

R. T. HICKS CONSULTANTS, LTD.

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April 18, 2016

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Final Closure Report
Atoka San Andres Unit No.141 Release Site, Lime Rock Resources II-A, L.P.
T19S R26E Section 13 Unit Letter J, Eddy County NM

Dear Mr. Bratcher:

On behalf of Lime Rock Resources II-A, L.P., R.T. Hicks Consultants (Hicks Consultants) is pleased to present the following Final Closure Report for the Atoka San Andres Unit No.141 release site.

Incident History

The release, associated with the Atoka San Andres Unit No.141, occurred on March 26, 2016. Figure 1 shows the release area relative to nearby wells and topography. The release area is located in Unit J Sec. 13, T18S-R26E.

The source of the release was from an injection line located near the wellhead, the injection line developed a pinhole size leak. The injection well was shut-in and the line repaired. The leak impacted the area near the wellhead and on location south of the wellhead, the alfalfa field located south of the location was impacted. The release volume was 15 bbls produced water with 0 bbls being recovered. The impacted area was measured to be 10-feet to 30-feet wide x 175-feet long. On 3/30/16 immediately following the release, excavation on the impacted material began. A backhoe was utilized to excavate the impacted area located in the alfalfa field and on location surrounding the wellhead. The impacted area in the field was excavated to 2-feet below ground surface (bgs). The impacted area on the location was excavated to .5-foot bgs. Removed material was loaded onto belly dumps and then transported to Lea Land fill LLC, and approved NMOCD landfill. Excavation activities were completed on 4/6/2016, a total of 254 cu.yds of impacted material was removed from the impacted areas located in the farmed area off location and from the impacted area on location. On 4/5/2016 soil samples were collected from the excavated area. Soil samples were transported to Cardinal laboratories located in Hobbs, New Mexico for analysis. Due to a request from the landowner and the urgent need not to interrupt the sprinkler system utilized to place waters onto the alfalfa field, the excavated areas were immediately backfilled using like material purchased from the landowner.



Figure 1: *Diagram for soil samples collected for field testing. North is up the page.*

On March 29, 2016, Hicks Consultants collected soil samples from the impacted area. Sample locations are shown on Figure 1. Soil samples were tested on location using the Field Titration test method for chloride.

Sampling Location and Depth	Depth	Chlorides mg/kg	Sampling date	Lat.-Long
BH-1	0'	9004	3/29/2016	32.74659-104.33414
BH-1	.5'	2339	3/29/2016	
BH-1	1'	1418	3/29/2016	
BH-1	2'	141	3/29/2016	
BH-2	0'	7302	3/29/2016	32.74667-104.33418
BH-2	.5'	2552	3/29/2016	
BH-2	1'	2410	3/29/2016	
BH-2	2'	1418	3/29/2016	
Sampling Location and Depth	Depth	Chlorides mg/kg	Sampling date	Lat.-Long
BH-3	0'	6168	3/29/2016	32.74674-104.33418
BH-3	.5'	3190	3/29/2016	
BH-3	1'	921	3/29/2016	
BH-3	2'	709	3/29/2016	
BH-4	0'	4112	3/29/2016	32.74680-104.33418
BH-4	.5'	354	3/29/2016	

Table 1: Chart for soil samples tested using Field Titration Test Method for Chloride

Table 1 presents results for soil samples collected on March 29, 2016 using hand tools to collect below grade soil samples, before excavation actions. The samples were tested on location using the Field Titration test Method for chloride. The field titration test results report BH-1 0-feet Cl.-9004 mg/kg, BH-1 2-feet Cl.-141 mg/kg. BH-2 0-feet Cl.-7302 mg/kg, BH-2 2-feet Cl. 1418 mg/kg. BH-3 0-feet Cl. 6168 mg/kg, BH-3 2-feet Cl. 709 mg/kg, BH-4 0-feet Cl. 4112 mg/kg, BH-4 .5-feet Cl. 354 mg/kg.

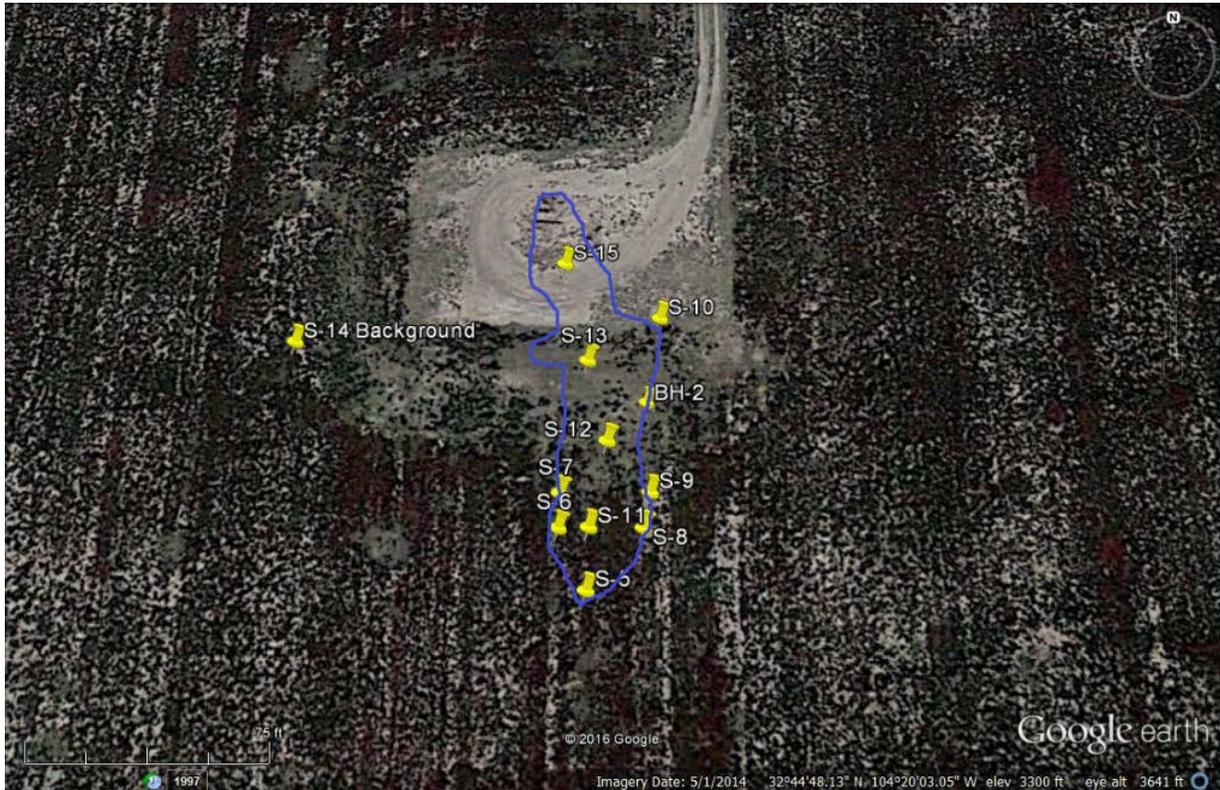


Figure 1: Blue out lined area is the impacted area. North is up the page.

On April 5, 2016, Hicks Consultants collected soil samples from the excavated area. Sample locations are shown on Figure 1. Soil samples were transported to Cardinal Laboratories located in Hobbs, N

Analytical test results for Atoka San Andres Unit No.141

Sampling Location and Depth	Chloride mg/kg	GRO mg/kg	DRO mg/kg	Ext. DRO mg/kg	BTEX mg/kg	Benzene	Sampling date	Lat.-Long
S-5	224						4/5/2016	32.74652-104.33421
S-6	240						4/5/2016	32.74657-104.33424
S-7	368						4/5/2016	32.74666-104.33424
S-8	1230						4/5/2016	32.74657-104.33415
S-9	672						4/5/2016	32.74675-104.33413
S-10	1840						4/5/2016	32.74677-104.33413
S-11 2'	944						4/5/2016	32.74657-104.33421
S-12 2'	768						4/5/2016	32.74665-104.33421
S-13 2'	192	<10.0	<10.0		<0.300	<0.050	4/5/2016	32.74673-104.33421
S-13 6'	320						4/5/2016	
S-14 BG	256						4/5/2016	32.74677-104.33454
S-15	1090						4/5/2016	32.74688-104.33422

Table 2: Laboratory results from the 15 sample locations.

Laboratory Results

Table 2 presents laboratory results for samples collected on April 5, 2016 from the excavated area located on and off location. The soil samples were transported to Cardinal laboratories for analysis. Analytical results report that the chloride to be 1840 mg/kg in the sample labeled S-10 which was collected from the north side wall of excavated area, chloride were reported to be 1230 mg/kg declining to 224 mg/kg in all other samples tested. Three (3) soil samples were collected from the bottom of the excavated area off location at 2-feet below ground surface. Analytical results for samples collected from below ground surface of the excavated area reported chloride to be 944 mg/kg declining to 192 mg/kg. S-15 was collected from the excavated area on location at .5-feet bgs, analytical reported chloride to be 1090 mg/kg. Soil sample S-13 2-feet bgs was analyzed for TPH and BTEX lab results reported combined GRO/DRO total TPH were less than <10.0 mg/kg, BTEX <0.300 mg/kg, benzene <0.50 mg/kg.



Photo 1 Excavated area after backfilling looking to north.

Hydrogeologic Data

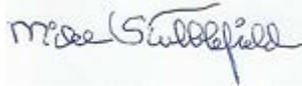
- A review of the New Mexico Office of State Engineer waters data base found the nearest water well to be located in Sec.24, Township 18S Range 26E. The depth to water was reported to be 18-feet (bgs).
- There are no water sources or water wells located with-in one-thousand feet of the release area.
- There is no surface water located with-in one-thousand feet of the release area.

REMEDIATION ACTIONS

- Impacted material in the release area located with-in the alfalfa was excavated to a depth of 2-foot (bgs) and then transported to Lea Land LLC and NMOCD approved Landfill.
- Impacted material in the release area located on location was excavated to a depth of .5-foot (bgs)
- On April 5, 2016 soil sample was collected from the excavated area of release and submitted to Cardinal Laboratories. (Appendix A).
- Analytical results for samples collected from the excavated area and submitted to Cardinal Laboratories. (Table 2)
- Analytical results received from Cardinal laboratories reported the combined GRO/DRO for total TPH in the excavated area to be <10.0 mg/kg. BTEX was reported to be <0.300 mg/kg the method detection limit, benzene was reported to be <0.050 mg/kg.
- The excavated material from the release was transported to Lea Land LLC for disposal.
- The excavated area will be backfilled using like material for the surrounding area.

Lime Rock Resources II-A, L.P. is requesting closure for the release that occurred on March 26, 2015 at the Atoka San Andres Unit No.141. Please contact me if further information is required.

Sincerely,
R.T. Hicks Consultants, Ltd.



Mike Stubblefield
R.T. Hicks Consultants
575-365-5034

Copy: Mike Barrett, Lime Rock Resources II-A, L.P.

Appendix A