

**RECEIVED** By OCD District 1 at 3:15 pm, Jul 10, 2015

**Devon Energy** 

Shinnery 15 Federal #5 SWD

API #: 30-025-30719

July 1, 2015

Subject:

Kellie Jones NMOCD District I 1625 N. French Dr.

Hobbs, NM 88240

# APPROVED ; CONDITIONAL

By OCD District 1 at 3:15 pm, Jul 10, 2015

1. Ensure BLM approval/concurrence.

AMARILLO 92I 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

Dear Ms. Jones:

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

> MIDLAND 290I State Hwy 349 Midland, Texas 79706 Phone 432.522.2133 Fax 432.522.2180

OKLAHOMA CITY 7700 North Hudson Avenue Suite IO Oklahoma City, Oklahoma 73II6 Phone 405.486.7030 Fax 806.467.0622

> SAN ANTONIO 13111 Lookout Way San Antonio, Texas 78233 Phone 210.265.8025 Fax 210.568.2191

Devon Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

Soil Assessment and Remediation Work Plan

### **Incident Date**

April 7, 2015

### **Background Information**

The Shinnery 15 Federal #5 SWD is located approximately twenty (20) miles southeast of Loco Hills in Lea County, New Mexico. The legal location for this site is Section 14, Township 18 South, and Range 32 East. More specifically the latitude and longitude for the release are 32.7483048 North and -103.7305638 West. A site plan is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Services, the soil in this area is made up of Ratliff - Wink fine sandy loam. Per the New Mexico Department of Geology and Mineral Resources, the local surface and shallow geology, Quaternary and Tertiary Age sedimentary deposits, is comprised of calcareous alluvium and calcareous eolian sands which includes silty soils under lain by sedimentary rock and hard caliche. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S26-T18S-R32E. The ground water in Section 26 appears to be dry at a depth of 700' below ground surface (bgs). The referenced groundwater data is presented in Appendix II.

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

ENVIRONMENTAL CONSULTING ENGINEERING	Depth to ground water Wellhead Protection Area	>100' >1000'	
DRILLING CONSTRUCTION	Distance to surface water body	>1000'	
SPILL MANAGEMENT			
GENERAL CONTRACTING		Page 1 of 3	

# **Incident Description**

On April 7, 2015 it was discovered that the swedge connection on the wellhead malfunctioned causing a release of 50 barrels of produced water on the location. The well was immediately shut-in, the wellhead repaired and brought back into service. A vac truck was called the location and recovered 40 barrels of fluid. The affected measured approximately 70-feet wide by 225-feet long around the wellhead staying on the pad.

# **Actions Taken**

On April 15, 2015 Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected utilizing a hand auger to a total depth of 3-feet below ground surface.

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 chloride samples were analyzed per Method SM4500Cl-B.

## Laboratory Results

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	1'		1140		
	2'		2120		
	3'		2280	100 H-17 5	
S-2	1'		832		
	2'		944		
	3'		2160		
S-3	1'		5840		84 <b></b> 14 (*)
	2'		6400		
	3'	1. 4. <b></b> - 7. 17	7920		
S-4	1'		5040		
	2'		6160		
	3'		4560		
S-5	1'	New York-Land State	800		
	2'		1760		
	3'		800		20 <b></b> 1
S-6	1'		3400		
	2'		3640		1200 <u>22</u> 0 333
	3'		2160		
S-7	1'		3800		
	2'		3520		
	3'		3360		

See Appendix III for complete report of laboratory results.

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL's) are 50 mg/kg for BTEX, 0 mg for Benzene, and 5,000 mg/kg for TPH. The chloride remediation standard is considered to be 1,000 mg/kg based upon a water table depth greater than 100-feet deep.

# **Proposed Remedial Actions**

- The impacted area in the vicinity of sample locations S-1, S-2, S-6 and S-7 will be excavated to a depth of 4-feet deep.
- The impacted area in the vicinity of S-5 will be excavated to a depth of 2.5-feet deep.
- The impacted area in the vicinity of sample locations S-3 and S-4 will be excavated to the depth of 4-feet and a 20 mil liner will be placed in the bottom of the excavation.
- All the contaminated soil will be transported to an approved disposal facility.
- The excavated areas will then be backfilled with new caliche, machine compacted and contoured to match the surrounding location.
- A final closure report documenting all remedial actions and analytical results will be provided to the OCD along with Final Form C-141.

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,

Kimberly M. Wilson Project Manager David J. Adkins District Manager

# **APPENDIX II**

# **GROUNDWATER DATA**

# **INITIAL C-141**

	Nev Water								ne State <b>je Dep</b>	0		
(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)				e 1=NW e smalle				) AD83 UTM in me	eters)	(	In feet)
	POD Sub-		QQ	Q							Depth	Depth Water
POD Number	Code basin Co	ounty	64 16	4 S	ec Tws	Rng		Х	Y	Distance	Well	Water Column
CP 00677		LE	1	1	26 18S	32E	617	750	3621373* 🌍	3376	700	
									Avera	ge Depth to	Water:	
										Minimum	Depth:	
										Maximum	Depth:	
Record Count: 1	() when () were ( were ) were , where ,	1001, 2003 <b>1</b> 000			ena, komi kong inna g		in and and (and )		ten ten ten tel tak ten ina ina			
UTMNAD83 Radius	Search (in meter	s):										

Easting (X): 619016

Northing (Y): 3624503

Radius: 4000

\*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.

# State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Fran	cis Dr., Santa	a Fe, NM 87505		Sa	inta Fe	e, NM 875	05		
			Rele	ease Notific	cation	n and Co	orrective A	ction	
						<b>OPERA</b>	ΓOR	🖂 Initi	al Report 🔲 Final Report
Name of Co	ompany D	evon Energy	Product	ion		Contact K	enny Kidd		
Address 64	88 Seven 1	Rivers Hwy	Artesia, 1	NM 88220		Telephone ]	No. 575-513-8	545	
Facility Nat	me Shinr	nery 14 Fed 5	5 SWD			Facility Ty	be Disposal W	ell SWD	
Surface Ow	vner Fede	eral		Mineral	Owner	Federal		API No	<b>b.</b> 30-025-30719
				LOCA	TIO	N OF REI	LEASE		
Unit Letter	Section	Township	Range	Feet from the		/South Line	Feet from the	East/West Line	County
Н	14	18S	32E	2310		N	660	Е	Lea
		L	atitude:	N 32'74'83.04'	,	Lor	igitude: W 103	3'73'05.63"	
				NAT	URE	OF RELI	EASE		
Type of Rele	ase Spill	Produced Wa	er				Release 50bbl	Volume 1	Recovered 40 bbl
Source of Re							Iour of Occurren		Hour of Discovery
2x1 swedge connection plumbed into wellhead						4/7/2015 @			@ 12:30 pm
Was Immedi	ate Notice					If YES, To			
			Y es	No 🗌 Not Re	equired	Jim Amos (			
By Whom?						Date and H	erding @ OCD		
Ruben Garcia	a					4/7/2015 @			
						4/7/2015 @			
Was a Water	course Re		Yes 🛛	No				the Watercourse	
If a Waterco	urse was Iı	npacted, Des	cribe Full	ly.*		Ci.			
Describe Cau	ise of Prob	lem and Rem	edial Act	ion Taken *					
source of the noticed that the plumbing was	leak and no ne 1" thread s not suffici	ticed it was co ls on the 2x1 s ently supporte	oming from wedge we ed. 50 bbls	n the 2x1 swedge ere cracked and w s of produced wate	connec	tion plumbed pump was rur	into the wellhead ming it would spr	. Upon further inverse avaluation of the second sec	hut in the well. He located the estigation Lease Operator the location, also the wellhead uced water left the pad.
Legendary Tr	ucking reco	overed 40 bbls	of the pro	oduced water.					
Describe Are	a Affected	and Cleanup	Action T	`aken.*					
The affected be scraped up			orth of th	e well with all of	it stayin	g on the pad.	Legendary Truck	ing was called to r	ecover 40 bbls, and the rest will
regulations all public health should their o	l operators or the envir perations h ment. In a	are required to conment. The ave failed to a ddition, NMO	report an acceptanc dequately CD accep	d/or file certain re e of a C-141 repo investigate and re	elease no rt by the emediate	otifications an NMOCD ma e contaminatio	Id perform correct arked as "Final Re on that pose a three e the operator of r	tive actions for rele eport" does not reli eat to ground water esponsibility for co	uant to NMOCD rules and eases which may endanger eve the operator of liability ; surface water, human health pmpliance with any other
Signature: Co	orína M	loya					OIL CONS	SERVATION	DIVISION
Printed Name	: Corina M	loya				Approved by	Environmental Sp	pecialist:	
Title: Field A	dmin Supp	oort	-			Approval Date	e:	Expiration 1	Date:
E-mail Addre	ss: corina.1	noya@dvn.co	m		(	Conditions of	Approval:		Attached
	4/9/2015 ional Shee	P. ets If Necessa		.746.5559					



# **APPENDIX III**

# LABORATORY RESULTS



April 24, 2015

KIMBERLY WILSON

408 W. TEXAS AVE.

ARTESIA, NM 88210

**RE: SHINNERY 14-5 SWD** 

Enclosed are the results of analyses for samples received by the laboratory on 04/17/15 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 <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-1 1' (H501019-01)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL 110 % 61-154

Chloride, SM4500CI-B	mg/	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1140	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
	10.0	10.0	0 1/ 22/ 2010	115	205	101	200	****	

Surrogate: 1-Chlorooctadecane 100 % 52.1-176

### **Cardinal Laboratories**

### \*=Accredited Analyte

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Celeg Di Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-1 2' (H501019-02)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	110 %	61-154		.1					
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1,11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	108 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	106%	6 52.1-17	6						

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

Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number: Project Location:	70079414901 LEA COUNTY, NM	Sample Received By:	Jodi Henson

### Sample ID: S-1 3' (H501019-03)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 %	61-154	1						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2280	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	107 %	6 47.2-15	7						

Surrogate: 1-Chlorooctadecane 105 % 52.1-176

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#### \*=Accredited Analyte

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Celeg Di Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-2 1' (H501019-04)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108 9	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	104 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	99.7	52.1-17	6						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-2 2' (H501019-05)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108 %	61-154	1						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	109 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	104%	6 52.1-17	6						

### **Cardinal Laboratories**

#### \*=Accredited Analyte

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Celeg D. Keno



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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-2 3' (H501019-06)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 %	61-154							
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	108 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	107 9	6 52.1-17	6						

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#### \*=Accredited Analyte

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-3 1' (H501019-07)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1,11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND		x			

Surrogate: 4-Bromofluorobenzene (PID 110 % 61-154

Result								
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
5840	16.0	04/21/2015	ND	400	100	400	7.69	
mg/	kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	04/21/2015	ND	209	104	200	1,11	
<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
1	mg/ Result <10.0	mg/kg Result Reporting Limit <10.0 10.0	mg/kg Analyzed Result Reporting Limit Analyzed <10.0 10.0 04/21/2015	mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank           <10.0	mg/kgAnalyzed By: MSResultReporting LimitAnalyzedMethod BlankBS<10.0	mg/kg     Analyzed By: MS       Result     Reporting Limit     Analyzed     Method Blank     BS     % Recovery       <10.0	mg/kg     Analyzed By: MS       Result     Reporting Limit     Analyzed     Method Blank     BS     % Recovery     True Value QC       <10.0	mg/kgAnalyzed By: MSResultReporting LimitAnalyzedMethod BlankBS% RecoveryTrue Value QCRPD<10.0

Surrogate: 1-Chlorooctadecane 109 % 52.1-176

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-3 2' (H501019-08)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/21/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/21/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/21/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/21/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108 9	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	104 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	103 9	52.1-17	6						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-3 3' (H501019-09)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	109 %	61-154	1						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7920	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	105 %	6 47.2-15	7						

Surrogate: 1-Chlorooctadecane 101 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager



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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-4 1' (H501019-10)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2,00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 %	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5040	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	110 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	108 %	6 52.1-17	6						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-4 2' (H501019-11)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6160	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1,11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	106 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	105 %	6 52.1-17	6						

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-4 3' (H501019-12)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 %	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	101 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	94.7 9	52.1-17	6						

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-5 1' (H501019-13)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	113 %	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	107 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	103 %	6 52.1-17	6						

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-5 2' (H501019-14)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	112 %	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS				*	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	104 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	101 %	6 52.1-17	6						

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Celeg D. Keene-

Celey D. Keene, Lab Director/Quality Manager



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

Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-5 3' (H501019-15)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	112 %	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	209	104	200	1.11	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	229	114	200	1.19	
Surrogate: 1-Chlorooctane	102 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	97.5 9	52.1-17	6						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-6 1' (H501019-16)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	113 9	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3400	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS		i.			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	210	105	200	0.511	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	228	114	200	2.63	
Surrogate: 1-Chlorooctane	101 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	97.7 9	52.1-17	6						

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-6 2' (H501019-17)

BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	112 9	% 61-154	1						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3640	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	210	105	200	0.511	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	228	114	200	2.63	
Surrogate: 1-Chlorooctane	107 9	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	104 9	% 52.1-17	6						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-6 3' (H501019-18)

BTEX 8021B	mg/	kg	Analyze	ed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	210	105	200	0.511	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	228	114	200	2.63	
Surrogate: 1-Chlorooctane	103 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	100 %	6 52.1-17	6						

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-7 1' (H501019-19)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID 114 % 61-154

Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3800	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	210	105	200	0.511	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	228	114	200	2.63	
Surrogate: 1-Chlorooctane	105 9	6 47.2-15	7						

Surrogate: 1-Chlorooctadecane 103 % 52.1-176

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-7 2' (H501019-20)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.02	101	2.00	1.93	
Toluene*	<0.050	0.050	04/22/2015	ND	1.79	89.7	2.00	1.95	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.73	86.6	2.00	1,11	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.50	91.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	112 %	61-154	(						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	210	105	200	0.511	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	228	114	200	2.63	
Surrogate: 1-Chlorooctane	100 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	97.2 9	52.1-17	6						

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Received:	04/17/2015	Sampling Date:	04/15/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	SHINNERY 14-5 SWD	Sampling Condition:	Cool & Intact
Project Number:	70079414901	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: S-7 3' (H501019-21)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2015	ND	2.13	106	2.00	0.0278	
Toluene*	<0.050	0.050	04/22/2015	ND	1.90	95.2	2.00	0.400	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.81	90.3	2.00	0.992	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.72	95.4	6.00	1.48	
Total BTEX	<0.300	0.300	04/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	61-154	1						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3360	16.0	04/21/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/21/2015	ND	210	105	200	0.511	
DRO >C10-C28	<10.0	10.0	04/21/2015	ND	228	114	200	2.63	
Surrogate: 1-Chlorooctane	102 %	6 47.2-15	7	r.					
Surrogate: 1-Chlorooctadecane	98.7 9	52.1-17	6						

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### 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 SM4500CI-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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Cardinal cannot accept verbal changes. Please fax written changes to (575) 395-2326	Bus Other: 2.		Reininguestied By:	with	affliates or successors arising out of or related to the performance of services hereunder by in Relinquisbed By: Darks.	including those for negligence and any other of shall Cardinal to Both for Including those for a state of the second state of		095-33	<u>(18</u> S - 3 2,	07 S-3 1-	065-23	2 8 - 2 <del>5</del> 1	045-21	-5 1-050	02 - 2	,	-	Lab I.D. Sample I.D.		FOR LATING CAN'Y	Project Location: Xrv	Project Name: Shippery 14-5 Sw	Project # 100 114 149 0 Project Owner:		City: Artesia State: NM	Address: 408 W. Texas Ave.	Project Manager: K () : ISON	Talon/LPE	101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476		Laboratorie	CARDINA
e fax written changes to (575) 393-2326	Cool Intact Pres I Yes No No No	Kin	Received By:	Werklands	by Cardinal, installess, of whether such claim is based upon any of the above stat (Cardinal, regardless, of whether such claim is based upon any of the above stat	any etaim arising whether based in contract or tort, shall be limited to the amou deemed walved unless made in writing and received by Cardinal within 30 day		S / 2	6 \ \	6 /	6				/		G)RAB C # CONTA GROUND WASTEW SOIL OIL SLUDGE OTHER : ACID/BAS ICE / COC OTHER :	INERS WATER ATER	MAIRIA PRESERV.	Fax #:	Phone #:	Ø	ner: Devon city:	Fax #: 575-746-8905 Address:	Zip: 88210 Attn:	Company: Talor	P.O. #:		38240 476		IPS	D L
				Phone Result    Yes    No Add'l Phone #: Fax Result    Yes    No Add'l Fax #:		unt paid by the client for the ys after completion of the applicable	1:25 / / /		1:12 /		\		\	12:40/	12:35/	1-15-15/2:30///////////////////////////////////	THE TP BTI Tola		SAMPLING			leo	5			Talon/LPE		ANALYSIS		CHAIN-OF-CUSTODY AND ANALYSIS REQUEST	×	
	1 2 3																											REQUEST		LYSIS REQUEST		

Page 24 of 26

$\dagger$ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393 2326 $\psi$	Sampler - UPS - Bus - Other: 2.82	Bejwered By: C(rcle One)	Reinquisened By:	JULUNDER (1)		affiliates of successors arising out of or related to the performance of services hersunder by Cardinal, negardless of Succession and the Successi	anaytes. All claims including base for nogligance and any other cause whatapaver shall be denied what what is waiting and reactived by Cardinal which is denied and construction of the applicable cardina. In no event hall Cardinal be black for indefined as a completion of the applicable	PLEASE NOTE: Linkilly and Damages. Cardinal's liability and client's exclusive remedy for any claim action whether based		<b>7</b> 6 -0	2	- 6 1		45-52		3	2	GROUNDWATER	P.	Sampler Name: IS S ; & +	Project Location:	Project Name: Strade Cy 14-5 Swo	Project # 160194149 01 Project Owner: Devo	Phone #: 575-746-8768 Fax #: 575-746-8905	City: Artesia State: NM Zip: 88210	Address: 408 W. Texas Ave.	Project Manager: K (W): /Sov	company name: Talon/LPE	101 East M 575) 393-2
changes to (575) 3932326	Cool Infact Tres Tres No No	Sample Condition CHECKED BY		REMARKS.		siness interruptions, less of use, or leas of profits incurred by client, its subsidiaries whether such claim is based upon any of the above stated reasons or otherwise.	is made in writing and received by Cardinal within 30 days after completion of the ap	tor based in contrast or tort shall be limited to the second wide before a	1 1 1 1 2 20	1 1 1 1 1 10	~ ~ . 2:00	> · · · · · · · · · · · · · · · · · · ·	/ 1:5~	24:1	1 1 ( 1:46	1 1 2 1:35	- 4-1545 1:30	WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER : DATE	MATRIX PRESERV. SAMPLING	Fax #:	Phone #:	State: Zip:	on city:		Attn:	Company: Talon/LPE	P.O. #:	101-11(8	
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Fax written changes to (575) 393/2326	Minan	Seemed waived unless made in writing and received by Cardinal within 30 days after compl writing limitation, business interruptions, loss of use, or loss of profils insured by client, the ardinal, regardless of whether such claim is based upon any of the above stated reasons of Received BY:	IV Saim addition whether based in contrast or that shall be limited to the amount would be the			:2 cr51-1 / / / 0)	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	MATRIX	Fax #:	#		r. Orven city:	746-8905 Address:	Zip: 88210 Attn:	Company: Talon/LPE	P.O. 共	9 6 240
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