2RP-3637

Investigation Summary and Work Plan

Cedar 32 State Com #1

April 29, 2016

Introduction

This summary and work plan by Matador Resources details knowledge and plans for remediation of the Cedar 32 State Com #1 between April 4 and 5, 2016. The Cedar 32 State Com #1 is located in Section 32, Township 17S, Range 31E of Eddy County, NM. This is a state lease. The geodetic position is 32°47.5553 N, 103°53.1059W. The release occurred between April 4 and 5, 2016. Approximately 12 barrels of fluid overflowed the produced water vessel. 9 barrels were recovered. The release was reported to the New Mexico Oil Conservation Division Artesia office on April 5, 2016. OCD issued remediation project (RP) number 2RP-3637. Attachments include surveys, pictures, and map.

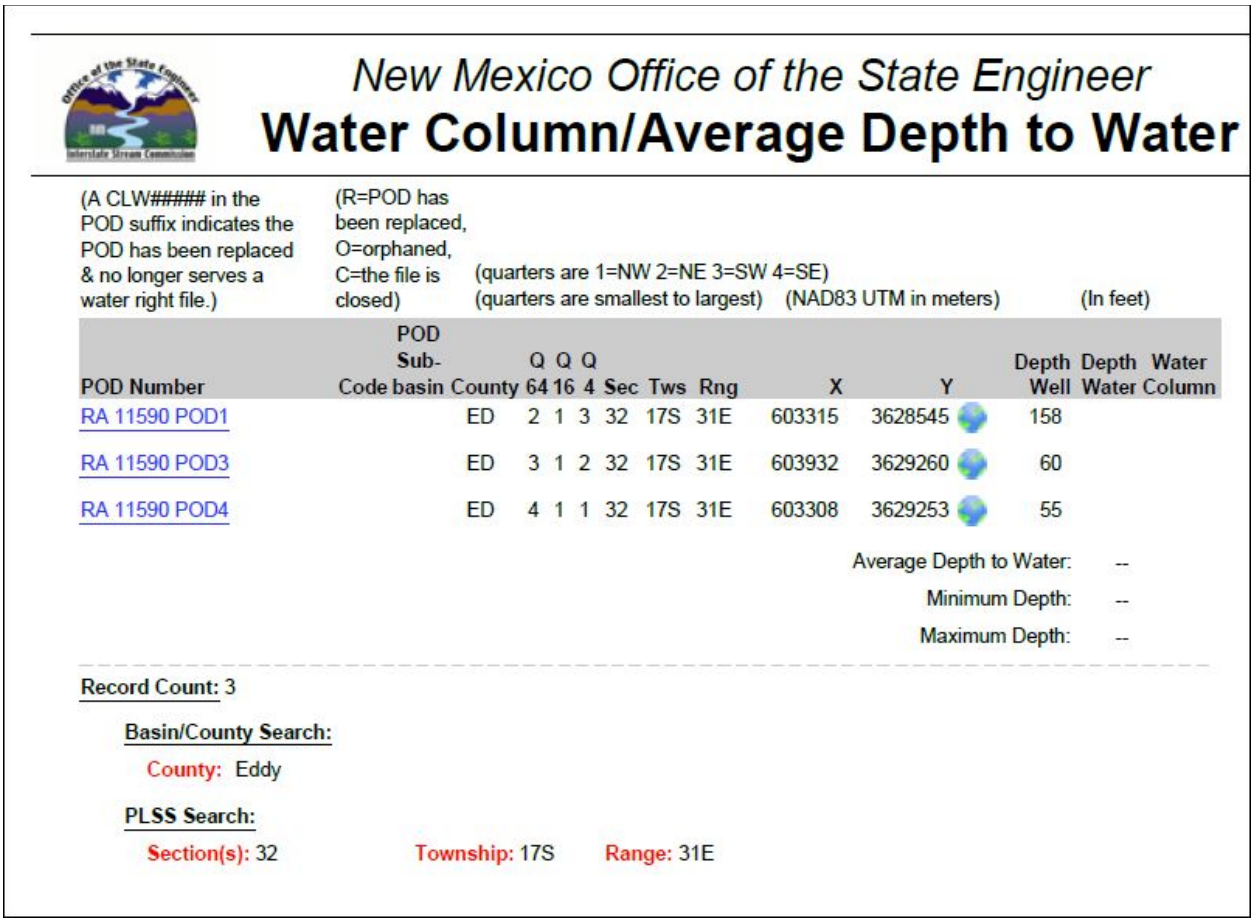
Setting

The setting is as follows:

- The surface elevation is approximately 3,726 feet above sea level.
- The topography is undulating sands with Kermit and Berino soils.
- Groundwater depth is unknown or not present according to records from the New Mexico Office of the State Engineer (OSE)
- No fresh water wells in the area. (See attached OSE water well reports)

Remediation Action

Collect soil samples at a minimum depth of 24 inches below surface near fire source to be analyzed by Cardinal Labs in Hobbs, NM. Upon return of results, determine whether or not soil needs to be remediated deeper than 24 inches below surface.



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
RA 11590 POD1			ED	2	1	3	32	17S	31E	603315	3628545	158		
RA 11590 POD3			ED	3	1	2	32	17S	31E	603932	3629260	60		
RA 11590 POD4			ED	4	1	1	32	17S	31E	603308	3629253	55		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 3

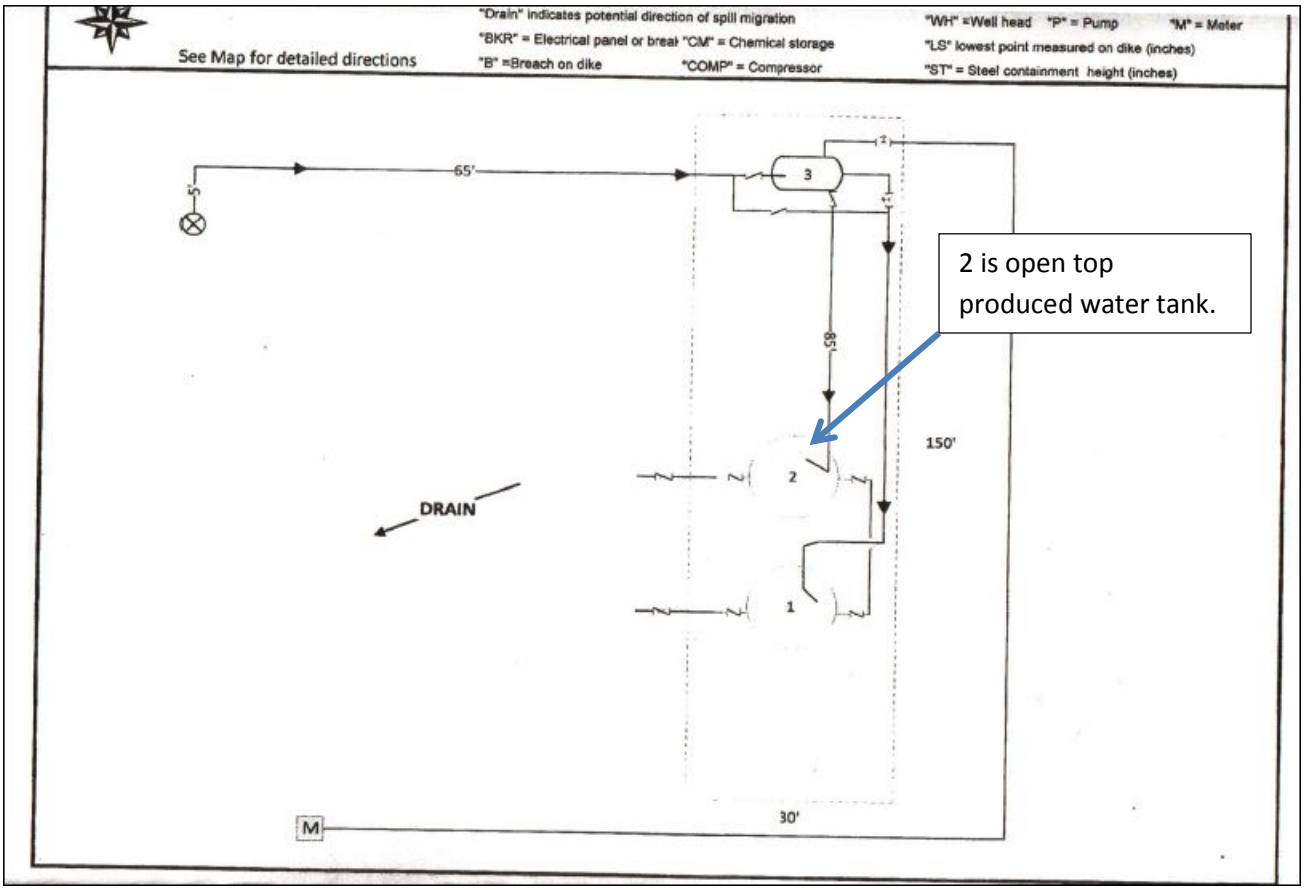
Basin/County Search:

County: Eddy

PLSS Search:

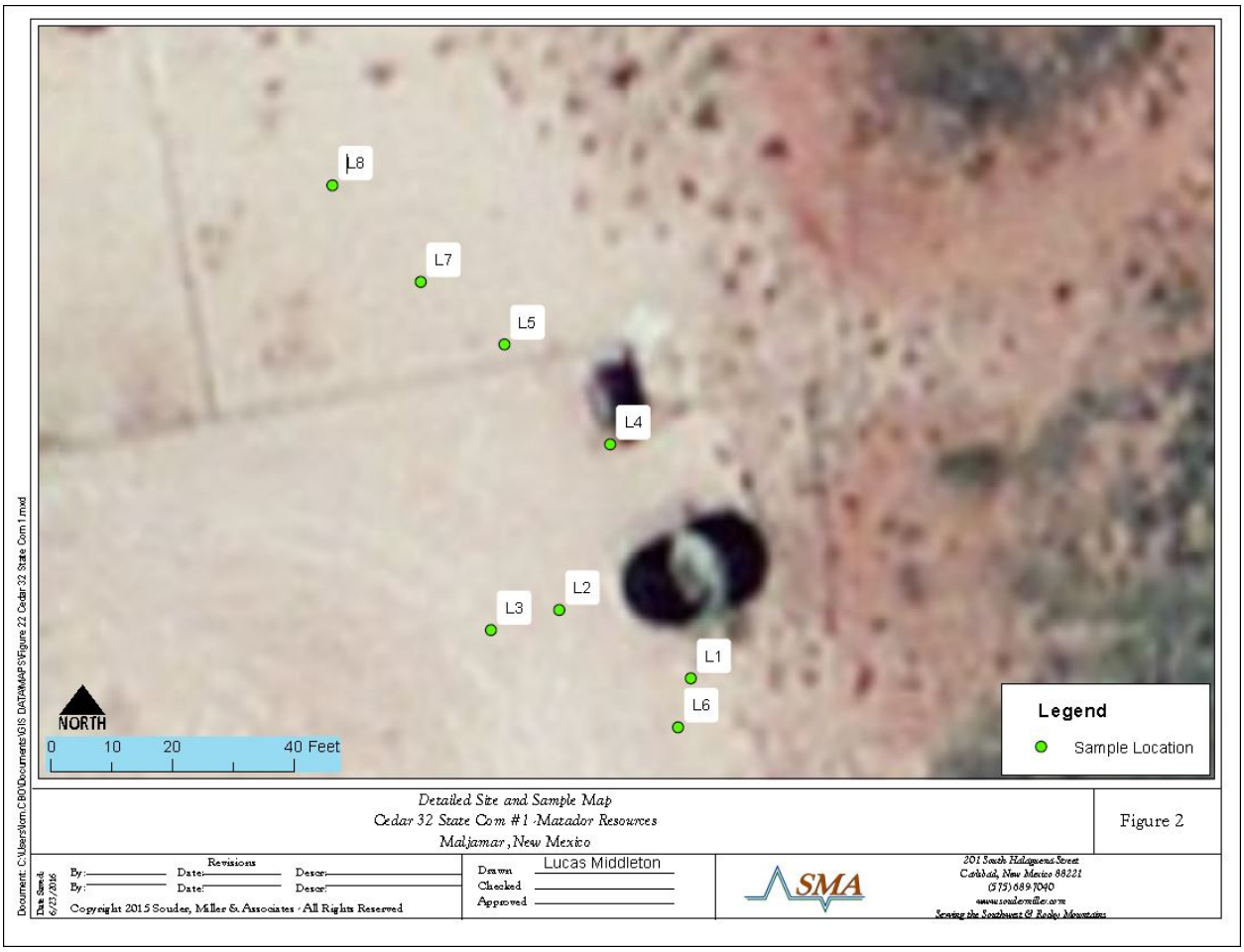
Section(s): 32 Township: 17S Range: 31E

As can be seen above, three wells have been drilled. However the depth to water is blank. This leaves the reader with an undefined conclusion.


See Map for detailed directions
"Drain" indicates potential direction of spill migration
"BKR" = Electrical panel or breal "CM" = Chemical storage
"B" =Breach on dike "COMP" = Compressor
"WH" =Well head "P" = Pump "M" = Meter
"LS" lowest point measured on dike (inches)
"ST" = Steel containment height (inches)
65'
3
2
1
150'
30'
DRAIN
M
2 is open top produced water tank.

Remediation Actions

Soil samples were collected as shown on the attached plat at the surface.



Field screening results are shown below.

Table 2: Summary of Chloride Field Screening Results

Cedar 32 State Com #1
Delineation
6/23/16

FIELD SCREENING RESULTS SUMMARY					
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N
6/23/2016	8:00	L1-1	1'	827	Y
6/23/2016	8:00	L1-2	2'	564	Y
6/23/2016	8:00	L1-3	3'	450	Y
6/23/2016	8:00	L1-4	4'	438	Y
6/23/2016	8:00	L2-1	1'	153	Y
6/23/2016	8:00	L2-3	3'	84	Y
6/23/2016	8:00	L3-1	1'	81	Y
6/23/2016	8:00	L4-1	1'	1523	Y
6/23/2016	8:00	L4-3	3'	1317	Y
6/23/2016	8:00	L4-4	4'	564	Y
6/23/2016	8:00	L5-1	1'	906	Y
6/23/2016	8:00	L6-1	1'	564	Y
6/23/2016	8:00	L7-1	1'	872	Y
6/23/2016	8:00	L7-3	3'	701	Y
6/23/2016	8:00	L8-1	1'	35	Y
6/23/2016	8:00	BG	1'	25	Y

Souder, Miller and Associates, who collected the samples, had to bring an auger to get to 4 feet below surface. At three feet below surface, they encountered rock that would not yield to a hand auger. This was a produced water spill. As can be seen by the above on site results, it appears that the chlorides at sample point 4 are the highest. Sample point 4 is very close to the water tank where the spill occurred. Please find the latest results below:

Analytical Report
Lab Order **1606F34**
Date Reported: **7/7/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-3
Project: Cedar 32 State Com 1
Collection Date: 6/23/2016 11:00:00 AM
Lab ID: 1606F34-001 **Matrix:** SOIL **Received Date:** 6/28/2016 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	760	30		mg/Kg	20	7/1/2016 4:08:10 PM	26203
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/30/2016 1:20:51 PM	26153
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/30/2016 1:20:51 PM	26153
Surr: DNOP	89.4	70-130		%Rec	1	6/30/2016 1:20:51 PM	26153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/29/2016 11:05:21 PM	26117
Surr: BFB	99.4	80-120		%Rec	1	6/29/2016 11:05:21 PM	26117

Analytical Report
Lab Order **1606F34**
Date Reported: **7/7/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-4
Project: Cedar 32 State Com 1
Collection Date: 6/23/2016 11:00:00 AM
Lab ID: 1606F34-002 **Matrix:** SOIL **Received Date:** 6/28/2016 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	620	30		mg/Kg	20	7/1/2016 4:20:35 PM	26203
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/30/2016 1:42:57 PM	26153
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/30/2016 1:42:57 PM	26153
Surr: DNOP	84.4	70-130		%Rec	1	6/30/2016 1:42:57 PM	26153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2016 12:38:51 AM	26117
Surr: BFB	99.0	80-120		%Rec	1	6/30/2016 12:38:51 AM	26117
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	6/30/2016 12:38:51 AM	26117
Benzene	ND	0.024		mg/Kg	1	6/30/2016 12:38:51 AM	26117
Toluene	ND	0.049		mg/Kg	1	6/30/2016 12:38:51 AM	26117
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2016 12:38:51 AM	26117
Xylenes, Total	ND	0.097		mg/Kg	1	6/30/2016 12:38:51 AM	26117
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	6/30/2016 12:38:51 AM	26117

Analytical Report
Lab Order **1606F34**
Date Reported: **7/7/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Cedar 32 State Com 1
Lab ID: 1606F34-003 **Matrix:** SOIL

Client Sample ID: L4-3
Collection Date: 6/23/2016 11:00:00 AM
Received Date: 6/28/2016 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1700	75		mg/Kg	50	7/6/2016 12:48:23 AM	26203
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	320	10		mg/Kg	1	6/30/2016 2:04:47 PM	26153
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/30/2016 2:04:47 PM	26153
Surr: DNOP	89.4	70-130		%Rec	1	6/30/2016 2:04:47 PM	26153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	21	4.6		mg/Kg	1	6/30/2016 1:02:18 AM	26117
Surr: BFB	294	80-120	S	%Rec	1	6/30/2016 1:02:18 AM	26117

Analytical Report
Lab Order **1606F34**
Date Reported: **7/7/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Cedar 32 State Com 1
Lab ID: 1606F34-004 **Matrix:** SOIL

Client Sample ID: L4-4
Collection Date: 6/23/2016 11:00:00 AM
Received Date: 6/28/2016 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	680	30		mg/Kg	20	7/1/2016 5:10:13 PM	26203
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	310	10		mg/Kg	1	6/30/2016 2:27:00 PM	26153
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/30/2016 2:27:00 PM	26153
Surr: DNOP	88.4	70-130		%Rec	1	6/30/2016 2:27:00 PM	26153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	62	4.8		mg/Kg	1	6/30/2016 1:25:44 AM	26117
Surr: BFB	673	80-120	S	%Rec	1	6/30/2016 1:25:44 AM	26117

Analytical Report
Lab Order **1606F34**
Date Reported: **7/7/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-1
Project: Cedar 32 State Com 1
Collection Date: 6/23/2016 11:00:00 AM
Lab ID: 1606F34-005 **Matrix:** SOIL **Received Date:** 6/28/2016 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	200	30		mg/Kg	20	7/1/2016 5:22:37 PM	26203
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/30/2016 2:49:04 PM	26153
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2016 2:49:04 PM	26153
Surr: DNOP	89.7	70-130		%Rec	1	6/30/2016 2:49:04 PM	26153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/30/2016 1:49:12 AM	26117
Surr: BFB	107	80-120		%Rec	1	6/30/2016 1:49:12 AM	26117

Analytical Report
Lab Order **1606F34**
Date Reported: **7/7/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-3
Project: Cedar 32 State Com 1
Collection Date: 6/23/2016 11:00:00 AM
Lab ID: 1606F34-006 **Matrix:** SOIL **Received Date:** 6/28/2016 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	190	30		mg/Kg	20	7/1/2016 5:35:02 PM	26203
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/30/2016 3:11:15 PM	26153
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/30/2016 3:11:15 PM	26153
Surr: DNOP	85.4	70-130		%Rec	1	6/30/2016 3:11:15 PM	26153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/30/2016 2:12:35 AM	26117
Surr: BFB	98.7	80-120		%Rec	1	6/30/2016 2:12:35 AM	26117

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606F34

07-Jul-16

Client: Souder, Miller & Associates

Project: Cedar 32 State Com 1

Sample ID	MB-26203	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	26203	RunNo:	35411				
Prep Date:	7/1/2016	Analysis Date:	7/1/2016	SeqNo:	1095690	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-26203	SampType:	LCS	TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS	Batch ID:	26203	RunNo:	35411				
Prep Date:	7/1/2016	Analysis Date:	7/1/2016	SeqNo:	1095691	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	90	110			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606F34

07-Jul-16

Client: Souder, Miller & Associates

Project: Cedar 32 State Com 1

Sample ID	LCS-26153	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	26153	RunNo:	35335				
Prep Date:	6/29/2016	Analysis Date:	6/30/2016	SeqNo:	1093643	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	62.6	124			
Surr: DNOP	4.6		5.000		91.0	70	130			

Sample ID	MB-26153	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	26153	RunNo:	35335				
Prep Date:	6/29/2016	Analysis Date:	6/30/2016	SeqNo:	1093644	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.6		10.00		86.4	70	130			

Sample ID	1606F25-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	BatchQC	Batch ID:	26153	RunNo:	35334				
Prep Date:	6/29/2016	Analysis Date:	6/30/2016	SeqNo:	1094441	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.6	48.03	2.386	84.6	33.9	141			
Surr: DNOP	4.2		4.803		86.6	70	130			

Sample ID	1606F25-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	BatchQC	Batch ID:	26153	RunNo:	35334				
Prep Date:	6/29/2016	Analysis Date:	6/30/2016	SeqNo:	1094442	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.56	2.386	87.0	33.9	141	7.55	20	
Surr: DNOP	4.6		5.056		91.5	70	130	0	0	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606F34

07-Jul-16

Client: Souder, Miller & Associates

Project: Cedar 32 State Com 1

Sample ID **MB-26117** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **26117** RunNo: **35307**

Prep Date: **6/28/2016** Analysis Date: **6/29/2016** SeqNo: **1092208** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.3	80	120			

Sample ID **LCS-26117** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **26117** RunNo: **35307**

Prep Date: **6/28/2016** Analysis Date: **6/29/2016** SeqNo: **1092209** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	110	80	120			
Surr: BFB	1100		1000		111	80	120			

Sample ID **1606F01-002AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **BatchQC** Batch ID: **26117** RunNo: **35307**

Prep Date: **6/28/2016** Analysis Date: **6/29/2016** SeqNo: **1092212** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	4.8	23.83	0	130	59.3	143			
Surr: BFB	1100		953.3		113	80	120			

Sample ID **1606F01-002AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **BatchQC** Batch ID: **26117** RunNo: **35307**

Prep Date: **6/28/2016** Analysis Date: **6/29/2016** SeqNo: **1092213** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	4.8	24.02	0	134	59.3	143	3.40	20	
Surr: BFB	1100		960.6		116	80	120	0	0	

Client: Souder, Miller & Associates
Project: Cedar 32 State Com 1

Sample ID MB-26117 SampType: MBLK TestCode: EPA Method 8021B: Volatiles
Client ID: PBS Batch ID: 26117 RunNo: 35307
Prep Date: 6/28/2016 Analysis Date: 6/29/2016 SeqNo: 1092238 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.0	80	120			

Sample ID LCS-26117 SampType: LCS TestCode: EPA Method 8021B: Volatiles
Client ID: LCSS Batch ID: 26117 RunNo: 35307
Prep Date: 6/28/2016 Analysis Date: 6/29/2016 SeqNo: 1092239 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.89	0.10	1.000	0	89.5	61	143			
Benzene	0.96	0.025	1.000	0	95.9	75.3	123			
Toluene	0.97	0.050	1.000	0	96.9	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.4	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	98.4	83.9	122			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.9	80	120			

Sample ID 1606F01-001AMS SampType: MS TestCode: EPA Method 8021B: Volatiles
Client ID: BatchQC Batch ID: 26117 RunNo: 35307
Prep Date: 6/28/2016 Analysis Date: 6/29/2016 SeqNo: 1092241 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.0	0.097	0.9699	0	104	69.2	128			
Benzene	1.0	0.024	0.9699	0.008312	106	71.5	122			
Toluene	1.1	0.048	0.9699	0.01987	110	71.2	123			
Ethylbenzene	1.1	0.048	0.9699	0.01678	116	75.2	130			
Xylenes, Total	3.5	0.097	2.910	0.2714	112	72.4	131			
Surr: 4-Bromofluorobenzene	1.0		0.9699		104	80	120			

Sample ID 1606F01-001AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles
Client ID: BatchQC Batch ID: 26117 RunNo: 35307
Prep Date: 6/28/2016 Analysis Date: 6/29/2016 SeqNo: 1092242 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.0	0.10	0.9970	0	99.9	69.2	128	1.73	20	
Benzene	1.0	0.025	0.9970	0.008312	103	71.5	122	0.428	20	
Toluene	1.1	0.050	0.9970	0.01987	110	71.2	123	2.37	20	
Ethylbenzene	1.2	0.050	0.9970	0.01678	118	75.2	130	4.67	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1606F34**
07-Jul-16

Client: Souder, Miller & Associates
Project: Cedar 32 State Com 1

Sample ID 1606F01-001AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles
Client ID: BatchQC Batch ID: 26117 RunNo: 35307
Prep Date: 6/28/2016 Analysis Date: 6/29/2016 SeqNo: 1092242 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	3.9	0.10	2.991	0.2714	120	72.4	131	9.06	20	
Surr: 4-Bromofluorobenzene	1.1		0.9970		106	80	120	0	0	

Website: www.hallenvironmental.com

Client Name: SMA-CARLSBAD Work Order Number: 1606F34 RcptNo: 1

Received by/date: DU 6/28/16
Logged By: **Ashley Gallegos** 6/28/2016 9:25:00 AM
Completed By: **Ashley Gallegos** 6/28/2016 12:52:19 PM
Reviewed By: 06/28/16

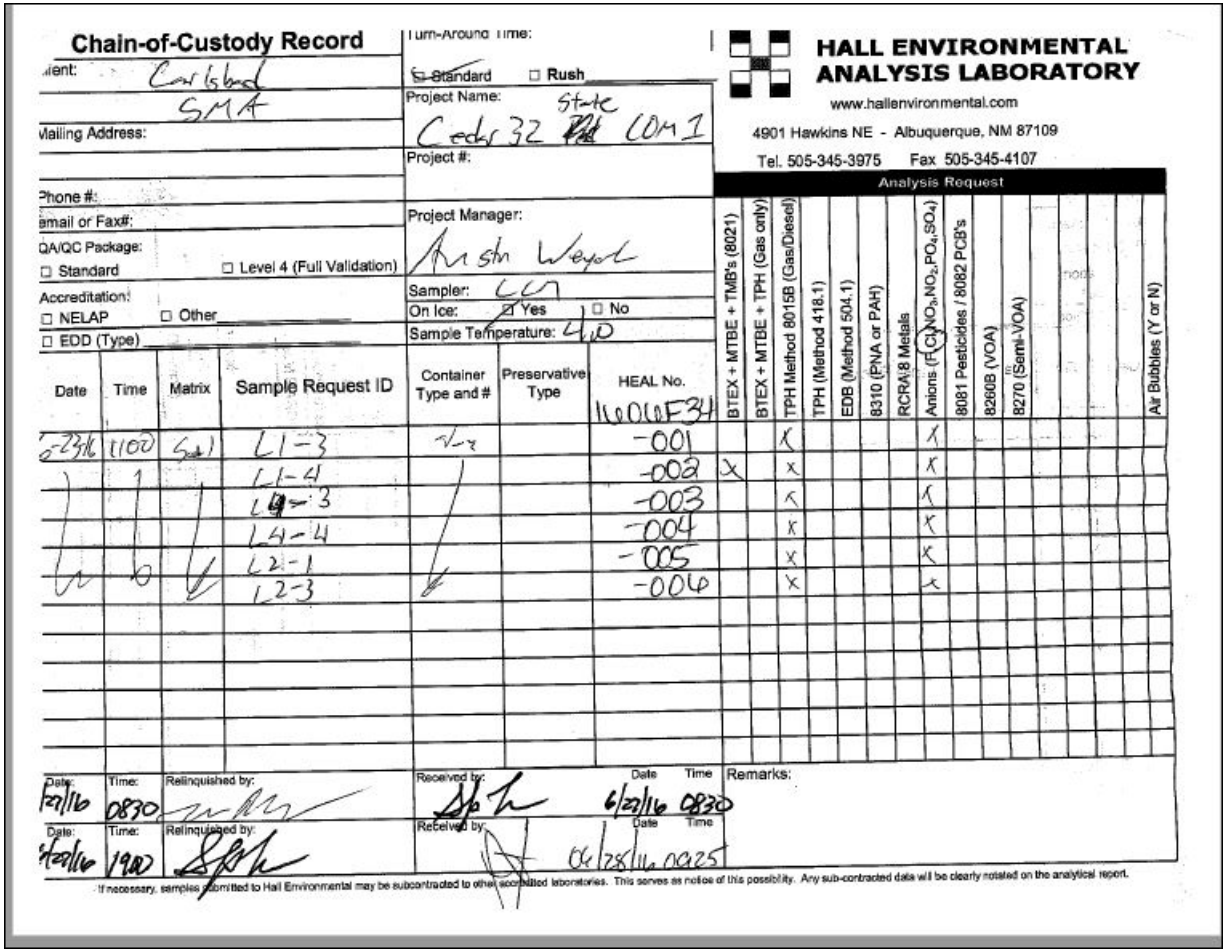
Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____



Chain-of-Custody Record

Client: Carlsbad SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
~~☐ Standard~~ ☐ Rush

Project Name: State Code 32 Fed Com 1

Project #:

Project Manager: Trish Wright

Sampler: CM

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1606F34	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, NO3, NO2, PO4, SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/23/16	1100	Soil	L1-3	4		-001			X					X								
			L1-4			-002	X		X					X								
			L4-3			-003			X					X								
			L4-4			-004			X					X								
			L2-1			-005			X					X								
			L2-3			-006			X					X								

Date: 6/23/16 Time: 0830 Relinquished by:

Received by: Date: 6/23/16 Time: 0830

Date: 6/23/16 Time: 1900 Relinquished by:

Received by: Date: 06/24/16 Time: 0025

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Table 2: Summary of Laboratory Analyses

Site Vistit for Cedar 32 State Com #1 on 6/23/16

Analytical Report- 1606F34	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1606F34-001	L1-3	6/23/2016	3'	N/A	N/A	BDL	BDL	760
1606F34-002	L1-4	6/23/2016	4'	BDL	BDL	BDL	BDL	620
1606F34-003	L4-3	6/23/2016	3'	N/A	N/A	21	320	1700
1606F34-004	L4-4	6/23/2016	4'	N/A	N/A	62	310	680
1606F34-005	L2-1	6/23/2016	1'	N/A	N/A	BDL	BDL	200
1606F34-006	L2-3	6/23/2016	3'	N/A	N/A	BDL	BDL	190

As can be seen by the table above, the chlorides at location point 4 that is 3 feet below ground surface are 1700 mg/kg. As this is above the acceptable limit, Matador proposes to excavate 4 feet below surface to remove the chlorides, and replace with 'fresh' soil.