



January 5, 2016

Mr. Mike Bratcher  
**NMOCD District 2**  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

AMARILLO  
921 North Bivins  
Amarillo, Texas 79107  
Phone 806.467.0607  
Fax 806.467.0622

ARTESIA  
408 West Texas Ave.  
Artesia, New Mexico 88210  
Phone 575.746.8768  
Fax 575.746.8905

Subject: **Remediation and Closure Report**  
Devon Energy Corporation  
Hackberry 16 SWD No. 1  
API # 30-015-41783, 2RP-3145 & 2RP-3146

Dear Mr. Bratcher,

HOBBS  
318 East Taylor Street  
Hobbs, New Mexico 88240  
Phone 575.393.4261  
Fax 575.393.4658

Devon Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the referenced Hackberry 16 SWD No. 1. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

**Incident Date**

MIDLAND  
2901 State Hwy 349  
Midland, Texas 79706  
Phone 432.522.2133  
Fax 432.522.2180

The dates of the releases are July 15<sup>th</sup> and July 16<sup>th</sup>, 2015.

**Background Information**

OKLAHOMA CITY  
7700 North Hudson Avenue  
Suite 10  
Oklahoma City, Oklahoma 73116  
Phone 405.486.7030  
Fax 806.467.0622

The Hackberry 16 SWD No. 1 is located approximately forty-four (44) miles southeast of Artesia, New Mexico. The legal location for the site is Section 16, Township 19 South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the location are 32.653260 North and 103.890311 West. See site map attached in [Appendix I](#).

SAN ANTONIO  
11 Commercial Place  
Schertz, Texas 78154  
Phone 210.265.8025  
Fax 210.568.2191

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Kermit-Berino fine sands with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Holocene to middle Pleistocene in age and is comprised of loamy alluvium and eolian sands which include silty soils under lain by clay loam and hard caliches. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S19-T19S-R31E. The ground water in the area is reported to be 180-feet below ground surface (bgs). The referenced groundwater data is presented in [Appendix II](#).

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

ENVIRONMENTAL CONSULTING  
ENGINEERING  
DRILLING  
CONSTRUCTION  
SPILL MANAGEMENT  
GENERAL CONTRACTING

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

## Incident Description

On July 15, 2015 the lay flat transfer line malfunctioned causing 75-100 barrels of treated water to be released into the pasture and to flow along the 2-track road. No fluids were recovered. The following day the lay flat line came apart and released an additional 150 barrels of treated water within the same impacted area. A vac truck was called to the location and recovered 70 barrels of fluid. Talon personnel measured the release at 850-feet along the lease road by 15-feet wide, with additional impacts in the pasture resulting from overspray as shown on the attached site plan.

## Remedial Action Taken

Following site assessment activities and a work plan approved by OCD and BLM, Talon mobilized personnel to perform remediation activities. The impacted areas in the vicinity of sample locations S-1, S-5 and S-8 were excavated to a depth of 2-feet deep.

The impacted area in the vicinity of S-10 was excavated to a depth of 1-foot deep and the impacted soil in the area of S-4 was excavated to a depth of 2.5-feet deep.

The area in the vicinity of sample location S-12 was excavated to a depth of 3.5-feet.

The remaining impacted areas were removed to a depth of 4-feet below land surface which include areas S-2 and S-3 along the lease road and between S-6 and S-7 in the pasture.

All excavated material was hauled to Lea Land, LLC an approved disposal facility.

Upon permission from the NMOCD and the BLM, a 20 mil liner measuring 10-feet wide by 70-feet long was installed in the 4-foot deep excavation at sample location S-2 in the lease road. The excavation was backfilled. Clean top soil was obtained from a local borrow pit and transported to the location. The excavation was backfilled, re-contoured to match the surrounding terrain and seeded with LPC seed mixture for the area.

Laboratory results from the confirmation sampling events are summarized in the table below and the full lab report is presented in the [Appendix III](#).

## Laboratory Results

October 16, 2015

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1					
W. Sidewall	1'	--	<16	--	--
S-2					
	4'	--	2440	--	--
	5'	--	832	--	--
Refusal	6'	--	80	--	--

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
<b>S-3</b>					
	4'	--	80	--	--
<b>S-4</b>					
<b>Bottom</b>	2.5'	--	336	--	--
<b>S-5</b>					
<b>E. Sidewall</b>	1'	--	<16	--	--
<b>S-6</b>					
<b>W. Sidewall</b>	2'	--	<16	--	--
<b>N. Sidewall</b>	2'	--	<16	--	--
<b>S. Sidewall</b>	2'	--	112	--	--
<b>Bottom</b>	4'	--	<16	--	--
<b>S-7</b>					
<b>W. Sidewall</b>	2'	--	<16	--	--
<b>Bottom DCP Line</b>	4'	--	<16	--	--
<b>Bottom</b>	4'	--	32	--	--
<b>S-8</b>					
<b>NE Sidewall</b>	1'	--	<16	--	--
<b>E. Sidewall</b>	1'	--	<16	--	--
<b>Bottom</b>	2'	--	768	--	--
<b>Bottom</b>	4.5'	--	64	--	--
<b>S-10</b>					
<b>N. Sidewall</b>	1'	--	<16	--	--
<b>S-12</b>					
<b>Bottom</b>	3.5'	--	48	--	--
<b>S-13</b>					
<b>N. Sidewall</b>	2'	--	<16	--	--
<b>S-14</b>					
<b>S. Sidewall</b>	2'	--	144	--	--

--Analyte Not Tested

Based upon the site ranking of 0, NMOCD Recommended Remedial Action Levels (RRAL's) are 50 mg/kg for BTEX, 10 mg for Benzene, and 5,000 mg/kg for TPH. The chloride standard is considered to be 1,000 mg/kg.

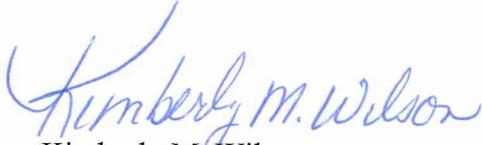
**Closure**

On behalf of Devon Energy we respectfully request that no further actions be required and that closure with respect to this release be granted. A Final C-141 is also attached. See Appendix IV.

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

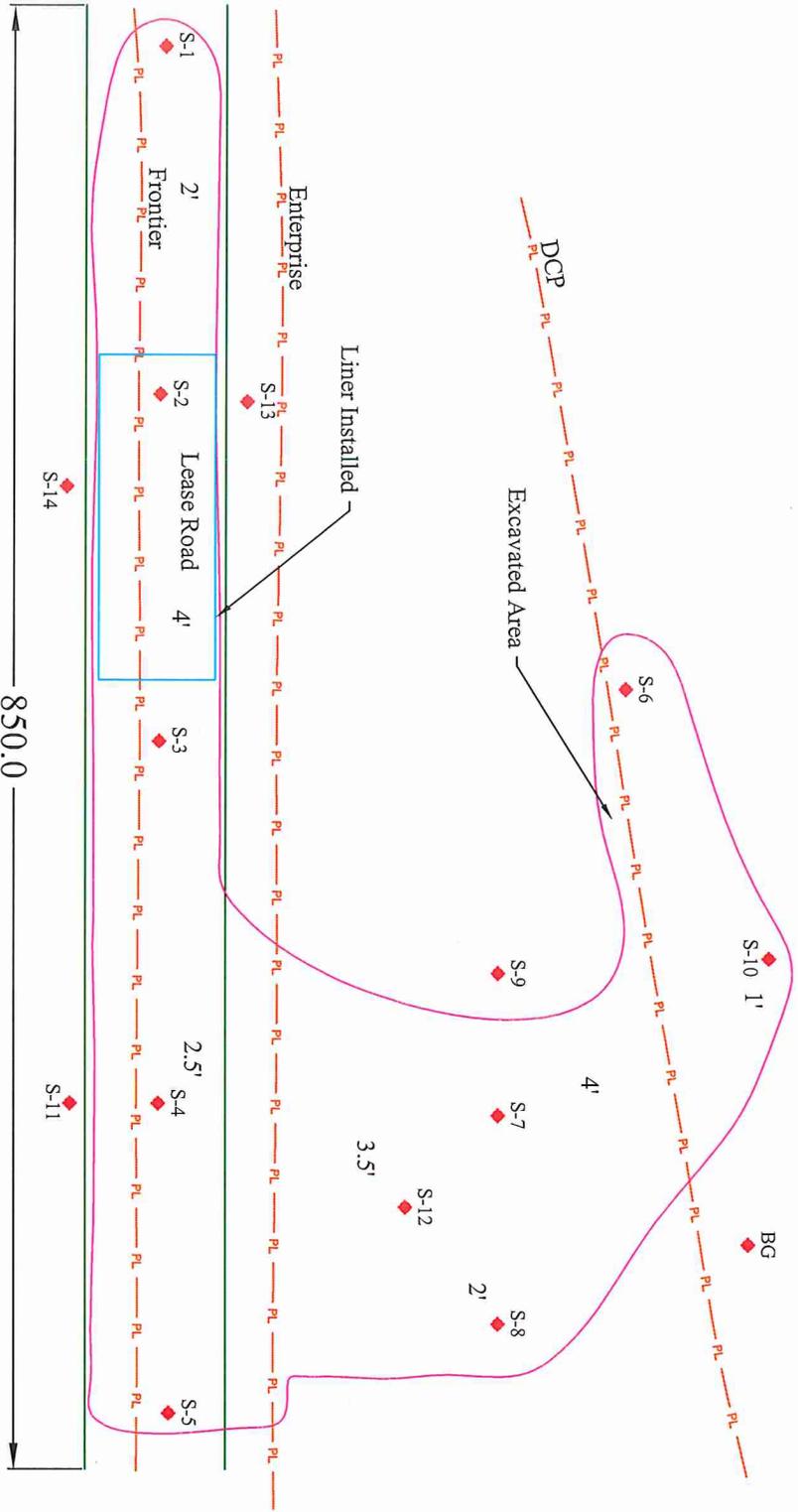


David J. Adkins  
District Manager

**APPENDIX I**

**SITE MAP**

Pasture  
Lands



NTS  
Scale in Feet

Legend	
◆	Soil Sample Locations (15)
- PL -	Underground Pipeline (3)
▭	Installed Liner
▭	Excavated Area



Date: 01/05/2016

Scale: NTS

Drawn By: TJS

Hackberry 16 SWD #1  
Devon Energy Corporation  
Eddy County, New Mexico  
Figure 1 - Site Plan

**APPENDIX II**  
**GROUNDWATER DATA**  
**REGULATOR'S STIPULATIONS**



# 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 Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">CP 00829</a>			LE	2	4	16	19S	31E		606165	3614009*	1401	120		
<a href="#">CP 00725</a>			ED	1	3	3	28	19S	31E	604906	3610473*	3018	231		
<a href="#">CP 00873</a>			ED	1	1	19	19S	31E		601772	3613147*	3110	340	180	160
<a href="#">CP 00722</a>			ED	4	3	3	28	19S	31E	605106	3610273*	3227	204		
<a href="#">CP 00723</a>			ED	2	1	1	33	19S	31E	605111	3610071*	3428	139		

Average Depth to Water: **180 feet**

Minimum Depth: **180 feet**

Maximum Depth: **180 feet**

**Record Count: 5**

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 604863

**Northing (Y):** 3613491

**Radius:** 5000

\*UTM location was derived from PLSS - see Help

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.

**Kimberly M. Wilson**

---

**From:** Tucker, Shelly [stucker@blm.gov]  
**Sent:** Tuesday, October 20, 2015 8:29 AM  
**To:** Bratcher, Mike, EMNRD  
**Cc:** Kimberly M. Wilson; Patterson, Heather, EMNRD; Fulks, Brett; David Adkins; jshirley@rockwaterenergy.com  
**Subject:** Re: Hackberry 16 SWD #1 \* 30-015-41783 \* 2RP- 3145 & 3146

The BLM concurs with the OCD.

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

*Shelly J Tucker*

Environmental Protection Specialist  
Bureau of Land Management

620 E. Greene St  
Carlsbad, NM 88220

575.234.5905 - Direct  
575.361.0084 - Cellular

[stucker@blm.gov](mailto:stucker@blm.gov)



On Tue, Oct 20, 2015 at 7:09 AM, Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)> wrote:

Kimberly,

Your proposal for backfill and liner placement at this site is approved. Federal sites require like approval by BLM.

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.

Mike Bratcher

NMOCD District 2

811 S. First Street

Artesia, NM 88210

O: 575-748-1283 X108

C: 575-626-0857

F: 575-748-9720

---

**From:** Kimberly M. Wilson [mailto:[kwilson@talonlpe.com](mailto:kwilson@talonlpe.com)]

**Sent:** Monday, October 19, 2015 1:37 PM

**To:** Tucker, Shelly; Bratcher, Mike, EMNRD

**Cc:** Patterson, Heather, EMNRD; Fulks, Brett; David Adkins; [jshirley@rockwaterenergy.com](mailto:jshirley@rockwaterenergy.com)

**Subject:** RE: Hackberry 16 SWD #1 \* 30-015-41783 \* 2RP- 3145 & 3146

Shelly and Mike,

Talon completed excavation activities on October 14, 2015 with confirmation sampling being obtained at that time. Attached please find the complete laboratory report along with a site map. After reviewing the lab data and the stipulations, we request permission to backfill the excavation and to install a liner **ONLY** at sample location S-2 measuring 8' x 70'.

Thank you.

Kimberly

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**From:** Tucker, Shelly [mailto:[stucker@blm.gov](mailto:stucker@blm.gov)]  
**Sent:** Wednesday, September 09, 2015 11:06 AM  
**To:** Bratcher, Mike, EMNRD  
**Cc:** Kimberly M. Wilson; Patterson, Heather, EMNRD; Fulks, Brett  
**Subject:** Re: Hackberry 16 SWD #1 \* 30-015-41783 \* 2RP- 3145 & 3146

Additionally,

BLM will need to approve sample results prior to backfill....

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

*Shelly J Tucker*

Environmental Protection Specialist

Bureau of Land Management

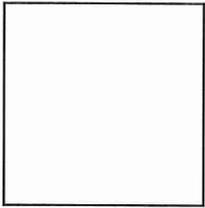
620 E. Greene St

Carlsbad, NM 88220

575.234.5905 - Direct

575.361.0084 - Cellular

[stucker@blm.gov](mailto:stucker@blm.gov)



On Wed, Sep 9, 2015 at 11:03 AM, Tucker, Shelly <[stucker@blm.gov](mailto:stucker@blm.gov)> wrote:

Kimberly,

In regards to the: Devon \* Hackberry 16 SWD 1 \* 30-015-41783 \* M-16-19s-31e \* Date of release: 7/15 & 16/2015

BLM accepts the remediation proposal and agrees with the NMOCD COA's, with the following additional stipulations:

1. Confirmation samples will need to be taken in areas of S-4, S-8 and S-12.
2. BLM agrees with further delineation of S-2, S-3, and S-6.
3. In the area identified as S-6, BLM agrees with the proposed 4' excavation and the NMOCD COA's.
4. Horizontal and vertical confirmation samples will need to be taken in the excavation area.

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues

are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

*Shelly J Tucker*

Environmental Protection Specialist

Bureau of Land Management

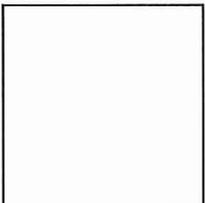
620 E. Greene St

Carlsbad, NM 88220

575.234.5905 - Direct

575.361.0084 - Cellular

[stucker@blm.gov](mailto:stucker@blm.gov)



On Tue, Sep 8, 2015 at 1:30 PM, Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)> wrote:

RE: Devon \* Hackberry 16 SWD 1 \* 30-015-41783 \* Hackberry Recycling Facility (2RF-102) \* M-16-19s-31e

Greetings,

The remediation proposal, submitted on behalf of Devon Energy by Talon LPE, for the above referenced releases, is approved with the following conditions of approval:

- Further delineation for chloride will be required in the areas identified as S-2 and S-3. Target delineation goal is 250 mg/kg.
- In the area identified as S-6, OCD agrees with the proposed 4' excavation. Deeper confirmation/delineation sample/samples will be required, with delineation target being 250 mg/kg. OCD does request samples be obtained during excavation of this area from S-6 to the area around the pipeline towards S-7. For this site, if data shows the 4' interval to be in the 1500 mg/kg range, a liner will not be required under the DCP pipeline. Field screens are acceptable for this procedure, including the S-6 delineation.
- Like approval by BLM.

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.

Mike Bratcher

NMOCD District 2

811 S. First Street

Artesia, NM 88210

O: 575-748-1283 X108

C: 575-626-0857

F: 575-748-9720

**APPENDIX III**  
**LABORATORY RESULTS**

October 16, 2015

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: HACKBERRY 16 SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 10/15/15 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 KIMBERLY WILSON  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/15/2015	Sampling Date:	10/14/2015
Reported:	10/16/2015	Sampling Type:	Soil
Project Name:	HACKBERRY 16 SWD #1	Sampling Condition:	** (See Notes)
Project Number:	700794.160.01	Sample Received By:	Jodi Henson
Project Location:	SEC 16. T19S ,R31E		

**Sample ID: S-1 1' W. SIDEWALL (H502702-01)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-2 4' BOTTOM (H502702-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2440	16.0	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-2 5' (H502702-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	832	16.0	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-2 6' REFUSAL (H502702-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/16/2015	ND	416	104	400	7.41		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 KIMBERLY WILSON  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/15/2015	Sampling Date:	10/14/2015
Reported:	10/16/2015	Sampling Type:	Soil
Project Name:	HACKBERRY 16 SWD #1	Sampling Condition:	** (See Notes)
Project Number:	700794.160.01	Sample Received By:	Jodi Henson
Project Location:	SEC 16. T19S ,R31E		

**Sample ID: S-3 4' BOTTOM (H502702-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-4 2.5' BOTTOM (H502702-06)**

Chloride, 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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-5 1' E. SIDEWALL (H502702-07)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-6 2' W. SIDEWALL (H502702-08)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-6 2' N. SIDEWALL (H502702-09)**

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	10/16/2015	ND	416	104	400	7.41		

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 KIMBERLY WILSON  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/15/2015	Sampling Date:	10/14/2015
Reported:	10/16/2015	Sampling Type:	Soil
Project Name:	HACKBERRY 16 SWD #1	Sampling Condition:	** (See Notes)
Project Number:	700794.160.01	Sample Received By:	Jodi Henson
Project Location:	SEC 16. T19S ,R31E		

**Sample ID: S-6 2' S. SIDEWALL (H502702-10)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-6 4' BOTTOM (H502702-11)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-7 2' W. SIDEWALL (H502702-12)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-7 4' BOTTOM DCP LINE (H502702-13)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-7 4' BOTTOM (H502702-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/16/2015	ND	416	104	400	7.41		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 KIMBERLY WILSON  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/15/2015	Sampling Date:	10/14/2015
Reported:	10/16/2015	Sampling Type:	Soil
Project Name:	HACKBERRY 16 SWD #1	Sampling Condition:	** (See Notes)
Project Number:	700794.160.01	Sample Received By:	Jodi Henson
Project Location:	SEC 16. T19S ,R31E		

**Sample ID: S-8 1' NE SIDEWALL (H502702-15)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-8 1' E. SIDEWALL (H502702-16)**

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	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-8 2' BOTTOM (H502702-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>768</b>	16.0	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-8 4.5' BOTTOM (H502702-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>64.0</b>	16.0	10/16/2015	ND	416	104	400	7.41		

**Sample ID: S-10 1' N. SIDEWALL (H502702-19)**

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	10/16/2015	ND	416	104	400	7.41		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 KIMBERLY WILSON  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/15/2015	Sampling Date:	10/14/2015
Reported:	10/16/2015	Sampling Type:	Soil
Project Name:	HACKBERRY 16 SWD #1	Sampling Condition:	** (See Notes)
Project Number:	700794.160.01	Sample Received By:	Jodi Henson
Project Location:	SEC 16. T19S ,R31E		

**Sample ID: S-12 3.5' BOTTOM (H502702-20)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	10/16/2015	ND	416	104	400	3.77		

**Sample ID: S-13 2' N. SIDEWALL (H502702-21)**

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	10/16/2015	ND	416	104	400	3.77		

**Sample ID: S-14 2' S. SIDEWALL (H502702-22)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	10/16/2015	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager

**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 SM4500Cl-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



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

<b>Company Name:</b> Talon/LPE <b>Project Manager:</b> K. Wilson <b>Address:</b> 408 W. Texas Ave. <b>City:</b> Artesia <b>Phone #:</b> 575-746-8768 <b>Project #:</b> 700794.160.01 <b>Project Name:</b> Hackberry 16 SWD #1 <b>Project Location:</b> S16-T19S-R31E <b>Sampler Name:</b> K. Wilson		<b>State:</b> NM <b>zip:</b> 88210 <b>City:</b> Artesia <b>Address:</b> <b>State:</b> Zip: <b>Phone #:</b> <b>Fax #:</b>		<b>P.O. #:</b> <b>Company:</b> Talon/LPE <b>Attn:</b> <b>Address:</b> <b>State:</b> Zip: <b>Phone #:</b> <b>Fax #:</b>								
<b>Lab I.D.</b> H502102A 1 2 3 4 5 6 7 8 9 10	<b>Sample I.D.</b> 3-1' W. sidewall 5-2' 4' Bottom 5-2' 5' 5-2' 6' Refusal 5-3' 4' Bottom 5-4' 2.5' Bottom 5-5' 1' E. sidewall 5-6' 2' W. sidewall 5-6' 2' N. sidewall 5-6' 2' S. sidewall	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	MATRIX PRESERV SAMPLING	DATE TIME	Chlorides							
						5	1			10/14/15	12:08	/
						6	1			12:10		/
						7	1			12:20		/
						8	1			12:22		/
						9	1			12:16		/
						10	1			12:19		/
							1			11:45		/
							1			11:54		/
							1			11:56		/
	1			11:58		/						

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**Relinquished By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Received By:** Paul Myers **Date:** 10/16/15

**Relinquished By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Received By:** Paul Myers **Date:** 10/16/15

**Delivered By:** (Circle One) Paul Myers **Time:** 3:00

**Sample Condition:**  Intact  Cool  Yes  No

**Checked By:** \_\_\_\_\_ **Initials:** \_\_\_\_\_

**Sampler - UPS - Bus - Other:** \_\_\_\_\_

**REMARKS:** Rush

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Talon/PE  
 Project Manager: K. Wilson  
 Address: 408 W. Texas Ave.  
 City: Artesia State: NM Zip: 88210  
 Phone #: 575-746-8768 Fax #: 575-746-8905  
 Project #: 700794.160.01 Project Owner: Devon  
 Project Name: Hackberry 16 SWD #1  
 Project Location: S16-T19S-R31E  
 Sampler Name: K. Wilson  
 P.O. #: \_\_\_\_\_ Company: Talon/PE  
 Attn: \_\_\_\_\_ Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
H00000	5-6 4' Bottom	G	1	/							12/14/15	12:30	Chlorides
	5-7 2' W. Side Walk	G	1	/							12:00		
	5-7 4' Bottom DEP Line	G	1	/							12:02		
	5-7 4' Bottom	G	1	/							12:04		
	5-8 1' NE Side Wall	G	1	/							11:50		
	5-8 1' E. Side Wall	G	1	/							11:48		
	5-8 2' Bottom	G	1	/							12:08		
	5-8 4.5' Bottom	G	1	/							12:24		
	5-10 1' N. Side Wall	G	1	/							11:52		
	5-12 3.5' Bottom	G	1	/							12:06		

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Relinquished By: *K. Wilson* Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: *Paul Meyers* Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Delivered By: *Paul Meyers* (Circle One) Sample Condition:  Intact  Cool  Yes  No  
 Sampler - UPS - Bus - Other: \_\_\_\_\_  
 CHECKED BY: *Paul Meyers* (Initials) \_\_\_\_\_  
 Phone Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
 Fax Result:  Yes  No Add'l Fax #: \_\_\_\_\_

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RT 2017



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO ANALYSIS REQUEST**

Company Name: Talon/PE  
 Project Manager: K. Wilson  
 Address: 408 W. Texas Ave.  
 City: Artesia State: NM Zip: 88210  
 Phone #: 575-746-8768 Fax #: 575-746-8905  
 Project #: 700794.160.01 Project Owner: Devon  
 Project Name: Hackberry 16 SWD #1  
 Project Location: S16-T19S-R31E  
 Sampler Name: K. Wilson  
 P.O. #: \_\_\_\_\_ Company: Talon/PE  
 Attn: \_\_\_\_\_ Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
H50210Z	91	G	1			/					10/14/15	12:14	Chlorides
	92	G	1			/					10/14/15	12:12	
	2												
	5-13 2' N. Sidervall												
	5-14 2' S. Sidervall												

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Relinquished By: H. Wilson Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: Paul Myers Date: 10/15/15 Time: 3:00  
 Delivered By: Paul Myers Sample Condition: Intact Checked By: Rush  
 Sampler - UPS - Bus - Other: \_\_\_\_\_

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**APPENDIX IV**

**FINAL C-141**