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January 25, 2012

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Subject: **Soil Assessment and Remediation Work Plan**
Devon Energy Corporation
Lynx Federal No. 6
API # 30-025-29272
AMENDED

Dear Mr. Leking,

Devon Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced Lynx Federal No. 6 release. Our soil sampling results, completed actions and proposed remediation activities consist of the following:

Incident Date

October 13, 2011

Background Information

The Lynx Federal No. 6 is located approximately forty-four (40) miles southeast of Artesia, New Mexico. The legal location for the site is Section 15, Township 17 South and Range 32 East in Eddy County, New Mexico. More specifically, the latitude and longitude for the release are 32.83912 North and -103.76183 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 Kermit soils and Dune land complex soils with 0 to 12 percent slopes in the Ogallala formation. The local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of calcareous-sandy eolian deposits derived from sedimentary rock and hard caliches. Drainage courses in this area are normally dry. The New Mexico State Engineer's web site indicates the nearest ground water data to be in S26-T16S-R32E. The ground water in Section 26 is reported to be a depth of 280-feet below ground surface (bgs). The referenced groundwater data is presented in Appendix I.

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'

Incident Description

On October 13, 2011 a flow line located at the Lynx Federal No. 6 was found to be leaking. The well was taken out of service, the flow line was replaced and the well was returned to service. Approximately thirty-five (35) barrels of produced water and ten (10) barrels of oil were released. A vacuum truck was called to the location and twenty-nine (29) barrels of produced water and six (6) barrels of oil were recovered. The areas affected by this release was a pooling area along the flow line approximately 40-feet long by 80-feet wide. The surrounding area was also impacted by overspray approximately 150-feet long by 150-feet wide.

Actions Taken

On December 8, 2011 Talon/LPE mobilized personnel to begin assessment and soil sampling for the construction of a work plan. Grab soil samples were collected in the impacted area utilizing a backhoe. The soil samples collected from sample location S-1 were obtained from the impacted area located in the pooling area behind the tank battery.

All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, and volatile organics (BTEX) using EPA Method 8021B. The chlorides were analyzed per Method SM4500Cl-B. The complete laboratory report is attached as Appendix II.

Analytical Results

Analytical results received from Cardinal Laboratories on December 16, 2011 are summarized below:

<u>Sample</u>	<u>Depth</u>	<u>Chlorides</u>	<u>BTEX</u>	<u>TPH</u>
S-1	0'	144	67.34	34,870 mg/kg
	2'	48	130.5	19,090
	4'	112	215.82	35,050
	6'	<16	97.02	29,670
	8'	112	604.4	25,790
	10'	48	404.87	17,260
	12'	112	118.7	5,000

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 5,000 mg/kg. The chloride remediation standard is considered to be 1,000 mg/kg.

Remedial Actions Taken:

On December 16, 2011 Talon personnel remobilized to the subject facility to carry out remedial actions. The impacted area from the overspray was treated with a total of 500-gallons of fresh water and Micro Blaze which were mixed according to manufacture specifications and spray applied to the impacted area.

Summary and Conclusions

- Ground water in the project vicinity is greater than 100-feet below land surface per the New Mexico State Engineer Database.
- Based upon the results of the laboratory data obtained for this investigation, the vertical impacts of the hydrocarbon release have been documented to extend greater than 12-feet below ground surface in the impacted pooling area.

Proposed Remedial Actions

- Completed remedial actions consisting of 500-gallons of Micro Blaze solution were applied to the overspray area.
- A 60-day soil sample will be obtained from the area in which Micro Blaze was applied.
- The impacted soil from this hydrocarbon release in the pooling area will be excavated to a depth of 8-feet deep per NMOCD requirements. Additionally, at that time Talon will excavate a test trench to 14-feet deep and obtain a sample to be tested for TPH as requested by NMOCD on January 25, 2012. The sample will be submitted to NMOCD along with the other confirmation soil samples from the excavation.
- The excavated soil will be transported to a NMOCD approved solid waste disposal facility.
- Confirmation soil samples will be collected from the sidewalls of the excavated area on the location. The soil samples will be submitted to laboratory for TPH analysis using Method 8015M, and BTEX analysis using Method 8021B.
- Upon NMOCD approval of the confirmation samples, either a 20 or 40 Mil liner will be installed into the bottom of the excavated area as directed by the NMOCD based upon the laboratory results.
- The excavated area will be backfilled to grade using new material transported from a local borrow pit, contoured to match existing terrain and seeded using an approved seed mixture for the area.

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

If we can provide additional information or be of further assistance please contact our office at 575.746.8768.

Respectfully submitted,

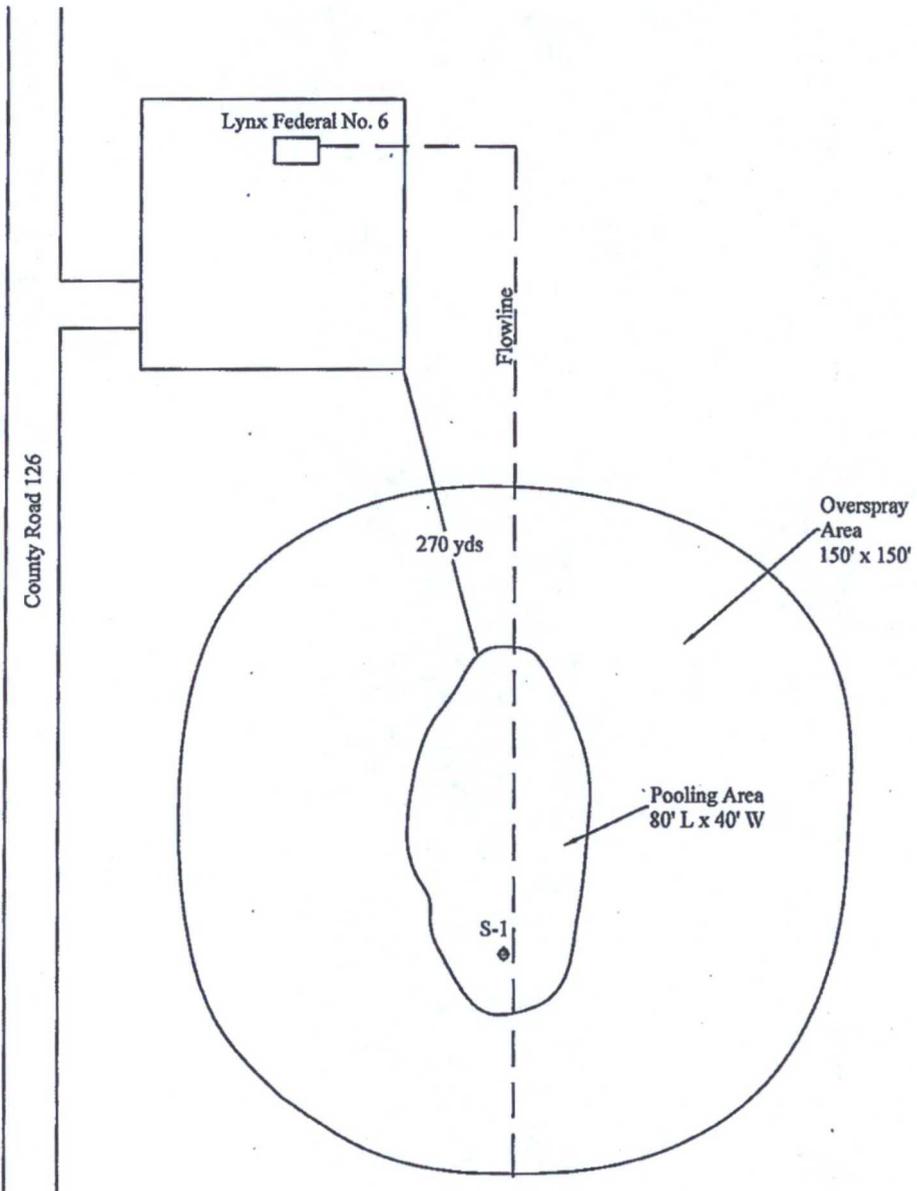
TALON/LPE

Mike Stubblefield

Mike Stubblefield
Project Manager



David J. Adkins
District Manager



Legend

◆ - Sample Location



Date: 01/10/2012
 Scale: 1" = 40'
 Drawn By: TJS

Lynx Federal No. 6
 Devon Energy Corp.
 Maljamar, New Mexico
 Figure 1 - Site Plan



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 08855			LE	4	1	1	10	17S	32E	616061	3635742*	1420	158		
RA 09505			LE	2	2	1	10	17S	32E	616462	3635944	1713	147		
RA 09505 S			LE	2	2	1	10	17S	32E	616463	3635945*	1713	144		
RA 11734 POD1			LE	2	2	1	10	17S	32E	616556	3635929	1733	165		
RA 11684 POD1			LE	1	1	4	11	17S	32E	618216	3635124	2465	275		
RA 11684 POD5			LE	3	1	4	11	17S	32E	618353	3635047	2573	275		
RA 11684 POD3			LE	3	3	1	11	17S	32E	618262	3635371	2597	275		
RA 11684 POD2			LE	1	1	4	11	17S	32E	618313	3635248	2598	275		
RA 11684 POD4			LE	1	3	2	11	17S	32E	618334	3635521	2725	275		
RA 10175			LE		2	1	28	17S	32E	614814	3631005*	3494	158		
L 02752	L		LE	1	3	26	16S	32E	32E	617521	3639880*	5784	324	280	44
													Average Depth to Water:		280 feet
													Minimum Depth:		280 feet
													Maximum Depth:		280 feet

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 615881

Northing (Y): 3634333

Radius: 6000

*UTM location was derived from PLSS - see Help

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