Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

<u>Closure Report Attachment Checklist:</u> Each of the following it	tems must be included in the closure report.									
A scaled site and sampling diagram as described in 19.15.29.11 NMAC										
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)										
Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)										
Description of remediation activities										
and regulations all operators are required to report and/or file certair may endanger public health or the environment. The acceptance of	nediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in									
Printed Name:	_ Title:									
Signature:	Date:									
email:	Telephone:									
OCD Only										
Received by: Jocelyn Harimon	Date: 01/19/2023									
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.									
Closure Approved by: <u><i>Robert Hamlet</i></u>	Date: 5/19/2023									
Printed Name: Robert Hamlet	Title: <u>Environmental Specialist - Advanced</u>									



January 18, 2023

District Supervisor Oil Conservation Division, District 2 506 W. Texas Artesia, New Mexico 88210

Re: Closure Report ConocoPhillips Heritage Concho JR Horz Federal #001 Release Unit Letter D, Section 10, Township 26 South, Range 29 East Eddy County, New Mexico Incident ID# NAB1531639135 2RP-3386

Sir or Madam,

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess and evaluate a Heritage Concho release and subsequent remedial/monitoring actions performed at the JR Horz Federal #001 release site (API No. 30-015-33066). The release footprint is located in Public Land Survey System (PLSS) Unit Letter D, Section 10, Township 26 South, Range 29 East, in Eddy County, New Mexico (Site). The C-141 listed coordinates for the release point, when in fact the coordinates indicated the location of the pad site. The coordinates listed on the C-141 are 32.0632515°, -103.9792099°, and the pad location is shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report, the release was discovered on October 21, 2015. The release occurred as a result of a lightning strike incident on the facilities with a fire that ensued. Once the fire was extinguished, vacuum trucks were dispatched to recover standing fluids. A total of approximately 1,310 barrels (bbls) of produced water and 44 bbls of crude oil, of which approximately 240 bbls of produced water and 40 bbls of crude oil were recovered. The release point was located in a lined facility however, the release was not contained within the metal-wall lined facility. The release flowed north, approximately 10 feet in width, across multiple pipeline rights-of-way and across a lease road, before pooling on the north side of the lease road. Then the release headed north into a local drainage and continuing north-northeast for nearly 1/4 mile, ranging in width from 10 to 75 feet at some points. The approximate release extent is shown in Figure 3.

The NMOCD approved the initial C-141 on November 12, 2015, and subsequently assigned the release the Incident ID NAB1531639135 and the remediation permit (RP) number 2RP-3386. The initial C-141 form is included in Appendix A.

SITE CHARACTERIZATION

The Site Characterization performed by COG at the time of the assessment (and ensuing proposed work plan) established a depth to groundwater greater than 100 feet bgs based on the Chevron Trend Maps,

classifying it as a site ranking of zero. This Site Characterization was accepted when the work plan was accepted.

Given the age of the release and the associated actions, a contemporaneous site characterization was performed for the release footprint. The Site assessment and remediation activities are described in subsequent sections of this report.

A contemporaneous site characterization was performed and no sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.29 New Mexico Administrative Code (NMAC). A stream body identified by the New Mexico Office of the State Engineer (NMOSE) is located in the vicinity of the far northern reaches of the release extent. The drainage area or "draw", as described in later reporting, is an ephemeral drainage to of this stream body. The Site is in an area of medium karst potential.

There are no water wells listed in the NMOSE database located within approximately ½ mile (800 meters) of the site. According to data from three (3) well listed in the NMOSE database located approximately 2.07 miles (3300 meters) from the Site, groundwater was encountered at a minimum depth of 75 feet below ground surface (bgs). The Site characterization data is presented in Appendix B.

The remediation action levels proposed for the Site are largely dependent upon depth to groundwater. As such, the OCD focuses upon depth to water estimation. Thus, 19.15.11(A)(2) NMAC allows for various means of determining depth to groundwater. For this release, as the available water level information was form wells further than ½ mile away from the site, COP reviewed adjacent release sites with approved Work Plans for possibility of associated borings which could provide a means for determining depth to groundwater in the vicinity of NAB1531639135 / 2RP-3386 release area. As such, subsurface data from the JR Horz Federal #2 Release Site (NAB1904554978) was reviewed.

One boring (Groundwater Determination Bore, aka GDB) drilled as a portion of the JR Horz Federal #2 Release characterization was identified as located within 0.4-mile radius of the JR Horz Federal #001 Release footprint. A review of the associated boring log indicates boring GDB does not define depth to groundwater but was dry to a depth of 55 feet below the ground surface. The borehole was plugged with 3/8" bentonite chips on August 3, 2020. The borehole coordinates are 32.063589, -103.972770. Thus, based on this data, COP proposes to use the 51 – 100 feet criteria listed in Table I of 19.15.29.12 NMAC. The boring log from the JR Horz Federal #2 (NAB1904554978) assessment is included in Appendix B. The remainder of the Site characterization is also included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

Based on the site characterization, established depth to groundwater, and in accordance with Table I of 19.15.29.12 NMAC, the RRALs for the Site are as follows:

Constituent	Site RRAL
Chloride	10,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 mg/kg
BTEX	50 mg/kg

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Additionally, in accordance with the NMOCD guidance *Procedures for Implementation of the Spill Rule* (19.15.29 NMAC) (September 6, 2019), the following reclamation requirements for surface soils (0-4 feet bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation Requirement							
Chloride	600 mg/kg							
ТРН	100 mg/kg							
BTEX	50 mg/kg							

SMA INITIAL ASSESSMENT

Following the initial release, COG dispatched vacuum trucks to recover standing fluid. On December 16, 2015, Souder, Miller & Associates (SMA) collected soil samples from four (4) locations (D1 through D4) on pad and three (3) locations (P1 through P3) in the drainage area. The assessment sampling locations are presented in Figure 3. A total of eighteen (18) samples were collected from the seven locations and sent to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico to be analyzed for chlorides via method EPA 300.0. P1 at 0.5 ft, P3 at 0.5 ft, and D2 at 2 ft were also tested for BTEX via Method 8021B. Analytical results associated with samples collected during the December 2015 assessment activities are summarized in Table 1.

A preliminary Work Plan dated December 28, 2015 was prepared by SMA based on the results of the December 2015 Site assessment and submitted to NMOCD and the Bureau of Land Management (BLM) via email on January 12, 2016. The Work Plan included an incomplete table of samples and associated laboratory analytical results. Heather Patterson of the NMOCD requested additional sample information and associated laboratory analytical results that were shown in Figure 2 of the SMA Work Plan, but not included in the initial Table 2 Summary of Laboratory Analyses. Lucas Middleton of SMA emailed Heather Patterson with additional sample and associated lab analytical data on January 19, 2016.

The Work Plan proposed an excavation of impacted soils on and off pad, continuously guided by SMA through the collection of composite soil samples for field screening with a mobile titration unit and calibrated PID. SMA's proposed Work Plan would not encroach the area north of the well pad and local drainage in and around the pipeline right-of-way. 1,400 cubic yards of contaminated soil were expected to be excavated and replaced with clean backfill material. Furthermore, SMA proposed to further delineate the remainder of the release extent located within the drainage feature, which was not previously accomplished due to wet ground conditions in the release footprint.

The Work Plan was approved by NMOCD via email on January 21, 2016 with the following comments:

- This approval is for the pad portion of the clean-up efforts only.
- With the additional information provided, the OCD can approve a 2 foot excavation of the pad. Like approval by BLM is required for this location.

No record of a response from the BLM can be located on the NMOCD Online Imaging website. Copies of the regulatory correspondence are included in Appendix C.

PARTIAL REMEDIAL ACTION AND ADDITIONAL DELINEATION

Post-assessment, SMA began the excavation of impacted soils on the well pad. The SMA Closure Report, (Appendix D), dated January 26, 2016, states that excavation activities were guided by SMA personnel and soil samples were collected for field screening utilizing a mobile titration unit and a calibrated PID. Areas of the pad were reportedly excavated to $2\frac{1}{2}$ feet bgs. No figure or details of the exact area excavated was provided by the SMA Closure Report. Furthermore, the report stated that confirmation samples were collected at final depth of excavation of $2\frac{1}{2}$ feet bgs. However, the report is unclear in this regard, and no data is found that presents as confirmation data. Total contaminated soils excavated was reported to be

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1,400 cubic yards, which was replaced with clean backfill material from the nearest COG caliche pit. Contaminated soil was transported for proper disposal at the R360 Red Bluff facility in Texas. No documentation from the R360 facility, demonstrating the quantity and associated dates of contaminated soils transported, was presented. Based on the Work Plan approval and reported volumes, an inferred remedial extent was drafted from the SMA documentation and is included as Figure 4.

SMA performed additional delineation of the release in the draw on January 20, 2016. A total of five (5) locations were accessed within the draw, whereby nine (9) samples were collected for field screening. Details were provided by SMA in the Closure Report dated January 26, 2016. The samples were gathered from the ground surface and 1 foot below ground surface. The results of the additional delineation surface screening indicated elevated levels of chlorides above Site Reclamation Limits. Table 2 includes laboratory analytical data associated with samples collected during the additional delineation event.

COG MONITORING PLAN

Based on the partial Work Plan approval from OCD, a monitoring plan was developed by COG, dated July 22, 2016, as an addendum to the approved work plan. Amanda Trujillo of COG emailed the proposed Monitoring Plan to Heather Patterson and Mike Bratcher of the NMOCD, as well as Jim Amos and Shelly Tucker of the BLM, on July 27, 2016. A copy of this report is included as Appendix E. This report was not found in a review of OCD imagery. Associated regulatory correspondence is also included in Appendix C. The goal of the monitoring plan was to address impact left in place within the draw, to verify that chlorides left in place would be stabilized at the then current depth. The proposed monitoring plan defined the depth to groundwater at 125 ft below the surface based on Chevron trend maps but did not include a figure as a reference for characterization purposes. Furthermore, COG stated that due to the high depth to groundwater, a greater risk of impact to the Pecos River was by way of horizontal movement of chlorides.

Four sample locations were selected for two separate purposes (P2, P3, MP1, and MP2). Two sampling locations were proposed to be in the flow path of the release. The second set of locations were chosen to measure horizontal movement of chlorides over time. Samples would not be gathered deeper than three feet below the ground surface. If samples deeper than three feet below ground surface were required, COG would seek permission from the NMOCD District 2 and Carlsbad BLM Office to enter the draw with a truck-mounted mechanical drilling rig for sampling purposes. The plan proposed to collect samples utilizing a hand auger in May of each year for 3 consecutive years beginning in 2017. COG's intent was to gather three years of monitoring event data and request closure if the analysis showed no change on chloride impact in the subsurface of the draw. Figure 5 depicts the locations in the proposed monitoring plan.

Within the proposed monitoring plan report, a set of figures and tables with laboratory analytical data were included. The sample locations referenced in the tables, and shown on the figures, were not the sample locations proposed in the monitoring plan. No record of a monitoring event conducted by COG could be located through the NMOCD Online Imaging records or by way of client correspondence. It appears from data presented in the monitoring plan, associated with corresponding sample points on aerial imagery, that three locations (S1, S3, and BGS) appear to have been sampled in the monitoring plan.

These three locations (S1, S3, and BGS) had not previously been presented by SMA. Furthermore, based on the laboratory reports associated with these locations, the samples were collected on May 26, 2016, five months after the closure report was prepared. The implication is that the samples were collected by COG internally and intended to verify the effectiveness of the remedial action. Laboratory analytical data associated with S1 and S3 were included in the tables adjacent to the aerial imagery figures in the report. The analytical data associated with the BGS sampling point was only in the laboratory analytical reports attached to the proposed monitoring plan. Figure 5 indicates the location of the June 2016 sampling event and associated laboratory analytical results are presented in Table 3.

2019 JR HORZ #2 AND COINCIDENT RELEASE REMEDIATION

Based on the age of the release and the site conditions, a review of adjacent release sites with approved Work Plans and remedial actions was conducted. The JR Horz Federal #2 incident (NAB1904554978/2RP-

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5238) was reviewed for any applicability to the current incident. The release and remedial actions associated with NAB1904554978 were determined to be coincident with sections of the JR Horz Federal #001 release footprint.

The JR Horz Federal #2 Release incident (NAB1904554978) was discovered on February 4, 2019. The release footprint occurred in the pasture north of the pad and migrated north into the adjacent draw. On behalf of COG, Tetra Tech assessed the release extent and generated a Work Plan based on the results of the assessment. Prior to performing the assessment of the release extent within the wash area, COG had excavated impacted soils to a depth of 3 ft bgs in areas that were accessible with a backhoe. Following the COG response, and prior to the submittal of the Work Plan, the BLM reviewed the assessment data and inspected the Site. James Amos of the BLM requested no additional excavation within the wash area (draw/drainage) which could cause more damage to the surrounding areas and alter the course of the wash area. The OCD concurred with the BLM request. Additionally, the area was sloped in the natural course of the draw and erosion controls installed every 50 ft.

The Closure Report for the JR Horz Federal #2 Release incident was submitted on October 20, 2020. The report details excavation extents and confirmation sampling performed as part of the remediation activities. Excavated extents from the JR Horz Federal #2 Release incident remediation (NAB1904554978) are partially coincident with sections of the JR Horz Federal #001 Release footprint (NAB1531639135). Figure 6 depicts the JR Horz Federal #001 Release footprint, the JR Horz Federal #2 Release footprint, and areas excavated as part of the JR Horz Federal #2 Release incident remediation.

CONCLUSION

Based on the current site conditions, previous remedial work completed, and BLM's documented desire for no further disturbance within the draw, ConocoPhillips respectfully requests closure for this incident. Several lines of evidence provide the basis for this request.

- Based on the documentation associated with the on-pad remediation conducted by SMA, it appears that the impacted soil within the release footprint on pad associated with the JR Horz #1 Release has been remediated as per the approved 2016 Work Plan.
- Based on the results of the initial assessment documented in COG's monitoring plan, which confirmed remedial efforts on pad and the absence of impact in soils in the southern draw, the release footprint area north of the lease road had little to no residual impacts.
- Based on subsequent remediation conducted in association with release NAB1904554978, sections of the release footprint north of the pad and south of the draw outside the lease roads have had residual impacts addressed.
- Based on subsequent remediation conducted in association with release NAB1904554978 in the draw and the associated ground disturbance from the excavation by COG, remaining impacted soils associated with the JR Horz Federal #1 Release in the southern draw have likely been remediated.

The final C-141 forms are enclosed in Appendix A. If you have any questions concerning the soil assessment activities for the Site, please call me at (512) 338-2861.

Sincerely, Tetra Tech, Inc.

Christian M. Llull, P.G. Program Manager

cc: Mr. Ike Tavarez – ConocoPhillips

ConocoPhillips

LIST OF ATTACHMENTS

Figures:

- Figure 1 Overview Map
- Figure 2 Topographic Map
- Figure 3 Approximate Release Extent
- Figure 4 Site Assessment Map
- Figure 5 Inferred Remediation Extents
- Figure 6 Monitoring Locations Map

Tables:

- Table 1 Summary of Analytical Results 2015 2016 Soil Assessment
- Table 2 Summary of Analytical Results 2016 Additional Delineation
- Table 3 Summary of Analytical Results COG 2016 Soil Assessment

Appendices:

Appendix A – C-141 Forms

Appendix B – Site Characterization Data

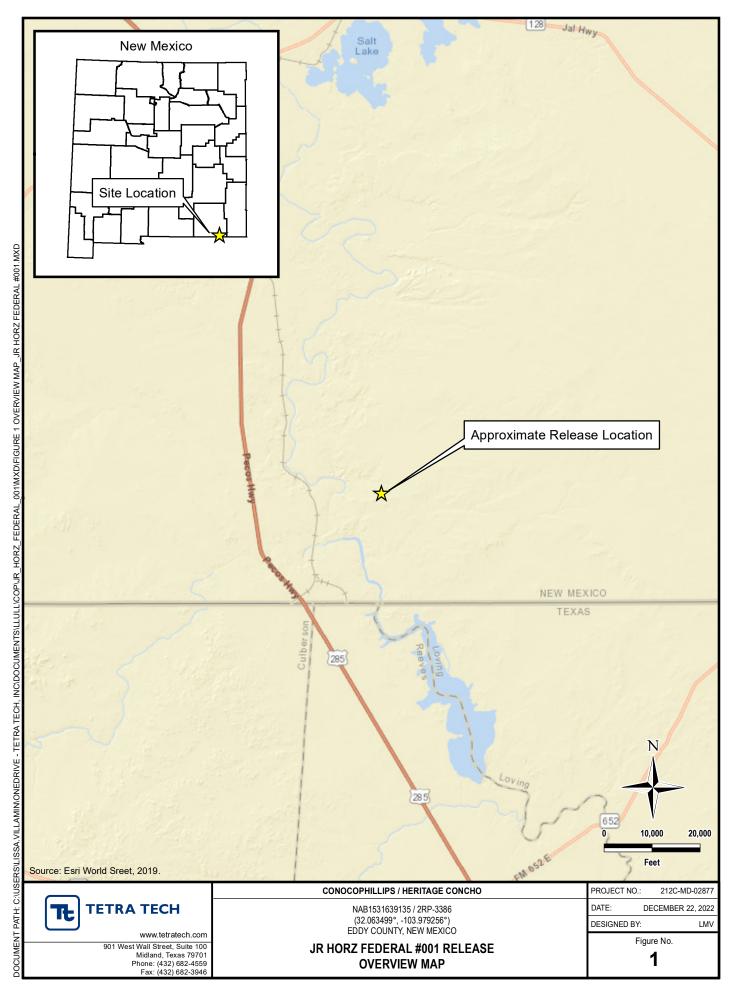
Appendix C – Regulatory Correspondence

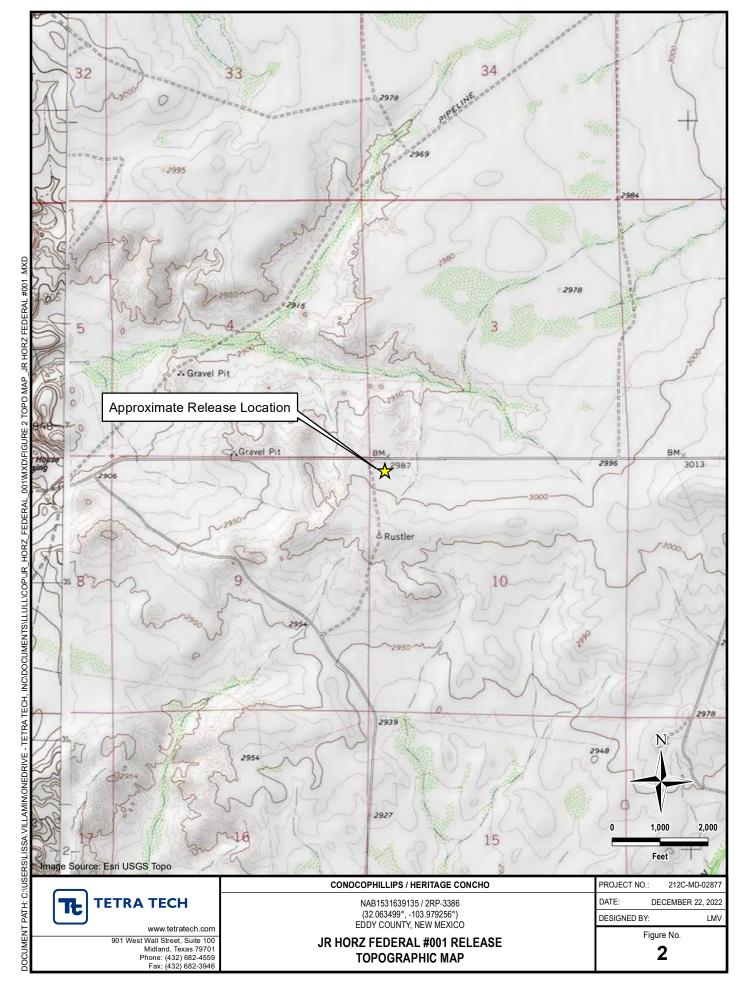
Appendix D – SMA Closure Report

Appendix E – COG Monitoring Report

FIGURES

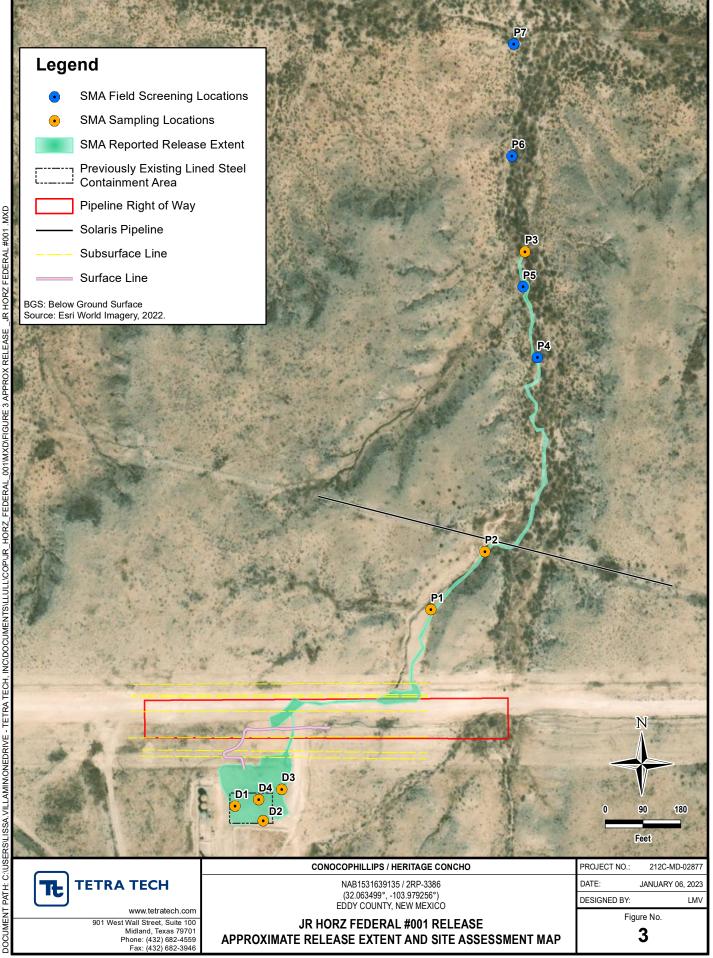
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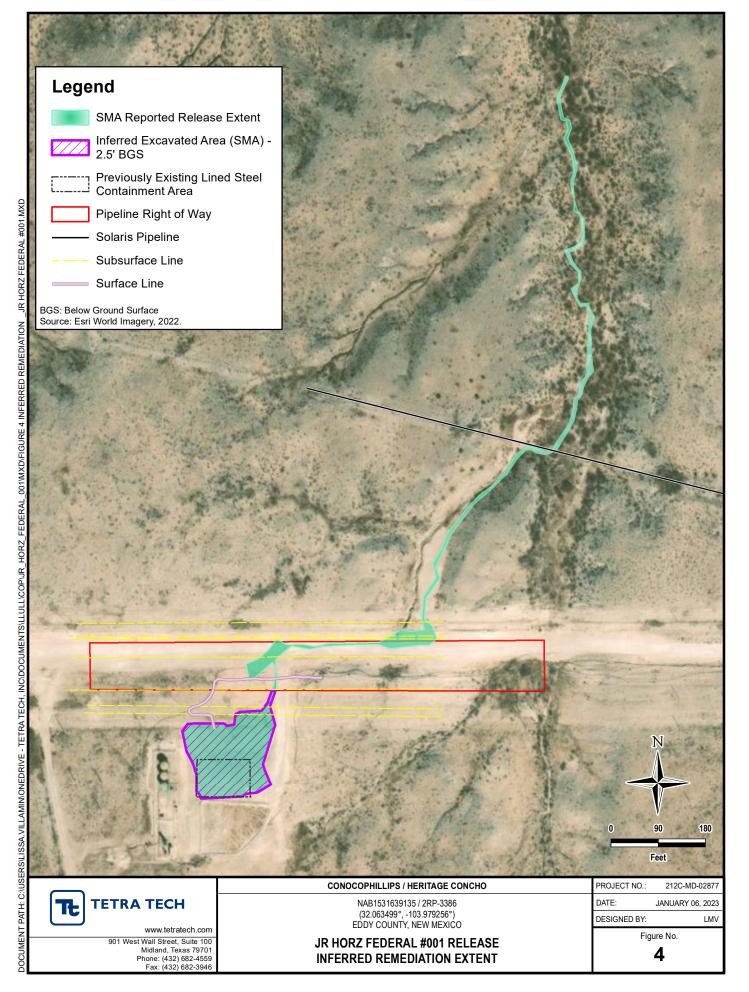


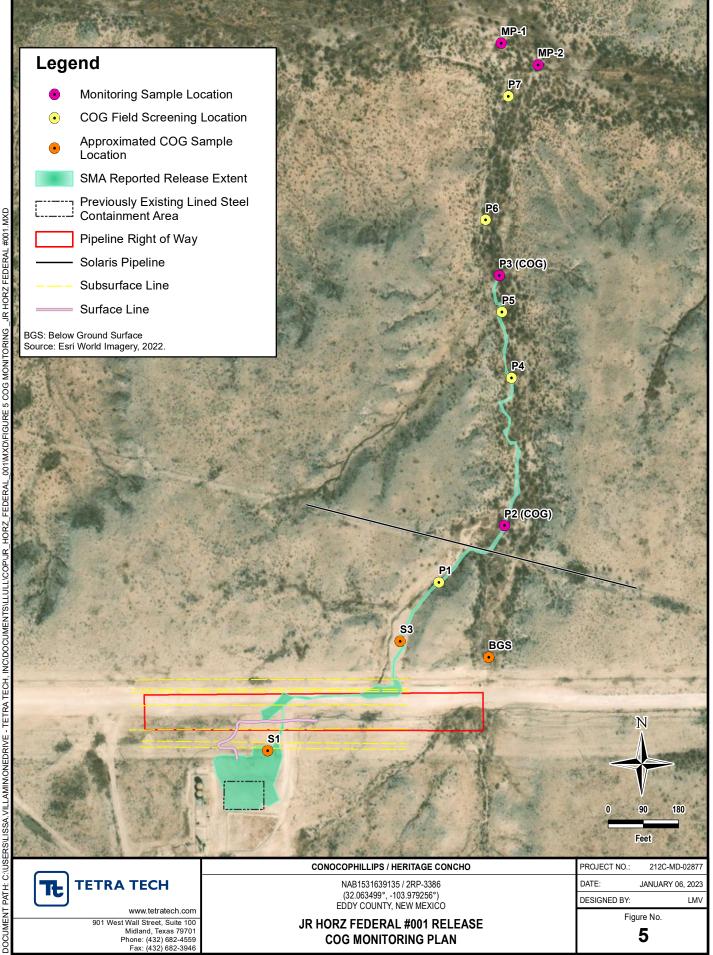


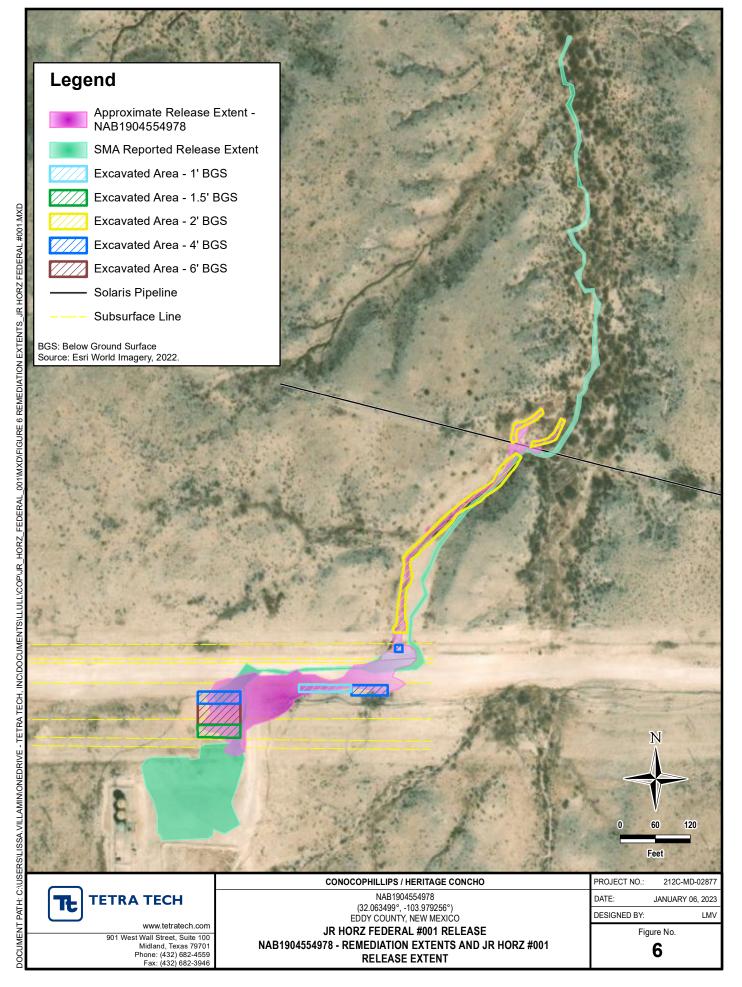
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TABLES

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TABLE 1

SUMMARY OF ANALYTICAL RESULTS 2015 2016 SOIL ASSESSMENT- NAB1531639135/2RP-3386 CONOCOPHILLIPS JR HORZ FED #1 RELEASE EDDY COUNTY, NM

									BTEX ²			ТРН ³								
Sample ID	Sample Date	Sample Depth	Chloride ¹	L	Benzene		Toluene		Ethylbenzen	•	Total Xylenes		Total BTEX	GRO		DRO		EXT DRO		Total TPH
Sumple ib Sumple Date					Delizene		roldelle			5	Total Aylenes	`	TOTAL DIEX	C ₆ - C ₁₀		> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆		(GRO+DRO+EXT DRO)
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
		2	110		NA		NA		NA		NA		NA	NA		NA		NA		-
		4	240		NA		NA		NA		NA		NA	NA		NA		NA		-
D1	12/16/2015	8	310		NA		NA		NA		NA		NA	NA		NA		NA		-
		12	280		NA		NA		NA		NA		NA	NA		NA		NA		-
		16	250		NA		NA		NA		NA		NA	NA		NA		NA		-
	12/16/2015	2	320		> 0.049		> 0.049		> 0.049		> 0.097		NA	NA		NA		NA		-
D2	12/16/2015	4	150		NA		NA		NA		NA		NA	NA		NA		NA		-
		4	440		NA		NA		NA		NA		NA	NA		NA		NA		-
D3	12/16/2015	6	80		NA		NA		NA		NA		NA	NA		NA		NA		-
03	12/16/2015	12	210		NA		NA		NA		NA		NA	NA		NA		NA		-
		16	180		NA		NA		NA		NA		NA	NA		NA		NA		-
D4	12/16/2015	2	1,100		NA		NA		NA		NA		NA	NA		NA		NA		-
D4	12/10/2015	4	ND		NA		NA		NA		NA		NA	NA		NA		NA		-
P1	12/16/2015	0.5	8,900		> 0.049		> 0.049		> 0.049		> 0.098		NA	NA		NA		NA		-
PI	12/10/2015	3	730		NA		NA		NA		NA		NA	NA		NA		NA		-
P2	12/16/2015	0.5	8,500		NA		NA		NA		NA		NA	NA		NA		NA		-
PZ 12/16/201	12/10/2015	3	220		NA		NA		NA		NA		NA	NA		NA		NA		-
P3	12/16/2015	0.5	24,000		> 0.047		> 0.047		> 0.047		> 0.093		NA	NA		NA		NA		-
Р3	1/20/2016	1	4,500		NA		NA		NA		NA		NA	NA		NA		NA		-

NOTES:

ft. Feet

bgs Below ground surface mg/kg Milligrams per kilogram

ТРН Total Petroleum Hydrocarbons

GRO Gasoline range organics

Diesel range organics DRO

1 Method SM4500Cl-B

Method 8021B 2

3 Method 8015M Bold and italicized values indicate exceedance of proposed Remediation RRALs and Reclamation Requirements.

QUALIFIERS:

.

TABLE 2 SUMMARY OF ANALYTICAL RESULTS 2016 ADDITIONAL DELINEATION - NAB1531639135/2RP-3386 CONOCOPHILLIPS JRS HORZ #1 RELEASE EDDY COUNTY, STATE

							BT	'EX ²					TPH ³								
Sample ID	Sample Date	Sample Depth	Chloride ¹	Chloride ¹		Benzene		Toluene		Ethylbenzene			Total BTEX		GRO C ₆ - C ₁₀		DRO > C ₁₀ - C ₂₈		EXT DRO		Total TPH
Sample ib	Sample Date						Toldelle		Lingibelizerie		Total Xylenes								> C ₂₈ - C ₃₆		(GRO+DRO+EXT DRO)
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
B6	1/20/2016	SURFACE	> 30		NA		NA		NA		NA		NA		NA		NA		NA		-
во	1/20/2010	1	> 30		NA		NA		NA		NA		NA		NA		NA		NA		-
1/20/2015	1/20/2016	SURFACE	54		NA		NA		NA		NA		NA		NA		NA		NA		-
H1	1/20/2016	1	1,000		NA		NA		NA		NA		NA		NA		NA		NA		-
H2	1/20/2016	SURFACE	79		NA		NA		NA		NA		NA		NA		NA		NA		-
ΠZ	1/20/2016	1	1,600		NA		NA		NA		NA		NA		NA		NA		NA		-
H3	1/20/2016	1	1,300		NA		NA		NA		NA		NA		NA		NA		NA		-
114	1/20/2016	SURFACE	170		NA		NA		NA		NA		NA		NA		NA		NA	Т	-
H4 1/20/2016	1/20/2016	1	2,400		NA		NA		NA		NA		NA		NA		NA		NA		-

NOTES:

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.

ft. Feet

bgs Below ground surface

mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

1 Method SM4500CI-B

2 Method 8021B

3 Method 8015M

Bold and italicized values indicate exceedance of proposed Remediation RRALs and Reclamation Requirements.

QUALIFIERS:

TABLE 3

SUMMARY OF ANALYTICAL RESULTS COG - 2016 SOIL ASSESSMENT- NAB1531639135/2RP-3386 CONOCOPHILLIPS JR HORZ FED #001 RELEASE EDDY COUNTY, NM

		Sample Depth							BTEX	2								т	РН ³		
Committee UD			Chlorid	Chloride1		Benzene		_	Tabu dha an		T-t-l Vol		Tetel DT	Total BTEX		GRO			EXT DR	RO	Total TPH
Sample ID	Sample Date				benzene		Toluen	roldelle		Ethylbenzene		Total Xylenes		TOLOIDIEA		10	> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆		(GRO+DRO+EXT DRO)
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
		1	256		NA		NA		NA		NA		NA		NA		NA		NA		-
		2	240		NA		NA		NA		NA		NA		NA		NA		NA		-
S1	5/26/2016	3	336		NA		NA		NA		NA		NA		NA		NA		NA		-
31	5/20/2010	4	368		NA		NA		NA		NA		NA		NA		NA		NA		-
		5	352		NA		NA		NA		NA		NA		NA		NA		NA		-
		6	288		NA		NA		NA		NA		NA		NA		NA		NA		-
52	5/26/2016	1	912		NA		NA		NA		NA		NA		NA		NA		NA		-
		1	384		NA		NA		NA		NA		NA		NA		NA		NA		-
		2	208		NA		NA		NA		NA		NA		NA		NA		NA		-
\$3	5/26/2016	3	<16.0		NA		NA		NA		NA		NA		NA		NA		NA		-
35	5/20/2010	4	<16.0		NA		NA		NA		NA		NA		NA		NA		NA		-
		5	384		NA		NA		NA		NA		NA		NA		NA		NA		-
		6	1,630		NA		NA		NA		NA		NA		NA		NA		NA		-
		1	<16.0		NA		NA		NA		NA		NA		NA		NA		NA		-
		2	<16.0		NA		NA		NA		NA		NA		NA		NA		NA		-
BGS	5/26/2016	3	16.0		NA		NA		NA		NA		NA		NA		NA		NA		-
503	5/20/2010	4	64.0		NA		NA		NA		NA		NA		NA		NA		NA		-
	-	5	208		NA		NA		NA		NA		NA		NA		NA		NA		-
		6	112		NA		NA		NA		NA		NA		NA		NA		NA		-

NOTES:

Released to Imaging: 5/19/2023 11:21:56 AM

ft. Feet

bgs Below ground surface mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

1 Method SM4500Cl-B

2 Method 8021B

3 Method 8015M

NA Sample not analyzed for parameter

Bold and italicized values indicate exceedance of proposed Remediation RRALs and Reclamation Requirements.

QUALIFIERS:

Page 18 of 134

APPENDIX A C-141 Forms

Received by OCD: 1/18/2023 4:28:50 PM	,	l	ate C	-14/ Page 20 of 13							
District II Energy Mineral	f New Mex s and Natura	ico	5	Form C-141 Revised August 8, 2011							
811 S. First St., Artesia, NM 88210 District III	ervation Div		Submit 1 Cor	by to appropriate District Office in accordance with 19.15.29 NMAC.							
1320 C. C. Francis D., Conte E. MM 97505	th St. Franc	· · · ·	1	accordance with 19.15.29 NMAC.							
Sana	² e, NM 875										
NAB1531639135 Release Notification		,		· ·							
Name of Company: COG Operating LLC 229/37	OPERA'	FOR bert McNeill	🖂 Init	tial Report 🔲 Final Report							
Address: 600 West Illinois Avenue, Midland TX 79701		No. 432-230-007	77								
Facility Name: JR'S HORZ FEDERAL #001	Facility Typ	e: SWD									
Surface Owner: Federal Mineral Owner		· · · · · · · ·	API N	lo. 30-015-33066							
LOCATIO	DN OF REI	LEASE									
Unit LetterSectionTownshipRangeFeet from theNorD1026S29E380'	th/South Line North	Feet from the 330°	East/West Line West	: County Eddy							
Latitude 32.06325	15 Longitude	-103.9792099									
	E OF REL										
Type of Release: Oil & Produced Water	Volume of	Release: : 1310 bbls PW	Volume 240 bbl	Recovered:							
Source of Release:	Date and I	our of Occurrenc	e: Date an	d Hour of Discovery:							
Lightning Strike Was Immediate Notice Given?	10/21/201; If YES, To	5 10:00 pm	10/21/2	015 10:00 pm							
Yes No Not Require											
By Whom? Amanda Trujillo Davis		lour: Fri 10/23/20									
Was a Watercourse Reached?	IFYES, Vo	olume Impacting t	he Watercourse.	NM OIL CONSERVATION							
If a Watercourse was Impacted, Describe Fully.*				NOV 1 1 2015							
Describe Cause of Problem and Remedial Action Taken.*				RECEIVED							
This release was caused by a lightning strike. Once the fire was extingu	ished, vacuum	trucks were dispa	tched to recover	all standing fluid.							
Describe Area Affected and Cleanup Action Taken.*											
This release was not contained on location. Concho will have the spill s present a remediation work plan to the NMOCD for approval prior to at	ite sampled to only significant re	lelineate any poss mediation work.	ible contaminatio	on from the release and we will							
I hereby certify that the information given above is true and complete to regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remedi or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	notifications a the NMOCD m ate contaminat	nd perform correc arked as "Final R on that pose a thr re the operator of	tive actions for n eport" does not n eat to ground wat responsibility for	eleases which may endanger elieve the operator of liability ter, surface water, human health compliance with any other							
Signature:	OIL CONSERVATION DIVISION										
Printed Name: Amanda Trujillo Davis	Approved by	Environmental S	$\frac{1}{1}$	24 Man							
Title: Senior Environmental Coordinator	Approval Da	te: 11 12 19	Expiratio	n Date: N/A							
E-mail Address: atrujillo@concho.com	Conditions o	f Approval:	Dulas & A								
Date: 11/4/2015 ' Phone: 575-748-6940	Romedia	tion per O.C.I REMEDIATIO HAN:	N PROPOSA	uldelinera 🗆							
* Attach Additional Sheets If Necessary			115-	- 2RP-3386							
		· · · · · · · · · · · · · · · · · · ·		CKY-UUV							

;

Patterson, Heather, EMNRD

From:	Amanda Trujillo Davis <atrujillo@concho.com></atrujillo@concho.com>
Sent:	Wednesday, November 11, 2015 6:38 PM
То:	Patterson, Heather, EMNRD; Bratcher, Mike, EMNRD; James_Amos@blm.gov; Shelly Tucker
Cc:	Austin Weyant; Lucas Middleton
Subject:	(C-141 Initial) JR's Horz Federal #1 SWD (30-015-33066)
Attachments:	10-22-2015 JRs Horz Federal #1 SWD (TB) Initial.pdf

ς.,

Mr. Bratcher,

Attached is a C-141 for your consideration. Souder, Miller and Associates will be addressing this release on our behalf. Please feel to contact me if you have any additional questions or concerns.

Thank you,

Amanda Trujillo Davis

Senior Environmental Coordinator COG Operating LLC⁷ Cell: 505.350.1336 Office: 575.748.6930 <u>atrujillo@concho.com</u>

1401 Commerce Drive Carlsbad, NM 88220

≫СОПСНО

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From: Amanda Trujillo Davis Sent: Friday, October 23, 2015 4:05, PM To: Heather Patterson; Mike.Bratcher@state.nm.us; James_Amos@blm.gov; Shelly Tucker Subject: (Notification) JR's Horz Federal #1 SWD (30-015-33066)

Mr. Bratcher,

COG Operating LLC is reporting a release on the JR's Horz Federal #1 SWD (30-015-33066). Unit D Section 10, Township 26S Range 29E The release occurred at 9:40 pm on 10/21/2015 Released: 44 bbls Oil ; 1,360 bbls PW Recovered: In Progress ì

The release was caused by a lightning strike resulting in a fire at the facility. The area is being evaluated and a C-141 will be submitted. If you have any additional questions please feel free to contact me.

Thank you,

Lupe Carrasco

Environmental Coordinator Concho Resources Cell: 575-725-0787 Office: 575-748-6933 gcarrasco@concho.com

2407 Pecos Ave. Artesia , NM 88210



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Patterson, Heather, EMNRD

From: Sent: To:	Amanda Trujillo Davis <atrujillo@concho.com> Friday, October 23, 2015 4:05 PM Patterson, Heather, EMNRD; Bratcher, Mike, EMNRD; James_Amos@blm.gov; Shelly</atrujillo@concho.com>
Subject:	Tucker (Notification) JR's Horz Federal #1 SWD (30-015-33066)

Mr. Bratcher,

COG Operating LLC is reporting a release on the JR's Horz Federal #1 SWD (30-015-33066). Unit D Section 10, Township 26S Range 29E The release occurred at 9:40 pm on 10/21/2015 Released: 44 bbls Oil ; 1,360 bbls PW Recovered: In Progress

The release was caused by a lightning strike resulting in a fire at the facility. The area is being evaluated and a C-141 will be submitted. If you have any additional questions please feel free to contact me.

Thank you,

Lupe Carrasco Environmental Coordinator Concho Resources Cell: 575-725-0787 Office: 575-748-6933

gcarrasco@concho.com

2407 Pecos Ave. Artesia, NM 88210



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Oil Conservation Division

	Page 24 of 134
Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	(ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🗌 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🗌 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🗌 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🗌 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🗌 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🗌 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🗌 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🗌 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🗌 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🗌 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🗌 No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
Field data
Data table of soil contaminant concentration data
Depth to water determination
Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
Boring or excavation logs
Photographs including date and GIS information
Topographic/Aerial maps

Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Received by OCD: 1/18/2023	State of New Mexico		Page 25 of 134				
ronn C-141			Incident ID				
Page 4	Oil Conservation Division		District RP				
			Facility ID				
			Application ID				
regulations all operators are requ public health or the environmen- failed to adequately investigate a addition, OCD acceptance of a C and/or regulations. Printed Name:	tion given above is true and complete to the laired to report and/or file certain release notifies. The acceptance of a C-141 report by the O and remediate contamination that pose a three C-141 report does not relieve the operator of the C-141 re	fications and perform co OCD does not relieve the at to groundwater, surfa responsibility for comp	orrective actions for rele e operator of liability sh- ice water, human health liance with any other fe	eases which may endanger ould their operations have or the environment. In deral, state, or local laws			
email: OCD Only Received by: Jocelyn	Harimon		/19/2023				

Page 6

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

<u>Closure Report Attachment Checklist</u>: Each of the following i	items must be included in the closure report.										
A scaled site and sampling diagram as described in 19.15.29.11 NMAC											
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)											
Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)											
Description of remediation activities											
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and ren human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regula restore, reclaim, and re-vegetate the impacted surface area to the co accordance with 19.15.29.13 NMAC including notification to the C Printed Name:	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in DCD when reclamation and re-vegetation are complete.										
Signature: / 4 7	Date:										
email:	Telephone:										
<u>OCD Only</u>											
Received by: Jocelyn Harimon	Date:01/19/2023										
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.										
Closure Approved by:	Date:										
Printed Name:	Title:										

APPENDIX B Site Characterization Data



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)	· ·					2=NE a	3=SW 4=	SE) (NAD83 UTM in i	meters)	(In feet)	
	POD Sub-		Q		-						-	-	Water
POD Number	Code basin Cou	unty 6	64 1	64	Sec	Tws	Rng		X Y	Distance	Well	Water	Column
C 04473 POD1	CUB E	D	3	4 3	3 33	25S	29E	59501	8 3549768	2295	110		
C 03507 POD1	C E	D	1	3 3	3 05	26S	29E	59306	3548313 🍯	3316	140	78	62
C 03508 POD1	C E	D	1	3 3	3 05	26S	29E	59306	3 3548361 🍯	3323	140	75	65
									Ave	erage Depth to	Water:	76	feet
										Minimum	Depth:	75	feet
										Maximum	Depth:	78	feet
Record Count: 3													

UTMNAD83 Radius Search (in meters):

Easting (X): 596355

Northing (Y): 3547902.36

Radius: 4000

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

Received by OCD: 1/18/2023 4:28:50 PM

TE TETRA TECH

LOG OF BORING GDB

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Page

			<u> </u>								1 of
-	ame: JRH										
	_ocationGPS		te: 32	2.0635	589, -1	03.97	2770		oreho	Surface Elevation: 2989 ft	
Borehole N	Number:GDB								iame	er (in.): Date Staned. 0/0/2020 Date Finish	ed: 8/3/2020
DEPTH (ft) OPERATION TYPE	SAMPLE A CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling ♀ DRY ft Upon Completion of Drilling ♀ Remarks: MATERIAL DESCRIPTION €	DRY_ft REMARK
	ExStik	PID	Ś	Σ	Δ	LL	ΡI	Σ	0 ***		
										-SM- CALICHE: White, stiff, dry, moderately cemented 5 -SM- SAND: Light brown, medium dense to dense, dry, fine to medium grained, with occasional Caliche layers 20 -SM- SAND: Brown, medium dense, dry, fine to medium grained, with occasional Caliche layers 20	
										-SM- CALICHE: White, dense, dry, moderately cemented, with occasional Sand pockets	
55 - ((55	
Sampler Types:	Split Spoon Shelby Bulk Sample Grab Sample		cetate ane S scret ample est Pi	e e	T		Mud Rota	tinuous nt Auge sh	s F	Hand Auger Notes: Air Rotary Surface elevation is an estimated value from Grata. Direct Push Core Barrel	oogle Earth
Logger: R HORZ FED	Lee Scarborou	-	23 3 1	T AU	C STIN 2		g Equ	ipme		Rotary Driller: Scarborough Drilling TT TEMPLATE DECEMBER WELL.GDT'	Revised 5-16-

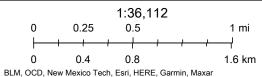
OCD Potential Karst Map



10/27/2022, 10:58:16 AM Karst Occurrence Potential

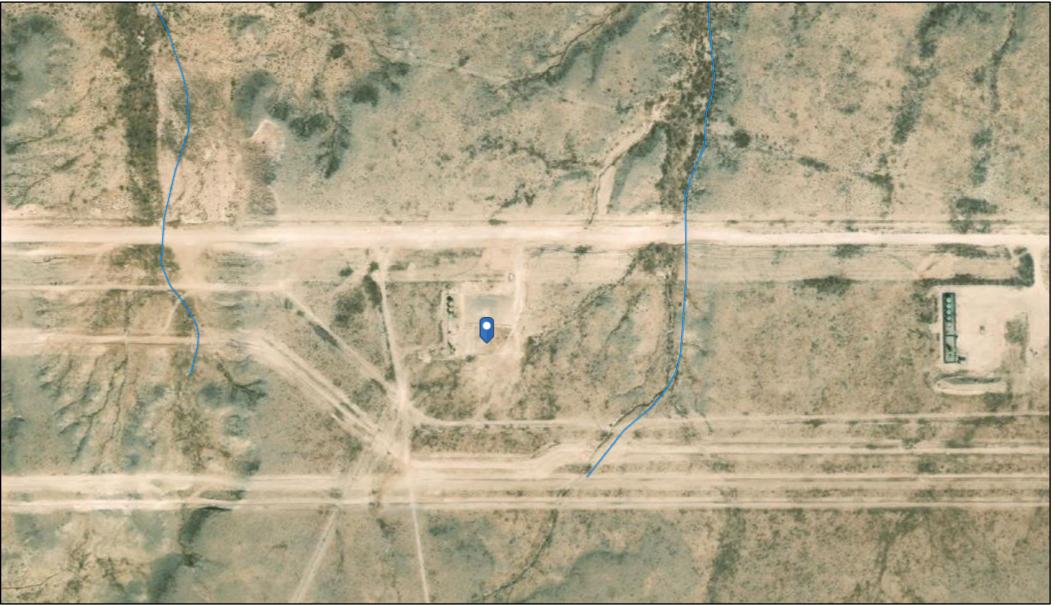
Medium

Low Released to Imaging: 5/19/2023 11:21:56 AM



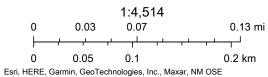
New Mexico Oil Conservation Division

OCD Waterbodies Map



10/27/2022, 11:18:29 AM

OSE Streams



APPENDIX C Regulatory Correspondence

From:	Patterson, Heather, EMNRD
To:	"Lucas Middleton"
Cc:	Bratcher, Mike, EMNRD; Tucker, Shelly; atrujillo@concho.com; "Austin Weyant"
Subject:	RE: Delineation Data JR HORZ 2RP-3386
Date:	Thursday, January 21, 2016 7:51:00 AM
Attachments:	image001.png

RE: COG * JR's Horz Fed #1 * 30-015-33066 * 2RP-3386 * Pad section only

Lucas,

This approval is for the pad portion of the clean-up efforts only.

With the additional information provided, the OCD can approve a 2 foot excavation of the pad. Like approval by BLM is required for this location.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Heather Patterson Environmental Specialist NMOCD District II Office (575)748-1283 ext.101 Cell (575)703-0228

From: Lucas Middleton [mailto:lucas.middleton@soudermiller.com]
Sent: Tuesday, January 19, 2016 2:01 PM
To: Patterson, Heather, EMNRD
Subject: Delineation Data JR HORZ 2RP-3386

Hello Heather, Attached is the delineation samples from lab for JR HORZ 2RP-3386.

Lucas Middleton Souder, Miller and Associates Staff Scientist 575-689-5351



Chama, Sam

From:	Amanda Trujillo Davis <imceaexo=first+20organization_ou=exchange+20administrative+ 20Group+20+28FYDIBOHF23SPDLT+29_cn=Recipients_cn=Amanda+ 20Trujillocab@namprd05.prod.outlook.com></imceaexo=first+20organization_ou=exchange+20administrative+
Sent:	Wednesday, July 27, 2016 5:06 PM
То:	Heather Patterson; Mike.Bratcher@state.nm.us; James_Amos@blm.gov; Shelly Tucker
Cc:	Robert McNeill; Lupe Carrasco; Dakota Neel
Subject:	(Workplan-Monitoring Plan) 10-21-2015 JR's Horz Federal #1
Attachments:	(Workplan-Monitoring Plan) 10-21-2015 JR's Horz Federal #1.pdf

Ms. Patterson/Ms. Tucker,

Attached is a work plan for long term monitoring of the draw associated with the lightning caused fire at the JR's Horz Federal #1 on October 21, 2016. Please feel free to contact me if you have any questions or concerns.

Thank you,

Amanda Trujillo Davis

Senior Environmental Coordinator COG Operating LLC Cell: 505.350.1336 Office: 575.748.6930 atrujillo@concho.com

1401 Commerce Drive Carlsbad, NM 88220



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APPENDIX D SMA Closure Report



Souder, Miller & Associates • 201 S. Halagueno • Carlsbad, NM 88221 (575) 689-7040

January 26, 2016

NMOCD District II Attn. Heather Patterson 1301 W Grand Ave Artesia, NM 88210

SUBJECT: FINAL CLOSURE REPORT FOR INCIDENT 2RP-3386 JRS HORZ FEDERAL #1, API# 30-015-33066, EDDY COUNTY, NEW MEXICO

Dear Ms. Patterson:

On behalf of COG Operating (COG), Souder Miller & Associates (SMA) is pleased to submit the attached Final Closure Report summarizing the soil remediation of the release located on the JRS HORZ Federal #1 in Eddy County, New Mexico. The purpose of the Final Closure Report is to obtain approval from the New Mexico Oil Conservation Division (NMOCD) for closure of the release that occurred on October 21, 2015.

At the request of COG, SMA responded to assess and delineate the production fluids release associated with the JRS HORZ Federal #1 Oil well location. The release was initially reported to NMOCD by COG Operating on November 4, 2015 and was a result of a Lighting Strike incident. The table below summarizes information regarding the release. Results of the assessment and delineation follow in the attached report.

Table 1: Release information and Site Ranking										
Name	JRS HORZ Federal #1									
Location	Incident Number	API Number	Section, Township, Range							
Location	2RP- 3386	30-015- 33066	NW/NW (Unit D)	Section 10	T 26S, R 29E NMPM					
Estimated Date of Release	October 21, 2015									
Date Reported to NMOCD	November 4, 2015									
Reported by	Amanda Trujillo Davis									
Land Owner	Federal									
Reported To	NM Oil Co	onservatior	n Division (I	NMOCD)						
Source of Release	Lighting S	trike								
Released Material	Produced	Water and	d Crude Oil							
Released Volume	1310 bbls Produced Water and 44 bbls Crude Oil									
Recovered Volume	200 bbls Produced Water and 40 bbls Crude Oil									
Net Release	1110 bbl Produced Water and 4 bbl Crude Oil									
Nearest Waterway	1,800 fee	t north of t	he location							



Depth to Groundwater	Estimated to be 102 feet
Nearest Domestic Water Source	Greater than 1000 feet
NMOCD Ranking	0
SMA Response Dates	Initial: 12/16/15 Mitigation Activities: 1/13/16
Subcontractors	TCS, MMX
Disposal Facility	Texas permitted R360 Red Bluff facility in Texas
Estimated Yd ³ Contaminated Soil Excavated and Disposed	1,400 γd ³

A copy of the C-141 Initial is located in Appendix B. For questions or comments pertaining to the release or the attached Work Plan, please feel free to contact either of us.

Submitted by:

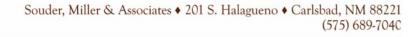
SOUDER, MILLER & ASSOCIATES

thisty Weyant

Austin Weyant Project Scientist

Reviewed by:

Cynthia Gray, CHMM Senior Scientist



SOIL REMEDIATION FINAL CLOSURE REPORT FOR INCIDENT 2RP-3386

COG OPERATING LLC

JRS HORZ FEDERAL #1 API# 30-015-33066 UL D, SECTION 10, T26S R29E, NMPM EDDY COUNTY, NM



Prepared for: COG Operating LLC 2407 Pecos Ave Artesia, NM 88210 Prepared by: Souder, Miller & Associates 201 S. Halagueno Carlsbad, NM 88221 575-689-7040

January 26, 2016 SMA Reference 5B23978 BG13



Released to Imaging: 5/19/2023 11:21:56 AM

Table of Contents

4
4
4
5
5
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Figures:

Figure 1: Vicinity Map Figure 2: Site Map

Tables:

Table 1: Release Information and Site RankingTable 2: Summary of Laboratory AnalysesTable 3: Summary of Field Screening Results

Appendices:

Appendix A: Laboratory Analytical Reports Appendix B: Form C141 Final

1.0 Introduction

On behalf of COG Operating LLC (COG), SMA has prepared this report that describes the assessment, initial delineation and mitigation of a release associated with the JRS HORZ FEDERAL #1, API# 30-015-33066 produced fluids release site. The site is located in Section 1, T 26S, R 29 E NMPM, Eddy County, New Mexico, on federal land administered by the Bureau of Land Management (BLM). Figure 1 illustrates the vicinity and location of the well site.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 1.2 miles (> 1,000 feet) east of Pecos River, on federal BLM land with an elevation of approximately 2,970 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be greater than 100 feet below ground surface (bgs) using the Pecos River as groundwater level. Figure 2 shows the site details and sample locations.

SMA searched the New Mexico State Engineer's Office online water well database for water wells in the vicinity of the release. No water well is shown located within a 1000 foot radius of the site or between the well site and the Pecos River. The physical location of this release is within the jurisdiction of NMOCD.

This release location has been assigned a NMOCD ranking of 0 under NMOCD Guidelines for Remediation of Leaks, Spills, and Releases which recommends a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 5000 ppm total petroleum hydrocarbons (TPH). Table 1 illustrates site ranking rationale.

3.0 Assessment and Initial Results

On December 16, 2015, after receiving 811 clearance, SMA field personnel assessed the release area onsite with an auger, a Photo Ionization Detector (PID), and a mobile chlorides titration kit. The affected area was found to be 130 feet long and 40 feet wide on the well pad. The spill moved north off of pad into the draw for a distance of 1,580 feet and approximately a foot wide along its length. The area north of pad and draw is a pipeline right-of-way where no sampling occurred due to safety concerns. Delineation samples were taken to depths of 16 feet bgs on the well pad and 3 foot bgs in the draw. Samples results displayed in Table 2 show that the hydrocarbon contaminated soils are limited to above 2 feet bgs on the pad. Samples taken in pad area at 4 foot bgs show background levels of chloride. The draw area samples show elevated chloride levels on surface. The draw area samples at 2.5 foot bgs show background levels of chloride. Sample locations are noted on Figure 2 Site Details and Sample Location Map. All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for Benzene and Total BTEX using EPA Method 8021B, DRO and GRO by EPA Method 8015D, and total Chlorides using EPA Method 300.0.

4.0 Soil Remediation Summary

On December 16, 2015 SMA begin the excavation of affected soils on the well pad, with approval from area utilities via 811 and NMOCD. SMA continuously guide the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500) and a

calibrated PID. Excavation occurred on pad two and a half feet bgs. Due to safety concerns no excavation will occur in the area north of the well pad and draw where the pipeline right-of-way exists. Excavation occur to depths to sufficient to delineate the plume by NMOCD Division 1 standards. Closure samples were collected at final depth of excavation of two and a half feet bgs. Approximately 1,400 cubic yards of contaminated soil was removed and was replaced with sufficient clean backfill material from the nearest COG caliche pit to bring the contours to a surface grade that will limit ponding and pooling on the excavation. The contaminated soil was transported for proper disposal at Texas permitted R360 Red Bluff facility in Texas.

Delineation occurred in the draw on 1/20/16 by SMA personal. Data is shown in Table 3.

5.0 Conclusions and Recommendations

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 0: 10 ppm (mg/kg) Benzene, 50 ppm total BTEX, and 5000 ppm TPH. The release consisted of produced water and associated petroleum found during the initial assessment and delineation.

All closure confirmation samples were taken as discrete samples to ensure that the contaminated soil was removed.

Soil contaminant concentrations found during the initial delineation are illustrated in Figure 2. A summary of the laboratory analyses is included in Table 2. Laboratory reports are included in Appendix A.

6.0 Closure and Limitations

Closure standards have been achieved for the crude oil and produced water release on the pad for 2RP-3386 on the JRS HORZ Federal #1 well pad.

The scope of our services consisted of the performance of a preliminary spill assessment, verification of release, stabilization, regulatory liaison, and preparation of this Remediation Work Plan. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-7040 or Cindy Gray at 505-325-7535.

Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES

to later

Austin Weyant Project Scientist

Cynthia Gray, CHMM Senior Scientist

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www.soudermiller.com

Figures:

Figure 1: Vicinity Map Figure 2: Site Map

Tables:

Table 1: Release Information and Site RankingTable 2: Summary of Laboratory AnalysesTable 3: Summary of Field Screening Results

Appendices:

Appendix A: Laboratory Analytical Reports Appendix B: Form C141 Final

FIGURE 1 VICINITY MAP

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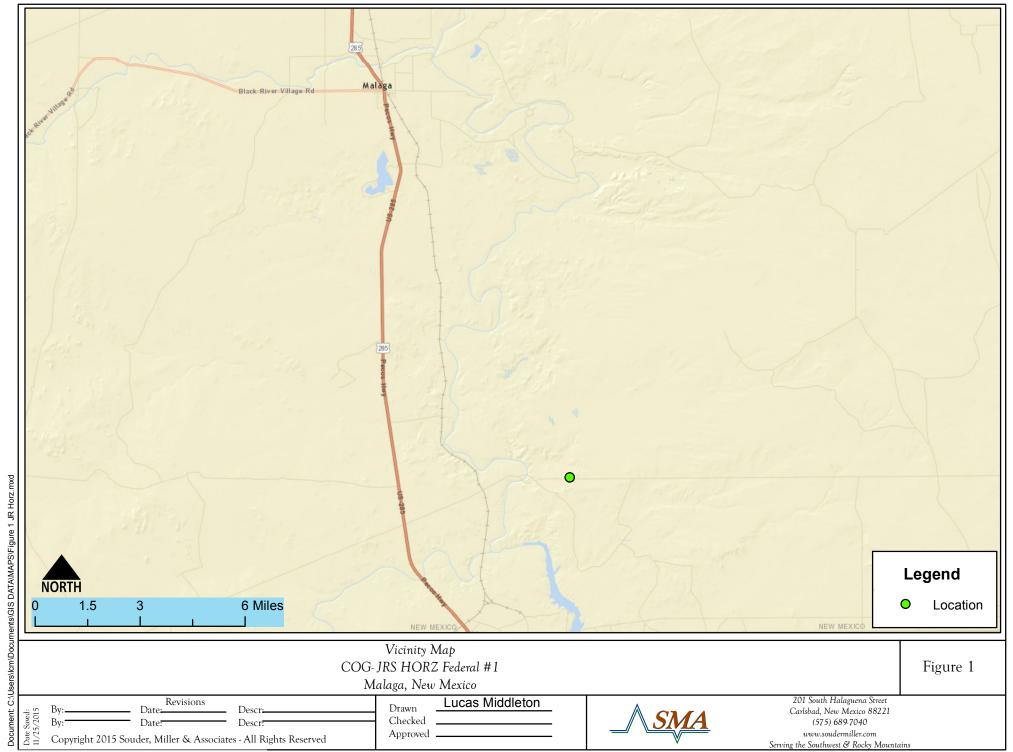
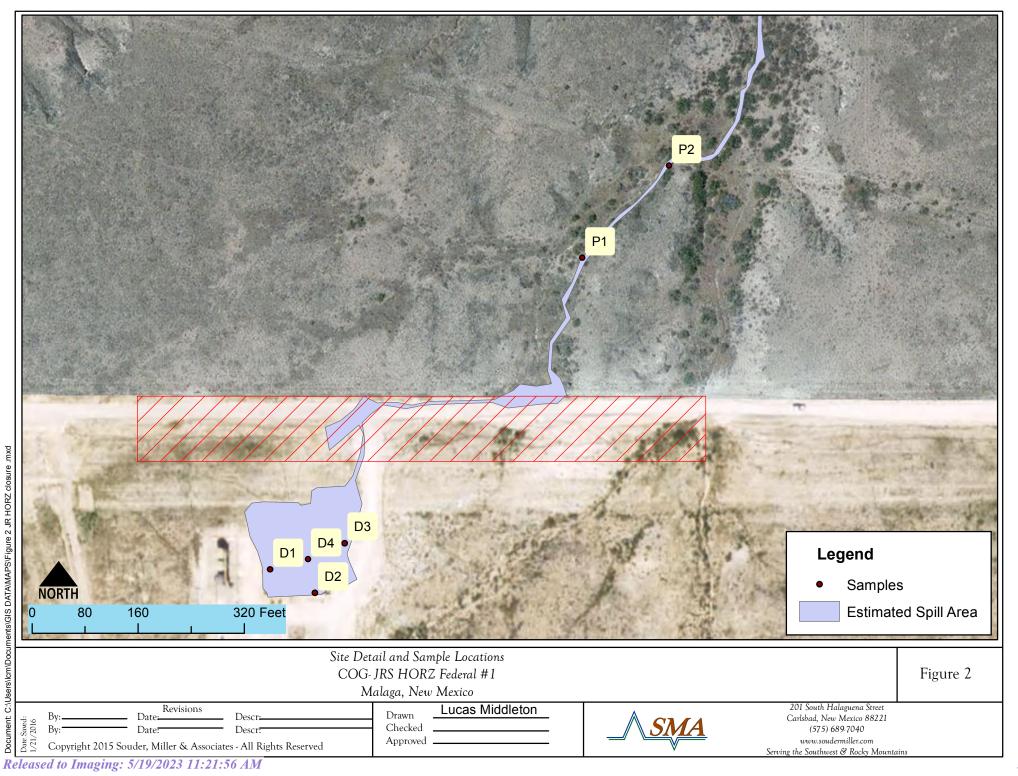
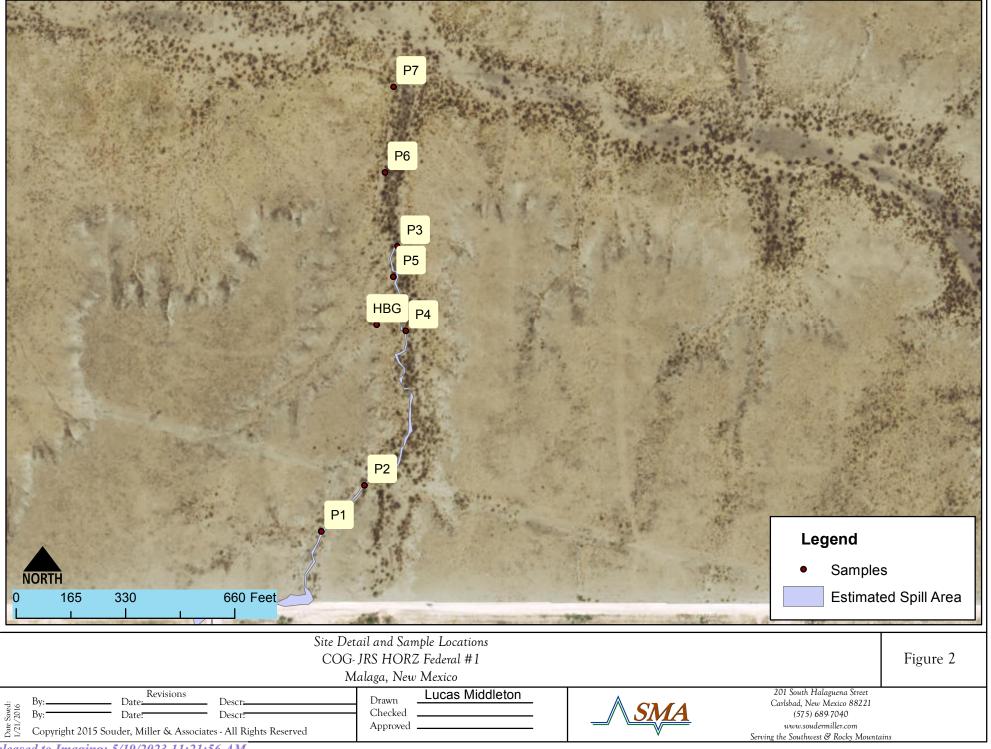


FIGURE 2 SITE DETAILS AND SAMPLE LOCATIONS MAP

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ents/GIS DATA/MAPS/Figure 2 JR HORZ closure

Document: C:\U

TABLE 1 RELEASE INFORMATION AND SITE RANKING

•

Table 1: Release information and Site Ranking						
Name	JRS HORZ Federal #1					
Location	Incident Number	Section, Township, Range				
Location	2RP-3386	30-015- 33066	SW/NE (Unit D)	Section 10	T 26S, R 29E NMPM	
Estimated Date of Release	October 21	, 2015				
Date Reported to NMOCD	November	4, 2015				
Reported by	Amanda Tr	ujillo Davis				
Land Owner	Bureau of L	and Manag	ement (BLN	Л)		
Reported To	NM Oil Cor	nservation D	ivision (NN	IOCD)		
Source of Release	Lighting Str	ike				
Released Material	Produced V	Vater and C	Dil			
Released Volume	1310 bbls F	Produced W	ater and 44	4 bbls Oil		
Recovered Volume	200 bbls P	roduced Wa	ater and 40	bbls Oil		
Net Release	1110 bbl P	roduced Wa	ater and 4 b	obl Oil		
Nearest Waterway	1,800 feet	north of the	location.			
Depth to Groundwater	Estimated t	to be 102 fe	et			
Nearest Domestic Water Source	Greater that	an 1000 fee [.]	t			
NMOCD Ranking	0					
SMA Response Dates	Initial: 12/16/15 Mitigation Activities: 1/13/16			16		
Subcontractors	TCS, MMX					
Disposal Facility	R360 Red E	Bluff Facility	, State of Te	exas Permit		
Estimated Yd ³ Contaminated Soil Excavated and Disposed	1,400					

TABLE 2 SUMMARY OF LABORATORY ANALYSES

Analytical Report- 1512A57	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	CI- mg/Kg
1512A57- 001	D3-16	12/16/2015	16'	N/A	N/A	N/A	N/A	180
1512A57- 002	D3-12	12/16/2015	12'	N/A	N/A	N/A	N/A	210
1512A57- 003	D3-6	12/16/2015	6'	N/A	N/A	N/A	N/A	80
1512A57- 004	D3-4	12/16/2015	4'	N/A	N/A	N/A	N/A	440
1512A57- 005	D4-2	12/16/2015	2'	N/A	N/A	N/A	N/A	1,100
1512A57- 006	D4-4	12/16/2015	4'	N/A	N/A	N/A	N/A	BDL
1512A54- 001	P1-0.5	12/16/2015	0.5'	BDL	BDL	N/A	N/A	8,900
1512A54- 002	P1-3	12/16/2015	3'	N/A	N/A	N/A	N/A	730
1512A54- 003	P2-3	12/16/2015	3'	N/A	N/A	N/A	N/A	220
1512A54- 004	P2-0.5	12/16/2015	0.5'	N/A	N/A	N/A	N/A	8,500
1512A54- 005	P3-0.5	12/16/2015	0.5'	BDL	BDL	N/A	N/A	24,000
1512A54- 006	D1-2	12/16/2015	2'	N/A	N/A	N/A	N/A	110
1512A54- 007	D1-4	12/16/2015	4'	N/A	N/A	N/A	N/A	240
1512A54- 008	D1-8	12/16/2015	8'	N/A	N/A	N/A	N/A	310
1512A54- 009	D1-12	12/16/2015	12'	N/A	N/A	N/A	N/A	280
1512A54- 010	D1-16	12/16/2015	16'	N/A	N/A	N/A	N/A	250
1512A54- 011	D2-2	12/16/2015	2'	N/A	N/A	N/A	N/A	320
1512A54- 012	D2-4	12/16/2015	4'	N/A	N/A	N/A	N/A	150

Table 2: Summary of Laboratory Analyses

Analytical Report- 1601A16	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	CI- mg/Kg
1601A16- 001	B6-S	1/20/2016	Surface	N/A	N/A	N/A	N/A	BDL
1601A16- 002	Bg-1	1/20/2016	1'	N/A	N/A	N/A	N/A	BDL
1601A16- 003	H1-S	1/20/2016	Surface	N/A	N/A	N/A	N/A	54
1601A16- 004	H1-1	1/20/2016	1'	N/A	N/A	N/A	N/A	1000
1601A16- 005	H2-1	1/20/2016	1'	N/A	N/A	N/A	N/A	1600
1601A16- 006	H2-S	1/20/2016	Surface	N/A	N/A	N/A	N/A	79
1601A16- 007	H3-1	1/20/2016	1'	N/A	N/A	N/A	N/A	1300
1601A16- 008	H4-S	1/20/2016	Surface	N/A	N/A	N/A	N/A	170
1601A16- 009	H4-1	1/20/2016	1'	N/A	N/A	N/A	N/A	2400
1601A16- 010	P3-1	1/20/2016	1'	N/A	N/A	N/A	N/A	4500

Table 2: Summary of Laboratory Analyses Con't

TABLE 3 SUMMARY OF FIELD SCREENING RESULTS

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Table 3: Summary of Field Screening Results

Page 54 of 134 JR Horz Federal #1 Produced Water 1/20/2016

		FIELD SCREENING RES		RY	
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N
1/20/2016	10:00	P3-1	1'	3498	у
1/20/2016	10:00	P4-S	Surface	187	У
1/20/2016	10:00	P4-1	1'	1921	У
1/20/2016	10:00	P5-S-Lost			
1/20/2016	10:00	P5-1	1'	531	У
1/20/2016	10:00	P6-S	Surface	158	У
1/20/2016	10:00	P6-1	1'	1534	у
1/20/2016	10:00	P7-S	Surface	15	у
1/20/2016	10:00	P7-1	1'	803	у

*BDL= Below Detectable Level



APPENDIX A LABORATORY ANALYTICAL REPORTS



January 12, 2016

Austin Weyant Souder, Miller & Associates 201 S Halagueno Carlsbad, NM 88221 TEL: (575) 689-7040 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

OrderNo.: 1512A54

Dear Austin Weyant:

RE: JR Horz FEX

Hall Environmental Analysis Laboratory received 12 sample(s) on 12/22/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Project:

Lab ID:

CLIENT: Souder, Miller & Associates

JR Horz FEX

1512A54-001

Analytical Report
Lab Order 1512A54

Lab Order **1512A54** Date Reported: **1/12/2016**

Client Sample ID: P1-0.5	
Collection Date: 12/16/2015 8:30:00 AM	
Received Date: 12/22/2015 9:25:00 AM	

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	rst: LGT
Chloride	8900	300	mg/Kg	200	12/30/2015 3:25:35 F	PM 22982
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.049	mg/Kg	1	12/24/2015 10:09:41	PM 22945
Toluene	ND	0.049	mg/Kg	1	12/24/2015 10:09:41	PM 22945
Ethylbenzene	ND	0.049	mg/Kg	1	12/24/2015 10:09:41	PM 22945
Xylenes, Total	ND	0.098	mg/Kg	1	12/24/2015 10:09:41	PM 22945
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	12/24/2015 10:09:41	PM 22945

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

				Analytical Report Lab Order 1512A54	
Hall Environmental Analysi		Date Reported: 1/12/2016			
CLIENT: Souder, Miller & Associates			Client Samp	le ID: P1-3	
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	Л
Lab ID: 1512A54-002	Matrix: S	OIL	Received	Date: 12/22/2015 9:25:00 AM	Л
Analyses	Result	RL Qua	l Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	rst: LGT
Chloride	730	30	mg/Kg	20 12/29/2015 12:09:18	PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

				Analytical Report Lab Order 1512A54		
Hall Environmental Analysis Laboratory, Inc.				Date Reported: 1/12/2016		
CLIENT: Souder, Miller & Associates			Client Samp	le ID: P2-3		
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	M	
Lab ID: 1512A54-003	Matrix: S	SOIL	Received	Date: 12/22/2015 9:25:00 AM	M	
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS				Analy	/st: LGT	
Chloride	220	30	mg/Kg	20 12/29/2015 12:46:31	PM 22982	

Qualifiers:	*	Value exce
	D	Comple Di

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysi		Analytical Report Lab Order 1512A54 Date Reported: 1/12/	54		
CLIENT: Souder, Miller & Associates			Client Samp	e ID: P2-0.5	
Project: JR Horz FEX			-	Date: 12/16/2015 8:30:00 Al	М
Lab ID: 1512A54-004	Matrix: S	SOIL	Received	Date: 12/22/2015 9:25:00 Al	М
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Anal	yst: LGT
Chloride	8500	300	mg/Kg	200 12/30/2015 3:37:59	PM 22982

Qualifiers:	*	Value excee
	D	Sample Dilu

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

Project:

CLIENT: Souder, Miller & Associates

JR Horz FEX

Analytical Report

Lab Order 1512A54 Date Reported: 1/12/2016

Client Sample ID: P3-0.5	
Collection Date: 12/16/2015 8:30:00 AM	
Received Date: 12/22/2015 9:25:00 AM	

Lab ID: 1512A54-005	Matrix:	Received	Received Date: 12/22/2015 9:25:00 AM			
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	24000	750	mg/Kg	500	12/30/2015 3:50:23	PM 22982
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.047	mg/Kg	1	12/24/2015 10:33:51	I PM 22945
Toluene	ND	0.047	mg/Kg	1	12/24/2015 10:33:51	PM 22945
Ethylbenzene	ND	0.047	mg/Kg	1	12/24/2015 10:33:51	PM 22945
Xylenes, Total	ND	0.093	mg/Kg	1	12/24/2015 10:33:51	PM 22945
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	12/24/2015 10:33:51	I PM 22945

Qualifiers:	*	Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 14 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL

Hall Environmental Analysi	s Laborat	orv. Inc.		Analytical Report Lab Order 1512A54 Date Reported: 1/12	
CLIENT: Souder, Miller & Associates			Client Samp	L.	2010
Project: JR Horz FEX Lab ID: 1512A54-006	Matrix: S	OIL	0011011011	Date: 12/16/2015 8:30:00 A Date: 12/22/2015 9:25:00 A	
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Anal	yst: LGT
Chloride	110	30	mg/Kg	20 1/7/2016 1:15:58 PM	1 23106

Qualifiers:	*	Val
		~

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

	- T - h 4	T		Analytical Report Lab Order 1512A54	
Hall Environmental Analysi	s Laborat	ory, Inc.		Date Reported: 1/12/	2016
CLIENT: Souder, Miller & Associates			Client Samp	le ID: D1-4	
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	M
Lab ID: 1512A54-007	Matrix: S	SOIL	Received	Date: 12/22/2015 9:25:00 AM	Ν
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	/st: LGT
Chloride	240	30	mg/Kg	20 12/29/2015 1:23:45 H	PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	(1) (1) (1) (1) (1) (1)

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysi	s Laborat	orv. Inc.		Analytical Report Lab Order 1512A54 Date Reported: 1/12/	
CLIENT: Souder, Miller & Associates		- ;;	Client Samp		2010
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 Al	M
Lab ID: 1512A54-008	Matrix: S	OIL	Received	Date: 12/22/2015 9:25:00 Al	М
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Anal	yst: LGT
Chloride	310	30	mg/Kg	20 12/29/2015 1:36:10 I	PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	(1) (1) (1) (1) (1) (1)

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysi	Johanat	any Inc		Analytical Report Lab Order 1512A54	
Hall Environmental Analysis	s Laborat	ory, Inc.		Date Reported: 1/12/2	2016
CLIENT: Souder, Miller & Associates			Client Samp	le ID: D1-12	
Project: JR Horz FEX			Collection 1	Date: 12/16/2015 8:30:00 AM	1
Lab ID: 1512A54-009	Matrix: S	OIL	Received	Date: 12/22/2015 9:25:00 AM	1
Analyses	Result	RL Qua	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	st: LGT
Chloride	280	30	mg/Kg	20 12/29/2015 1:48:34 P	M 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	_	

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

				Analytical Report Lab Order 1512A54	
Hall Environmental Analysi	s Laborat	ory, Inc.		Date Reported: 1/12/2	2016
CLIENT: Souder, Miller & Associates			Client Sampl	e ID: D1-16	
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	Ν
Lab ID: 1512A54-010	Matrix: S	OIL	Received	Date: 12/22/2015 9:25:00 AM	Л
Analyses	Result	RL Qua	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	/st: LGT
Chloride	250	30	mg/Kg	20 12/29/2015 2:00:59 F	PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	_	

- D Sample Diluted Due to Matrix
 - H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

Analytical Report
Lab Order 1512A54

Lab Order **1512A54** Date Reported: **1/12/2016**

CLIENT: Souder, Miller & Associates	Client Sample ID: D2-2						
Project: JR Horz FEX			Collection 1	Date: 12/	16/2015 8:30:00 AN	Λ	
Lab ID: 1512A54-011	Matrix: SOIL Receive				ved Date: 12/22/2015 9:25:00 AM		
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analy	vst: LGT	
Chloride	320	30	mg/Kg	20	12/29/2015 2:13:23 F	PM 22982	
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB	
Benzene	ND	0.049	mg/Kg	1	12/24/2015 10:58:11	PM 22945	
Toluene	ND	0.049	mg/Kg	1	12/24/2015 10:58:11	PM 22945	
Ethylbenzene	ND	0.049	mg/Kg	1	12/24/2015 10:58:11	PM 22945	
Xylenes, Total	ND	0.097	mg/Kg	1	12/24/2015 10:58:11	PM 22945	
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	12/24/2015 10:58:11	PM 22945	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	(1) (1) (1) (1) (1) (1)

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 11 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysi	s Laborat	ory, Inc.		Analytical Report Lab Order 1512A54 Date Reported: 1/12/	
CLIENT: Souder, Miller & Associates			Client Sampl	e ID: D2-4	
Project: JR Horz FEX			Collection I	Date: 12/16/2015 8:30:00 AM	Ν
Lab ID: 1512A54-012	Matrix: S	SOIL	Received 1	Date: 12/22/2015 9:25:00 AM	Ν
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	/st: LGT
Chloride	150	30	mg/Kg	20 12/29/2015 2:25:48 F	PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	(1) (1) (1) (1) (1) (1)

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 12 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Souder JR Hor	, Miller & Associates z FEX			
Sample ID	MB-22982	SampType: MBLK	TestCode: EPA Method	300.0: Anions	
Client ID:	PBS	Batch ID: 22982	RunNo: 31150		
Prep Date:	12/28/2015	Analysis Date: 12/29/2015	SeqNo: 953465	Units: mg/Kg	
Analyte Chloride		Result PQL SPK value ND 1.5	e SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Sample ID	LCS-22982	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID:	LCSS	Batch ID: 22982	RunNo: 31150		
Prep Date:	12/28/2015	Analysis Date: 12/29/2015	SeqNo: 953466	Units: mg/Kg	
Analyte		Result PQL SPK value	e SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		14 1.5 15.00	0 92.3 90	110	
Sample ID	MB-23106	SampType: MBLK	TestCode: EPA Method	300.0: Anions	
Client ID:	PBS	Batch ID: 23106	RunNo: 31326		
Prep Date:	1/7/2016	Analysis Date: 1/7/2016	SeqNo: 959120	Units: mg/Kg	
Analyte		Result PQL SPK value	e SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		ND 1.5			
Sample ID	LCS-23106	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID:	LCSS	Batch ID: 23106	RunNo: 31326		
Prep Date:	1/7/2016	Analysis Date: 1/7/2016	SeqNo: 959121	Units: mg/Kg	
Analyte		Result PQL SPK value	e SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		14 1.5 15.00	0 0 92.5 90	110	

Qualifiers:

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

WO#: 1512A54 12-Jan-16

Page 13 of 14

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

	r, Miller & A rz FEX	ssociate	es												
Sample ID MB-22945	SampT	Type: ME	BLK	TestCode: EPA Method 8021B: Volatiles											
Client ID: PBS	Batcl	h ID: 22	945	RunNo: 31062											
Prep Date: 12/23/2015	Analysis D	Date: 12	2/24/2015	S	SeqNo: 9	50286	Units: mg/ł	٨g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Benzene	ND	0.050													
Toluene	ND	0.050													
Ethylbenzene	ND	0.050													
Xylenes, Total	ND	0.10													
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120								
Sample ID LCS-22945	SampT	Type: LC	s	TestCode: EPA Method 8021B: Volatiles											
Client ID: LCSS	Batcl	h ID: 22	945	F	RunNo: 3										
Prep Date: 12/23/2015	Analysis E	Date: 12	2/24/2015	S	SeqNo: 9	50305	Units: mg/ł	٢g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Benzene	1.0	0.050	1.000	0	102	80	120								
Toluene	1.0	0.050	1.000	0	102	80	120								
Ethylbenzene	1.0	0.050	1.000	0	101	80	120								
Xylenes, Total	3.1	0.10	3.000	0	103	80	120								
Surr: 4-Bromofluorobenzene	1.2		1.000		124	80	120			S					

Qualifiers:

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

Page 14 of 14

1512A54

12-Jan-16

WO#:

Received by	OCD:	1/18/2023	4:28:50 PM
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HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL:	nvironmental Albı 505-345-3975 bsite: www.ha	4901 I iquerque FAX: 56	Hawkins NE , NM 87109)5-345-4107	Sample Log-In Check List							
Client Name: SMA-CARLSBAD	Work O	rder Number:	1512A	.54	RoptNo: 1							
Received by/date:	12	1221	15									
ogged By: Ashley Gallegos	12/22/201	5 9:25:00 AM	٨	63	AZ							
Completed By: Ashley Gallegos	12/23/201	5 8:55:45 AM	٨	5	AR							
Reviewed By:	12/2	3/15			a							
hain of Custody	10/1	21-										
1. Custody seals intact on sample bottles	?		Yes		No 🗌	Not Present						
2. Is Chain of Custody complete?			Yes	~	No 🗌	Not Present						
 How was the sample delivered? 			Couri	er								
Log In												
 Was an attempt made to cool the sam 	ples?		Yes		No 🗌	NA \Box						
Were all samples received at a temper	ature of >0° C t	o 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) p	roperly preserve	d?	Yes	~	No 🗌							
9. Was preservative added to bottles?			Yes		No 🗹	NA 🗌						
10. VOA vials have zero headspace?			Yes		No 🗌	No VOA Vials 🗹						
11. Were any sample containers received	broken?		Yes		No 🗹	# of preserved bottles checked						
12. Does paperwork match bottle labels?			Yes	\checkmark	No 🗌	for pH:	r >12 unless noted)					
(Note discrepancies on chain of custor 3. Are matrices correctly identified on Chain of Chain and Chain a	20 100000 ACC		Yes	~	No 🗌	Adjusted?						
 Are mances conectly identified on children Is it clear what analyses were requested 			Yes		No 🗌	-						
15. Were all holding times able to be met? (If no, notify customer for authorization)			Yes		No 🗆	Checked by:						
pecial Handling (if applicable)												
16, Was client notified of all discrepancies	with this order?		Yes		No 🗌	NA 🔽						
Person Notified:		Date										
By Whom: Regarding:		Via:	🗌 eMa	ail 🗌 Pho	one 🗌 Fax	In Person						
Client Instructions:												
17. Additional remarks:												
18. Cooler Information	10				land D	ī						
Cooler No Temp C Condition	Yes	Seal No	Seal D	ate S	Signed By	-						
4.5 0000	103											

Claim Claim Claim Claim Claim Claim Claim Claim Claim Main Main Claim Claim Claim Main Main Claim Main Claim Main Main Claim Main Claim Main Main Main Main Main Main Main	eived by	<u>ОС</u> .	D: 1 /	18/2	023	4:2	8:50 PN	1	(N -	10 Y	vir Bubbles (1						<u> </u>	-		-			<i>Pi</i>	<u>age 72 oj</u>
III. Mark Vision Information Project Handling Fig. Address: Discreted Fig. Address: <td></td> <td> </td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td>																					-				
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January 04, 2016

Austin Weyant Souder, Miller & Associates 201 S Halagueno Carlsbad, NM 88221 TEL: (575) 689-7040 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

RE: J.R. HORZ

OrderNo.: 1512A57

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/22/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environ	mental Analys	sis Laborato	ory, Inc.		Analytical Report Lab Order: 1512A57 Date Reported: 1/4/2	2016
	Souder, Miller & Asso .R. HORZ	ociates			Lab Order: 1512 <i>A</i>	A57
Lab ID: Client Sample ID:	1512A57-001 D3-16		(te: 12/16/2015 8:30:00 A	AM
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	180	30	mg/Kg	Ana 20 12/30/2015 11:29:4	alyst: LGT 48 AM 23002
Lab ID: Client Sample ID:	1512A57-002 D3-12		(te: 12/16/2015 8:30:00 A	AM
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	210	30	mg/Kg	Ana 20 12/30/2015 12:31:{	alyst: LGT 51 PM 23002
Lab ID: Client Sample ID:	1512A57-003 D3-6		(te: 12/16/2015 8:30:00 A ix: SOIL	AM
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	80	30	mg/Kg	Ana 20 12/30/2015 12:44:	alyst: LGT 15 PM 23002
Lab ID: Client Sample ID:	1512A57-004 D3-4				te: 12/16/2015 8:30:00 A ix: SOIL	AM
Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	440	30	mg/Kg	Ana 20 12/30/2015 12:56:4	alyst: LGT 40 PM 23002
Lab ID: Client Sample ID: Analyses	1512A57-005 D4-2	Result	RL Qual	Matr	te: 12/16/2015 8:30:00 A ix: SOIL DF Date Analyzed	AM Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	1100	30	mg/Kg		alyst: LGT

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

- Qualifiers: * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix

 - H Holding times for preparation or analysis exceeded
 - ND Not Detected at the Reporting Limit
 - R RPD outside accepted recovery limits
 - S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits Page 1 of 3
 - P Sample pH Not In Range
 - RL Reporting Detection Limit

Hall Envi	ironmental Analysi	s Laborat	ory, Inc.		Analytical Rep Lab Order: 1512 Date Reported:	A57
CLIENT: Project:	Souder, Miller & Asso J.R. HORZ	ciates			Lab Order: 15	512A57
Lab ID: Client Sample	1512A57-006 e ID: D4-4				Date: 12/16/2015 8:30: atrix: SOIL	00 AM
Analyses		Result	RL Qua	l Units	DF Date Analyze	ed Batch ID
EPA METHO Chloride	D 300.0: ANIONS	ND	30	mg/Kg	20 12/30/2015 1:2	Analyst: LGT 21:29 PM 23002

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits Page 2 of 3
 - P Sample pH Not In Range
 - RL Reporting Detection Limit

Client: Project:	Soude J.R. H	r, Miller & As ORZ	sociate	es							
Sample ID	MB-23002	SampTy	pe: M	BLK	Tes	tCode: EP	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	ID: 23	002	R	lunNo: 31	168				
Prep Date:	12/29/2015	Analysis Da	ate: 12	2/30/2015	S	SeqNo: 95	54140	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-23002	SampTy	pe: LC	s	Tes	tCode: EP	A Method	300.0: Anion	s		
Client ID:	LCSS	Batch	ID: 23	002	R	unNo: 31	168				
Prep Date:	12/29/2015	Analysis Da	ate: 12	2/30/2015	S	6eqNo: 95	54141	Units: mg/K	ģ		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	92.4	90	110			

Qualifiers:

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

Page 76 of 134

Page 3 of 3

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	HALL ENVIRON ANALYSI LABORAT	S		TEL: :	Alb 505-345-3971	Analysis Labo 4901 Hawk wquergue, NM 5 FAX: 505-34 allenvironmen	ins NE 87109 5-4107	Samp	ole Log-In Check	List
Clien	t Name: SM	A-CARLSE	BAD	Work Or	der Numper	: 1512A57			RcptNo: 1	
Recei	ved by/date:	A		12	391	5_	Å	0		
ogge	ed By: A	shiey Galle	gos	12/22/201	5 9:25:00 A	M	~	FJ.		
Comp	leted By: A	shiey Galle	gos	1	5 9:03:19 A	м	×	FF		
Revie	wed By:	TO		12/2	3/5					
hair	n of Custoc	ly		,	,				_	
1. 0	ustody seals in	ntact on san	nple bottles?			Yes 🗌		No 🗌	Not Present	
2. Is	Chain of Cust	ody comple	te?			Yes 🔽		No 🗌	Not Present	
з. н	ow was the sa	mple delive	red?			Courier				
Log	In									
4. v	Vas an attemp	t made to co	ool the sampl	es?		Yes 🖌		No 🗌	NA 🗌	
5. V	vere all sample	es received	at a temperat	ture of >0° C t	o 6.0°C	Yes 🗹		No 🗌		
6. s	ample(s) in pr	oper contair	ner(s)?			Yes 🗹		No 🗌		
7. S	ufficient samp	le volume fo	or indicated te	est(s)?		Yes 🗹		No 🗌		
8. A	re samples (e:	kcept VOA a	and ONG) pro	perly preserve	ed?	Yes 🗹		No 🗌		
9. V	Vas preservativ	ve added to	bottles?			Yes 🗌		No 🗹	NA	
10.V	OA vials have	zero heads	pace?			Yes 🗌		No 🗆	No VOA Vials 🗹	
11. V	Were any samp	ole containe	rs received b	roken?		Yes 🗆		No 🗹	# of preserved bottles checked	
	oes paperwor Note discrepar			4		Yes 🗹		No 🗌	for pH: (<2 or >12 un	less noted)
				n of Custody?		Yes 🖌		No 🗆	Adjusted?	
	s it clear what					Yes 🔽		No 🗆		
15.V	Vere all holding If no, notify cu	g times able	to be met?			Yes 🗹		No 🗌	Checked by:	
Spec	cial Handlir	ng (if app	licable)							
16.V	Vas client noti	fied of all dis	screpancies v	with this order?		Yes 🗌		No 🗌	NA 🗹	
	Person N	lotified:			Date	[17		
	By Whon				Via:	🗌 eMail	Pho	ne 🗌 Fax	In Person	
	Regardin	g Î								
	Client Ins	structions:								
17,	Additional rem	arks:								
18.	Cooler Inform	nation								
	Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Si	gned By	-	
	1	4.3	Good	Yes					1	

HALL ENVIRONMENTAL	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analy	20 ⁴)) 259) (2MIS (2MIS)	2808 2808 200 (1: (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	С + 2811 811 811 81 81 8 7 8 7 8 7 8 7 8 7 8	BE (G 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RH + XJT8 RH + XJT8 TPH 80155 FPH (Meth TPH (Meth (Meth) FPH's (831 RAP 837 RAP 837 RA						X		X		Remarks:	
Turn-Around Time:		2,12- Hault	Project #:			#CUN NOTEN !!	Sampler: LCM	Provide Antonio Contraction of the second	Sample Temperature: 4, 3	Container Preservative HEAL No. Type and # Type [S] AS7	4.2 - 001	E00- 100	£00-	hau,	290,	and -			B	Cont 12/22/15 0925	Received by: Date Time
Chain-of-Custody Record		Mailing Address: 201 5	HALHAUEND CIMESDAN	Phone #: 684 - 740	email or Fax#:	QA/QC Package:		NELAP Other	EDD (Type)	Date Time Matrix Sample Request ID	114 R20 502 13-16	1110 830 Card D3-12-	1)3-6	1 03- A	C-7V	Ma - 4				Date: Time: Relinquished by:	Date: Time: Relinquished by:



February 04, 2016

Austin Weyant Souder, Miller & Associates 201 S Halagueno Carlsbad, NM 88221 TEL: (575) 689-7040 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website www.hallenvironmental.com

RE: JRS Horz Fed #1

OrderNo.: 1601A16

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 10 sample(s) on 1/27/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Page	80	01	f 134

Hall Environ	mental Analysi	s Laborat	ory, Inc.		Analytical Report Lab Order: 1601A16 Date Reported: 2/4/2016
	Souder, Miller & Assoc RS Horz Fed #1	ciates		L	ab Order: 1601A16
Lab ID: Client Sample ID:	1601A16-001 B6-5			Collection Date: Matrix:	1/20/2016 8:00:00 AM SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride).0: ANIONS	ND	30	mg/Kg	Analyst: LGT 20 1/29/2016 2:32:06 PM 23486
Lab ID: Client Sample ID:	1601A16-002 B6-1		I	Collection Date: Matrix:	1/20/2016 8:00:00 AM SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	ND	30	mg/Kg	Analyst: LGT 20 1/29/2016 2:44:31 PM 23486
Lab ID:	1601A16-003		(Collection Date:	1/20/2016 8:00:00 AM
Client Sample ID:	H1-5			Matrix:	SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	54	30	mg/Kg	Analyst: LGT 20 1/29/2016 2:56:55 PM 23486
Lab ID:	1601A16-004			Collection Date:	1/20/2016 8:00:00 AM
Client Sample ID:	H1-1			Matrix:	SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	1000	30	mg/Kg	Analyst: LGT 20 1/29/2016 3:09:19 PM 23486
Lab ID:	1601A16-005			Collection Date:	1/20/2016 8:00:00 AM
Client Sample ID:	H2-1			Matrix:	SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	1600	75	mg/Kg	Analyst: LGT 50 2/2/2016 2:53:01 PM 23486

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 th	e associated Method Blank	
	Sample Diluted Due to Matrix E Value above quantita	tion range	
	Holding times for preparation or analysis exceeded J Analyte detected belo	w quantitation limits Page 1 of	63
	Not Detected at the Reporting Limit P Sample pH Not In Ra	nge	2
	RPD outside accepted recovery limits RL Reporting Detection 1	_tmit	
	% Recovery outside of range due to dilution or matrix W Sample container tem	perature is out of limit as specified	
	Not Detected at the Reporting Limit P Sample pH Not In Ra RPD outside accepted recovery limits RL Reporting Detection I	nge Limit	

Hall Environ	mental Analysi	s Laborat	ory, Inc.		Analytical Report Lab Order: 1601A16 Date Reported: 2/4/2	016
	Souder, Miller & Assoc RS Horz Fed #1	ciates		L	ab Order: 1601A	16
Lab ID: Client Sample ID:	1601A16-006 H2-5			Collection Date: Matrix:	: 1/20/2016 8:00:00 AN : SOIL	1
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	79	30	mg/Kg	Anal 20 1/29/2016 3:58:57 F	lyst: LGT PM 23486
Lab ID: Client Sample ID:	1601A16-007 H3-1			Collection Date: Matrix:	: 1/20/2016 8:00:00 AN SOIL	1
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	1300	75	mg/Kg	Ana 50 2/2/2016 3:05:26 PM	lyst: LGT A 23486
Lab ID: Client Sample ID:	1601A16-008 H4-5			Collection Date: Matrix:	: 1/20/2016 8:00:00 AN : SOIL	1
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	170	30	mg/Kg	Anal 20 2/1/2016 7:11:41 PM	yst: LGT // 23515
Lab ID: Client Sample ID:	1601A16-009 H4-1			Collection Date: Matrix:	1/20/2016 8:00:00 AN SOIL	1
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	2400	75	mg/Kg	Anal 50 2/2/2016 3:17:51 PM	yst: LGT / 23515
Lab ID: Client Sample ID:	1601A16-010 P3-1		(Collection Date: Matrix:	1/20/2016 8:00:00 AN SOIL	1
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	4500	150	mg/Kg	Anal 100 2/2/2016 3:30:16 PM	yst: LGT / 23515

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of	3
	ND	Not Detected at the Reporting Limit	р	Sample pH Not In Range	2
	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	

	der, Miller & Associates Horz Fed #1			
Sample ID MB-23486	SampType: MBLK	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 23486	RunNo: 31808		
Prep Date: 1/29/2016	Analysis Date: 1/29/2016	SeqNo: 973423	Units: mg/Kg	
Analyte		SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-23486	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 23486	RunNo: 31808		
Prep Date: 1/29/2016	Analysis Date: 1/29/2016	SeqNo: 973424	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 95.6 90	110	
Sample ID MB-23515	SampType: MBLK	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 23515	RunNo: 31841		
Prep Date: 2/1/2016	Analysis Date: 2/1/2016	SeqNo: 974435	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-23515	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 23515	RunNo: 31841		
Prep Date: 2/1/2016	Analysis Date: 2/1/2016	SeqNo: 974436	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 94.1 90	110	· •

Qualifiers:

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

1601A16

04-Feb-16

WO#:

Page 3 of 3

Received by OCD: 1/18/2023 4:28:50 PM

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: www.hai	4901 Iquerqu FAX: 5	Hawkin 2, NM 8 0 5- 345-	s NE 7109 Sai 4107	mple Log-in C	heck List
Client Name: SMA-CARLSBAD	Work Order Number:	1601/	16		RcptNo:	1
Received by/date: A OIT TTI	6					
Logged By: Anne Thome	1/27/2016 9:10:00 AM			Arre H. Arre H.		
Completed By: Anne Thorne	1/27/2016			am A.		i i
Reviewed By:	01/27/16					
Chain of Custody	/ //					
1. Custody seals intact on sample bottles?		Yes		No 🗌		
2. Is Chain of Custody complete?		Yes		No 🗔	Not Present	
3. How was the sample delivered?		<u>Cour</u>	er			
Log In			<u>t</u> :			
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	3)?	Yes		No 🗌		
8. Are samples (except VOA and ONG) proper	ly 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 broke	эп?	Yes		No 🗹]	
12. Does paperwork match bottle labels?		Yes		No 🗆	# of preserved bottles checked for pH:	
(Note discrepancies on chain of custody)	Oustack 2	Yes		No 🗇	Charles Autor	r >12 unless noted)
13. Are matrices correctly identified on Chain of 14. Is it clear what analyses were requested?	Custody?					
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes		No 🗌	Checked by:	
Special Handling (if applicable)						
16. Was client notified of all discrepancies with	this order?	Yes		No 🗔	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions:	Date Via:] eMa	il 🗌	Phone 🗌 Fa	x 🗍 In Person	
17. Additional remarks: 18. <u>Cooler Information</u> <u>Cooler No</u> Temp °C Condition Set <u>1</u> 2.2 Good Yest Page 1 of 1		Seal Da	te	Signed By		

.

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Table 3: Summary of Field Screening Results

JR Horz Federal #1 Produced Water 1/20/2016

	FIELD SCREENING RESULTS SUMMARY									
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N					
1/20/2016	10:00	P3-1	1'	3498	y					
1/20/2016	10:00	P4-S	Surface	187	y					
1/20/2016	10:00	P4-1	1'	1921	y					
1/20/2016	10:00	P5-S-Lost								
1/20/2016	10:00	P5-1	1'	531	y					
1/20/2016	10:00	P6-S	Surface	158	y					
1/20/2016	10:00	P6-1	1'	1534	y					
1/20/2016	10:00	P7-5	Surface	15	y					
1/20/2016	10:00	P7-1	1'	803	y					

*BDL= Below Detectable Level



.

JRS HORZ Federal #1 Final Closure Report SMA Ref 5B23978 BG 13 1/26/16

APPENDIX B FORM C141 FINAL

Engineering
 Environmental
 Surveying

APPENDIX E COG Monitoring Report



July 22, 2016

Oil Conservation Division District 2 – Artesia 811 S. First St. Artesia, NM 88210

Re: JR's Horz Federal #1 30-015-33066 Sec. 10, T26S-R29E Eddy County, NM

Ms. Patterson/Ms. Tucker,

COG Operating LLC would like to submit for your consideration the enclosed work plan for the above captioned well. This monitoring plan is an addendum to the partial work plan approved on January 21, 2016. The purpose of this supplementary work plan is to address impact left in place in the draw during the time of deferment, while insuring measures are protective of the long term success of the draw ecology. The plan is in response to the C-141 Initial report dated October 21, 2015. Work for the approved work plan dated December 28, 2015 was completed in January of 2016.

Background

The release was due to a fire that was the result of a lightning strike. Approximately 44 barrels oil and 1310 barrels of produced water were released of which 240 barrels of fluid were recovered. The release impacted the surrounding pasture, lease road, and crossed pipeline right of ways running parallel to the lease road before entering a feeder draw. The attached Site Diagram depicts the approximate area impacted by the release along with the approximate sampling points.

Groundwater & Soil

Received by OCD: 1/18/2023 4:28:50 PM

Based on the Chevron Trend Maps, the release area would be classified at a site ranking of Zero due to the depth of groundwater at approximately 125'.

The feeder draw is an un-named draw that eventually leads to the Pecos River. Per NRCS Soil survey, the following plants are present in the draw. This is concurrent with on-site observations.

"Grass cover is uniform and evenly distributed. Litter cover is high, averaging 25 percent. Shrub/succulent cover is low averaging only 2 percent. Evidence of erosion Page 89 of 134

such as large water flow patterns, rills and gullies are infrequent. Other grasses which would appear on this site include:

bottlebrush squirreltail, galleta, alkali sacaton, hairy grama, mat muhly, ring muhly, green sprangletop, Hall's panicum, plains bristlegrass, little bluestem, silver bluestem, Indiangrass, fluffgrass, buffalograss, wolftail, tridens spp., and needle grass. Other shrubs include:cholla, juniper, pinyon, creosotebush, oak spp., broom baccharis, pricklypear, Apacheplume, dalea spp., winterfat, and algerita. Other forbs include:wooly loco, wooly Indianwheat, cudweed, thistles, annual sunflowers, mullin, wildbuckwheat spp., nightshade spp., milkweed spp., and

Work Plan

bladderpod."

COG proposes a long term monitoring plan to ensure the chlorides left in place are stabilized at their current depth. 4 sampling points were selected, two point in the flow path to measure leaching and three points to measure horizontal movement of chlorides. Please see attached sampling map. The map shows two areas highlighted in red. These areas are

Depth to groundwater in the area is at approximately 125', therefore the greater concern is not contamination of groundwater through leaching but rather horizontal movement of chlorides through the draw where is could potentially impact the Pecos River.

Sampling Point Label	GPS Coordinates	Sampling Depth (TD)
Sampling Point 2 (P2)	32.065445° -103.977071°	2'
Sampling Point 3 (P3)	32.067206° -103.977107°	3'
Monitoring Point 1 (MP1)	32.068833° -103.977082°	2'
Monitoring Point 2 (MP2)	32.068689° -103.976739°	2'

Samples will be taken in May of each year for the next 3 years, starting in 2017, and submitted to the NMOCD and BLM. Due to the dense vegetation in the draw, and attempting to limited disturbance, sampling will be conducted with a hand auger. In the event samples deeper than 3 feet below ground surface are required, COG will obtain permission from NMOCD District 2 and the Carlsbad BLM Office to enter the draw with a rig for mechanical sampling. A report will be submitted after 3 years of analysis have been conducted. If the analysis shows no change, COG will request closure of 2RP-3386-0. Listed below is a sampling schedule.

Sampling Schedule May 2017 May 2018 May 2019 NMOCD July 22, 2016 Page 3

Page 90 of 134

If there are no objections or further stipulations, COG Operating LLC would like to begin the remediation process based on approval of this work plan. Please feel free to contact my with any questions or concerns at (505) 350-1336

Sincerely,

Amanda Trujillo Davis

Sr. Environmental Coordinator

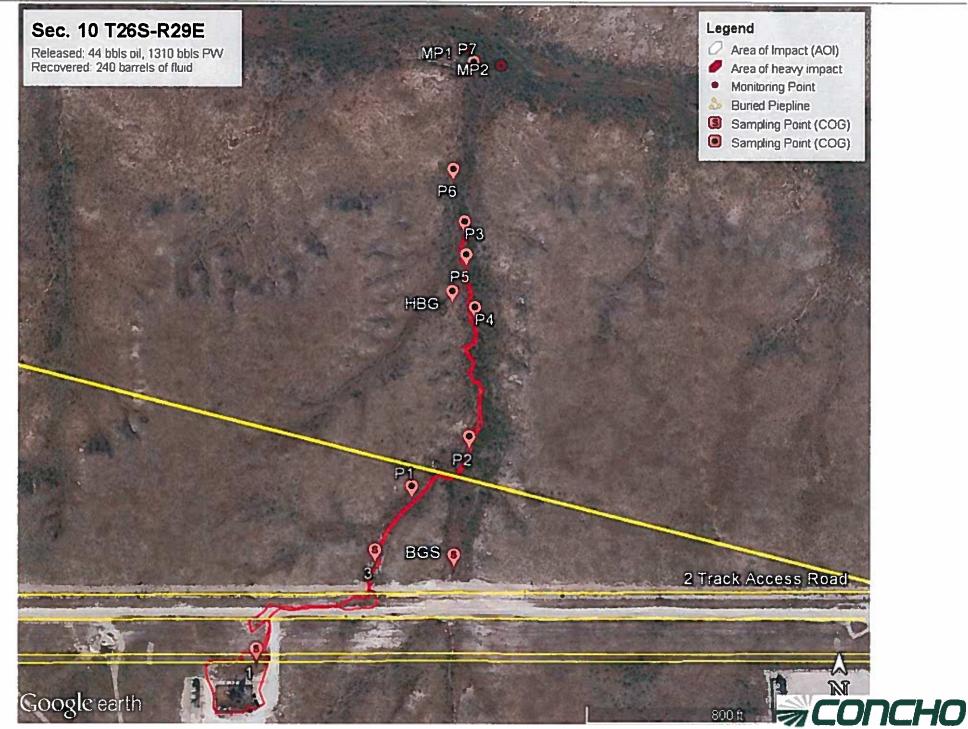
Enclosed

- (1) Site Diagram with Monitoring Points
- (2) Site Diagram of P1 and P2
- (3) Site Diagram of P3 and P4
- (4) Site Diagram of Monitoring Points
- (5) Supporting analytical data

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uly 22, 2016

JR's Horz Federal SWD #1



July 22, 2016

SR: Zero DGW:125' **S1** Cl-1' 256 2' 240 3' 336 **S**3 GI-1' 384 2' 208 3' <16.0 CI-P1 Sf 7,712 1' 1,290 3' 717 P2 GI-Sf 5,619 1' 488 3' 244 P4 CI-Sf 187 1' 1921 G-**P5** 1' 531 GI-P3 Sf 25,000 1' 3498 CI-P6 Sf 158 1534 1' P7 Cl-Sf 15 1' 803



JR's Horz Federal SWD #1 – P1 & P2



SR: Zero

S1

1'

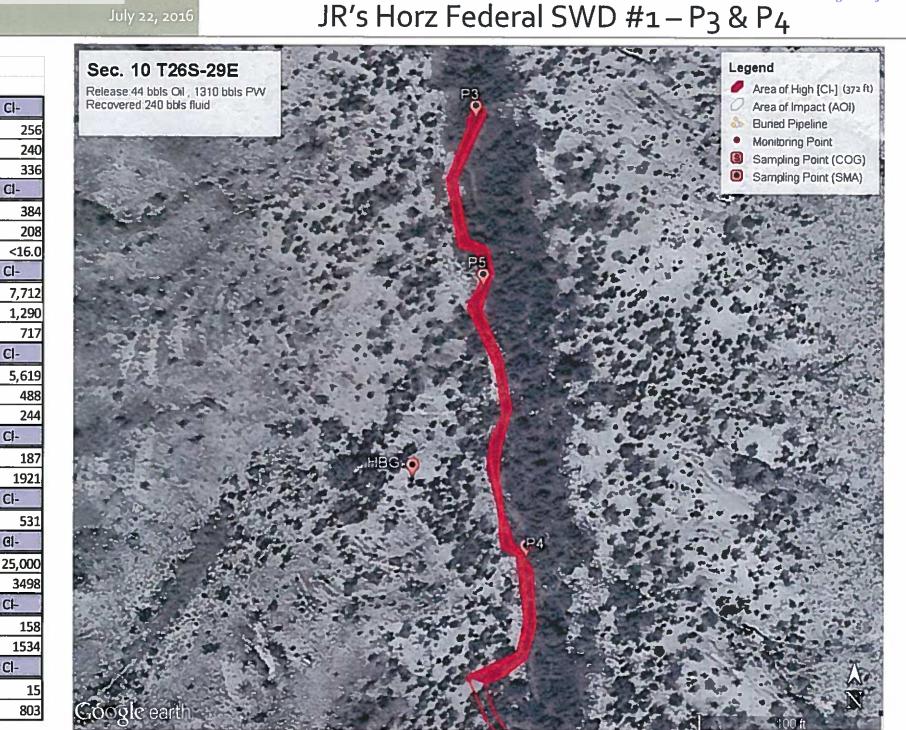
2'

3'

S3

2'

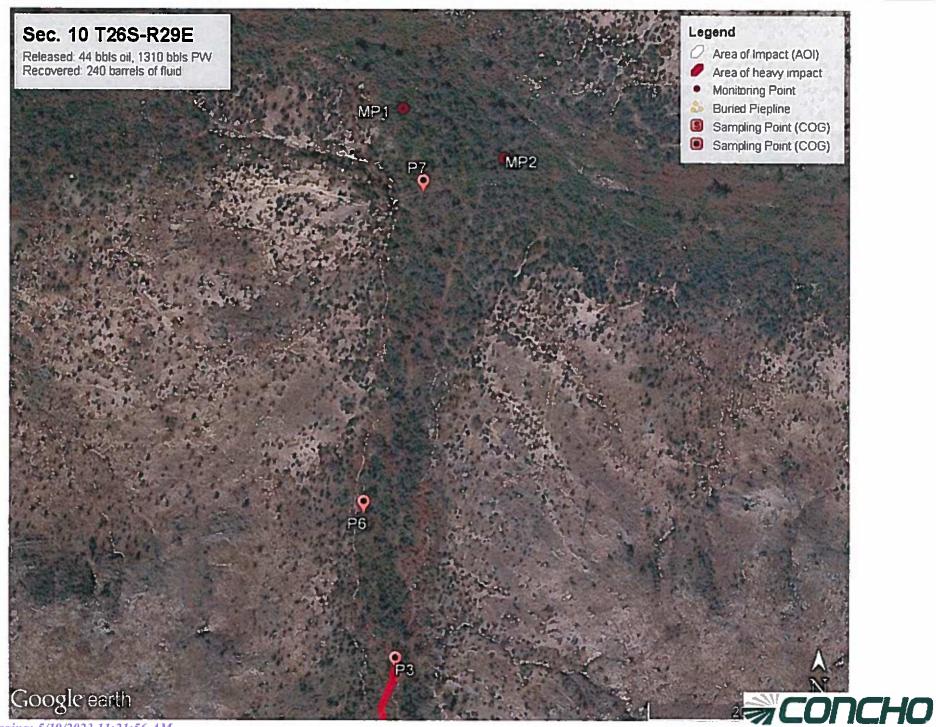
DGW:125'





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JR's Horz Federal SWD #1 – Monitoring Points





June 08, 2016

AMANDA TRUJILLO COG Operating, LLC 500 W. ILLINOIS Midland, TX 79701

RE: JRs Horz Federal SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 06/01/16 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.qov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Received by OCD: 1/18/2023 4:28:50 PM

Celay D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

COG Operating, LLC AMANDA TRUJILLO 500 W. ILLINOIS Midland TX, 79701 Fax To: None

Received:	06/01/2016	Sampling Date:	05/26/2016
Reported:	06/08/2016	Sampling Type:	Soil
Project Name:	JRs Horz Federal SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

Sample ID: BGS 1' (H601251-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/06/2016	ND	416	104	400	3,77	

Sample ID: BGS 2' (H601251-02)

Chloride, SM4500Cl-B mg/kg			Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/06/2016	ND	416	104	400	3.77		

Sample ID: BGS 3' (H601251-03)

Chloride, SM4500CI-8	mg,		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/06/2016	ND	416	104	400	3.77	

Sample ID: BGS 4' (H601251-04)

Chloride, SM4500CI-B	ntoride, SM4500Cl-B mg/kg			Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/06/2016	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liabley and Demages. Cerdinal's bability and clernt's exclusive remedy for any clean arsung, whether based in contract or tort, shall be limited to the amount paid by cleant for analyses. All claims, including those for negligence and any other cluade vulnation-verse shall be deemed waved unless made in writing and received by Caronal within thirty (30) days affect on the contract or tort, shall be limited to the amount paid by cleant for analyses. All claims, including those for negligence and including, writing, writing, hostiness improvpont, loss of upon of ponts incurred by cleant, ets substations, affective negotigence and annotation of the applicable service. In no event shall Cardnal be suble for inclands do nonsequential damages, including, writing, business improvpont, loss of upon of upon of the suble for the performance of the services hermunder by Cardnal, regardless of whether such damin is based upon any of the substance stated reasons or otherwise. Result relater only to be samples demonstrated above. This report shall not be reported except in full with writem approval of Cardnal Laboratories.

Celay The

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 5



Analytical Results For:

COG Operating, LLC AMANDA TRUJILLO 500 W. ILLINOIS Midland TX, 79701 Fax To: None

Received:	06/01/2016	Sampling Date:	05/26/2016
Reported:	06/08/2016	Sampling Type:	Soil
Project Name:	JRs Horz Federal SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

Sample ID: BGS 5' (H601251-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	06/06/2016	ND	416	104	400	3.77	

Sample ID: BGS 6' (H601251-06)

Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/06/2016	ND	416	104	400	3.77	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
÷	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

Received by OCD: 1/18/2023 4:28:50 PM

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 5 of 5

5. Please fax written changes to 575-393-2476

Delivered By: (Circle One) Sampler - UPS - Bus - Other:

5,20 Good Intact Ves La Ves

CHECKED BY

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2



June 08, 2016

AMANDA TRUJILLO DAVIS COG OPERATING P. O. BOX 1630 ARTESIA, NM 88210

RE: JRS HORZ FEDERAL SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 06/01/16 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited analytes are denoted by www.tceq.texas.gov/field/ga/lab accredited analytes are denoted by www.tceq.texas.gov/field/ga/lab accredited analytes are denoted analytes are denoted by www.tceq.texas.gov/field/ga/lab accredited analytes are denoted analytes ar

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

COG OPERATING AMANDA TRUJILLO DAVIS P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	06/01/2016	Sampling Date:	05/26/2016
Reported:	06/08/2016	Sampling Type:	Soil
Project Name:	JRS HORZ FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S1 1' (H601197-01)

Chloride, SM4S00Cl-B mg/kg		Analyze	Analyzed By: AP			<u></u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	06/06/2016	ND	416	104	400	3.92	

Sample ID: S1	. 2' (H601197-02)
---------------	-------------------

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/06/2016	ND	416	104	400	3.92	

Sample ID: S1 3' (H601197-03)

Chloride, SM4500Cl-B	ie, SM4500Cl-B mg/kg			Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	06/06/2016	ND	416	104	400	3.92	

Sample ID: S1 4' (H601197-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	06/06/2016	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

COG OPERATING AMANDA TRUJILLO DAVIS P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	06/01/2016	Sampling Date:	05/26/2016
Reported:	06/08/2016	Sampling Type:	Soil
Project Name:	JRS HORZ FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S1 5' (H601197-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	06/06/2016	ND	416	104	400	3.92	

Sample ID: S1 6' (H601197-06)

Chloride, SM4500CI-B	B mg/kg		Analyze	Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	06/06/2016	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5



Notes and Definitions

ND		Analyte NOT DETECTED at or above the reporting limit
RPD		Relative Percent Difference
		Samples not received at proper temperature of 6°C or below.
***		Insufficient time to reach temperature.
<i>.</i> :	20	Chloride by SM4500CI-B does not require samples be received at or below 6°C
		Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 5



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

	(575) 393-2326 FAX (575) 393-2476	BILLTO		AN	ANALYSIS REQUEST
Company Name: COG Operating LLC Project Manager: Amanda T. Davis	EC.	P.O. #			
2		Company: COG Operating LLC	ating LLC		
2	State: NM Zip 88210	Attn: Robert McNeil	Neill		
0	Fax #:	Address: 600 W Illinois	linois		
	Project Owner:	City: Midland			
Project Name: JRs Horz Federal SWD #1	/D #1	State: TX Zip: 79701	-		
g		Phone #: (432) 221-0388			
Sampler Name: Amanda T. Davis		1			
	MATRIX	PRESERV. SAMPLING	ING		
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER ACID/BASE ICE / COOL OTHER	Ы М ВТЕХ ТРН	Chloride	
S1 1	1	X	8:00 AM	×	
	2	x 5/26/16	8:00 AM	×	
	<u>س</u>	x 5/26/16	8:00 AM	×	
	Ą.	x 5/26/16	8:00 AM	×	
	σ <u>ι</u>	× 5/26/16	8:00 AM	×	
ଟ ସେ	e	X 5/26/16	8:00 AM	×	
PLEASE HDTE: Linkely and Damages. Centres's instant and e analyses. All clams installing those for magigance and mity offer across. In no event shall Centeral be table for inculentel or con-	ganta a science i nevero y na ery serio energy original made a n cause whatopeer shall be destrict waved urbos made a sequenti destaget, including without interact, business at	and received by Cardonis within 30 days at a, lose of use, we tops of pretits encurred by	has compliation of the applicable y claim, its subadament,		
Relinquished By:	a -	Jenn a based were any of the stores allow	Phone Result: D Yes Fax Result: D Yes REMARKS: dneel2/@concho.com lcarrasco@concho.com atruijillo@concho.com	N NO	Add'l Phone #: Add'l Faz #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	5.2° Sample Condition	dition CHECKED BY			

s. Please fax written changes to 575-393-2476

#75



June 08, 2016

AMANDA TRUJILLO COG Operating, LLC 500 W. ILLINOIS Midland, TX 79701

RE: JRs Horz Federal SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 06/01/16 8:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celeg D. Kune

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

COG Operating, LLC AMANDA TRUJILLO 500 W. ILLINOIS Midland TX, 79701 Fax To: None

Received:	06/01/2016	Sampling Date:	05/26/2016
Reported:	06/08/2016	Sampling Type:	Soil
Project Name:	JRs Horz Federal SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

Sample ID: S3 1' (H601250-01)

Chloride, SM4500CI-8	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	06/06/2016	ND	415	104	400	3.92	

Sample ID: S3 2' (H601250-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	06/06/2016	ND	416	104	400	3.92	

Sample ID: S3 3' (H601250-03)

Chioride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/06/2016	ND	416	104	400	3.92	

Sample ID: S3 4' (H601250-04)

Cardinal Laboratories

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/06/2016	ND	416	104	400	3.92	

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

COG Operating, LLC AMANDA TRUJILLO 500 W. ILLINOIS Midland TX, 79701 Fax To: None

Received:	06/01/2016	Sampling Date:	05/26/2016
Reported:	06/08/2016	Sampling Type:	Soil
Project Name:	JRs Horz Federal SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

Sample ID: S3 5' (H601250-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	06/06/2016	ND	416	104	400	3.92	

Sample ID: S3 6' (H601250-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP	_				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1630	16.0	06/06/2016	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
.5	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 5



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating LLC		BILL TO			ANALYSIS REQUEST	
1	P.O. #			_		_
5	Company:	any: COG Operating LLC				
rte	Zip 88210 Attn:	Robert McNeill	116	_		
Phone #: (575) 748-6930 Fax #:	Address:	ISS: 600 W Illinois	ŌIS			
Project #: Project Owner:	ner: City:	Midland				
ame: JRs Horz Federal SWD #	State: TX	TX Zip: 79701				
¥.	Phone	Phone #: (432) 221-0388				
Sampler Name: Amanda T. Davis	Fax #:					
FOR U4B USE ONLY	rs Ter R Matrix	PRESERV. SAMPLING	۵ 			
Lab I.D. Sample I.D.	(G)RAB OR (G # CONTAINE GROUNDWA WASTEWATE SOIL OIL SLUDGE OTHER : ACID/BASE:	ICE / COOL OTHER :	BTEX TPH	Chloride		
S3 1'			8:00 AM	×		
2 S3 2'		x 5/26/16	8:00 AM	×		
3 b s3 3'		x 5/26/16	8:00 AM	×		
4 N S3 4'		x 5/26/16	8:00 AM	×		
5 Z S35'		x 5/26/16	8:00 AM	×		
S3 6'		x 5/28/16	8:00 AM	X		
b) Linkbery and Demages Cardena's ladder and cherd's exclasive arres encludery linea lor registrance and any other cause while arres anal. Cardenal be index for molecular or consequential damin oreanon a summa and or related to the sentence area of services for common assessment of or related to the sentence of services for	interng whether based in contract or tor, waved urises made in solary and receiv landation, business memophics, loss of i repartiess of whether such clern is base	stayl for jimining to the account year by the chards for the set by Candenal whith 30 days after completion of the apple man, or loss of prefer mounted by cleant, its subartisenes, d upon, may of the above stated research or other the d upon.	- pp			
Relinquished By:	Receive		Phone Result: D Yes Fax Result: D Yes REMARKS: dneel2@concho.com lcarrasco@concho.com alruiillo@concho.com		Add'l Phone #: Add'l Fax #:	
Deilvered By: (Circle One) Sampler - UPS - Bus - Other:	5.20 Cool Inlact	CHECKED BY:				
 Please fax written changes to 575-393-2476 	51# 50	S				



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

January 12, 2016

Austin Weyant Souder, Miller & Associates 201 S Halagueno Carlsbad, NM 88221 TEL: (575) 689-7040 FAX

RE: JR Horz FEX

OrderNo.: 1512A54

Released to Imaging: 5/19/2023 11:21:56 AM

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 12 sample(s) on 12/22/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1512A54

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/12/2016

CLIENT: Souder, Miller & Associates			Client Sampl	e ID: P1-0.5	
Project: JR Horz FEX			Collection I	Date: 12/16/2015 8:30:00 AM	ſ
Lab ID: 1512A54-001	Matrix:	SOIL	Received I	Date: 12/22/2015 9:25:00 AM	1
Analyses	Result	RL (Qual Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	st: LGT
Chloride	8900	300	mg/Kg	200 12/30/2015 3:25:35 P	M 22982
EPA METHOD 8021B: VOLATILES				Analy	st: NSB
Benzene	ND	0.049	mg/Kg	1 12/24/2015 10:09:41	PM 22945
Toluene	NÐ	0.049	mg/Kg	1 12/24/2015 10:09:41	PM 22945
Ethylbenzene	ND	0.049	mg/Kg	1 12/24/2015 10 09 41	PM 22945
Xylenes, Total	ND	0.098	mg/Kg	1 12/24/2015 10 09 41	PM 22945
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1 12/24/2015 10:09:41	PM 22945

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

Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 14
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not in Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Er	ıvironmental Analysi	s Labora	tory, Inc.		Analytical Report Lab Order 1512A54 Date Reported: 1/12/2	
CLIENT:	Souder, Miller & Associates			Client Samp	le ID: P1-3	
Project:	JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	1
Lab ID:	1512A54-002	Matrix:	SOIL	Received	Date: 12/22/2015 9:25:00 AN	1
Analyses		Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS				Analy	st: LGT
Chloride		730	30	mg/Kg	20 12/29/2015 12:09:18	PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 14
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall En	vironmental Analysi	s Labora	tory, In	ic.		Analytical Rep Lab Order 1512 Date Reported: 1	A54
CLIENT:	Souder, Miller & Associates			С	lient Samp	le ID: P2-3	
Project:	JR Horz FEX				Collection	Date: 12/16/2015 8:30:0	0 AM
Lab ID:	1512A54-003	Matrix:	SOIL		Received	Date: 12/22/2015 9:25:0	0 AM
Analyses		Result	RL	Qual	Units	DF Date Analyzed	l Batch
EPA MET	HOD 300.0: ANIONS						Analyst: LGT
Chloride		220	30		mg/Kg	20 12/29/2015 12:4	6:31 PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 14
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Er	ivironmental Analysi	s Laborat	ory, Inc.		Analytical Report Lab Order 1512A54 Date Reported: 1/12/	
CLIENT:	Souder, Miller & Associates			Client Samp	le ID: P2-0.5	
Project:	JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 Al	м
Lab ID:	1512A54-004	Matrix: S	OIL	Received	Date: 12/22/2015 9:25:00 Al	M
Analyses		Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS				Analy	yst: LGT
Chloride		8500	300	mg/Kg	200 12/30/2015 3:37:59	PM 22982

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 14
	ND	Not Detected at the Reporting Limit	Р	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		

Released to Imaging: 5/19/2023 11:21:56 AM

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1512A54 Date Reported: 1/12/2016

CLIENT: Souder, Miller & Associates			Client Sampl	e ID: P3-0.5	
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	
Lab ID: 1512A54-005	Matrix:	SOIL	Received l	Date: 12/22/2015 9:25:00 AM	
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analyst	LGT
Chloride	24000	750	mg/Kg	500 12/30/2015 3:50:23 PM	22 9 82
EPA METHOD 8021B: VOLATILES				Analyst	NSB
Benzene	ND	0.047	mg/Kg	1 12/24/2015 10:33:51 PI	VI 22945
Toluene	ND	0.047	mg/Kg	1 12/24/2015 10:33:51 PI	VI 22945
Ethylbenzene	ND	0.047	mg/Kg	1 12/24/2015 10:33 51 Pl	VI 22945
Xylenes, Total	ND	0.093	mg/Kg	1 12/24/2015 10:33:51 Pl	VI 22945
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1 12/24/2015 10:33:51 Pł	VI 22945

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

production in community and income				
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 14
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	5	% Recovery outside of range due to dilution or matrix		

					Analytical Report		
					Lab Order 1512A54		
Hall E	nvironmental Analysi	s Laborat	ory, Inc.		Date Reported: 1/12/	2016	
CLIENT:	Souder, Miller & Associates			Client Sampl	le ID: D1-2		
Project:	JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	M	
Lab ID:	1512A54-006	Matrix: SOIL Received			Date: 12/22/2015 9:25:00 AM		
Analyses		Result	RL Qu	al Units	DF Date Analyzed	Batch	
EPA MET	HOD 300.0: ANIONS				Analy	/st: LGT	
Chloride		110	30	mg/Kg	20 1/7/2016 1:15:58 PM	23106	

Justine 1 D

Released to Imaging: 5/19/2023 11:21:56 AM

Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	I	Analyte detected below quantitation limits Page 6 of 14
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysi	Analytical Report Lab Order 1512A54 Date Reported: 1/12/2016					
CLIENT: Souder, Miller & Associates			Client Sampl	le ID: D1-4		
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AN	1	
Lab ID: 1512A54-007	Matrix: SOIL Received			Date: 12/22/2015 9:25:00 AM		
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS				Analy	st: LGT	
Chloride	240	30	mg/Kg	20 12/29/2015 1:23:45 F	PM 22982	

Qualifiers:		Value exceeds Maximum Contaminant Level,	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 7 of 14
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL.	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental A		Analytical Report Lab Order 1512A54 Date Reported: 1/12/2016			
CLIENT: Souder, Miller & Ass	ociates		Client Sampl	e ID: D1-8	
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AM	Л
Lab ID: 1512A54-008	Matrix: SC	DIL	Received Date: 12/22/2015 9:25:00 AM		
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	st: LGT
Chloride	310	30	mg/Kg	20 12/29/2015 1:36:10 F	M 22982

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits Page 8 of 14
	ND	Not Detected at the Reporting Limit	р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall En	ivironmental Analysi	s Laborat	ory, In	c.	Analytical Report Lab Order 1512A54 Date Reported: 1/12/2016	i	
CLIENT:	Souder, Miller & Associates			Client Sa	mple ID: D1-12		
Project:	JR Horz FEX			Collecti	on Date: 12/16/2015 8:30:00 AM		
Lab ID:	1512A54-009	Matrix: SOIL Received			Date: 12/22/2015 9:25:00 AM		
Analyses		Result	RL	Qual Units	DF Date Analyzed	Batch	
	HOD 300.0: ANIONS				Analyst: I	LGT	
Chloride		280	30	mg/Kg	20 12/29/2015 1:48:34 PM	22982	

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 9 of 14
	NÐ	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysi	Analytical Report Lab Order 1512A54 Date Reported: 1/12/2016					
CLIENT: Souder, Miller & Associates			Client Sampl	e ID: D1-16		
Project: JR Horz FEX			Collection	Date: 12/16/2015 8:30:00 AI	M	
Lab ID: 1512A54-010	Matrix: S	OIL	Received	Date: 12/22/2015 9:25:00 AM		
Analyses	Result	RL Qua	l Units	DF Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS				Analy	/st: LGT	
Chloride	250	30	mg/Kg	20 12/29/2015 2:00:59 F	PM 22982	

				-
Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspage 10 of 14
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1512A54 Date Reported: 1/12/2016

CLIENT: Souder, Miller & Associates	Client Sample ID: D2-2							
Project: JR Horz FEX		Collection Date: 12/16/2015 8:30:00 AM						
Lab ID: 1512A54-011	Matrix:	SOIL	Received	Date: 12	/22/2015 9:25:00 AI	M		
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Anal	yst: LGT		
Chloride	320	30	mg/Kg	20	12/29/2015 2:13:23	PM 22982		
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB		
Benzene	ND	0.049	mg/Kg	1	12/24/2015 10:58:11	PM 22945		
Toluene	ND	0.049	mg/Kg	1	12/24/2015 10:58:11	PM 22945		
Ethylbenzene	ND	0.049	mg/Kg	1	12/24/2015 10:58:11	PM 22945		
Xylenes, Total	ND	0.097	mg/Kg	1	12/24/2015 10:58:11	PM 22945		
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	12/24/2015 10:58:11	PM 22945		

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	8	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitPage 11 of 14
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

						Analytical Repo	rt	
						Lab Order 1512A5	4	
Hall Environmental Analysis Laboratory, Inc.						Date Reported: 1/12/2016		
CLIENT:	Souder, Miller & Associates			C	lient Sampl	le ID: D2-4		
Project:	JR Horz FEX			(Collection I	Date: 12/16/2015 8:30:00 A	١M	
Lab ID:	1512A54-012	Matrix: SOIL			Received Date: 12/22/2015 9:25:00 AM			
Analyses		Result	RL	Qual	Units	DF Date Analyzed	Batch	
EPA MET	HOD 300.0: ANIONS					Ana	alyst: LGT	
Chloride		150	30	I	mg/Kg	20 12/29/2015 2:25:48	3 PM 22982	

Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitsPage 12 of 14
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Ir	ıc.

WO#:	1512A54

12-Jan-16

Client:	Souder	, Miller & Associates					
Project:	JR Hor	z FEX					
Sample ID	MB-22982	SampType: MBLK	Te	stCode: EPA Metho	d 300.0: Anions	<u> </u>	
Client ID;	PBS	Batch ID: 22982		RunNo: 31150			
Prep Date:	12/28/2015	Analysis Date: 12/29/2	015	SeqNo: 953465	Units: mg/Kg		
Analyte			value SPK Ref Va	%REC LowLimit	HighLimit %RPI	D RPDLimit	Qual
Chloride		ND 1.5					
Sample ID	LCS-22982	SampType: LCS	Те	stCode: EPA Metho	d 300.0: Anions		
Client ID:	LCSS	Batch ID: 22982		RunNo:: 31150			
Prep Date:	12/28/2015	Analysis Date: 12/29/20	015	SeqNo: 953466	Units: mg/Kg		
Analyte		Result PQL SPK	value SPK Ref Va	%REC LowLimit	HighLimit %RPI	D RPDLimit	Qual
Chloride		14 1.5	15.00 0	92,3 90	110		
Sample ID	MB-23106	SampType: MBLK	Те	stCode: EPA Metho	d 300.0: Anions		
Client ID:	PBS	Batch ID: 23106		RunNo: 31326			
Prep Date:	1/7/2016	Analysis Date: 1/7/2016	6	SeqNo: 959120	Units: mg/Kg		
Analyte		Result PQL SPK	value SPK Ref Val	%REC LowLimit	HighLimit %RPI	D RPDLimit	Qual
Chloride		ND 1.5					
Sample ID	LCS-23106	SampType: LCS	Te	stCode: EPA Metho	d 300.0: Anions		
Client ID:	LCSS	Batch ID: 23106		RunNo: 31326			
Prep Date:	1/7/2016	Analysis Date: 1/7/2010	6	SeqNo: 959121	Units: mg/Kg		
Analyte		Result PQL SPK	value SPK Ref Val	%REC LowLimit	HighLimit %RP(D RPDLimit	Qual
Chloride		14 1.5	15.00 0	92.5 90	110		

Qualifiers:

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

-

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Souder, JR Horz	Miller & A z FEX	ssociate	25					
Sample ID I	MB-22945	SampT	ype: Mi	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles
Client ID: I	Batch ID: 22945			RunNo: 31062					
Prep Date:	12/23/2015	Analysis E	ate: 1	2/24/2015	S	SeqNo: 9	50286	Units: mg/k	٢g
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD
Benzene		ND	0.050						
Toluene		ND	0.050						
Ethylbenzene		ND	0.050						

Xylenes, Total Sum 4-Bromofluorobenzene	ND 1.1	0.10	1.000		108	80	120				
Sample ID LCS-22945	Sampl	Type: LC	S	Tes	tCode: El	PA Method	8021B: Voia	tiles			
Client ID: LCSS	Batcl	h ID: 22	945	F	RunNo: 3	1062					
Prep Date: 12/23/2015	Analysis D	Date: 12	2/24/2015	5	SeqNo: 9	50305	Units: mg/H	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.0	0.050	1.000	0	102	80	120				
Toluene	1.0	0.050	1.000	0	102	80	120				
Ethylbenzene	1.0	0.050	1.000	0	101	80	120				
	1.10	0.000		-							
Xyienes, Total	3.1	0.10	3.000	0	103	80	120				

Qualifiers:

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

Qual

RPDLimit

12-Jan-16

ANALYSIS	nental Analysis Laborat 4901 Hawkins Albuquerque, NM 87 5-3975 FAX, 505-345-4 www.hallenvironmental.c	NE 109 Sam	ple Log-In Ch	eck List
Client Name: SMA-CARLSBAD Work Order Na	umber: 1512A54		RcptNo	1
Received by/date A 12/2	2/15		dividence with the derivative $(q_1, d) \neq d \geq 0$ is much order density	
Logged By: Ashley Gillegos 12/22/2015 9:25	:00 AM	Staf		
Completed By: Ashlay Gallagos 12/23/2015 8:55	45 AM	stage		
Reviewed By 17/73/1	S	V		
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?	Couner			
LogIn				
4. Was an attempt made to coci 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 🗹	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗌	• •	>12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗌	Adjusted?	الأفلاف ومعيين ومروع ومراجع
14_Is it clear what analyses were requested?	Yes 🗹	No 🖂	Checked by:	
15. Were all holding times able to be met? (if no, notify customer for authorization.)	Yes 🗸	No		
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗌	NA Z	-
Person Notified	Date			
	/ia: 🗌 eMail 🛄 F	Phone 🛄 Fax	In Person	
Regarding:				
Client Instructions:			1.1 III	
17. Additional remarks:				
18 <u>Cooler Information</u> Cooler No Temp °C Condition Seal Intact Seal 1	No Seal Date	Signed By	I	
Cooler No Temp *C Condition Seal Intact Seal 1 1 4.3 Good Yes		Ogree by		
Page 1 of 1	an an an an an an an		and the second of the	

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.halienvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Request	Air Bubbles (Y or N)							
LYSIS LABOR LYSIS LABOR altenvironmental.com - Albuquerque, NM 87109 Fax 505-345-4107 Analysis Request	(AOV-im92) 0728							
IR. ental o5-34	8081 Pesticides / 8082 PCB's 8260B (VOA)				+	+ + -		-
IALL ENVIRON NALYSIS LAB www.hallenvironmental.com ns NE - Albuquerque, NM (5-3975 Fax 505-345-41 Analysis Request	Anions (FCNO ₃ ,NO ₂ ,PO ₄ ,SO ₄)		7 7					,
Albi F	RCRA 8 Metals							1 1
NLL NLL M.ha NE - 3975	(2MI2 0728 to 0128) 2'HA9							1
HP AN ww kins 345-3	EDB (Melhod 504.1)]
HALL ANAI www.ha 4901 Hawkins NE	TPH 80158 (GRO / DRO / MRO) TPH (Method 418.1)		_					4
Tel.	(Vino 260) H9T + 38TM + X3T8				╞╌╽╴	┨──┨╼┉	┝─┤─┤─	- X
	BTEX + MTBE + TMB's (8021)	+	┼╌┤					Remarks:
	10 10 10 10 10 10 10 10 10 10 10 10 10 1							
Rush HOUEL FLX	HEAL No. 1572195-44	100-	-003	700- -	noç ,	-005	-010-	Date Time $\frac{22/1}{23/1} > \frac{23/25}{1}$ Date Time
	P Hine							Alist 12
Tum-Around Tum-Around Project Name: Project #:	Project Manager: Sampler: Stam On Ice: Ja Yes Sample Temperature: Container Preserve Type and # Type	402					>	Received by: Received by: Received by:
Chain-of-Custody Record g Address: 201 S Address: 201 S Add	a: Cother Control (Full Validation)	2001 71 - J.	1 21-3	22,02	V/ 21-4	/ D1-8		Time: Relinquished by: Date Time Remarks: Time: Relinquished by: Received by: Date Time If necessary, samples submitted to Hall Environmental may be subcontracted to other according latenetaria. Date Time
Client: Client: Mailing Address: Phone #:	email or Fax#: QA/QC Package: D Standard Accreditation D NELAP D EDD (Type) Date Time	11/10 630						Date: Time: Date: Time:

Released to Imaging: 5/19/2023 11:21:56 AM



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

February 04, 2016

Austin Weyant Souder, Miller & Associates 201 S Halagueno Carlsbad, NM 88221 TEL: (575) 689-7040 FAX

RE: JRS Horz Fed #1

OrderNo.: 1601A16

Released to Imaging: 5/19/2023 11:21:56 AM

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 10 sample(s) on 1/27/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report	
Lab Order: 1601A16	

Date Reported: 2/4/2016

	Souder, Miller & Associa JRS Horz Fed #1	ites			L	ab C)rder: 1601	A16	
Lab ID: Client Sample ID:	1601A16-001 B6-5			C	Collection Date: Matrix:		20/2016 8:00:00 A DIL	M	
Analyses		Result	PQL Q	Qual	Units	DF	Date Analyzed	B	atch ID
EPA METHOD 30 Chloride	0.0: ANIONS	ND	30		mg/Kg	20		-	23486
Lab ID:	1601A16-002			C	Collection Date:	1/2	20/2016 8:00:00 A	М	
Client Sample ID:	B6-1				Matrix:	SC	DIL		
Analyses		Result	PQL Q	Qual	Units	DF	Date Analyzed	B	atch ID
EPA METHOD 30	0.0: ANIONS						An	alysi	LGT
Chloride		ND	30		mg/Kg	20	1/29/2016 2:44:31	PM	23486
Lab ID:	1601A16-003			C	Collection Date:	1/2	20/2016 8:00:00 A	М	
Client Sample ID:	H1-5				Matrix:	SO	DIL		
Analyses		Result	PQL C)ual	Units	DF	Date Analyzed	B	atch ID
EPA METHOD 30	D.0: ANIONS						Ап	alyst	LGT
Chloride		54	30		mg/Kg	20	1/29/2016 2:56:55	РМ	23486
Lab ID:	1601A16-004			C	Collection Date:	1/2	20/2016 8:00:00 A	М	
Client Sample ID:	H1-1				Matrix:	SC)IL		
Analyses		Result	PQL Q	Qual	Units	DF	Date Analyzed	B	atch ID
EPA METHOD 30	0.0: ANIONS						An	alyst	LGT
Chloride		1000	30		mg/Kg	20	1/29/2016 3:09:19	PM	23486
Lab ID:	1601A16-005			С	Collection Date:	1/2	0/2016 8:00:00 A	М	
Client Sample ID:	H2-1				Matrix:	SO	IL		
Analyses		Result	PQL Q)ual	Units	DF	Date Analyzed	B	atch ID
EPA METHOD 300	0.0: ANIONS						An	alyst	LGT
Chloride		1600	75		mg/Kg	50	2/2/2016 2 53 01 F	PM	23486

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

Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method E	lank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 1 of
	ND Not Detected at the Reporting Limit			Sample pH Not In Range	I age I of
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix			Sample container temperature is out of limit	as specified

Page 1 of 3

Hall Environ	mental Analysis	Date Reported: 2/4/2016				
	ouder, Miller & Associa RS Horz Fed #1	tes		L	ab Order: 1601.	416
Lab ID:	1601A16-006		(Collection Date:	: 1/20/2016 8:00:00 A	М
Client Sample ID:	H2-5			Matrix:	SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	79	30	mg/Kg	An: 20 1/29/2016 3:58:57	alyst: LGT PM 23486
Lab ID:	1601A16-007			Collection Date:	: 1/20/2016 8:00:00 A	M
Client Sample ID:	H3-1			Matrix:	SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	1300	75	mg/Kg	An: 50 2/2/2016 3:05:26 F	alyst: LGT PM 23486
Lab ID:	1601A16-008			Collection Date:	: 1/20/2016 8:00:00 A	
Client Sample ID:	H4-5			Matrix:	SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	0.0: ANIONS				An	alyst: LGT
Chloride		170	30	mg/Kg	20 2/1/2016 7:11:41 F	M 23515
Lab ID:	1601A16-009		(Collection Date:	1/20/2016 8:00:00 A	M
Client Sample ID:	H4-1			Matrix:	SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	.0: ANIONS				An	alyst: LGT
Chloride		2400	75	mg/Kg	50 2/2/2016 3:17:51 P	M 23515
Lab ID:	1601A16-010		(Collection Date:	1/20/2016 8:00:00 A	M
Client Sample ID:	P3-1			Matrix:	SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300	.0: ANIONS				Ana	alyst: LGT
Chloride		4500	150	mg/Kg	100 2/2/2016 3:30:16 F	

Analytical Report Lab Order: 1601A16

Received by OCD: 1/18/2023 4:28:50 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level	В	Analyte detected in the associated Method E	Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 2 of
	ND	Not Detected at the Reporting Limit	р	Sample pH Not In Range	rage 2 or
	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

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

04-Feb-16

Client:	Souder,	Miller & As	sociate	S							
Project:	JRS Hor	z Fed #1									
Sample ID	MB-23486	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	300.0: Anion	S		
Client ID:	PBS	Batch	ID: 234	486	F	RunNo: 3	1808				
Prep Date:	1/29/2016	Analysis Da	te::: 1/:	29/2016	5	SeqNo: 9	73423	Units: mg/K	g		
Analyte Chloride		Result ND	PQL 1.5	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID	LCS-23486	SampTy	pe: LC	s	Tes	tCode: E	PA Method	300.0: Anion	s		<u> </u>
Client ID:	LCSS	Batch	D: 234	486	F	RunNo: 3	1808				
Prep Date:	1/29/2016	Analysis Da	te: 1/2	29/2016	5	SeqNo: 9	73424	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	95.6	90	110			
Sample ID	MB-23515	SampTy	pe: ME	ILK	Tes	tCode: E	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	D: 23	515	F	RunNo; 3	1841				
Prep Date:	2/1/2016	Analysis Da	te: 2/	1/2016	5	SeqNo: 9	74435	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-23515	SampTy	pe: LC	S	Tes	tCode: E	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	D: 23	515	F	RunNo: 3	1841				
Prep Date:	2/1/2016	Analysis Da	te 2/	1/2016	s	GeqNo: 9	74436	Units: mg/K	9		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	94.1	90	110		. =	

Qualifiers:

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

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ANALYSIS	Albu TEL: 505-345-3975 Website: www.ha		7109 Sam 1107	ple Log-In Cl	neck List
Client Name: SMA-CARLSBAD	Work Order Number:	1601A16		RcptNo:	1
Received by/date: JA 01/ 77/	16	·			
Logged By: Anne Thome	1/27/2016 9:10:00 AM		am Im	-	
Completed By: Anne Thorne	1/27/2016		Am In Am In	_	
Reviewed By:	nita 1/10			-	
Chain of Custody	29-21110	. <u></u>			<u> </u>
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?		<u>Courier</u>			
Log In					
4. Was an attempt made to cool the samples	\$?	Yes 🗹	No 🗌	NA 🗆	
5. Were all samples received at a temperature	re 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) prop	erly 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 bro	ken?	Yes 🗆	No 🗹	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗆	for pH:	r >12 unless note
13. Are matrices correctly identified on Chain of	of Custody?	Yes 🗹	No 🗍	Adjusted?	
14. Is it clear what analyses were requested?		Yes 🗹	No 🗆		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:	
pecial Handling (if <u>applicable)</u>					
16. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗔		
Person Notified:	Date				1
By Whom:	Via:	eMail 🗌 I	Phone 🔲 Fax		

17. Additional remarks:

Received by OCD: 1/18/2023 4:28:50 PM

18. Cooler Information

Client Instructions:

Cooler No	Temp °C	Condition	Seal Intect	Seal No	Seal Date	Signed By
1	2.2	Good	Yes			

Released to Imaging: 5/19/2023 11:21:56 AM

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HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	EDB (Method 504.1) PAH's (8310 or 8270 SIMS) ACRA 8 Metals Anions (FONO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8260B (VOA) 8270 (Semi-VOA) 8270 (Semi-VOA)				Time: Relinquished by: Date Time Remarks: Time: Relinquished by: Date Time Remarks: Time: Relinquished by: Date Time Remarks: Time: Relinquished by: Date Time Time: Relinquished by: Date Time Time: Relinquished by: Date Time
4901 Hawkins NE	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TPH 8015B (GRO / DRO / MRO) TPH (Method 418.1)				Remarks:
the fed #1	Werd Therd I HEAL NO.	<u>6</u> 7	207	150 B22 02	Date Time R 0i/27/// 09/0 Date Time
Turn-Around Time:	Project Manager: Au S M Sampler: LLM On Ice: DKKes Sample Temperature: Q. Container Preservative Type and # Type	4 e 7			Received by: Received by: Received by:
Chain-of-Custody Record に らんチ Gulb bud address:	Cother Addition Cother Addition Addition Addition Addition Addition Sample Request ID	Seul 13-6-5 1 13-6-1	H1-5 H2-1	42-3 1+3-1 1+3-1 1+4-5 1+4-1 1+4-1	Relinquished by: Relinquished by: samptes submitted to Hall Environmental may be subc
Chain-of- ient:	Time	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			ate: Time: Relir ate: Time: Relir ate: Time: Relir

Released to Imaging: 5/19/2023 11:21:56 AM

FIELD SCREENING RESULTS SUMMARY							
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N		
1/20/2016	10:00	P3-1	1'	3498	у		
1/20/2016	10:00	P4-S	Surface	187	y		
1/20/2016	10:00	P4-1	1'	1921	y		
1/20/2016	10:00	P5-S-Lost					
1/20/2016	10:00	P5-1	1'	531	y		
1/20/2016	10:00	P6-S	Surface	158	y		
1/20/2016	10:00	P6-1	1'	1534	у		
1/20/2016	10:00	P7-S	Surface	15	y		
1/20/2016	10:00	P7-1	1'	803	y		

*BDL= Below Detectable Level



District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

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

CONDITIONS

Operator: (OGRID:	
COG OPERATING LLC	229137	
600 W Illinois Ave	Action Number:	
Midland, TX 79701	177315	
	Action Type:	
	[C-141] Release Corrective Action (C-141)	
CONDITIONS		
Created By Condition	Condition	on

-		Date
rhamlet	We have received your closure report and final C-141 for Incident #NAB1531639135 JR'S HORZ FEDERAL #001, thank you. This closure is approved. ConocoPhillips should put barriers in place to mitigate releasing liquids into the draw/arroyos in this immediate area and prevention measures to keep it from happening again. ConocoPhillips's response to the BLM and OCD has been that they cannot safely remediate due to the depth of the draw and further impact on the native vegetation would be higher than removing the impact from the area. Keep the OCD up to date on how ConocoPhillips proposes to handle this matter.	5/19/2023

CONDITIONS

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Action 177315