006959	100	75	125	0.0980	20	
Chromium	0.060	0.0010	0.05000	0.009977	99.2	75	125	3.42	20	
Lead	0.052	0.0010	0.05000	0.002367	98.4	75	125	0.939	20	
Selenium	0.048	0.0010	0.05000	0	96.1	75	125	2.09	20	
Silver	0.049	0.0010	0.05000	0.0009169	95.5	75	125	3.88	20	

Sample ID: **1907731-001CMSLL** SampType: **MS** TestCode: **EPA Method 6020: Total Metals**

Client ID: **San Luis Non Exem** Batch ID: **46246** RunNo: **61619**

Prep Date: Analysis Date: **7/24/2019** SeqNo: **2088647** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.12	0.0050	0.05000	0.07287	95.8	75	125			

Sample ID: **1907731-001CMSDL** SampType: **MSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **San Luis Non Exem** Batch ID: **46246** RunNo: **61619**

Prep Date: Analysis Date: **7/24/2019** SeqNo: **2088648** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.12	0.0050	0.05000	0.07287	97.3	75	125	0.600	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: **100NG LCS2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R61503**	RunNo: **61503**
Prep Date:	Analysis Date: **7/18/2019**	SeqNo: **2084771** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	80.0	70	130			
Toluene	18	1.0	20.00	0	87.8	70	130			
Chlorobenzene	19	1.0	20.00	0	93.4	70	130			
1,1-Dichloroethene	15	1.0	20.00	0	76.6	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	77.8	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.0	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R61503**	RunNo: **61503**
Prep Date:	Analysis Date: **7/18/2019**	SeqNo: **2084772** 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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R61503**	RunNo: **61503**
Prep Date:	Analysis Date: **7/18/2019**	SeqNo: **2084772** 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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R61503**	RunNo: **61503**
Prep Date:	Analysis Date: **7/18/2019**	SeqNo: **2084772** 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		105	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	10		10.00		99.7	70	130			
Surr: Toluene-d8	10		10.00		99.8	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: **lcs-46261**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSW**	Batch ID: **46261**	RunNo: **61603**							
Prep Date: **7/18/2019**	Analysis Date: **7/23/2019**	SeqNo: **2087952**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	18	0.50	20.00	0	90.3	29.6	105			
1-Methylnaphthalene	16	1.0	20.00	0	78.6	33.4	112			
2-Methylnaphthalene	16	1.0	20.00	0	81.2	28.6	108			
Acenaphthylene	18	0.50	20.00	0	89.0	35.7	116			
Acenaphthene	16	0.50	20.00	0	79.5	32.4	118			
Fluorene	17	0.50	20.00	0	85.7	35.6	118			
Phenanthrene	18	0.50	20.00	0	88.2	36.3	130			
Anthracene	17	0.50	20.00	0	86.6	34.8	135			
Fluoranthene	17	0.50	20.00	0	86.2	41	136			
Pyrene	18	0.50	20.00	0	89.5	44.8	136			
Benz(a)anthracene	16	0.50	20.00	0	82.1	41.1	136			
Chrysene	14	0.50	20.00	0	70.3	37.9	132			
Benzo(b)fluoranthene	17	0.50	20.00	0	82.8	39	144			
Benzo(k)fluoranthene	18	0.50	20.00	0	88.6	40	144			
Benzo(a)pyrene	16	0.50	20.00	0	80.7	36.8	137			
Dibenz(a,h)anthracene	16	0.50	20.00	0	78.2	31.5	141			
Benzo(g,h,i)perylene	16	0.50	20.00	0	81.2	32.9	138			
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	79.7	40.9	143			
Surr: N-hexadecane	61		87.60		69.4	20.4	126			
Surr: Benzo(e)pyrene	15		20.00		74.5	21.4	126			

Sample ID: **lcsd-46261**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSS02**	Batch ID: **46261**	RunNo: **61603**							
Prep Date: **7/18/2019**	Analysis Date: **7/23/2019**	SeqNo: **2087953**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	18	0.50	20.00	0	89.1	29.6	105	1.34	68.7	
1-Methylnaphthalene	17	1.0	20.00	0	83.4	33.4	112	5.93	66	
2-Methylnaphthalene	17	1.0	20.00	0	83.3	28.6	108	2.55	68.7	
Acenaphthylene	20	0.50	20.00	0	101	35.7	116	12.1	64.9	
Acenaphthene	17	0.50	20.00	0	87.0	32.4	118	9.01	53.2	
Fluorene	18	0.50	20.00	0	91.5	35.6	118	6.55	62.4	
Phenanthrene	17	0.50	20.00	0	83.9	36.3	130	5.00	62.6	
Anthracene	16	0.50	20.00	0	81.2	34.8	135	6.44	62.4	
Fluoranthene	16	0.50	20.00	0	81.7	41	136	5.36	59.4	
Pyrene	16	0.50	20.00	0	82.4	44.8	136	8.26	55.4	
Benz(a)anthracene	16	0.50	20.00	0	77.5	41.1	136	5.76	56.6	
Chrysene	13	0.50	20.00	0	65.8	37.9	132	6.61	51.9	
Benzo(b)fluoranthene	17	0.50	20.00	0	85.3	39	144	2.97	59.1	

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: **lcsd-46261**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **LCSS02**	Batch ID: **46261**	RunNo: **61603**							
Prep Date: **7/18/2019**	Analysis Date: **7/23/2019**	SeqNo: **2087953**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	16	0.50	20.00	0	77.8	40	144	13.0	57	
Benzo(a)pyrene	17	0.50	20.00	0	85.1	36.8	137	5.31	60.2	
Dibenz(a,h)anthracene	15	0.50	20.00	0	76.3	31.5	141	2.46	64.7	
Benzo(g,h,i)perylene	16	0.50	20.00	0	79.7	32.9	138	1.86	61.5	
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	82.3	40.9	143	3.21	61.1	
Surr: N-hexadecane	65		87.60		73.7	20.4	126	0	0	
Surr: Benzo(e)pyrene	15		20.00		73.4	21.4	126	0	0	

Sample ID: **mb-46261**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**							
Client ID: **PBW**	Batch ID: **46261**	RunNo: **61603**							
Prep Date: **7/18/2019**	Analysis Date: **7/23/2019**	SeqNo: **2087954**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	61		87.60		69.6	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		72.2	21.4	126			

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907731

26-Jul-19

Client: Souder, Miller and Associates

Project: San Luis

Sample ID: **MB-46307**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**							
Client ID: **PBW**	Batch ID: **46307**	RunNo: **61563**							
Prep Date: **7/22/2019**	Analysis Date: **7/22/2019**	SeqNo: **2086444**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-46307**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**							
Client ID: **LCSW**	Batch ID: **46307**	RunNo: **61563**							
Prep Date: **7/22/2019**	Analysis Date: **7/22/2019**	SeqNo: **2086445**	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	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
PQL	Practical Quanitative Limit
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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1907731 RcptNo: 1

Received By: Leah Baca 7/16/2019 8:05:00 AM Leah Baca
Completed By: Anne Thorne 7/16/2019 10:12:47 AM Anne Thorne
Reviewed By: YG 7/16/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

# of preserved bottles checked for pH: 1:2 (2 or >2 unless noted)
Adjusted? NO
Checked by: DAD 7/16/19

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	8.5	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington NM 87401
Phone #: 505 325 7535
email or Fax#: ashley.maxwell
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: San Luis
Project #: Non Exempt BGT
Project Manager: Ashley Maxwell
Sampler: RW
On Ice: ☒ Yes ☐ No
\# of Coolers: 1
Cooler Temp (including CF): 8.4 - 0 = 8.4°C

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	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1907731	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI					
7/15/19	12:10	Aqueous	San Luis Non Exempt	Various	Various	-001					X	X		X			X					

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
		[signature]				
Date:	Time:	Relinquished by:	Received by: [signature]	Via: Courier	Date 7/16/19	Time 0805

Remarks: 8260 Full List
TCLP compound at TCLP limits
Invoice Enterprise CC Tom Long
Receiving Temp approved by Ashley LB 7/16/19

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.

12/10/ 2019

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 Manzanares 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 yd^3 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, 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, 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: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 01, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX:

RE: Manzanares OrderNo.: 1907972

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/19/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1907972**
Date Reported: **8/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Manzanares
Lab ID: 1907972-001 **Matrix:** AQUEOUS

Client Sample ID: Manzanares Non Exempt
Collection Date: 7/18/2019 10:17:00 AM
Received Date: 7/19/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6020: TOTAL METALS						Analyst: **DBK**
Arsenic	0.0037	0.0010		mg/L	1	7/23/2019 2:58:57 PM
Barium	0.055	0.0050		mg/L	5	7/23/2019 3:22:30 PM
Cadmium	ND	0.0010		mg/L	1	7/23/2019 2:58:57 PM
Chromium	ND	0.0010		mg/L	1	7/23/2019 2:58:57 PM
Lead	ND	0.0010		mg/L	1	7/23/2019 2:58:57 PM
Selenium	ND	0.0010		mg/L	1	7/23/2019 2:58:57 PM
Silver	ND	0.0010		mg/L	1	7/23/2019 2:58:57 PM
EPA METHOD 7470: MERCURY						Analyst: **rde**
Mercury	ND	0.020		mg/L	1	7/22/2019 3:39:53 PM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
1-Methylnaphthalene	ND	1.0		µg/L	1	7/30/2019 5:15:40 PM
2-Methylnaphthalene	ND	1.0		µg/L	1	7/30/2019 5:15:40 PM
Acenaphthylene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Acenaphthene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Fluorene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Phenanthrene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Anthracene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Fluoranthene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Pyrene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Benz(a)anthracene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Chrysene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	7/30/2019 5:15:40 PM
Surr: N-hexadecane	53.6	20.4-126		%Rec	1	7/30/2019 5:15:40 PM
Surr: Benzo(e)pyrene	111	21.4-126		%Rec	1	7/30/2019 5:15:40 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
Benzene	ND	0.50		mg/L	200	7/24/2019 11:51:22 AM
Toluene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Ethylbenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	7/24/2019 11:51:22 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
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1907972**
Date Reported: **8/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Manzanares
Lab ID: 1907972-001 **Matrix:** AQUEOUS

Client Sample ID: Manzanares Non Exempt
Collection Date: 7/18/2019 10:17:00 AM
Received Date: 7/19/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Naphthalene	ND	0.40		mg/L	200	7/24/2019 11:51:22 AM
1-Methylnaphthalene	ND	0.80		mg/L	200	7/24/2019 11:51:22 AM
2-Methylnaphthalene	ND	0.80		mg/L	200	7/24/2019 11:51:22 AM
Acetone	ND	2.0		mg/L	200	7/24/2019 11:51:22 AM
Bromobenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Bromodichloromethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Bromoform	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Bromomethane	ND	0.60		mg/L	200	7/24/2019 11:51:22 AM
2-Butanone	ND	2.0		mg/L	200	7/24/2019 11:51:22 AM
Carbon disulfide	ND	2.0		mg/L	200	7/24/2019 11:51:22 AM
Carbon Tetrachloride	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Chlorobenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Chloroethane	ND	0.40		mg/L	200	7/24/2019 11:51:22 AM
Chloroform	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Chloromethane	ND	0.60		mg/L	200	7/24/2019 11:51:22 AM
2-Chlorotoluene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
4-Chlorotoluene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
cis-1,2-DCE	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	7/24/2019 11:51:22 AM
Dibromochloromethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Dibromomethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Dichlorodifluoromethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,1-Dichloroethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,1-Dichloroethene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2-Dichloropropane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,3-Dichloropropane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
2,2-Dichloropropane	ND	0.40		mg/L	200	7/24/2019 11:51:22 AM
1,1-Dichloropropene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Hexachlorobutadiene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
2-Hexanone	ND	2.0		mg/L	200	7/24/2019 11:51:22 AM
Isopropylbenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
4-Isopropyltoluene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	7/24/2019 11:51:22 AM
Methylene Chloride	ND	0.60		mg/L	200	7/24/2019 11:51:22 AM

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1907972**
Date Reported: **8/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Manzanares
Lab ID: 1907972-001 **Matrix:** AQUEOUS

Client Sample ID: Manzanares Non Exempt
Collection Date: 7/18/2019 10:17:00 AM
Received Date: 7/19/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**
n-Butylbenzene	ND	0.60		mg/L	200	7/24/2019 11:51:22 AM
n-Propylbenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
sec-Butylbenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Styrene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
tert-Butylbenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	7/24/2019 11:51:22 AM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
trans-1,2-DCE	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Trichloroethene (TCE)	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Trichlorofluoromethane	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	7/24/2019 11:51:22 AM
Vinyl chloride	ND	0.20		mg/L	200	7/24/2019 11:51:22 AM
Xylenes, Total	ND	0.30		mg/L	200	7/24/2019 11:51:22 AM
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	200	7/24/2019 11:51:22 AM
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	200	7/24/2019 11:51:22 AM
Surr: Dibromofluoromethane	86.7	70-130		%Rec	200	7/24/2019 11:51:22 AM
Surr: Toluene-d8	94.9	70-130		%Rec	200	7/24/2019 11:51:22 AM

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

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
PQL	Practical Quanitative Limit
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 Limit

1907972-001D MANXANARES NON EXEMPT
Collected date/time: 07/18/19 10:17

SAMPLE RESULTS - 01
L1121234

ONE LAB. NATIONWIDE

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND	J6	0.00500	1	07/31/2019 11:24	WG1319539

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	6.64	T8	1	07/23/2019 19:44	WG1315812

Sample Narrative:
L1121234-01 WG1315812: 6.64 at 21.3C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	07/23/2019 15:19	WG1315857

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	07/24/2019 10:11	WG1316459

WG1319539

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L1121234-01

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3435948-1 07/31/19 10:57

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

L1120371-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1120371-02 07/31/19 11:02 • (DUP) R3435948-3 07/31/19 11:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Cyanide	U	0.000	1	0.000		20

L1120500-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1120500-01 07/31/19 11:16 • (DUP) R3435948-6 07/31/19 11:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Cyanide	ND	0.00535	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3435948-2 07/31/19 10:58

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.108	108	85.0-115	

L1120371-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1120371-04 07/31/19 11:06 • (MS) R3435948-4 07/31/19 11:07 • (MSD) R3435948-5 07/31/19 11:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	U	0.101	0.0877	101	87.7	1	75.0-125			14.1	20

L1121234-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1121234-01 07/31/19 11:24 • (MS) R3435948-7 07/31/19 11:25

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Reactive Cyanide	0.100	ND	0.0736	73.6	1	75.0-125	J6

WG1315812

Wet Chemistry by Method 4500H+ B-2011

QUALITY CONTROL SUMMARY

L1121234-01

Laboratory Control Sample (LCS)

(LCS) R3433476-1 07/23/19 19:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	9.96	99.6	99.0-101	

Sample Narrative:

LCS: 9.96 at 21.2C

WG1315857

Wet Chemistry by Method 9034-9030B

QUALITY CONTROL SUMMARY

L1121234-01

Method Blank (MB)

(MB) R3433383-1 07/23/19 15:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3433383-2 07/23/19 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Sulfide	0.500	0.500	100	85.0-115	

WG1316459

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1121234-01

L1121497-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1121497-01 07/24/19 10:11 • (DUP) R3433625-2 07/24/19 10:11

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3433625-1 07/24/19 10:11

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	83.7	102	96.0-104	

GLOSSARY OF TERMS

ONE LAB. NATIONWIDE.

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: MB-46311	SampType: MBLK	TestCode: EPA Method 6020: Total Metals							
Client ID: PBW	Batch ID: 46311	RunNo: 61597							
Prep Date: 7/22/2019	Analysis Date: 7/23/2019	SeqNo: 2087649	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Barium	ND	0.0010								
Cadmium	ND	0.0010								
Chromium	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Silver	ND	0.0010								

Sample ID: MSLLLCS-46311	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals							
Client ID: BatchQC	Batch ID: 46311	RunNo: 61597							
Prep Date: 7/22/2019	Analysis Date: 7/23/2019	SeqNo: 2087650	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	92.2	70	130			
Barium	0.0010	0.0010	0.001000	0	102	70	130			
Cadmium	0.0010	0.0010	0.001000	0	102	70	130			
Chromium	0.0011	0.0010	0.001000	0	114	70	130			
Lead	0.0011	0.0010	0.001000	0	113	70	130			
Selenium	ND	0.0010	0.001000	0	83.4	70	130			
Silver	0.0010	0.0010	0.001000	0	101	70	130			

Sample ID: MSLCS-46311	SampType: LCS	TestCode: EPA Method 6020: Total Metals							
Client ID: LCSW	Batch ID: 46311	RunNo: 61597							
Prep Date: 7/22/2019	Analysis Date: 7/23/2019	SeqNo: 2087651	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.048	0.0010	0.05000	0	95.9	80	120			
Barium	0.047	0.0010	0.05000	0	94.7	80	120			
Cadmium	0.050	0.0010	0.05000	0	100	80	120			
Chromium	0.051	0.0010	0.05000	0	101	80	120			
Lead	0.048	0.0010	0.05000	0	95.7	80	120			
Selenium	0.047	0.0010	0.05000	0	94.5	80	120			
Silver	0.048	0.0010	0.05000	0	96.6	80	120			

Sample ID: 1907972-001CMSLL	SampType: MS	TestCode: EPA Method 6020: Total Metals							
Client ID: Manzanares Non Ex	Batch ID: 46311	RunNo: 61597							
Prep Date: 7/22/2019	Analysis Date: 7/23/2019	SeqNo: 2087656	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.051	0.0010	0.05000	0.003747	93.9	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
- PQL Practical Quanitative Limit
- 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: **1907972-001CMSLL** SampType: **MS** TestCode: **EPA Method 6020: Total Metals**

Client ID: **Manzanares Non Ex** Batch ID: **46311** RunNo: **61597**

Prep Date: **7/22/2019** Analysis Date: **7/23/2019** SeqNo: **2087656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.050	0.0010	0.05000	0	101	75	125			
Chromium	0.052	0.0010	0.05000	0.0008084	103	75	125			
Lead	0.047	0.0010	0.05000	0	94.6	75	125			
Selenium	0.046	0.0010	0.05000	0	91.7	75	125			
Silver	0.048	0.0010	0.05000	0	96.3	75	125			

Sample ID: **1907972-001CMSDL** SampType: **MSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **Manzanares Non Ex** Batch ID: **46311** RunNo: **61597**

Prep Date: **7/22/2019** Analysis Date: **7/23/2019** SeqNo: **2087657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.051	0.0010	0.05000	0.003747	94.9	75	125	0.945	20	
Cadmium	0.050	0.0010	0.05000	0	100	75	125	0.442	20	
Chromium	0.051	0.0010	0.05000	0.0008084	101	75	125	1.48	20	
Lead	0.047	0.0010	0.05000	0	94.9	75	125	0.267	20	
Selenium	0.046	0.0010	0.05000	0	91.8	75	125	0.0791	20	
Silver	0.048	0.0010	0.05000	0	96.4	75	125	0.0996	20	

Sample ID: **1907972-001CMSLL** SampType: **MS** TestCode: **EPA Method 6020: Total Metals**

Client ID: **Manzanares Non Ex** Batch ID: **46311** RunNo: **61597**

Prep Date: **7/22/2019** Analysis Date: **7/23/2019** SeqNo: **2087659** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.11	0.0050	0.05000	0.05490	100	75	125			

Sample ID: **1907972-001CMSDL** SampType: **MSD** TestCode: **EPA Method 6020: Total Metals**

Client ID: **Manzanares Non Ex** Batch ID: **46311** RunNo: **61597**

Prep Date: **7/22/2019** Analysis Date: **7/23/2019** SeqNo: **2087660** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.10	0.0050	0.05000	0.05490	95.7	75	125	2.20	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R61636**	RunNo: **61636**
Prep Date:	Analysis Date: **7/24/2019**	SeqNo: **2089113** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.3	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	19	1.0	20.00	0	95.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	88.4	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.5	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.4	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.5	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R61636**	RunNo: **61636**
Prep Date:	Analysis Date: **7/24/2019**	SeqNo: **2089114** 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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R61636**	RunNo: **61636**
Prep Date:	Analysis Date: **7/24/2019**	SeqNo: **2089114** 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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R61636	RunNo: 61636
Prep Date:	Analysis Date: 7/24/2019	SeqNo: 2089114 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	8.8		10.00		88.4	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.6	70	130			
Surr: Dibromofluoromethane	8.7		10.00		86.7	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID: 1907972-001ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES
Client ID: Manzanares Non Ex	Batch ID: R61636	RunNo: 61636
Prep Date:	Analysis Date: 7/24/2019	SeqNo: 2089118 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.3	0.50	4.000	0	83.5	70	130			
Toluene	3.5	0.20	4.000	0	88.4	70	130			
Chlorobenzene	3.7	0.20	4.000	0	93.0	70	130			
1,1-Dichloroethene	3.4	0.20	4.000	0	85.5	67.6	130			
Trichloroethene (TCE)	3.3	0.20	4.000	0	82.3	70	130			
Surr: 1,2-Dichloroethane-d4	1.8		2.000		91.0	70	130			
Surr: 4-Bromofluorobenzene	1.9		2.000		97.3	70	130			
Surr: Dibromofluoromethane	1.8		2.000		88.7	70	130			
Surr: Toluene-d8	1.9		2.000		92.6	70	130			

Sample ID: 1907972-001amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES
Client ID: Manzanares Non Ex	Batch ID: R61636	RunNo: 61636
Prep Date:	Analysis Date: 7/24/2019	SeqNo: 2089119 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.2	0.50	4.000	0	79.8	70	130	4.61	20	
Toluene	3.5	0.20	4.000	0	86.4	70	130	2.27	20	
Chlorobenzene	3.6	0.20	4.000	0	90.2	70	130	3.14	20	
1,1-Dichloroethene	3.3	0.20	4.000	0	82.0	67.6	130	4.18	20	
Trichloroethene (TCE)	3.0	0.20	4.000	0	74.8	70	130	9.45	20	
Surr: 1,2-Dichloroethane-d4	1.8		2.000		87.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.9		2.000		94.7	70	130	0	0	
Surr: Dibromofluoromethane	1.8		2.000		89.0	70	130	0	0	
Surr: Toluene-d8	1.9		2.000		93.5	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: **mb-46349**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBW**	Batch ID: **46349**	RunNo: **61804**
Prep Date: **7/24/2019**	Analysis Date: **7/31/2019**	SeqNo: **2095206** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	73		87.60		83.9	20.4	126			
Surr: Benzo(e)pyrene	19		20.00		95.8	21.4	126			

Sample ID: **lcs-46349**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **46349**	RunNo: **61804**
Prep Date: **7/24/2019**	Analysis Date: **7/31/2019**	SeqNo: **2095207** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	18	0.50	20.00	0	88.6	29.6	105			
1-Methylnaphthalene	18	1.0	20.00	0	87.8	33.4	112			
2-Methylnaphthalene	20	1.0	20.00	0	97.7	28.6	108			
Acenaphthylene	17	0.50	20.00	0	87.1	35.7	116			
Acenaphthene	16	0.50	20.00	0	80.6	32.4	118			
Fluorene	18	0.50	20.00	0	88.7	35.6	118			
Phenanthrene	18	0.50	20.00	0	89.1	36.3	130			
Anthracene	18	0.50	20.00	0	88.0	34.8	135			
Fluoranthene	18	0.50	20.00	0	90.9	41	136			
Pyrene	17	0.50	20.00	0	86.9	44.8	136			
Benz(a)anthracene	17	0.50	20.00	0	84.9	41.1	136			
Chrysene	15	0.50	20.00	0	73.0	37.9	132			
Benzo(b)fluoranthene	22	0.50	20.00	0	109	39	144			

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: lcs-46349	SampType: LCS	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSW	Batch ID: 46349	RunNo: 61804							
Prep Date: 7/24/2019	Analysis Date: 7/31/2019	SeqNo: 2095207	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	22	0.50	20.00	0	108	40	144			
Benzo(a)pyrene	22	0.50	20.00	0	110	36.8	137			
Dibenz(a,h)anthracene	20	0.50	20.00	0	99.2	31.5	141			
Benzo(g,h,i)perylene	23	0.50	20.00	0	115	32.9	138			
Indeno(1,2,3-cd)pyrene	23	0.50	20.00	0	115	40.9	143			
Surr: N-hexadecane	75		87.60		86.1	20.4	126			
Surr: Benzo(e)pyrene	20		20.00		101	21.4	126			

Sample ID: lcsd-46349	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 46349	RunNo: 61804							
Prep Date: 7/24/2019	Analysis Date: 7/31/2019	SeqNo: 2095208	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	17	0.50	20.00	0	85.7	29.6	105	3.33	68.7	
1-Methylnaphthalene	17	1.0	20.00	0	85.3	33.4	112	2.89	66	
2-Methylnaphthalene	18	1.0	20.00	0	89.8	28.6	108	8.43	68.7	
Acenaphthylene	15	0.50	20.00	0	77.3	35.7	116	11.9	64.9	
Acenaphthene	13	0.50	20.00	0	67.2	32.4	118	18.1	53.2	
Fluorene	15	0.50	20.00	0	77.4	35.6	118	13.6	62.4	
Phenanthrene	16	0.50	20.00	0	82.4	36.3	130	7.81	62.6	
Anthracene	16	0.50	20.00	0	79.9	34.8	135	9.65	62.4	
Fluoranthene	17	0.50	20.00	0	84.3	41	136	7.53	59.4	
Pyrene	16	0.50	20.00	0	80.5	44.8	136	7.65	55.4	
Benz(a)anthracene	16	0.50	20.00	0	77.8	41.1	136	8.73	56.6	
Chrysene	14	0.50	20.00	0	68.6	37.9	132	6.21	51.9	
Benzo(b)fluoranthene	19	0.50	20.00	0	93.8	39	144	15.0	59.1	
Benzo(k)fluoranthene	19	0.50	20.00	0	97.0	40	144	11.1	57	
Benzo(a)pyrene	18	0.50	20.00	0	89.5	36.8	137	20.6	60.2	
Dibenz(a,h)anthracene	18	0.50	20.00	0	88.0	31.5	141	12.0	64.7	
Benzo(g,h,i)perylene	21	0.50	20.00	0	103	32.9	138	11.5	61.5	
Indeno(1,2,3-cd)pyrene	21	0.50	20.00	0	103	40.9	143	11.2	61.1	
Surr: N-hexadecane	66		87.60		75.9	20.4	126	0	0	
Surr: Benzo(e)pyrene	17		20.00		85.0	21.4	126	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907972

01-Aug-19

Client: Souder, Miller and Associates

Project: Manzanares

Sample ID: **MB-46307**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW**	Batch ID: **46307**	RunNo: **61563**
Prep Date: **7/22/2019**	Analysis Date: **7/22/2019**	SeqNo: **2086444** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-46307**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW**	Batch ID: **46307**	RunNo: **61563**
Prep Date: **7/22/2019**	Analysis Date: **7/22/2019**	SeqNo: **2086445** 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	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
PQL	Practical Quanitative Limit
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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1907972 RcptNo: 1

Received By: Desiree Dominguez 7/19/2019 8:00:00 AM

Completed By: Anne Thorne 7/19/2019 11:16:51 AM

Reviewed By: YG 7/19/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

# of preserved bottles checked for pH: 1:2 (<2 or >12 unless noted)
Adjusted? NO
Checked by: DAD 7/19/19

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

Client: OMA

Mailing Address: 401 W Broadway Farmington NM 87401

Phone #: 505 325 7535

email or Fax#: ashley maxwell

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Manzanares

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.0-0.4=0.6°c

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	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1907972	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI
7/18/19	10:17	Aqueous	~~Manzanares~~	Vonals	Vonals	- 001					X	X		X			X
			Manzanares			-cd											
			Non Exempt														

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/18/19	1610				7/18/19	1610
7/18/19	1810			Courier	7/19/19	8:00

Remarks: 8260 Full List
TCLP Compound at TCLP Limits
Invoice Enterprise CC Tom Long

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.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 284146

COMMENTS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID: 247130
	Action Number: 284146
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	Quarterly Waste Analyses Information 2019 Submittal	11/8/2023

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 284146

CONDITIONS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID: 247130
	Action Number: 284146
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
cchavez	Condition of Approval: 1. Follow Discharge Permit Quarterly Report Guidelines, Content, and Deadline Date for submittal of future reports.	11/8/2023