

May 18, 2015

Mrs. Heather Patterson
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Remediation Work Plan**
Devon Energy
Cotton Draw Unit No. 206H
API # 30-015-42072 2RP-2798

Dear Heather and Mike,

Devon Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services for the Cotton Draw Unit No. 206H release. The results of our soil assessment and proposed remediation activities consist of the following. See site map attached in [Appendix I](#).

Incident Date

The release occurred on February 4, 2015.

Background Information

The Cotton Draw Unit No. 206H is located approximately forty-eight (48) miles southeast of Carlsbad, New Mexico. The legal location for the site is Section 26, Township 24 South and Range 31 East in Eddy County, New Mexico. More specifically, the Latitude and Longitude for the release are 32.1814442801983 North and -103.744606191949 West.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Berino complex with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Quaternary in age and is comprised of eolian sands and piedmont deposits which include silty soils under lain with sandy clay loam and hard caliche. Drainage courses in this area are normally dry. Ground water in the project vicinity is greater than 260-feet below ground surface (bgs), according to the New Mexico Office of the State Engineer. See [Appendix II](#) for the referenced groundwater data.

The ranking for this site is 0 based on the as following:

Depth to ground water	>100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

For this site’s ranking, New Mexico Oil Conservation District action level criterion for BTEX is 50 mg/kg, Benzene is 10 mg/kg and TPH is 5000 mg/kg. The chloride standard is considered to be 1,000 mg/kg.

Incident Description

On February 4, 2015 Halliburton was performing the fracture treatment when a check valve washed out causing a spill of 12 barrels of fluid. No fluids were recovered. All fluids stayed on location to the south of the wellhead. The area impacted was a 20-foot by 40-foot area around the front of the frac tank. After the tanks were removed, Talon mobilized personnel to conduct a site assessment and performed soil sampling activities at the location. Laboratory results from the soil sampling event are summarized in the table below.

Laboratory Results

See [Appendix III](#) for complete report of laboratory results.

April 24, 2015

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0'	--	1960	--	--
	0.5'	--	3080	--	--
	1'	--	64	--	--
	1.5'	--	<16	--	--
	2'	--	<16	--	--

-Analyte Not Tested

Proposed Remedial Actions

- The impacted area in the vicinity of sample location S-1 will be excavated to a depth of 0.75-feet deep.
- Once chloride titration field results indicate that the impacted soil is below NMOCD Recommended Remedial Action Level’s (RRAL’s), a confirmation soil sample will be obtained to insure all of the impacted material was removed.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility, Lea Land, LLC.
- The excavated areas will be backfilled with new caliche and re-contoured to match the surrounding location.

- A final closure report documenting all remedial actions and analytical results will be provided to the NMOCD Artesia Office and the BLM along with a Final C-141 Form

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575.746.8768.

Respectfully submitted,

TALON/LPE

Kimberly M. Wilson
Project Manager

David J. Adkins
District Manager