BW - ___35_____

MONITORING WELL(s)

Chavez, Carl J, EMNRD

From: Christopher Cortez <chris@atkinseng.com>
Sent: Tuesday, May 8, 2018 4:17 PM
To: Chavez, Carl J, EMNRD; darrangell@gmail.com
Cc: Andrew Martin
Subject: Siringo ACS State Brine Well No. 1 2018-05-08_HEAL_LabReport-Final
Attachments: 2018-05-08_HEAL_LabReport-Final.pdf

Importance: High

Carl,

Attached please find the updated and final HEAL lab report which include the radionuclide results.

If you have any questions, please contact me.

Thanks,

Chris Cortez
| 575.624.2420 x 203 | 575.914.0174 mobile
Atkins Engineering Associates, Inc. | 2904 W 2nd St, Roswell, NM 88201

Your message is ready to be sent with the following file or link attachments:

2018-05-08_HEAL_LabReport-Final

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

May 08, 2018

Christopher Cortez

Atkins Engineering Associates
2904 West Second Street
Roswell, NM 88201
TEL: (575) 624-2420
FAX (575) 624-2421

RE: Siringo OrderNo.: 1804B71

Dear Christopher Cortez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/24/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: 20180423-Siringo
Project: Siringo
Collection Date: 4/23/2018 11:37:00 AM
Lab ID: 1804B71-001 **Matrix:** AQUEOUS **Received Date:** 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBK**	
Arsenic	0.0036	0.0010		mg/L	1	4/25/2018 4:40:47 PM	B50833
Lead	ND	0.00050		mg/L	1	4/25/2018 4:40:47 PM	B50833
Selenium	0.0035	0.0010		mg/L	1	4/25/2018 4:40:47 PM	B50833
Uranium	0.0042	0.00050		mg/L	1	4/25/2018 4:40:47 PM	B50833
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	0.78	0.10		mg/L	1	4/24/2018 1:54:15 PM	R50822
Chloride	250	10		mg/L	20	4/24/2018 2:07:07 PM	R50822
Nitrogen, Nitrate (As N)	3.2	0.10		mg/L	1	4/24/2018 1:54:15 PM	R50822
Sulfate	72	10		mg/L	20	4/24/2018 2:07:07 PM	R50822
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **sat**	
Total Dissolved Solids	794	40.0	*D	mg/L	1	4/26/2018 1:21:00 PM	37787
SM4500-H+B / 9040C: PH						Analyst: **JRR**	
pH	7.61		H	pH units	1	4/26/2018 2:21:34 PM	R50879
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **pmf**	
Aluminum	ND	0.020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Barium	0.12	0.0020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Boron	0.16	0.040		mg/L	1	4/26/2018 3:07:19 PM	A50835
Cadmium	ND	0.0020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Chromium	ND	0.0060		mg/L	1	4/26/2018 3:07:19 PM	A50835
Cobalt	ND	0.0060		mg/L	1	4/26/2018 3:07:19 PM	A50835
Copper	ND	0.0060		mg/L	1	4/26/2018 3:07:19 PM	A50835
Iron	ND	0.020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Manganese	0.019	0.0020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Molybdenum	0.016	0.0080		mg/L	1	4/26/2018 3:07:19 PM	A50835
Nickel	ND	0.010		mg/L	1	4/26/2018 3:07:19 PM	A50835
Silver	ND	0.0050		mg/L	1	4/26/2018 3:07:19 PM	A50835
Zinc	ND	0.010		mg/L	1	4/26/2018 3:07:19 PM	A50835
EPA METHOD 245.1: MERCURY						Analyst: **rde**	
Mercury	ND	0.00020		mg/L	1	4/27/2018 9:49:41 AM	37814
EPA METHOD 8011/504.1: EDB						Analyst: **JME**	
1,2-Dibromoethane	ND	0.0095		µg/L	1	4/25/2018 10:27:16 PM	37781
EPA METHOD 8082A: PCB'S						Analyst: **TOM**	
Aroclor 1016	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1221	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1232	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1242	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: 20180423-Siringo
Project: Siringo
Collection Date: 4/23/2018 11:37:00 AM
Lab ID: 1804B71-001 **Matrix:** AQUEOUS **Received Date:** 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8082A: PCB'S						Analyst: **TOM**	
Aroclor 1248	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1254	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1260	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Surr: Decachlorobiphenyl	76.0	34.1-101		%Rec	1	4/30/2018 12:27:00 PM	37763
Surr: Tetrachloro-m-xylene	57.2	22.9-104		%Rec	1	4/30/2018 12:27:00 PM	37763
EPA METHOD 8310: PAHS						Analyst: **TOM**	
Naphthalene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
1-Methylnaphthalene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
2-Methylnaphthalene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
Acenaphthylene	ND	2.5		µg/L	1	4/26/2018 1:34:00 PM	37765
Acenaphthene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
Fluorene	ND	0.80		µg/L	1	4/26/2018 1:34:00 PM	37765
Phenanthrene	ND	0.60		µg/L	1	4/26/2018 1:34:00 PM	37765
Anthracene	ND	0.60		µg/L	1	4/26/2018 1:34:00 PM	37765
Fluoranthene	ND	0.30		µg/L	1	4/26/2018 1:34:00 PM	37765
Pyrene	ND	0.30		µg/L	1	4/26/2018 1:34:00 PM	37765
Benz(a)anthracene	ND	0.070		µg/L	1	4/26/2018 1:34:00 PM	37765
Chrysene	ND	0.20		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(a)pyrene	ND	0.070		µg/L	1	4/26/2018 1:34:00 PM	37765
Dibenz(a,h)anthracene	ND	0.12		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(g,h,i)perylene	ND	0.12		µg/L	1	4/26/2018 1:34:00 PM	37765
Indeno(1,2,3-cd)pyrene	ND	0.25		µg/L	1	4/26/2018 1:34:00 PM	37765
Surr: Benzo(e)pyrene	71.2	52-133		%Rec	1	4/26/2018 1:34:00 PM	37765
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Toluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Ethylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Naphthalene	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Acetone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: 20180423-Siringo
Project: Siringo
Collection Date: 4/23/2018 11:37:00 AM
Lab ID: 1804B71-001 **Matrix:** AQUEOUS **Received Date:** 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Bromobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Bromodichloromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Bromoform	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Bromomethane	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Butanone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Carbon disulfide	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Carbon Tetrachloride	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chloroethane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chloroform	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chloromethane	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
4-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
cis-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Dibromochloromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Dibromomethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1-Dichloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1-Dichloroethene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,3-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2,2-Dichloropropane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Hexachlorobutadiene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Hexanone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Isopropylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
4-Isopropyltoluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
4-Methyl-2-pentanone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Methylene Chloride	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
n-Butylbenzene	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
n-Propylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
sec-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Styrene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
tert-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: 20180423-Siringo
Project: Siringo
Collection Date: 4/23/2018 11:37:00 AM
Lab ID: 1804B71-001
Matrix: AQUEOUS
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
trans-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Trichlorofluoromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Vinyl chloride	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Xylenes, Total	ND	1.5		µg/L	1	4/24/2018 2:37:57 PM	A50817
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
Surr: Dibromofluoromethane	96.1	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
Surr: Toluene-d8	92.3	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
TOTAL PHENOLICS BY SW-846 9067						Analyst: **MAB**	
Phenolics	7.3	2.5	E	µg/L	1	4/30/2018	37840

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

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: Trip Blank
Project: Siringo
Collection Date:
Lab ID: 1804B71-002
Matrix: TRIP BLANK
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst: **JME**	
1,2-Dibromoethane	ND	0.0095		µg/L	1	4/25/2018 10:42:21 PM	37781
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Toluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Ethylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Naphthalene	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Acetone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromodichloromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromoform	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromomethane	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Butanone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Carbon disulfide	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Carbon Tetrachloride	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chloroethane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chloroform	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chloromethane	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
4-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
cis-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Dibromochloromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Dibromomethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1-Dichloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1-Dichloroethene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: Trip Blank
Project: Siringo
Collection Date:
Lab ID: 1804B71-002
Matrix: TRIP BLANK
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2,2-Dichloropropane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Hexachlorobutadiene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Hexanone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Isopropylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
4-Isopropyltoluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
4-Methyl-2-pentanone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Methylene Chloride	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
n-Butylbenzene	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
n-Propylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
sec-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Styrene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
tert-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
trans-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Trichlorofluoromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Vinyl chloride	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Xylenes, Total	ND	1.5		µg/L	1	4/24/2018 3:07:15 PM	A50817
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817
Surr: Dibromofluoromethane	100	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817
Surr: Toluene-d8	90.6	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817

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

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180426027
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1804B71
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180426027-001	**Sampling Date**	4/23/2018	**Date/Time Received**	4/26/2018 10:52 AM
Client Sample ID	1804B71-0011 / 20180423-SIRINGO				
Matrix	Water	**Sampling Time**	11:37 AM		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	4/27/2018	RPU	EPA 335.4	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180426027
Project Name: 1804B71

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.529	mg/L	0.5	105.8	90-110	4/27/2018	4/27/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180423005-003	Cyanide	ND	0.506	mg/L	0.5	101.2	80-120	4/27/2018	4/27/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.509	mg/L	0.5	101.8	0.6	0-20	4/27/2018	4/27/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	4/27/2018	4/27/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180426027
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1804B71
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180426027-002	**Sampling Date**	4/23/2018	**Date/Time Received**	4/26/2018 10:52 AM
Client Sample ID	1804B71-001J / 20180423-SIRINGO			**Extraction Date**	4/26/2018
Matrix	Water	**Sampling Time**	11:37 AM		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Methanol	ND	mg/L	50	4/26/2018	GGH	GC/FID	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E87099

Anatek Labs, Inc.

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180426027
Project Name: 1804B71

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Methanol	262	mg/L	250	104.8	60-140	4/26/2018	4/27/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180426027-002	Methanol	ND	277	mg/L	250	110.8	60-140	4/26/2018	4/27/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Methanol	267	mg/L	250	106.8	3.7	0-25	4/26/2018	4/27/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Methanol	ND	mg/L	25	4/26/2018	4/27/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C535; MT Cert0095; FL(NELAP): E871099

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www.pacelabs.com

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1804B71
Pace Project No.: 30250818

Sample: 1804B71-001H/20180423-Siringo **Lab ID: 30250818001** Collected: 04/23/18 11:37 Received: 04/26/18 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**1.03 ± 0.651 (0.736) C:NA T:92%**	pCi/L	05/07/18 12:07	13982-63-3	
Radium-228	EPA 904.0	**1.35 ± 0.552 (0.885) C:75% T:74%**	pCi/L	05/07/18 12:21	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 1804B71
Pace Project No.: 30250818

QC Batch: 296654
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Associated Lab Samples: 30250818001

METHOD BLANK: 1452086
Matrix: Water
Associated Lab Samples: 30250818001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.185 ± 0.512 (0.993) C:NA T:86%	pCi/L	05/07/18 11:54	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 1804B71
Pace Project No.: 30250818

QC Batch: 296658 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 30250818001

METHOD BLANK: 1452092 Matrix: Water
Associated Lab Samples: 30250818001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.325 ± 0.288 (0.577) C:83% T:84%	pCi/L	05/07/18 12:22	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 1804B71
Pace Project No.: 30250818

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651077** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651080** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	116	50	150			
Barium	ND	0.0020	0.002000	0	93.5	50	150			
Boron	ND	0.040	0.04000	0	93.0	50	150			
Cadmium	0.0021	0.0020	0.002000	0	103	50	150			
Chromium	ND	0.0060	0.006000	0	98.8	50	150			
Cobalt	ND	0.0060	0.006000	0	98.5	50	150			
Copper	ND	0.0060	0.006000	0	80.3	50	150			
Iron	0.021	0.020	0.02000	0	103	50	150			
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Molybdenum	0.0081	0.0080	0.008000	0	101	50	150			
Nickel	ND	0.010	0.005000	0	88.6	50	150			
Silver	ND	0.0050	0.005000	0	91.6	50	150			
Zinc	ND	0.010	0.005000	0	126	50	150			

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651082** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.57	0.020	0.5000	0	115	85	115			
Barium	0.51	0.0020	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651082** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.52	0.040	0.5000	0	104	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Chromium	0.51	0.0060	0.5000	0	103	85	115			
Cobalt	0.50	0.0060	0.5000	0	99.4	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Manganese	0.52	0.0020	0.5000	0	105	85	115			
Molybdenum	0.52	0.0080	0.5000	0	103	85	115			
Nickel	0.50	0.010	0.5000	0	100	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.13	0.0050	0.1000	0	129	85	115			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B50833**	RunNo: **50833**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B50833**	RunNo: **50833**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649658** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	93.1	50	150			
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Selenium	ND	0.0010	0.001000	0	92.8	50	150			
Uranium	ND	0.00050	0.0005000	0	91.5	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B50833**	RunNo: **50833**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649659** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.6	85	115			
Lead	0.013	0.00050	0.01250	0	104	85	115			
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	93.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID	**MB-37814**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**37814**	RunNo:	**50885**					
Prep Date:	**4/26/2018**	Analysis Date:	**4/27/2018**	SeqNo:	**1651634**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-37814**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**37814**	RunNo:	**50885**					
Prep Date:	**4/26/2018**	Analysis Date:	**4/27/2018**	SeqNo:	**1651635**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	101	80	120			

Sample ID	**1804B71-001FMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**20180423-Siringo**	Batch ID:	**37814**	RunNo:	**50885**					
Prep Date:	**4/26/2018**	Analysis Date:	**4/27/2018**	SeqNo:	**1651659**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0.0001114	103	75	125			

Sample ID	**1804B71-001FMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**20180423-Siringo**	Batch ID:	**37814**	RunNo:	**50885**					
Prep Date:	**4/26/2018**	Analysis Date:	**4/27/2018**	SeqNo:	**1651660**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0.0001114	101	75	125	1.68	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#: **1804B71**
08-May-18

Client: Atkins Engineering Associates
Project: Siringo

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R50822**	RunNo: **50822**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1649372** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R50822**	RunNo: **50822**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1649373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.6	0.50	5.000	0	92.2	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	94.1	90	110			
Sulfate	9.1	0.50	10.00	0	90.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID	**MB-37781**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**37781**	RunNo:	**50838**					
Prep Date:	**4/25/2018**	Analysis Date:	**4/25/2018**	SeqNo:	**1649761**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-37781**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**37781**	RunNo:	**50838**					
Prep Date:	**4/25/2018**	Analysis Date:	**4/25/2018**	SeqNo:	**1649846**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.086	0.010	0.1000	0	86.2	70	130			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID	**MB-37763**	SampType:	**MBLK**	TestCode:	**EPA Method 8082A: PCB's**					
Client ID:	**PBW**	Batch ID:	**37763**	RunNo:	**50910**					
Prep Date:	**4/24/2018**	Analysis Date:	**4/30/2018**	SeqNo:	**1652878**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	1.7		2.500		68.4	34.1	101			
Surr: Tetrachloro-m-xylene	1.4		2.500		55.2	22.9	104			

Sample ID	**LCS-37763**	SampType:	**LCS**	TestCode:	**EPA Method 8082A: PCB's**					
Client ID:	**LCSW**	Batch ID:	**37763**	RunNo:	**50910**					
Prep Date:	**4/24/2018**	Analysis Date:	**4/30/2018**	SeqNo:	**1652954**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	3.6	1.0	5.000	0	72.2	33.4	137			
Aroclor 1260	4.3	1.0	5.000	0	86.8	27.4	141			
Surr: Decachlorobiphenyl	4.7		5.000		94.0	34.1	101			
Surr: Tetrachloro-m-xylene	3.4		5.000		67.0	22.9	104			

Sample ID	**LCSD-37763**	SampType:	**LCSD**	TestCode:	**EPA Method 8082A: PCB's**					
Client ID:	**LCSS02**	Batch ID:	**37763**	RunNo:	**50910**					
Prep Date:	**4/24/2018**	Analysis Date:	**4/30/2018**	SeqNo:	**1652966**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	4.0	1.0	5.000	0	79.2	33.4	137	9.25	17.9	
Aroclor 1260	4.7	1.0	5.000	0	93.8	27.4	141	7.75	16.2	
Surr: Decachlorobiphenyl	2.2		2.500		88.4	34.1	101	0	0	
Surr: Tetrachloro-m-xylene	1.3		2.500		50.4	22.9	104	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648442** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648442** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648443** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Toluene	19	1.0	20.00	0	94.8	70	130			
Chlorobenzene	19	1.0	20.00	0	96.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648443** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **MB-37765**	SampType: **MBLK**	TestCode: **EPA Method 8310: PAHs**
Client ID: **PBW**	Batch ID: **37765**	RunNo: **50850**
Prep Date: **4/24/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650817** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	2.0								
2-Methylnaphthalene	ND	2.0								
Acenaphthylene	ND	2.5								
Acenaphthene	ND	2.0								
Fluorene	ND	0.80								
Phenanthrene	ND	0.60								
Anthracene	ND	0.60								
Fluoranthene	ND	0.30								
Pyrene	ND	0.30								
Benz(a)anthracene	ND	0.070								
Chrysene	ND	0.20								
Benzo(b)fluoranthene	ND	0.10								
Benzo(k)fluoranthene	ND	0.070								
Benzo(a)pyrene	ND	0.070								
Dibenz(a,h)anthracene	ND	0.12								
Benzo(g,h,i)perylene	ND	0.12								
Indeno(1,2,3-cd)pyrene	ND	0.25								
Surr: Benzo(e)pyrene	15		20.00		77.4	52	133			

Sample ID **LCS-37765**	SampType: **LCS**	TestCode: **EPA Method 8310: PAHs**
Client ID: **LCSW**	Batch ID: **37765**	RunNo: **50850**
Prep Date: **4/24/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650819** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	43	2.0	80.00	0	53.4	35.5	118			
1-Methylnaphthalene	44	2.0	80.20	0	54.5	35.5	119			
2-Methylnaphthalene	44	2.0	80.00	0	54.5	32.4	122			
Acenaphthylene	48	2.5	80.20	0	59.7	47.6	128			
Acenaphthene	47	2.0	80.00	0	59.2	43.7	112			
Fluorene	4.9	0.80	8.020	0	61.3	45.9	113			
Phenanthrene	2.6	0.60	4.020	0	63.7	52.7	114			
Anthracene	2.8	0.60	4.020	0	70.6	54.1	127			
Fluoranthene	5.7	0.30	8.020	0	71.2	59.1	116			
Pyrene	5.8	0.30	8.020	0	72.2	55.2	105			
Benz(a)anthracene	0.60	0.070	0.8020	0	74.8	52.9	126			
Chrysene	2.9	0.20	4.020	0	72.1	50.6	120			
Benzo(b)fluoranthene	0.70	0.10	1.002	0	69.9	49.7	118			
Benzo(k)fluoranthene	0.37	0.070	0.5000	0	74.0	54.5	119			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID **LCS-37765**	SampType: **LCS**	TestCode: **EPA Method 8310: PAHs**
Client ID: **LCSW**	Batch ID: **37765**	RunNo: **50850**
Prep Date: **4/24/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650819** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(a)pyrene	0.38	0.070	0.5020	0	75.7	49.8	120			
Dibenz(a,h)anthracene	0.74	0.12	1.002	0	73.9	52.5	126			
Benzo(g,h,i)perylene	0.74	0.12	1.000	0	74.0	52.3	120			
Indeno(1,2,3-cd)pyrene	1.4	0.25	2.004	0	71.9	46.8	114			
Surr: Benzo(e)pyrene	15		20.00		77.4	52	133			

Sample ID **LCSD-37765**	SampType: **LCSD**	TestCode: **EPA Method 8310: PAHs**
Client ID: **LCSS02**	Batch ID: **37765**	RunNo: **50850**
Prep Date: **4/24/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650820** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	41	2.0	80.00	0	50.8	35.5	118	4.99	19.8	
1-Methylnaphthalene	42	2.0	80.20	0	51.8	35.5	119	5.14	19.9	
2-Methylnaphthalene	41	2.0	80.00	0	51.4	32.4	122	5.76	19.4	
Acenaphthylene	46	2.5	80.20	0	57.0	47.6	128	4.53	22	
Acenaphthene	46	2.0	80.00	0	57.2	43.7	112	3.35	20.2	
Fluorene	4.6	0.80	8.020	0	58.0	45.9	113	5.64	18.9	
Phenanthrene	2.2	0.60	4.020	0	56.0	52.7	114	12.9	21	
Anthracene	2.6	0.60	4.020	0	65.2	54.1	127	8.06	19.3	
Fluoranthene	5.5	0.30	8.020	0	68.6	59.1	116	3.75	18.9	
Pyrene	5.6	0.30	8.020	0	69.8	55.2	105	3.34	19.7	
Benz(a)anthracene	0.57	0.070	0.8020	0	71.1	52.9	126	5.13	20.1	
Chrysene	2.8	0.20	4.020	0	69.7	50.6	120	3.51	18.8	
Benzo(b)fluoranthene	0.69	0.10	1.002	0	68.9	49.7	118	1.44	19	
Benzo(k)fluoranthene	0.35	0.070	0.5000	0	70.0	54.5	119	5.56	22.1	
Benzo(a)pyrene	0.36	0.070	0.5020	0	71.7	49.8	120	5.41	24.1	
Dibenz(a,h)anthracene	0.73	0.12	1.002	0	72.9	52.5	126	1.36	21.8	
Benzo(g,h,i)perylene	0.72	0.12	1.000	0	72.0	52.3	120	2.74	21.2	
Indeno(1,2,3-cd)pyrene	1.4	0.25	2.004	0	70.4	46.8	114	2.11	19.9	
Surr: Benzo(e)pyrene	14		20.00		71.4	52	133	0		

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID	**MB-37840**	SampType: **MBLK**		TestCode: **Total Phenolics by SW-846 9067**						
Client ID:	**PBW**	Batch ID: **37840**		RunNo: **50919**						
Prep Date:	**4/30/2018**	Analysis Date: **4/30/2018**		SeqNo: **1653063**		Units: **µg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics		ND	2.5								E

Sample ID	**LCS-37840**	SampType: **LCS**		TestCode: **Total Phenolics by SW-846 9067**						
Client ID:	**LCSW**	Batch ID: **37840**		RunNo: **50919**						
Prep Date:	**4/30/2018**	Analysis Date: **4/30/2018**		SeqNo: **1653064**		Units: **µg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics		6.3	2.5	20.00	0	31.3	67.8	139			SE

Sample ID	**LCSD-37840**	SampType: **LCSD**		TestCode: **Total Phenolics by SW-846 9067**						
Client ID:	**LCSS02**	Batch ID: **37840**		RunNo: **50919**						
Prep Date:	**4/30/2018**	Analysis Date: **4/30/2018**		SeqNo: **1653065**		Units: **µg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics		15	2.5	20.00	0	75.9	67.8	139	83.1	21	RE

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

08-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID	**MB-37787**	SampType:	**MBLK**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**PBW**	Batch ID:	**37787**	RunNo:	**50861**					
Prep Date:	**4/25/2018**	Analysis Date:	**4/26/2018**	SeqNo:	**1650414**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-37787**	SampType:	**LCS**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**LCSW**	Batch ID:	**37787**	RunNo:	**50861**					
Prep Date:	**4/25/2018**	Analysis Date:	**4/26/2018**	SeqNo:	**1650415**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	983	20.0	1000	0	98.3	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

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: ATK | Work Order Number: 1804B71 | RcptNo: 1

Received By: Erin Melendrez 4/24/2018 9:00:00 AM

Completed By: Michelle Garcia 4/24/2018 9:32:00 AM Michelle Garcia

Reviewed By: JMO 4/24/18 MW 4/24/18

Chain of Custody

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

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 ☑ MW 04/24/18
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: 5/1 (<2 or >12 unless noted)

Adjusted? NO

Checked by: MW

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	0.8	Good	Yes			

Chain-of-Custody Record

Client: Atkins Engineering Associates, Inc.

Mailing Address: 2904 W 2ND ST
Roswell NM 88201

Phone #: 575-624-2420

email or Fax#: sampling@atkinseng.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush 4/27/18

Project Name:
Syringo

Project #:
1dsrin

Project Manager:
Christopher Carter

Sampler: ZA / KR

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.8

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 Request ID	Container Type and #	Preservative Type	HEAL No. 1804871	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	General Chemistry	Methanol	CATION/ANION	NMAC 20.6.2.3103	Air Bubbles (Y or N)
4/23/18	11:37	AQ	20180423-Syringo	varies	varies	001												X	X	X	X	
			Trip Blank my			002																

Date:	Time:	Relinquished by:	Received by:	Date	Time
04/23/18	1700		Fedex 4/24/18 ENV	04/24/18	0900
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
See EMAL ENCLOSED
NMAC LIST plus methanol via 8015B
Total Bottles: 19 + 3 trip blank

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.

Chris

A. **Human Health Standards**-Ground water shall meet the standards of Subsection A and section unless otherwise provided. If more than one water contaminant affecting human health is present, pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the con of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floa of or immersed within ground water, as can be reasonably measured.

(1)	Arsenic (As)	0.1 mg/l
(2)	Barium (Ba)	1.0 mg/l
(3)	Cadmium (Cd)	0.01 mg/l
(4)	Chromium (Cr)	0.05 mg/l
(5)	Cyanide (CN)	0.2 mg/l
(6)	Fluoride (F)	1.6 mg/l
(7)	Lead (Pb)	0.05 mg/l
(8)	Total Mercury (Hg)	0.002 mg/l
(9)	Nitrate (NO_3 as N)	10.0 mg/l
(10)	Selenium (Se)	0.05 mg/l
(11)	Silver (Ag)	0.05 mg/l
(12)	Uranium (U)	0.03 mg/l
(13)	Radioactivity: Combined Radium-226 & Radium-228	30 pCi/l
(14)	Benzene	0.01 mg/l
(15)	Polychlorinated biphenyls (PCB's)	0.001 mg/l
(16)	Toluene	0.75 mg/l

20.6.2 NMAC

(17) Carbon Tetrachloride.....0.01 mg/l
(18) 1,2-dichloroethane (EDC).....0.01 mg/l
(19) 1,1-dichloroethylene (1,1-DCE).....0.005 mg/l
(20) 1,1,2,2-tetrachloroethylene (PCE).....0.02 mg/l
(21) 1,1,2-trichloroethylene (TCE).....0.1 mg/l
(22) ethylbenzene.....0.75 mg/l
(23) total xylenes.....0.62 mg/l
(24) methylene chloride.....0.1 mg/l
(25) chloroform.....0.1 mg/l
(26) 1,1-dichloroethane.....0.025 mg/l
(27) ethylene dibromide (EDB).....0.0001 mg/l
(28) 1,1,1-trichloroethane.....0.06 mg/l
(29) 1,1,2-trichloroethane.....0.01 mg/l
(30) 1,1,2,2-tetrachloroethane.....0.01 mg/l
(31) vinyl chloride.....0.001 mg/l
(32) PAHs: total naphthalene plus monomethylnaphthalenes.....0.03 mg/l
(33) benzo-a-pyrene.....0.0007 mg/l

B. Other Standards for Domestic Water Supply

(1) Chloride (Cl).....250.0 mg/l
(2) Copper (Cu).....1.0 mg/l
(3) Iron (Fe).....1.0 mg/l
(4) Manganese (Mn).....0.2 mg/l
(6) Phenols.....0.005 mg/l
(7) Sulfate (SO_4).....600.0 mg/l
(8) Total Dissolved Solids (TDS).....1000.0 mg/l
(9) Zinc (Zn).....10.0 mg/l
(10) pH.....between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, nd C of this section unless otherwise provided.

(1) Aluminum (Al).....5.0 mg/l
(2) Boron (B).....0.75 mg/l
(3) Cobalt (Co).....0.05 mg/l
(4) Molybdenum (Mo).....1.0 mg/l
(5) Nickel (Ni).....0.2 mg/l

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-
41

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, May 4, 2018 1:22 PM
To: 'Christopher Cortez'; darrangell@gmail.com
Cc: Griswold, Jim, EMNRD; Griswold, Jim, EMNRD
Subject: RE: 2018-05-04_Siringo ACS State Brine Well No. 1_MonitorWellInstallReport.pdf (BW-35)

Mr. Cortez:

The New Mexico Oil Conservation Division (OCD) is in receipt of the above subject information with attachments and will update its administrative record today.

Thank you for the great communication on this discharge permit condition.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Christopher Cortez <chris@atkinseng.com>
Sent: Friday, May 4, 2018 10:48 AM
To: darrangell@gmail.com
Cc: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Subject: 2018-05-04_Siringo ACS State Brine Well No. 1_MonitorWellInstallReport.pdf
Importance: High

All,

See attached for the Siringo ACS State Brine Well No 1. , monitor well install report. Carl as discussed earlier this week, the partial HEAL results are included. HALL is awaiting the radionuclide results from its subcontracted lab.

As soon as those results become available, I will forward them to you

Contact me with any questions,

Thanks,

Chris

Christopher R. Cortez | Operations Manager
NM Licensed Drill Rig Supervisor for WD #1249
Atkins Engineering Associates Inc.
2904 W 2nd St | Roswell, NM 88201
Office 575.624.2420 | Mobile 575.914.0174
chris@atkinseng.com

ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

05/04/2018

Darr Angell
Llano Disposal, LLC
PO Box 250
Lovington, NM 88260

Transmitted via email to Dar Angell at darrangell@gmail.com.

Re: Monitor Well Installation Report at the Siringo ACS State Brine Well No. 1, Section 26, T-17-S, R-36-E, Lea County, New Mexico.

Mr. Angell,

Atkins Engineering Associates Inc. (AEA) is pleased to submit this Monitor Well Installation Report at the Siringo ACS State Brine Well No. 1 located in Section 26, Township 17 South, Range 36 East, Lea County, New Mexico.

Permitting

On March 30, 2018, AEA submitted an *Application for Permit to Drill a Well with No Water Right* to the District II Office of the State Engineer (DII OSE). AEA received the OSE permit for L-14453 POD1 on April 10, 2018. A copy of the permit is in Appendix B: Permits and Reports.

Field Work

The week of April 17, 2018, AEA mobilized to the site and advanced one soil boring to approximately 59 feet below ground surface (bgs) using 4.25-inch inside diameter hollow stem augers. The boring was converted to site monitor well MW-1 using 15 feet of 2-inch schedule 40 PVC 0.020 slot screen and enough 2-inch schedule 40 PVC riser to get above land surface. 12/20 silica sand pack was placed inside the annular space from total depth to 2 feet above the PVC screened interval. Prior to the placement of a 3-foot layer of hydrated bentonite, AEA personnel developed the well to allow the silica sand to“settle and added silica as necessary. The remaining annular space was grouted with neat cement to approximately 2 feet bgs. The surface completion consisted of 5000 psi Quikrete, a 4”x4”x5’ standup vault, 2-inch locking J-Plug, and bollards. Please see the provided log in Appendix A for well construction details.

On April 23, 2018, AEA technicians, under the direction of Ryan C. Cortez, a New Mexico Licensed Professional Surveyor, conducted a survey of monitoring well MW-1 and the Brine Well. The horizontal positions and elevations were established using a Topcon GR-5 base and receiver. Horizontal coordinates are reported in US Survey Feet NAD 83 New Mexico State Plane East Grid Coordinates, scaled to ground with a combined scale factor of 1.00016239637. Latitude and Longitude are reported in NAD 83 decimal degrees. Elevations were determined using GPS RTK observations tied to Static GPS observations of NGS Benchmark "U151" with a published Orthometric height of 3,890.55 feet NAVD88.

A stamped survey report can be found in Appendix B.

On April 23, 2018, AEA technicians sampled MW-1. The monitoring well's water column was measured using a water level meter. The completed well total depth was 60.56 feet from the top of casing (TOC) and the static water level was measured at 50.47 feet below TOC with a water column of 10.09 feet. Following water level measurement, MW-1 was low-flow purged using a decontaminated Geotech SS Geosub Electrical Submersible Pump and disposable tubing. Purging was completed when field parameters became stable.

After purging, samples were collected in Hall Environmental Analytical Laboratory (HEAL) supplied containers with preservatives, as needed, and immediately placed on ice. The samples were shipped overnight to HEAL in Albuquerque, New Mexico. Samples were tested for methanol, general chemistry, and additional dissolved phase contaminants listed on New Mexico Administrative Code Subsection A 20.6.2.3103.

Reporting and Results

After well construction and surveying, AEA submitted a well record to the DII OSE for monitor well MW-1 (L-14453 POD1). The timestamped well record can be found in Appendix B.

HEAL received the groundwater samples on April 24, 2018 with an arrival temperature of 0.8º C. All samples were analyzed within the proper holding times, and AEA has no concerns with the quality of the laboratory results. A copy of the partial HEAL laboratory report can be found in Appendix B.

At the time of this report, the radionuclide results are still pending from the HEAL subcontracted laboratory. Those results will be forward as soon as they become available.

If you have any questions please contact me at 575.624.2420 or chris@atkinseng.com.

Chris Cortez

CC: Carl Chavez, NMOCD, carlj.chavez@state.nm.us

Appendix A: Well Construction Log

Atkins ENGINEERING ASSOCIATES
2904 W. 2nd St. Roswell, NM 88201

Log MW-1

Page 1 of 1

Client	Llano Disposal, LLC	**Completion Date**	04/18/2018	**Latitude**	32.8112808°
Location	PO Box 250	**Drilling Contractor**	Atkins Engineering Assoc. Inc.	**Longitude**	-103.3315004°
	Lovington, NM 88260	**Drilling Method**	Hollow-stem auger	**Surface Elevation (ft)**	3832.36
Purpose	Groundwater Monitoring Well	**Boring Diameter**	8.675"	**TOC Elevation (ft)**	3835.11
Project	ldsirin_drl_18	**Well Diameter**	2" Sch. 40 PVC	**Boring Depth (ft bgs)**	59
		Well Screen	2" Sch. 40 PVC 0.020 slot	**Well Depth (ft bgs)**	58

Depth in feet	Lithology	USCS	Description	LAB DRO/GRO MRO (mg/Kg)	PID (ppm-v)	Well Construction Detail
5 to 0						Locking J-Plug; 5 Foot Standup Well Vault
0 to -5		SC	Clayey sand, fine to coarse grained sand, 5-10mm gravel, light brown, dry			5000 PSI Quikrete; Neat Cement; Bentonite Seal
-5 to -15		SC	Clayey sand, fine to coarse grained sand, light brown, dry			
-15 to -25		SC	Clayey sand, fine to coarse grained sand, 5-10mm gravel, light brown, dry			2" SCH 40 Riser
-25 to -35		SP/SM	Sand, very fine to fine grained sand, brown, dry			12/20 Silica Sand Pack
-35 to -45		SP/SM	Sand, very fine to fine grained sand, brown, dry			
-45 to -55		CL	Sandy clay, fine to coarse grained sand, brown, moist to wet			47.9 ft bgs water level; 2" SCH 40 0.020 Screen
-55 to -60		CL	Sandy clay, fine to coarse grained sand, brown, moist to wet			Endcap

Bottom of Boring (ft) = 59 BGS

Appendix B: Permits and Reports

File No. L-14453

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well (Pump test)	☐ Construction Site/Public Works Dewatering	☐ Other(Describe):
■ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☐ Temporary Request - Requested Start Date: Requested End Date:

Plugging Plan of Operations Submitted? ☐ Yes ■ No

---

1. APPLICANT(S)

Name: Llano Disposal, LLC	Name:
Contact or Agent: Darr Angell check here if Agent ☐ or	Contact or Agent: Atkins Engineering Associates, Inc check here if Agent ☐
Mailing Address: PO Box 250	Mailing Address: 2904 W. 2nd St.
City: Lovington	City: Roswell
State: NM Zip Code: 88260	State: NM Zip Code: 88201
Phone: ☐ Home ☐ Cell Phone (Work):	Phone: ☐ Home ☐ Cell Phone (Work): 575.624.2420
E-mail (optional):	E-mail (optional): andrew@atkinseng.com

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2019 MAR 30 PM 2:50

FOR OSE INTERNAL USE	Application for Permit, Form WR-07, Rev 11/17/16	
File No.: L-14453	Trn. No.: 623182	Receipt No.: 2-39237
Trans Description (optional): POD 1		
Sub-Basin: L	PCW/LOG Due Date: 4-30-19	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
L-14453 POD- 1 (MW-1)	103°19'53.39"W	32°48'40.64"N	NW1/4NW1/4 of Section 26, T17S, R36E, N. M. P.M.

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2010 MAR 10 PM 2:50

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ **Yes** ■ **No** **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:

Well is on land owned by: Angell #2 Family LTD Partnership

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ **Yes** ■ **No**
If yes, how many_____

Approximate depth of well (feet): ±80	Outside diameter of well casing (inches): ±2.375
Driller Name: Jackie D. Atkins	Driller License Number: 1249

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

monitor well for brine well conversion.

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: L-14453 Trn No.: 623182

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
☐ Include a description of any proposed pump test, if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring. Until no longer needed	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Laura Angell (Executive Vice President of Llano Disposal, LLC)
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Laura Angell
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 10th day of April 20 18, for the State Engineer,

Tom Blaine, P.E., State Engineer

By: _____
Signature

Print

Title: Juan Hernandez, Water Resources Manager 1
Print

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2018 MAY 30 PM 2:50

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: L-14453 Trn No.: 623182

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-1B Depth of the well shall not exceed the thickness of the Ogallala formation.

17-4 No water shall be appropriated and beneficially used under this permit.

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

LOG The Point of Diversion L 14453 POD1 must be completed and the Well Log filed on or before 04/30/2019.

IT IS THE PERMITTEES RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

SHOULD THE PERMITTEE CHANGE THE PURPOSE OF USE TO OTHER THAN MONITORING PURPOSES, AN APPLICATION SHALL BE ACQUIRED FROM THE OFFICE OF THE STATE ENGINEER.

Trn Desc: L 14453 POD1 File Number: L 14453
Trn Number: 623182

Tom Blaine, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 623182
File Nbr: L 14453 POD1

Apr. 10, 2018

CHRIS CORTEZ
ATKINS ENGR ASSOC INC
2904 W 2ND ST
ROSWELL, NM 88201

RE: LLANO DISPOSAL LLC

Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 04/30/2019, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 04/30/2019.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Juan Hernandez
(575)622-6521

Enclosure

explore

2018-03-28_ldsirin_PermittoDrill (form)

Adobe Sign Document History 03/30/2018

Created:	03/30/2018
By:	Christopher Cortez (chris@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAALw8HIUecnP56-gwjVzVumtwoFxBJwvpv

"2018-03-28_ldsirin_PermittoDrill(form)" History

Document uploaded by Christopher Cortez (chris@atkinseng.com) from Acrobat
03/30/2018 - 10:00:41 AM PDT- IP address: 174.126.65.140

Document emailed to Laura Angell (angelllauram@gmail.com) for signature
03/30/2018 - 10:01:32 AM PDT

Document viewed by Laura Angell (angelllauram@gmail.com)
03/30/2018 - 10:01:43 AM PDT- IP address: 66.249.80.48 .

Document e-signed by Laura Angell (angelllauram@gmail.com)
Signature Date: 03/30/2018 - 10:02:32 AM PDT - Time Source: server- IP address: 199.195.171.253

Atkins
ENGINEERING ASSOCIATES INC.

2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

3/302018

District II Office of the State Engineer
1900 W 2nd St.
Roswell, NM 88201

Hand delivered on the date of this letter to the DII Office of the State Engineer

RE: Monitor Well Permit

To Whom It May Concern,

Atkins Engineering Associates, Inc. (AEA) has been contracted to drill a monitor well for Llano Disposal, LLC

Enclosed please find in triplicate, an *Application for Permit to Drill a Well with No Water Right* and a Check for $5.00 to process the application.

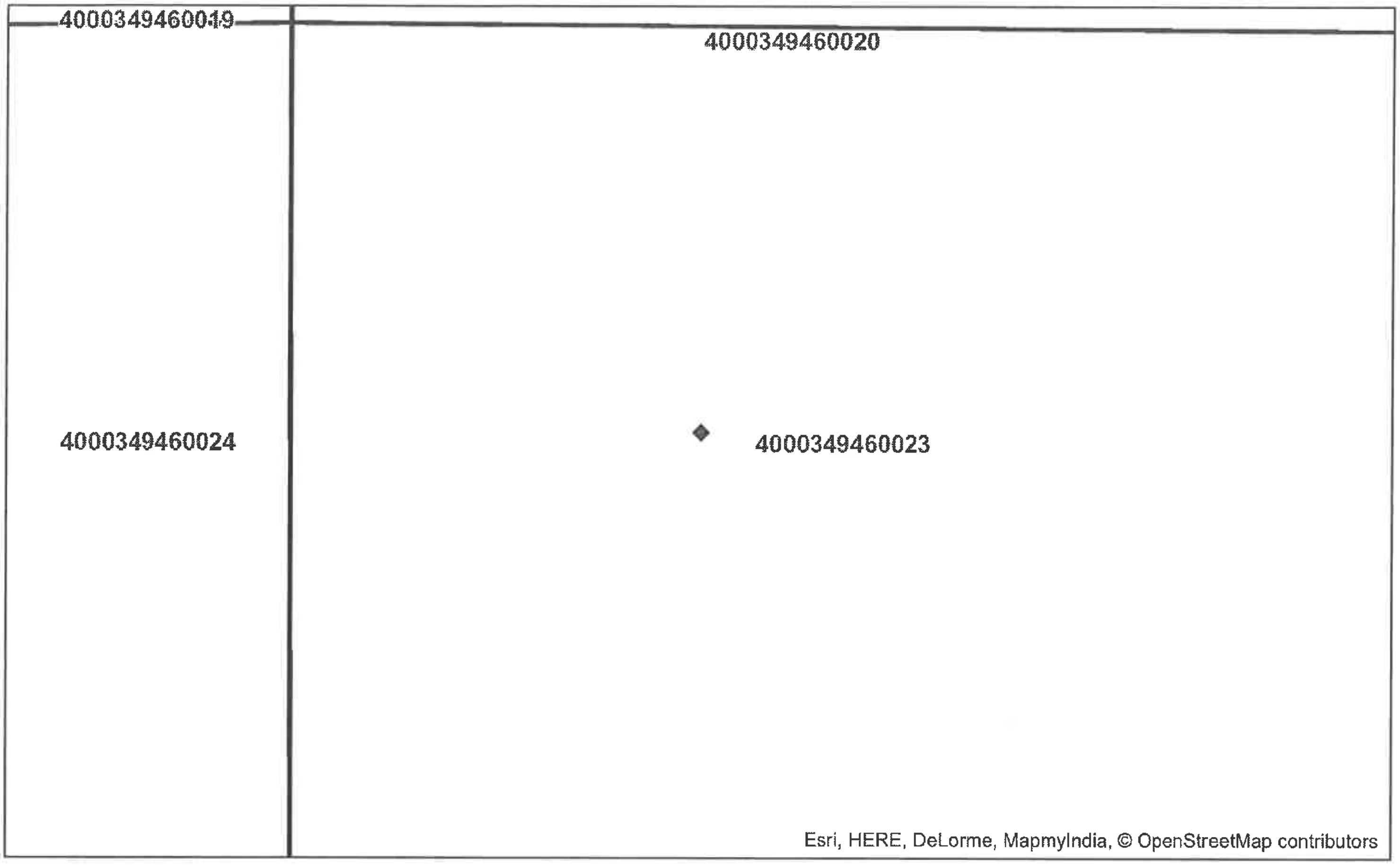
If you have any questions, please contact me at 575.624.2420 or chris@atkinseng.com .

Sincerely,

Chris Cortez

Enclosures: as noted above

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2018 MAY 30 PM 2:50



Coordinates

UTM - NAD 83 (m) - Zone 13

Easting 656205.585
Northing 3631598.792

State Plane - NAD 83 (f) - Zone E

Easting 849138.476
Northing 660335.807

Degrees Minutes Seconds

Latitude 32 : 48 : 40.640000
Longitude -103 : 19 : 53.390000

Location pulled from Coordinate Search

NEW MEXICO OFFICE
OF THE
STATE ENGINEER

1:4,514

ft
0 90 180 360

N

YMENDIOLA ;

Reasonable efforts have been made by the New Mexico Office of the State Engineer (OSE) to verify that these maps accurately interpret the source data used in their preparation; however, a degree of error is inherent in all maps, and these maps may contain omissions and errors in scale, resolution, rectification, positional accuracy, development methodology, interpretation of source data, and other circumstances.
These maps are distributed "as is" without warranty of any kind.

Spatial Information

County: Lea
Groundwater Basin: Lea County
Abstract Area: L
Land Grant: Not in Land Grant
Restrictions:
NA
PLSS Description
NWSENWNW Qtr of Sec 26 of 017S 036E

Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

Parcel Information

UPC/DocNum: 4000349460023
Parcel Owner: ANGELL #2 FAMILY LTD
Address:

Legal:

POD Information

Owner: LLANO DISPOSAL/ATKINS
File Number: L- POD1
POD Status: NoData
Permit Status: NoData
Permit Use: NoData
Purpose: MONITOR

- Coord Search Location
- OSE District Boundary
- Catron County Parcel Points 2017
- Guadalupe County Parcel Points 2016
- Mora County Parcel Points 2014
- Quay County Parcel Points 2017
- Union County Parcel Points 2017
- Bernalillo County Parcels 2017
- Chaves County Parcels 2017
- Cibola County Parcels 2017
- Colfax County Parcels 2017
- Curry County Parcels 2017
- Doña Ana County Parcels 2017
- De Baca County Parcels 2017
- Eddy County Parcels 2017
- Grant County Parcels 2017
- Harding County Parcels 2017
- Hidalgo County Parcels 2017
- Lea County Parcels 2017
- Lincoln County Parcels 2017
- Los Alamos County Parcels 2017
- Luna County Parcels 2017
- McKinley County Parcels 2017
- Otero County Parcels 2017
- Roosevelt County Parcels 2017
- Rio Arriba County Parcels 2017
- San Juan County Parcels 2017
- San Miguel County Parcels 2017
- Sandoval County Parcels 2017
- Santa Fe County Parcels 2017
- Sierra County Parcels 2017
- Socorro County Parcels 2017
- Taos County Parcels 2017
- Torrance County Parcels 2017
- Valencia County Parcels 2017

Atkins
ENGINEERING ASSOCIATES INC.

2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record for L-14453 POD1 (site MW-1)

To Whom It May Concern:

Atkins Engineering Associates, Inc has completed the installation of one (1) monitoring well for Llano Disposal, LLC.

Please a well record for the following well in triplicate form:

L-14453 POD 1 (Site MW-1)

If you have any questions, please contact me at 575.624.2420 or andrew@atkinseng.com.

Sincerely,

Andrew Martin | Junior Engineer
Atkins Engineering Associates, Inc.

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD 1 (Site MW-1)	N/A	L-14453

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Llano Disposal, LLC	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
PO Box 250 Attn: Dar Angell	Lovington	NM	88260

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	48	40.6	N
	LONGITUDE	103	19	53.4	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NW1/4NW1/4 of Section 26, T17S, R36E, N. M. P.M.

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
04/17/2018	04/18/2018	58	59	50

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 47.9

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY: None

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger (HSA)

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	43	±8.0	2 IN SCH 40 PVC Riser	n/a	2.067	0.154	n/a
43	58	±8.0	2 IN SCH 40 PVC Screen	n/a	2.067	0.154	0.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	2	±8.0	5000 psi Quikrete	±0.57	from surface
2	38	±8.0	Neat Cement	±10.23	tremie hose
38	41	±8.0	Hole Plug/Bentonite Chips	±1.05	tremie through HSA
41	59	±8.0	12/20 Silica Sand Pack	±4.24	tremie through HSA

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	9	9	Clayey sand, fine to coarse grained sand, 5-10mm gravel, light brown, dry	Y ✓ N	
9	19	10	Clayey sand, fine to coarse grained sand, light brown, dry	Y ✓ N	
19	29	10	Clayey sand, fine to coarse grained sand, 5-10mm gravel, light brown, dry	Y ✓ N	
29	44	15	Sand, very fine to fine grained sand, brown, dry	Y ✓ N	
44	59	15	Sandy clay, fine to coarse grained sand, brown, moist to wet	✓ Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☑ OTHER – SPECIFY: N/A

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Site monitoring well MW-1.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Guadalupe Leyba, Shane Eldridge

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Jackie D. Atkins — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

April 25, 2018 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

WELL MONITORING DATA SHEET

Atkins ENGINEERING ASSOCIATES

Well I.D.	Sirino	Job Number:	[illegible]-dr1-18
Client:	[illegible] Disposal, LLC	Date:	04/23/18
Project:	GW Sampling	Sampler:	ZH/KR
Weather:	Clear	Time In/Out:	1025 /

WELL DATA

Well Depth:	60.56'	Well Diameter:	2"	Water Height	–
Depth to Water:	50.47'	Screened Interval:		x Multiplier	–
Water Column Length:	10.09'	Depth to Free Product:	No FP	x Casing Volumes	–
Purge Volume:		Free Product Thickness:	NONE	= Purge Volume	–
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.1743	4-inch = 0.6613	1 gallon = 3.785 liters	–

PURGING DATA

Purge Method:	Submersible Pump	Pump Intake Depth:	53.50'	Comments
Sampling Method:	Low Flow	Tubing Type:	Geotech 3/8" ID	

Time	Volume Purged (~~liters~~) gal	Cumulative Volume Purged (~~liters~~) gal	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1055	0.70	0.70	50.61	0.483	8.17	20.7	1149	6.31	143.4	–	SC
1101	0.25	0.95	50.57	0.40	8.12	21.2	1175	5.23	123.2	–	SC
1106	0.2	1.15	50.52	0.24	8.10	21.4	1184	5.30	112.3	–	Cl
1112	0.1	1.25	50.55	0.236	8.08	21.5	1220	5.54	101.9	–	Cl
1118	0.21	1.46	50.49	0.22	8.06	22.0	1237	5.15	97.3	–	Cl
1124	0.39	1.85	50.53	0.25	8.09	21.7	1238	5.32	96.2	–	Cl
1129	0.30	2.15	50.53	0.24	8.06	22.1	1232	5.84	92.8	–	Cl

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	20180423-Sirino	Sampling Flow Rate	Varies - See Purge Rate	Analytical Laboratory:	HEAL
Sample Time:	See Comments	Final Depth to Water:	50.53'	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

Sample Times: Ambers - 1137 Polys - 1147 Vials - 1155

04/23/14 ZA/KM

L @	705	79436
A @	1002	79558
L @	1407	79575
A @	1416	79686

1002 Onsite - ZA/KM

1036 Pump placed 5' above TD @ 55.50'

NL after pump placed: 50.46'

1046 Pump started
Initial flow: 483 mL/min

1051 Drop pump settings to 56

1100 Flow Rate: 400mL/min
Drop pump settings to 55

1105 Flow Rate: 242 mL/min
Drop Pump Settings to: 54

1109 No water pumping
Turn pump settings up to: 55

1111 Flow Rate: 236 mL/min

1116 Flow Rate: 220 mL/min

1122 Flow Rate: 230 mL/min

1128 Flow Rate: 236 mL/min

Ambers Sampled @ 1137
Polys Sampled @ 1147
Vials Sampled @ 1155

Depth to water after sampling (Pump still in place): 50.48'

Final Depth to water (No Pump): 50.50'

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

Christopher Cortez
Atkins Engineering Associates
2904 West Second Street
Roswell, NM 88201
TEL: (575) 624-2420
FAX: (575) 624-2421

RE: Siringo

OrderNo.: 1804B71

Dear Christopher Cortez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/24/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

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

Case Narrative

WO#: **1804B71**

Date:

CLIENT: Atkins Engineering Associates
Project: Siringo

Analytical Notes Regarding EPA Method 9067:
The LCS for phenolics was below the acceptable limit. The LCSD had a passing value. The phenolic result is listed with an "E" flag to represent an estimated value due to the LCS low recovery.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1804B71**
Date Reported:

CLIENT: Atkins Engineering Associates
Project: Siringo
Lab ID: 1804B71-001 **Matrix:** AQUEOUS

Client Sample ID: 20180423-Siringo
Collection Date: 4/23/2018 11:37:00 AM
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Arsenic	0.0036	0.0010		mg/L	1	4/25/2018 4:40:47 PM	B50833
Lead	ND	0.00050		mg/L	1	4/25/2018 4:40:47 PM	B50833
Selenium	0.0035	0.0010		mg/L	1	4/25/2018 4:40:47 PM	B50833
Uranium	0.0042	0.00050		mg/L	1	4/25/2018 4:40:47 PM	B50833
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Fluoride	0.78	0.10		mg/L	1	4/24/2018 1:54:15 PM	R50822
Chloride	250	10		mg/L	20	4/24/2018 2:07:07 PM	R50822
Nitrogen, Nitrate (As N)	3.2	0.10		mg/L	1	4/24/2018 1:54:15 PM	R50822
Sulfate	72	10		mg/L	20	4/24/2018 2:07:07 PM	R50822
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**sat**
Total Dissolved Solids	794	40.0	*D	mg/L	1	4/26/2018 1:21:00 PM	37787
SM4500-H+B / 9040C: PH						Analyst:	**JRR**
pH	7.61		H	pH units	1	4/26/2018 2:21:34 PM	R50879
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**pmf**
Aluminum	ND	0.020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Barium	0.12	0.0020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Boron	0.16	0.040		mg/L	1	4/26/2018 3:07:19 PM	A50835
Cadmium	ND	0.0020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Chromium	ND	0.0060		mg/L	1	4/26/2018 3:07:19 PM	A50835
Cobalt	ND	0.0060		mg/L	1	4/26/2018 3:07:19 PM	A50835
Copper	ND	0.0060		mg/L	1	4/26/2018 3:07:19 PM	A50835
Iron	ND	0.020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Manganese	0.019	0.0020		mg/L	1	4/26/2018 3:07:19 PM	A50835
Molybdenum	0.016	0.0080		mg/L	1	4/26/2018 3:07:19 PM	A50835
Nickel	ND	0.010		mg/L	1	4/26/2018 3:07:19 PM	A50835
Silver	ND	0.0050		mg/L	1	4/26/2018 3:07:19 PM	A50835
Zinc	ND	0.010		mg/L	1	4/26/2018 3:07:19 PM	A50835
EPA METHOD 245.1: MERCURY						Analyst:	**rde**
Mercury	ND	0.00020		mg/L	1	4/27/2018 9:49:41 AM	37814
EPA METHOD 8011/504.1: EDB						Analyst:	**JME**
1,2-Dibromoethane	ND	0.0095		µg/L	1	4/25/2018 10:27:16 PM	37781
EPA METHOD 8082A: PCB'S						Analyst:	**TOM**
Aroclor 1016	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1221	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1232	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1242	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763

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 **1804B71**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: 20180423-Siringo
Project: Siringo
Collection Date: 4/23/2018 11:37:00 AM
Lab ID: 1804B71-001
Matrix: AQUEOUS
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8082A: PCB'S						Analyst: **TOM**	
Aroclor 1248	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1254	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Aroclor 1260	ND	1.0		µg/L	1	4/30/2018 12:27:00 PM	37763
Surr: Decachlorobiphenyl	76.0	34.1-101		%Rec	1	4/30/2018 12:27:00 PM	37763
Surr: Tetrachloro-m-xylene	57.2	22.9-104		%Rec	1	4/30/2018 12:27:00 PM	37763
EPA METHOD 8310: PAHS						Analyst: **TOM**	
Naphthalene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
1-Methylnaphthalene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
2-Methylnaphthalene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
Acenaphthylene	ND	2.5		µg/L	1	4/26/2018 1:34:00 PM	37765
Acenaphthene	ND	2.0		µg/L	1	4/26/2018 1:34:00 PM	37765
Fluorene	ND	0.80		µg/L	1	4/26/2018 1:34:00 PM	37765
Phenanthrene	ND	0.60		µg/L	1	4/26/2018 1:34:00 PM	37765
Anthracene	ND	0.60		µg/L	1	4/26/2018 1:34:00 PM	37765
Fluoranthene	ND	0.30		µg/L	1	4/26/2018 1:34:00 PM	37765
Pyrene	ND	0.30		µg/L	1	4/26/2018 1:34:00 PM	37765
Benz(a)anthracene	ND	0.070		µg/L	1	4/26/2018 1:34:00 PM	37765
Chrysene	ND	0.20		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(a)pyrene	ND	0.070		µg/L	1	4/26/2018 1:34:00 PM	37765
Dibenz(a,h)anthracene	ND	0.12		µg/L	1	4/26/2018 1:34:00 PM	37765
Benzo(g,h,i)perylene	ND	0.12		µg/L	1	4/26/2018 1:34:00 PM	37765
Indeno(1,2,3-cd)pyrene	ND	0.25		µg/L	1	4/26/2018 1:34:00 PM	37765
Surr: Benzo(e)pyrene	71.2	52-133		%Rec	1	4/26/2018 1:34:00 PM	37765
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Toluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Ethylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Naphthalene	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Acetone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Project: Siringo
Lab ID: 1804B71-001 **Matrix:** AQUEOUS

Client Sample ID: 20180423-Siringo
Collection Date: 4/23/2018 11:37:00 AM
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Bromobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Bromodichloromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Bromoform	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Bromomethane	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Butanone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Carbon disulfide	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Carbon Tetrachloride	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chloroethane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chloroform	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Chloromethane	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
4-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
cis-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Dibromochloromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Dibromomethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1-Dichloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1-Dichloroethene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,3-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2,2-Dichloropropane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Hexachlorobutadiene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
2-Hexanone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Isopropylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
4-Isopropyltoluene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
4-Methyl-2-pentanone	ND	10		µg/L	1	4/24/2018 2:37:57 PM	A50817
Methylene Chloride	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
n-Butylbenzene	ND	3.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
n-Propylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
sec-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Styrene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
tert-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817

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 **1804B71**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: 20180423-Siringo
Project: Siringo
Collection Date: 4/23/2018 11:37:00 AM
Lab ID: 1804B71-001
Matrix: AQUEOUS
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
trans-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Trichlorofluoromethane	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Vinyl chloride	ND	1.0		µg/L	1	4/24/2018 2:37:57 PM	A50817
Xylenes, Total	ND	1.5		µg/L	1	4/24/2018 2:37:57 PM	A50817
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
Surr: Dibromofluoromethane	96.1	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
Surr: Toluene-d8	92.3	70-130		%Rec	1	4/24/2018 2:37:57 PM	A50817
TOTAL PHENOLICS BY SW-846 9067						Analyst: **MAB**	
Phenolics	7.3	2.5	E	µg/L	1	4/30/2018	37840

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: Trip Blank
Project: Siringo
Collection Date:
Lab ID: 1804B71-002
Matrix: TRIP BLANK
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst: **JME**	
1,2-Dibromoethane	ND	0.0095		µg/L	1	4/25/2018 10:42:21 PM	37781
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Toluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Ethylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Naphthalene	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Methylnaphthalene	ND	4.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Acetone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromodichloromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromoform	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Bromomethane	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Butanone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Carbon disulfide	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Carbon Tetrachloride	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chloroethane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chloroform	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Chloromethane	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
4-Chlorotoluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
cis-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Dibromochloromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Dibromomethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1-Dichloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1-Dichloroethene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817

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 **1804B71**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates
Client Sample ID: Trip Blank
Project: Siringo
Collection Date:
Lab ID: 1804B71-002
Matrix: TRIP BLANK
Received Date: 4/24/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichloropropane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2,2-Dichloropropane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Hexachlorobutadiene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
2-Hexanone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Isopropylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
4-Isopropyltoluene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
4-Methyl-2-pentanone	ND	10		µg/L	1	4/24/2018 3:07:15 PM	A50817
Methylene Chloride	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
n-Butylbenzene	ND	3.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
n-Propylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
sec-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Styrene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
tert-Butylbenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
trans-1,2-DCE	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Trichlorofluoromethane	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Vinyl chloride	ND	1.0		µg/L	1	4/24/2018 3:07:15 PM	A50817
Xylenes, Total	ND	1.5		µg/L	1	4/24/2018 3:07:15 PM	A50817
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817
Surr: Dibromofluoromethane	100	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817
Surr: Toluene-d8	90.6	70-130		%Rec	1	4/24/2018 3:07:15 PM	A50817

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180426027
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1804B71
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180426027-001	**Sampling Date**	4/23/2018	**Date/Time Received**	4/26/2018 10:52 AM
Client Sample ID	1804B71-001I / 20180423-SIRINGO				
Matrix	Water	**Sampling Time**	11:37 AM		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	4/27/2018	RPU	EPA 335.4	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180426027
Project Name: 1804B71

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.529	mg/L	0.5	105.8	90-110	4/27/2018	4/27/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180423005-003	Cyanide	ND	0.506	mg/L	0.5	101.2	80-120	4/27/2018	4/27/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.509	mg/L	0.5	101.8	0.6	0-20	4/27/2018	4/27/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	4/27/2018	4/27/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180426027
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1804B71
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180426027-002	**Sampling Date**	4/23/2018	**Date/Time Received**	4/26/2018	10:52 AM
Client Sample ID	1804B71-001J / 20180423-SIRINGO			**Extraction Date**	4/26/2018	
Matrix	Water	**Sampling Time**	11:37 AM			
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Methanol	ND	mg/L	50	4/26/2018	GGH	GC/FID	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180426027
Project Name: 1804B71

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Methanol	262	mg/L	250	104.8	60-140	4/26/2018	4/27/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180426027-002	Methanol	ND	277	mg/L	250	110.8	60-140	4/26/2018	4/27/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Methanol	267	mg/L	250	106.8	3.7	0-25	4/26/2018	4/27/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Methanol	ND	mg/L	25	4/26/2018	4/27/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651077** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651080** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	116	50	150			
Barium	ND	0.0020	0.002000	0	93.5	50	150			
Boron	ND	0.040	0.04000	0	93.0	50	150			
Cadmium	0.0021	0.0020	0.002000	0	103	50	150			
Chromium	ND	0.0060	0.006000	0	98.8	50	150			
Cobalt	ND	0.0060	0.006000	0	98.5	50	150			
Copper	ND	0.0060	0.006000	0	80.3	50	150			
Iron	0.021	0.020	0.02000	0	103	50	150			
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Molybdenum	0.0081	0.0080	0.008000	0	101	50	150			
Nickel	ND	0.010	0.005000	0	88.6	50	150			
Silver	ND	0.0050	0.005000	0	91.6	50	150			
Zinc	ND	0.010	0.005000	0	126	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651082** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.57	0.020	0.5000	0	115	85	115			
Barium	0.51	0.0020	0.5000	0	102	85	115			

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 Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651082** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.52	0.040	0.5000	0	104	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Chromium	0.51	0.0060	0.5000	0	103	85	115			
Cobalt	0.50	0.0060	0.5000	0	99.4	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Manganese	0.52	0.0020	0.5000	0	105	85	115			
Molybdenum	0.52	0.0080	0.5000	0	103	85	115			
Nickel	0.50	0.010	0.5000	0	100	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A50835**	RunNo: **50835**
Prep Date:	Analysis Date: **4/26/2018**	SeqNo: **1651109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.13	0.0050	0.1000	0	129	85	115			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B50833**	RunNo: **50833**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B50833**	RunNo: **50833**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649658** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	93.1	50	150			
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Selenium	ND	0.0010	0.001000	0	92.8	50	150			
Uranium	ND	0.00050	0.0005000	0	91.5	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B50833**	RunNo: **50833**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649659** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.6	85	115			
Lead	0.013	0.00050	0.01250	0	104	85	115			
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	93.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB-37814** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**

Client ID: **PBW** Batch ID: **37814** RunNo: **50885**

Prep Date: **4/26/2018** Analysis Date: **4/27/2018** SeqNo: **1651634** Units: **mg/L**

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

Sample ID: **LCS-37814** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**

Client ID: **LCSW** Batch ID: **37814** RunNo: **50885**

Prep Date: **4/26/2018** Analysis Date: **4/27/2018** SeqNo: **1651635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	101	80	120			

Sample ID: **1804B71-001FMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**

Client ID: **20180423-Siringo** Batch ID: **37814** RunNo: **50885**

Prep Date: **4/26/2018** Analysis Date: **4/27/2018** SeqNo: **1651659** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0.0001114	103	75	125			

Sample ID: **1804B71-001FMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**

Client ID: **20180423-Siringo** Batch ID: **37814** RunNo: **50885**

Prep Date: **4/26/2018** Analysis Date: **4/27/2018** SeqNo: **1651660** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0.0001114	101	75	125	1.68	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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R50822**	RunNo: **50822**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1649372** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R50822**	RunNo: **50822**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1649373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.6	0.50	5.000	0	92.2	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	94.1	90	110			
Sulfate	9.1	0.50	10.00	0	90.7	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- 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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB-37781**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **37781**	RunNo: **50838**
Prep Date: **4/25/2018**	Analysis Date: **4/25/2018**	SeqNo: **1649761** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-37781**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **37781**	RunNo: **50838**
Prep Date: **4/25/2018**	Analysis Date: **4/25/2018**	SeqNo: **1649846** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.086	0.010	0.1000	0	86.2	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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB-37763** SampType: **MBLK** TestCode: **EPA Method 8082A: PCB's**

Client ID: **PBW** Batch ID: **37763** RunNo: **50910**

Prep Date: **4/24/2018** Analysis Date: **4/30/2018** SeqNo: **1652878** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	1.7		2.500		68.4	34.1	101			
Surr: Tetrachloro-m-xylene	1.4		2.500		55.2	22.9	104			

Sample ID: **LCS-37763** SampType: **LCS** TestCode: **EPA Method 8082A: PCB's**

Client ID: **LCSW** Batch ID: **37763** RunNo: **50910**

Prep Date: **4/24/2018** Analysis Date: **4/30/2018** SeqNo: **1652954** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	3.6	1.0	5.000	0	72.2	33.4	137			
Aroclor 1260	4.3	1.0	5.000	0	86.8	27.4	141			
Surr: Decachlorobiphenyl	4.7		5.000		94.0	34.1	101			
Surr: Tetrachloro-m-xylene	3.4		5.000		67.0	22.9	104			

Sample ID: **LCSD-37763** SampType: **LCSD** TestCode: **EPA Method 8082A: PCB's**

Client ID: **LCSS02** Batch ID: **37763** RunNo: **50910**

Prep Date: **4/24/2018** Analysis Date: **4/30/2018** SeqNo: **1652966** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	4.0	1.0	5.000	0	79.2	33.4	137	9.25	17.9	
Aroclor 1260	4.7	1.0	5.000	0	93.8	27.4	141	7.75	16.2	
Surr: Decachlorobiphenyl	2.2		2.500		88.4	34.1	101	0	0	
Surr: Tetrachloro-m-xylene	1.3		2.500		50.4	22.9	104	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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648442** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648442** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648443** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Toluene	19	1.0	20.00	0	94.8	70	130			
Chlorobenzene	19	1.0	20.00	0	96.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A50817**	RunNo: **50817**
Prep Date:	Analysis Date: **4/24/2018**	SeqNo: **1648443** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB-37765** SampType: **MBLK** TestCode: **EPA Method 8310: PAHs**

Client ID: **PBW** Batch ID: **37765** RunNo: **50850**

Prep Date: **4/24/2018** Analysis Date: **4/26/2018** SeqNo: **1650817** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	2.0								
2-Methylnaphthalene	ND	2.0								
Acenaphthylene	ND	2.5								
Acenaphthene	ND	2.0								
Fluorene	ND	0.80								
Phenanthrene	ND	0.60								
Anthracene	ND	0.60								
Fluoranthene	ND	0.30								
Pyrene	ND	0.30								
Benz(a)anthracene	ND	0.070								
Chrysene	ND	0.20								
Benzo(b)fluoranthene	ND	0.10								
Benzo(k)fluoranthene	ND	0.070								
Benzo(a)pyrene	ND	0.070								
Dibenz(a,h)anthracene	ND	0.12								
Benzo(g,h,i)perylene	ND	0.12								
Indeno(1,2,3-cd)pyrene	ND	0.25								
Surr: Benzo(e)pyrene	15		20.00		77.4	52	133			

Sample ID: **LCS-37765** SampType: **LCS** TestCode: **EPA Method 8310: PAHs**

Client ID: **LCSW** Batch ID: **37765** RunNo: **50850**

Prep Date: **4/24/2018** Analysis Date: **4/26/2018** SeqNo: **1650819** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	43	2.0	80.00	0	53.4	35.5	118			
1-Methylnaphthalene	44	2.0	80.20	0	54.5	35.5	119			
2-Methylnaphthalene	44	2.0	80.00	0	54.5	32.4	122			
Acenaphthylene	48	2.5	80.20	0	59.7	47.6	128			
Acenaphthene	47	2.0	80.00	0	59.2	43.7	112			
Fluorene	4.9	0.80	8.020	0	61.3	45.9	113			
Phenanthrene	2.6	0.60	4.020	0	63.7	52.7	114			
Anthracene	2.8	0.60	4.020	0	70.6	54.1	127			
Fluoranthene	5.7	0.30	8.020	0	71.2	59.1	116			
Pyrene	5.8	0.30	8.020	0	72.2	55.2	105			
Benz(a)anthracene	0.60	0.070	0.8020	0	74.8	52.9	126			
Chrysene	2.9	0.20	4.020	0	72.1	50.6	120			
Benzo(b)fluoranthene	0.70	0.10	1.002	0	69.9	49.7	118			
Benzo(k)fluoranthene	0.37	0.070	0.5000	0	74.0	54.5	119			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times 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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **LCS-37765**	SampType: **LCS**	TestCode: **EPA Method 8310: PAHs**
Client ID: **LCSW**	Batch ID: **37765**	RunNo: **50850**
Prep Date: **4/24/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650819** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(a)pyrene	0.38	0.070	0.5020	0	75.7	49.8	120			
Dibenz(a,h)anthracene	0.74	0.12	1.002	0	73.9	52.5	126			
Benzo(g,h,i)perylene	0.74	0.12	1.000	0	74.0	52.3	120			
Indeno(1,2,3-cd)pyrene	1.4	0.25	2.004	0	71.9	46.8	114			
Surr: Benzo(e)pyrene	15		20.00		77.4	52	133			

Sample ID: **LCSD-37765**	SampType: **LCSD**	TestCode: **EPA Method 8310: PAHs**
Client ID: **LCSS02**	Batch ID: **37765**	RunNo: **50850**
Prep Date: **4/24/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650820** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	41	2.0	80.00	0	50.8	35.5	118	4.99	19.8	
1-Methylnaphthalene	42	2.0	80.20	0	51.8	35.5	119	5.14	19.9	
2-Methylnaphthalene	41	2.0	80.00	0	51.4	32.4	122	5.76	19.4	
Acenaphthylene	46	2.5	80.20	0	57.0	47.6	128	4.53	22	
Acenaphthene	46	2.0	80.00	0	57.2	43.7	112	3.35	20.2	
Fluorene	4.6	0.80	8.020	0	58.0	45.9	113	5.64	18.9	
Phenanthrene	2.2	0.60	4.020	0	56.0	52.7	114	12.9	21	
Anthracene	2.6	0.60	4.020	0	65.2	54.1	127	8.06	19.3	
Fluoranthene	5.5	0.30	8.020	0	68.6	59.1	116	3.75	18.9	
Pyrene	5.6	0.30	8.020	0	69.8	55.2	105	3.34	19.7	
Benz(a)anthracene	0.57	0.070	0.8020	0	71.1	52.9	126	5.13	20.1	
Chrysene	2.8	0.20	4.020	0	69.7	50.6	120	3.51	18.8	
Benzo(b)fluoranthene	0.69	0.10	1.002	0	68.9	49.7	118	1.44	19	
Benzo(k)fluoranthene	0.35	0.070	0.5000	0	70.0	54.5	119	5.56	22.1	
Benzo(a)pyrene	0.36	0.070	0.5020	0	71.7	49.8	120	5.41	24.1	
Dibenz(a,h)anthracene	0.73	0.12	1.002	0	72.9	52.5	126	1.36	21.8	
Benzo(g,h,i)perylene	0.72	0.12	1.000	0	72.0	52.3	120	2.74	21.2	
Indeno(1,2,3-cd)pyrene	1.4	0.25	2.004	0	70.4	46.8	114	2.11	19.9	
Surr: Benzo(e)pyrene	14		20.00		71.4	52	133	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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB-37840**	SampType: **MBLK**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **PBW**	Batch ID: **37840**	RunNo: **50919**
Prep Date: **4/30/2018**	Analysis Date: **4/30/2018**	SeqNo: **1653063** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	ND	2.5								E

Sample ID: **LCS-37840**	SampType: **LCS**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **LCSW**	Batch ID: **37840**	RunNo: **50919**
Prep Date: **4/30/2018**	Analysis Date: **4/30/2018**	SeqNo: **1653064** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	6.3	2.5	20.00	0	31.3	67.8	139			SE

Sample ID: **LCSD-37840**	SampType: **LCSD**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **LCSS02**	Batch ID: **37840**	RunNo: **50919**
Prep Date: **4/30/2018**	Analysis Date: **4/30/2018**	SeqNo: **1653065** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	15	2.5	20.00	0	75.9	67.8	139	83.1	21	RE

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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#: **1804B71**

02-May-18

Client: Atkins Engineering Associates

Project: Siringo

Sample ID: **MB-37787**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **37787**	RunNo: **50861**
Prep Date: **4/25/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-37787**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **37787**	RunNo: **50861**
Prep Date: **4/25/2018**	Analysis Date: **4/26/2018**	SeqNo: **1650415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	983	20.0	1000	0	98.3	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 Detection Limit
- 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: ATK | Work Order Number: 1804B71 | RcptNo: 1

Received By: **Erin Melendrez** 4/24/2018 9:00:00 AM

Completed By: **Michelle Garcia** 4/24/2018 9:32:00 AM Michelle Garcia

Reviewed By: JMO 4/24/18

MW 4/24/18

Chain of Custody

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

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 preserved added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☑ MW 04/24/18
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: 5/1 (<2 or >12 unless noted)
Adjusted? NO
Checked by: MW

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	0.8	Good	Yes			

Chain-of-Custody Record

Client: Atkins Engineering Associates, INC.

Mailing Address: 2904 W 2ND ST
Roswell NM 88201

Phone #: 575-624-2420

email or Fax#: sampling@atkinseng.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush 4/27/18

Project Name:
Syringo

Project #:
1dsrin

Project Manager:
Christopher Carter

Sampler: ZA / KR

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.8

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.
4/23/18	11:37	AQ	20180423-Syringo	varies	varies	1804871 001
			Trip Blank my			002

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	General Chemistry	Methanol	CATIAN/ANION	NMAC 20.6.2.3103	Air Bubbles (Y or N)
											X	X	X	X	

Date	Time	Relinquished by:	Received by:	Date	Time
04/23/18	1700		Fedex 4in2VIB ENG	04/24/18	0900

Remarks:
See EMAL enclosed
NMAC LIST plus methanol via 8015B
Total Bottles: 19 + 3 trip blank

Chris

A. Human Health Standards-Ground water shall meet the standards of Subsection A and section unless otherwise provided. If more than one water contaminant affecting human health is present, pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the com of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floa of or immersed within ground water, as can be reasonably measured.

(1)	Arsenic (As)	0.1 mg/l
(2)	Barium (Ba)	1.0 mg/l
(3)	Cadmium (Cd)	0.01 mg/l
(4)	Chromium (Cr)	0.05 mg/l
(5)	Cyanide (CN)	0.2 mg/l
(6)	Fluoride (F)	1.6 mg/l
(7)	Lead (Pb)	0.05 mg/l
(8)	Total Mercury (Hg)	0.002 mg/l
(9)	Nitrate (NO_3 as N)	10.0 mg/l
(10)	Selenium (Se)	0.05 mg/l
(11)	Silver (Ag)	0.05 mg/l
(12)	Uranium (U)	0.03 mg/l
(13)	Radioactivity: Combined Radium-226 & Radium-228	30 pCi/l
(14)	Benzene	0.01 mg/l
(15)	Polychlorinated biphenyls (PCB's)	0.001 mg/l
(16)	Toluene	0.75 mg/l

20.6.2 NMAC

(17) Carbon Tetrachloride.....0.01 mg/l
(18) 1,2-dichloroethane (EDC).....0.01 mg/l
(19) 1,1-dichloroethylene (1,1-DCE).....0.005 mg/l
(20) 1,1,2,2-tetrachloroethylene (PCE).....0.02 mg/l
(21) 1,1,2-trichloroethylene (TCE).....0.1 mg/l
(22) ethylbenzene.....0.75 mg/l
(23) total xylenes.....0.62 mg/l
(24) methylene chloride.....0.1 mg/l
(25) chloroform.....0.1 mg/l
(26) 1,1-dichloroethane.....0.025 mg/l
(27) ethylene dibromide (EDB).....0.0001 mg/l
(28) 1,1,1-trichloroethane.....0.06 mg/l
(29) 1,1,2-trichloroethane.....0.01 mg/l
(30) 1,1,2,2-tetrachloroethane.....0.01 mg/l
(31) vinyl chloride.....0.001 mg/l
(32) PAHs: total naphthalene plus monomethylnaphthalenes.....0.03 mg/l
(33) benzo-a-pyrene.....0.0007 mg/l

B. Other Standards for Domestic Water Supply

(1) Chloride (Cl).....250.0 mg/l
(2) Copper (Cu).....1.0 mg/l
(3) Iron (Fe).....1.0 mg/l
(4) Manganese (Mn).....0.2 mg/l
(6) Phenols.....0.005 mg/l
(7) Sulfate (SO_4).....600.0 mg/l
(8) Total Dissolved Solids (TDS).....1000.0 mg/l
(9) Zinc (Zn).....10.0 mg/l
(10) pH.....between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, nd C of this section unless otherwise provided.

(1) Aluminum (Al).....5.0 mg/l
(2) Boron (B).....0.75 mg/l
(3) Cobalt (Co).....0.05 mg/l
(4) Molybdenum (Mo).....1.0 mg/l
(5) Nickel (Ni).....0.2 mg/l

]-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-
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