

January 20, 2015

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

RE: Soil Assessment and Remediation Work Plan Devon Energy Corporation Littlefield AB Tank Battery Eddy County, NM

Dear Ms. Patterson:

Devon Energy Corporation (Devon) has contracted Enviro Clean Services (ECS) to perform soil assessment and remediation services at the Littlefield AB Tank Battery in Eddy County, NM. The results of the soil assessment and proposed remediation activities are presented below.

Site Information

The Littlefield AB Tank Battery is located nine miles southeast of Loco Hills in Eddy County, New Mexico. The legal location is Section 22, Township 18S, Range 31E, with a latitude of N32.7336 and a longitude of W103.85727. It consists of approximately one half acre with three tanks, a heater treater, and a separator. The Site Plan is provided in **Appendix A**.

According to the US Department of Agriculture Natural Resource Conservation Service soil survey, the soil in this area is made up of Berino-Pajarito fine sands with 0 to 3% eroded slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface geology is Holocene to middle Pleistocene in age and is comprised of eolian sands. Drainage courses in the area are normally dry. Groundwater in this area is greater than 100 feet below ground surface (bgs), according to the New Mexico Office of the State Engineer. See Appendix B for the referenced groundwater data.

Ranking for this site, according to the New Mexico-Oil Conservation Division (NMOCD) Environmental Handbook, is **0** based on the following:

Depth to groundwater>100'Wellhead protection area>1000'Distance to surface water body>1000'

2405 E. County Road 123 ° Midland, Texas ° 432.301.0209 www.EnviroCleanPS.com

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30-015-20300 (Neavest well)

2RP-28

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Littlefield AB Tank Battery Soil Assessment and Work Plan Eddy County, NM

Incident Description

This incident occurred prior to Devon's acquisition of this facility in 2005; therefore, the origin of impact is not known. There is an asphaltene substance on the north and east side of the firewall. This area extends from the fence to approximately 110 feet to the north and to the east of the fence approximately 30 feet. At the north fence line, the impact is 200 feet wide and narrows to 20 feet wide on the north end of the impact. The asphaltenes are not continuous throughout this area, and some vegetation is scattered throughout this area.

Sample Collection

On January 5, 2015, ECS field staff collected ten samples at five locations within the impacted area. Grab samples were collected at the surface and at two feet bgs at each of the five locations using a hand auger. These samples were analyzed for Total Petroleum Hydrocarbons (TPH), per Method 8015M and Chlorides, per EPA Method 300. The results are provided in **Table 1**. The laboratory analytical report and chain of custody documentation are provided in **Appendix C**.

Sample ID.	Depth	Chlorides (mg/Kg)	TPH C6-C12 (mg/Kg)	TPH C12-C28 (mg/Kg)	TPH C28-C35 (mg/Kg)	Total TPH C6-C38 (mg/Kg)
001	Surface	6.60	274	19,900	5,850	26,000
001B	2 ft. bgs	<1.06	<26.6	269	197	465
002	Surface	<1.01	<25.3	836	373	1,210
002B	2 ft. bgs	<1.03	<25.8	587	292	879
003	Surface	<1.01	<25.3	1,190	776	1,960
003B	2 ft. bgs	<1.10	<27.5	<27.5	<27.5	<27.5
004	Surface	<1.02	<25.5	1,800	1,050	2,840
004B	2 ft. bgs	<1.06	<26.6	<26.6	<26.6	<26.6
005	Surface	<1.11	<27.8	2,090	1,170	3,260
005B	2 ft. bgs	<1.03	<25.8	1,170	521	1,690

Table 1- Summary of Analytical Results

All of the TPH results from the samples collected on the surface are above the NMOCD action level of 1,000 mg/Kg; however, only one of the samples collected at 2 feet bgs is above the action level. Chloride levels are below the NMOCD action level for all samples.

Proposed Remedial Actions

ECS proposes excavating the impacted area, excluding the area around sample location 005, to at a minimum of 2 ft. bgs. Sample 005 is located at the lowest elevation point of the impacted

Littlefield AB Tank Battery Soil Assessment and Work Plan Eddy County, NM

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area, where the release likely pooled. This area will be excavated until PID results indicate the TPH level is below 1,000 mg/Kg. The base of the excavation will be tilled using a mechanical tiller on a skid steer. Once the soil has been tilled, the area will be treated with an EnviroClean solution, a hydrocarbon degradation agent that will aid in breaking down the TPH. Confirmation samples will be collected approximately three months after the treatment and analyzed for TPH, Method 8015M.

A report detailing the remediation activities and sample results will be generated upon completion of the project and provided to the NMOCD, Artesia Office, along with a Final C-141 Form. If you have any questions about the information presented in this work plan, please don't hesitate to contact me at (432) 301-0209 or at <u>sspringer@envirocleanps.com</u>.

Sincerely,

Enviro Clean Services, LLC

Scott Springer

Scott Springer Permian Basin Operations Manager

Attachments: Appendix A: Site Plan Appendix B: Groundwater Data Appendix C: Laboratory Analytical Report and Chain of Custody Documentation

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APPENDIX A

SITE PLAN

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APPENDIX B

GROUNDWATER DATA

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APPENDIX C

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LABORATORY ANALYTICAL REPORT AND CHAIN OF CUSTODY DOCUMENTATION

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From:	Weaver, Crystal, EMNRD				
To:	"Fisher, Sheila"; "Shelly Tucker (stucker@blm.gov)"; Bratcher, Mike, EMNRD				
Cc:	"Shoemaker, Mike"; "Fulks, Brett"; "Velo, Danny"; "Scott, KY"; "Armendariz, Jesse"				
Subject:	RE: Littlefield AB Fed Battery_10bbl oil_4.8.17				
Date:	Monday, May 1, 2017 4:39:00 PM				
Attachments:	<u>2RP-2804.pdf</u>				

Shelia,

Also I wanted to follow up on an old RP file for this tank battery site. It is called 2RP-2804. I have attached to this email the only documentation we have on file regarding the release that happened at this same battery back in 2005. Has there been any further motion on this file? Looks like back in 2015 an environmental team stated they were planning on doing some work on Devon's behalf. Just wanted to check on it since I saw it while dealing with the current one.

Thanks,

Crystal Weaver

Environmental Specialist OCD – Artesia District II 811 S. 1st Street Artesia, NM 88210 Office: 575-748-1283 ext. 101 Cell: 575-840-5963 Fax: 575-748-9720

From: Weaver, Crystal, EMNRD
Sent: Monday, May 1, 2017 4:23 PM
To: 'Fisher, Sheila' <Sheila.Fisher@dvn.com>; Shelly Tucker (stucker@blm.gov) <stucker@blm.gov>;
Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Cc: Shoemaker, Mike <Mike.Shoemaker@dvn.com>; Fulks, Brett <Brett.Fulks@dvn.com>; Velo,
Danny <Danny.Velo@dvn.com>; Scott, KY <KY.Scott@dvn.com>; Armendariz, Jesse
<Jesse.Armendariz@dvn.com>
Subject: RE: Littlefield AB Fed Battery_10bbl oil_4.8.17

RE: Devon * Littlefield AB Federal #11 * 30-015-20300 * 2RP-4181

Sheila,

I have included a scanned copy of the signed Initial C-141 Remediation Permit along with an attached Conditions of Approval. The OCD tracking number for this event is 2RP-4181.

Thank you,

Crystal Weaver

Environmental Specialist OCD – Artesia District II 811 S. 1st Street Artesia, NM 88210 Office: 575-748-1283 ext. 101 Cell: 575-840-5963 Fax: 575-748-9720

From: Fisher, Sheila [mailto:Sheila.Fisher@dvn.com]
Sent: Tuesday, April 18, 2017 2:10 PM
To: Shelly Tucker (stucker@blm.gov) <stucker@blm.gov>; Bratcher, Mike, EMNRD
<mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>
Cc: Shoemaker, Mike <<u>Mike.Shoemaker@dvn.com</u>>; Fulks, Brett <<u>Brett.Fulks@dvn.com</u>>; Velo,
Danny <<u>Danny.Velo@dvn.com</u>>; Scott, KY <<u>KY.Scott@dvn.com</u>>; Armendariz, Jesse
<Jesse.Armendariz@dvn.com>
Subject: Littlefield AB Fed Battery_10bbl oil_4.8.17

Good Afternoon, Attached please find the Initial C-141 and GIS Image for the 10bbl oil release at the Littlefield AB Fed Battery on 4.8.17. If you have any questions please feel free to contact me. Thank you,

Sheila Fisher Field Admin Support Production B-Schedule

Devon Energy Corporation PO Box 250 Artesia, NM 88211 575 748 1829 Direct



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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:
Permian Resources Operating, LLC	372165
300 N. Marienfeld St Ste 1000	Action Number:
Midland, TX 79701	399510
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)
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