

Remediation and Closure Report

Cooter 16 State 1H Battery Eddy County, New Mexico 2RP-5572

Prepared For:

Devon Energy Production Company 6488 Seven Rivers Hwy Artesia, NM 88210

Prepared By:

TALON/LPE 408 W. Texas Avenue Artesia, New Mexico 88210

April 29, 2020

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Mr. Mike Bratcher **NMOCD District 2** 811 S. 1st Street Artesia. NM 88210

Subject: Remediation and Closure Report Cooter 16 State 1H Battery Eddy County, New Mexico 2RP-5572

Dear Mr. Bratcher,

Devon Energy Production Company (Devon Energy) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the abovereferenced location. The incident description, soil sampling result, remedial action, and closure request is presented herein.

Site Information

The Cooter 16 State 1H Battery is located approximately twenty two (22) miles southeast of Malaga, New Mexico. The legal location for this release is Unit Letter N, Section 16, Township 25 South and Range 29 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.12360 North and -103.99290 West. A Site Map is presented in Appendix I.

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 Potter-Simona Complex with 5 to 10 percent slopes, the reference soil data is presented in Appendix II. 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 eolian sands and piedmont alluvial deposits. Drainage courses in this area are well drained.

Ground Water and Site Characterization

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 30-feet below ground surface (BGS). See Appendix II for the referenced groundwater depth. This site is not located within a high Karst area.

If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29 NMAC.

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Approximate Depth to	Groundwater	30 Feet/BGS
□Yes ⊠No	Within 300 feet of any continuously flowing wa any other significant watercourse	atercourse or
□Yes ⊠No	Within 200 feet of any lakebed, sinkhole or a p	olaya lake
□Yes ⊠No	Within 300 feet from an occupied permanent r school, hospital, institution or church	esidence,
□Yes ⊠No	Within 500 feet of a spring or a private, domes well used by less than five households for dor watering purposes	stic fresh water nestic or stock
□Yes ⊠No	Within 1000 feet of any freshwater well or spri	ng
□Yes ⊠No	Within incorporated municipal boundaries or v municipal freshwater well field covered under ordinance adopted pursuant to Section 3-2703	vithin a defined a municipal 3 NMSA 1978
□Yes ⊠No	Within 300 feet of a wetland	
□Yes ⊠No	Within the area overlying a subsurface mine	
□Yes ⊠No	Within an unstable area	
□Yes ⊠No	Within a 100-year floodplain	

Because the release did not occur in any of these areas and the depth to groundwater is greater than 100-feet deep, based on the site characterization data the clean up criteria for this site is as follows.

Table I					
Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit		
<u><</u> 50 feet	Total Chlorides TPH (GRO+DRO+MRO)	EPA 300.0 or SM4500 CI B EPA SW-846 Method 8015M	600 mg/kg 100 mg/kg		
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg		
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg		

Incident Description

On July 19, 2019, a check valve on the water transfer pump malfunctioned causing it to backflow. Approximately 7.25 barrels (bbls) of produced water were released inside the engineered lined battery and 1 bbl of produced water were recovered. The site map is presented in Appendix I.

On February 25, 2020, Talon mobilized personnel to the site and conducted the liner inspection, taking photos for the record. Background samples around the battery were collected to ensure the integrity of the liner was not breached. No liner breaches were observed. Sample locations are shown on the attached site plan and the results of our sampling event are presented in the following data table.

Soil Sampling

Sample ID	Sample	Depth	BTEX	Benzene	GRO	DRO	MRO "	Total TPH	Cl
	Date	ft.(BGS)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NMOCD T	able 1 Closur	e Criteria	(I		DRO +	GRO			600
1	9.15.29 NMA	c	50 mg/kg	10 mg/kg	combined = 100			100 mg/kg	mg/kg
N. Comp	2/25/2020	0-1'	ND	ND	25.2	21.8	ND	47	394
S. Comp-1	2/25/2020	0-1'	ND	ND	22.5	54.2	30.8	108	36.3
S. Comp-2	2/25/2020	0-1'	ND	ND	21.3	28.8	19.7	69.8	17.3
W. Comp-1	2/25/2020	0-1'	ND	ND	22.5	18.8	ND	41.3	48.5
W. Comp-2	2/25/2020	0-1'	ND	ND	25.6	40.4	23.5	89.5	58.4
E. Comp	2/25/2020	0-1'	ND	ND	ND	ND	ND	ND	10.2

2-27-20 Soil Sample Laboratory Results

ND-Analyte Not Detected

See Appendix V for the complete report of laboratory results.

Remedial Actions

- Stained Pea gravel was hand excavated from the interior of the lined area.
- No breaches were observed in exposed liner, photo documentation is presented in Appendix IV .
- Fresh Pea gravel was placed in lined area.

Closure

Based on this site characterization, liner inspection, and analytical results, we request that no further actions be required, and that closure with regard to the attached incident be granted.

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

Rebecca Pons

Rebecca Pons Project Manager

David J Adkins

David J. Adkins District Manager

Attachments:

Appendix I Site Maps, Karst Map, TOPO Map
Appendix II Groundwater Data, FEMA Flood Zone, Soil Survey
Appendix III Initial and Final C-141's
Appendix IV Photographic Documentation
Appendix V Laboratory Results



APPENDIX I

SITE MAPS

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APPENDIX II

SOIL SURVEY, GROUNDWATER DATA

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(A CLW##### in the POD suffix indicates the POD has been replaced & no longer	(R=POD been rep O=orpha	has blaced, aned,	(
serves a water right file.)	C=the fil closed)	e is	(qı (qı lar	uarte uarte gest	ers ers t)	are	e i=r e sma	allest t	NE 3=3	(NAD8	3 UTM in mete	rs)	(In feet)	
		POD Sub-		Q	Q	Q				X		,	、 ,	Water
POD Number C 01337	Code	basin C	County ED	64	16 2	4 : 1	Sec 30	Tws 25S	Rng 29E	X 591926	Y 3552642* 🥌	DepthWellDe 180	epthWaterC 30	olumn 150
<u>C 01880</u>		С	ED	3	3	2	06	25S	29E	592161	3558605* 🥃	85	40	45
<u>C 02371</u>		С	ED		2	3	15	25S	29E	596741	3555106* 🧧	200	60	140
<u>C 02459</u>		С	ED	4	4	1	02	25S	29E	598422	3558663* 🧉	150		
<u>C 02518</u>		С	ED		3	4	08	25S	29E	593895	3556300*	462		
<u>C 02680</u>		CUB	ED		2	3	15	25S	29E	596741	3555106* 🧧	200		
C 04324 POD10		CUB	ED	1	1	1	09	25S	29E	594563	3557603 🧲	65	60	5
C 04324 POD11		CUB	ED	1	1	1	09	25S	29E	594576	3557619 🌍	61	61	0
C 04324 POD12		CUB	ED	2	2	2	08	25S	29E	594476	3557627 🍯	65	60	5
C 04324 POD6		CUB	ED	1	1	1	09	25S	29E	594538	3557657 🌍	62	61	1
C 04324 POD8		CUB	ED	4	4	4	05	25S	29E	594442	3557807 🌍	69	65	4
C 04324 POD9		CUB	ED	1	1	1	09	25S	29E	594590	3557676 🍯	72	62	10
											Average Deptl	n to Water:	55 f	eet
											Minim	um Depth:	30 f	eet
											Maxim	um Depth:	65 f	eet

Record Count: 12

PLSS Search:

Township: 25S Range: 29E

*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, or suitability for any particular purpose of the data.

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WATER COLUMN/ AVERAGE DEPTH TO WATER

Eddy Area, New Mexico

PS—Potter-Simona complex, 5 to 25 percent slopes

Map Unit Setting

National map unit symbol: 1w57 Elevation: 2,750 to 5,000 feet Mean annual precipitation: 8 to 16 inches Mean annual air temperature: 57 to 70 degrees F Frost-free period: 180 to 230 days Farmland classification: Not prime farmland

Map Unit Composition

Potter and similar soils: 80 percent Simona and similar soils: 15 percent Minor components: 5 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Potter

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope

Landform position (three-dimensional): Side slope, crest, nose slope, head slope

Down-slope shape: Convex *Across-slope shape:* Linear

Parent material: Alluvium

Typical profile

H1 - 0 to 10 inches: gravelly loam H2 - 10 to 60 inches: cemented material

Properties and qualities

Slope: 5 to 25 percent
Depth to restrictive feature: About 10 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 60 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 1.0

Available water storage in profile: Very low (about 1.2 inches)



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Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico Survey Area Data: Version 15, Sep 15, 2019

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APPENDIX III

C-141

. Released to Imaging: 1/19/2021 2:38:41 PM

Received by OCD: 7/30/2019 8:51:47 AM Received by OCD: 6/3/2020 3:29:36 PM

> District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural **Resources Department**

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

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Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NAB1922428005
District RP	2RP-5572
Facility ID	
Application ID	pAB1922427755

Release Notification

PY7L3-190730-C-1410

)

Responsible Party

Responsible Party Devon Energy Production Company	OGRID ₆₁₃₇
Contact Name Amanda T. Davis	Contact Telephone 575-748-0176
Contact email amanda.davis@dvn.com	Incident # (assigned by OCD) NAB1922428005
Contact mailing address 6488 Seven Rivers HWY	

Location of Release Source

Latitude 32.12360

Site Name Cooter 16 State 1H Battery **	Site Type Oil
Date Release Discovered 7/19/19	API# (if applicable) **30-015-37625 AB

Unit Letter	Section	Township	Range	County
Ν	16	25S	29E	Eddy

Surface Owner: State Federal Tribal Private (Name:

Nature and Volume of Release

Material	(s) Released (Select all that apply and attach calculations or specific	justification for the volumes provided below)
Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 7.25	Volume Recovered (bbls) 1
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release The c Spill s	heck valve on the water transfer pump ma tayed within dirt lined containment. Spill a	alfunctioned and caused it to backflow. areas 32'x36'x1/2", 36'x4'x12".

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Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?
release as defined by	
19.15.29.7(A) NMAC?	
Ves 🗖 No	
If YES, was immediate ne	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have <u>not</u> been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kendra DeHoyos	EHS Associate
Signature: <u>Kendra DeHoyos</u> Date:	7/23/2019
email: kendra.dehoyos@dvn.com	_{me:} 575-748-3371
OCD Only	
Received by: Amalia Bustamante Date:	8/12/2019

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Oil Conservation Division

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>30</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🔀 No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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10IIII C-141				Incident ID	NAB1922428005				
Page 4	Oil Conservation Division		District RP	2RP-5572					
			Facility ID						
				Application ID	pAB1922427755				
I hereby certify that regulations all open public health or the failed to adequately addition, OCD acco and/or regulations. Printed Name: Signature: email:	tt the information given above is true and complete to the rators are required to report and/or file certain release noti e environment. The acceptance of a C-141 report by the C y investigate and remediate contamination that pose a three eptance of a C-141 report does not relieve the operator of Rebecca Pons <i>Rebecca Pons</i> @talonlpe.com	best of n ifications OCD doe: eat to gro responsi 	ny knowledge and u and perform correct s not relieve the op undwater, surface w bility for compliand Project Ma 4/29/2020 tone:575	Inderstand that pursuan ctive actions for release erator of liability should vater, human health or ce with any other federa anager 5-441-0980	t to OCD rules and s which may endanger d their operations have the environment. In ul, state, or local laws				
OCD Only									
Received by:			Date:						

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Oil Conservation Division

Remediation Plan Checklist: Each of the following items must be included in the plan.

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Remediation Plan

Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points Estimated volume of material to be remediated \boxtimes Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required) Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation. Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction. Extents of contamination must be fully delineated. Contamination does not cause an imminent risk to human health, the environment, or groundwater. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Printed Name: Rebecca Pons _____ Title: ____ Project Manager Signature: Rebecca Pons Date: 4/29/2020 Telephone: ____ 575-441-0980 Rpons@ talonlpe.com email: OCD Only Received by: _____ Date: Approved Approved with Attached Conditions of Approval Denied Deferral Approved Signature: Date:

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Oil Conservation Division

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

<u>Closure Report Attachment Checklist</u>: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name:	Rebecca Pons	_ Title:	Project Manager								
Signature:	Rebecca Pons	Date:4//	29/2020								
email: Rpons@	@talon.lpe.com	Telephone:575-441-0980									
OCD Only											
Received by:		Date:									
Closure approval b and remediate cont responsible party of	Received by: Date: Date: Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.										
Closure Approved I	by:	Dat	e:								
Printed Name:		Tif	le.								



APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

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Devon Cooter State Battery

PHOTO DOCUMENTATION



Location Signage



Lined Battery



Interior Staining



Lined Berm

Devon Cooter State Battery

Completion Photos



Post clean-up at source



Completion Photo of fresh material



Post removal of staining



Aerial confirmation of lined containment

.



APPENDIX V

LABORATORY DATA

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Analytical Report 653630

for

Talon LPE-Artesia

Project Manager: Chris Jones

Cooter 16St 1H

700794.313.01

03.04.2020

Collected By: Client

1089 N Canal Street Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Tampa: Florida (E87429), North Carolina (483)



03.04.2020

Project Manager: **Chris Jones Talon LPE-Artesia** 408 West Texas St. Artesia, NM 88210

Reference: XENCO Report No(s): **653630** Cooter 16St 1H Project Address: Eddy County

Chris Jones:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653630. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 653630 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

fession kenner

Jessica Kramer Project Assistant

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 653630

Cooter 16St 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
N. COMP	S	02.25.2020 10:30		653630-001
S. COMP-1	S	02.25.2020 10:40		653630-002
S. COMP-2	S	02.25.2020 10:50		653630-003
W. COMP-1	S	02.25.2020 10:55		653630-004
W. COMP-2	S	02.25.2020 11:05		653630-005
E.COMP	S	02.25.2020 11:15		653630-006





Client Name: Talon LPE-Artesia Project Name: Cooter 16St 1H

 Project ID:
 700794.313.01

 Work Order Number(s):
 653630

 Report Date:
 03.04.2020

 Date Received:
 02.25.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118030 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 653630-006.

Batch: LBA-3118395 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected. Samples affected are: 653630-006.

Lab Sample ID 653630-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 653630-001, -002, -003, -004, -005, -006.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene is within laboratory Control Limits, therefore the data was accepted.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 653630

Talon LPE-Artesia, Artesia, NM

Cooter 16St 1H

Sample Id:	N. COMP		Matrix:	Soil		Samp	le Depth:		
Lab Sample Id	: 653630-001		Date Collected: 02.25.2020 10:30			Date Received: 02.25.2020 13:55			
Analytical Met	thod: Inorganic Anions by E	PA 300/300.1				Prep I	Method: E300P		
Analyst:	CHE		% Moist:			Tech:	CHE		
Seq Number:	3117800		Date Prep: 02	2.26.2020 15:	:50				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	97557					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	394	25.3	4.34	mg/kg	02.26.2020 18:44		5
Analytical Met	thod: TPH by SW8015 Mod					Prep I	Method: 8015		
Analyst:	ARM		% Moist:			Tech:	ARM		
Seq Number:	3118031		Date Prep: 02	2.27.2020 14:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697666					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline R	ange Hydrocarbons (GRO)	PHC610	25.2	50.0	15.0	mg/kg	02.28.2020 04:45	J	1
Diesel Rang	ge Organics (DRO)	C10C28DRO	21.8	50.0	15.0	mg/kg	02.28.2020 04:45	J	1
Motor Oil Rat	nge Hydrocarbons (MRO)	PHCG2835 PHC635	<15.0 47 0	50.0	15.0 15.0	mg/kg mg/kg	02.28.2020 04:45	U	1
100011111		1110055	17.0		15.0	mg/ kg	02.20.2020 01.15	5	
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag
1-Chlorooct	tane		74		70 - 135	%			
o-Terpheny	1		73		70 - 135	%			
Analytical Met	hod: BTEX by EPA 8021B					Prep I	Method: 5030B		
Analyst:	KTL		% Moist:			Tech:	KTL		
Seq Number:	3118395		Date Prep: 03	3.02.2020 08:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697961					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene		71-43-2	< 0.000384	0.00200	0.000384	mg/kg	03.03.2020 08:53	U	1
Toluene		108-88-3	< 0.000455	0.00200	0.000455	mg/kg	03.03.2020 08:53	U	1
Ethylbenzer m n Vulana	ne	100-41-4	<0.000564	0.00200	0.000564	mg/kg	03.03.2020 08:53	U	1
o-Xylene	8	95-47-6	<0.00101	0.00399	0.00101	mg/kg	03.03.2020 08.53	U	1
Total Xvlen	es	1330-20-7	< 0.000344	0.00200	0.000344	mg/kg	03.03.2020 08:53	U	L
Total BTEX	[< 0.000344		0.000344	mg/kg	03.03.2020 08:53	U	
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag
1 4-Difluor	henzene		100		70 - 130	0/			0
4-Bromoflu	orobenzene		82		70 - 130	70 %			
Diomonu	o. contente		02		,0 150	70			



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4-Bromoflu	orobenzene		86		70 - 130	%			
1,4-Difluoro	obenzene		70 Recovery		70 - 130	ошіз %	Analysis Dau	C	riag
Surrogate			% Recovery		Limits	Unite	Analysis Dat	P	Flag
Total BTEX			< 0.00176		0.00176	mg/kg	03.03.2020 09:14	U	
Total Xylen	es	1330-20-7	<0.00176		0.00176	mg/kg	03.03.2020 09:14	U	
o-Xylene		95-47-6	<0.00176	0.0102	0.00176	mg/kg	03.03.2020 09:14	U	5
m,p-Xylene:	S	179601-23-1	< 0.00213	0.0204	0.00200	mg/kg	03.03.2020 09:14	U	5
I oluene Ethylbenzen	1e	108-88-5	<0.00232	0.0102	0.00232	mg/Kg mg/kg	03.03.2020.09:14	U II	5 5
Benzene		71-43-2	<0.00196	0.0102	0.00196	mg/kg	03.03.2020 09:14	U	5
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697961					
Seq Number:	3118395		Date Prep: 03	3.02.2020 08:	:00				
Analyst:	KTL		% Moist:			Tech:	KTL		
Analytical Met	hod: BTEX by EPA 8021B					Prep M	Method: 5030B		
o-Terpheny	1		71		70 - 135	%			
1-Chlorooct	ane		71		70 - 135	%	·		8
Surrogate			% Recovery		Limits	Units	Analysis Dat	е	Flag
Total TPH		PHC635	108		15.0	mg/kg	02.28.2020 05:06		
Motor Oil Ra	ge Organics (DKO) ange Hydrocarbons (MRO)	PHCG2835	54.2 30.8	49.9 49.9	15.0 15.0	mg/kg mg/kg	02.28.2020 05:06	J	1
Gasoline Ra	ange Hydrocarbons (GRO)	PHC610	22.5	49.9	15.0	mg/kg	02.28.2020 05:06	J	1
Parameter	,	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697666					
Seq Number:	3118031		Date Prep: 02	2.27.2020 14:	:00				
Analyst:	ARM		% Moist:			Tech:	ARM		
Analytical Met	hod: TPH by SW8015 Mod					Prep N	Method: 8015		
Chloride		16887-00-6	36.3	25.3	4.34	mg/kg	02.26.2020 18:50		5
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697557					
Seq Number:	3117800		Date Prep: 02	2.26.2020 15:	:50				
Analyst:	CHE		% Moist:			Tech:	CHE		
Analytical Met	hod: Inorganic Anions by E	PA 300/300.1				Prep N	Method: E300P		
Lab Sample Id	: 653630-002		Date Collecte	d: 02.25.202	20 10:40	Date Received: 02.25.2020 13:55			
Sample Id:	S. COMP-1		Matrix:	Soil		Samp	le Depth:		



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Talon LPE-Artesia, Artesia, NM

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Sample Id:	S. COMP-2		Matrix:	Soil		Samp	le Depth:		
Lab Sample Id	: 653630-003		Date Collected: 02.25.2020 10:50			Date Received: 02.25.2020 13:55			
Analytical Met	thod: Inorganic Anions by E	EPA 300/300.1				Prep I	Method: E300P		
Analyst:	CHE		% Moist:			Tech:	CHE		
Seq Number:	3117800		Date Prep: 02	2.26.2020 15:	:50				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	97557					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	17.3	4.95	0.850	mg/kg	02.26.2020 16:14		1
Analytical Met	hod: TPH by SW8015 Mod					Prep I	Method: 8015		
Analyst:	ARM		% Moist:			Tech:	ARM		
Seq Number:	3118031		Date Prep: 02	2.27.2020 14:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697666					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline R	ange Hydrocarbons (GRO)	PHC610	21.3	49.8	14.9	mg/kg	02.28.2020 05:27	J	1
Diesel Rang	ge Organics (DRO)	C10C28DRO	28.8	49.8	14.9	mg/kg	02.28.2020 05:27	J	1
Motor Oil Ra Total TPH	ange Hydrocarbons (MRO)	PHCG2835 PHC635	19.7 69.8	49.8	14.9 14.9	mg/kg mg/kg	02.28.2020 05:27	J	1
		1110000	0,10		1.00		0212012020 00127		
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag
1-Chlorooct	tane		70		70 - 135	%			
o-Terpheny	1		71		70 - 135	%			
Analytical Met	thod: BTEX by EPA 8021B					Prep I	Method: 5030B		
Analyst:	KTL		% Moist:			Tech:	KTL		
Seq Number:	3118395		Date Prep: 03	3.02.2020 08:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697961					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene		71-43-2	< 0.000383	0.00199	0.000383	mg/kg	03.03.2020 09:34	U	1
Toluene		108-88-3	< 0.000454	0.00199	0.000454	mg/kg	03.03.2020 09:34	U	1
Ethylbenzer	ne	100-41-4	< 0.000563	0.00199	0.000563	mg/kg	03.03.2020 09:34	U	1
o-Xylene	8	95-47-6	<0.00101	0.00398	0.00101	mg/kg	03.03.2020.09:34	U	1
Total Xylen	es	1330-20-7	<0.000343	0.00177	0.000343	mg/kg	03.03.2020.09:34	U	1
Total BTEX			<0.000343		0.000343	mg/kg	03.03.2020 09:34	U	
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag
1 4-Difluor	benzene		104		70 - 130	0/			0
4-Bromoflu	orobenzene		85		70 - 130	%			
. 5101110110						,,,			



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Sample Id:	W. COMP-1		Matrix:	Soil		Samp	le Depth:		
Lab Sample Id	: 653630-004		Date Collected: 02.25.2020 10:55			Date Received: 02.25.2020 13:55			
Analytical Met	thod: Inorganic Anions by E	EPA 300/300.1				Prep I	Method: E300P		
Analyst:	CHE		% Moist:			Tech:	CHE		
Seq Number:	3117800		Date Prep: 02	2.26.2020 15:	:50				
Subcontractor:	SUB: T104704400-19-19		Prep sea: 76	597557					
		CAS					Analysis		Dil Factor
Parameter		Number	Result	MQL	SDL	Units	Date	Flag	Diffuctor
Chloride		16887-00-6	48.5	4.98	0.855	mg/kg	02.26.2020 17:42		1
Analytical Met	thod: TPH by SW8015 Mod	l				Prep I	Method: 8015		
Analyst:	ARM		% Moist:			Tech:	ARM		
Seq Number:	3118031		Date Prep: 02	2.27.2020 14:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	597666					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline R	ange Hydrocarbons (GRO)	PHC610	22.5	50.0	15.0	mg/kg	02.28.2020 05:49	J	1
Diesel Rang	ge Organics (DRO)	C10C28DRO	18.8	50.0	15.0	mg/kg	02.28.2020 05:49	J	1
Motor Oil Ra	nge Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	02.28.2020 05:49	U	1
Total TPH		PHC635	41.3		15.0	mg/kg	02.28.2020 05:49	J	
Surrogate			% Recovery		Limits	Units	Analysis Dat	te	Flag
1-Chlorooct	tane		71		70 - 135	%			
o-Terpheny	1		71		70 - 135	%			
Analytical Met	hod: BTEX by EPA 8021B					Prep I	Method: 5030B		
Analyst:	KTL		% Moist:			Tech:	KTL		
Seq Number:	3118395		Date Prep: 03	3.02.2020 08:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	597961					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene		71-43-2	< 0.000383	0.00199	0.000383	mg/kg	03.03.2020 09:54	U	1
Toluene		108-88-3	< 0.000454	0.00199	0.000454	mg/kg	03.03.2020 09:54	U	1
Ethylbenzer	ne -	100-41-4	<0.000563	0.00199	0.000563	mg/kg	03.03.2020 09:54	U	1
m,p-Aylene	S	179601-25-1	<0.00101	0.00398	0.00101	mg/kg	03.03.2020 09:54	U	1
Total Xylen	ec.	1330-20-7	<0.000343	0.00199	0.000343	mg/kg	03.03.2020.09.54	U	1
Total BTEX		1550 20 7	< 0.000343		0.000343	mg/kg	03.03.2020 09:54	U	
Surrogate			% Recovery		Limits	Units	Analysis Dat	te	Flag
1.4-Difluor	obenzene		103		70 - 130	%	-		-
4-Bromoflu	orobenzene		87		70 - 130	%			



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Sample Id:	W. COMP-2		Matrix:	Soil		Samp	le Depth:		
Lab Sample Id	: 653630-005		Date Collected: 02.25.2020 11:05			Date Received: 02.25.2020 13:55			
Analytical Me	thod: Inorganic Anions by E	PA 300/300.1				Prep I	Method: E300P		
Analyst:	CHE		% Moist:			Tech:	CHE		
Seq Number:	3117800		Date Prep: 02	2.26.2020 15:	:50				
Subcontractor:	SUB: T104704400-19-19		Prep sea: 76	597557					
54000111400011	505.1101/011001/19	CAS	Trop soul				Analysis		Dil Factor
Parameter		Number	Result	MQL	SDL	Units	Date	Flag	
Chloride		16887-00-6	58.4	5.05	0.867	mg/kg	02.26.2020 18:57		1
Analytical Me	thod: TPH by SW8015 Mod					Prep I	Method: 8015		
Analyst:	ARM		% Moist:			Tech:	ARM		
Seq Number:	3118031		Date Prep: 02	2.27.2020 14:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	597666					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline R	ange Hydrocarbons (GRO)	PHC610	25.6	50.0	15.0	mg/kg	02.28.2020 06:10	J	1
Diesel Rang	ge Organics (DRO)	C10C28DRO	40.4	50.0	15.0	mg/kg	02.28.2020 06:10	J	1
Motor Oil Ra	ange Hydrocarbons (MRO)	PHCG2835	23.5	50.0	15.0	mg/kg	02.28.2020 06:10	J	1
Total IPH		PHC035	89.5		15.0	mg/kg	02.28.2020 06:10		
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag
1-Chlorooc	tane		72		70 - 135	%			
o-Terpheny	1		73		70 - 135	%			
Analytical Me	thod: BTEX by EPA 8021B					Prep I	Method: 5030B		
Analyst:	KTL		% Moist:			Tech:	KTL		
Seq Number:	3118395		Date Prep: 03	3.02.2020 08:	:00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	597961					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene		71-43-2	< 0.000384	0.00200	0.000384	mg/kg	03.03.2020 10:14	U	1
Toluene		108-88-3	< 0.000455	0.00200	0.000455	mg/kg	03.03.2020 10:14	U	1
Ethylbenzei	ne	100-41-4	< 0.000564	0.00200	0.000564	mg/kg	03.03.2020 10:14	U	1
o-Xylene	5	95-47-6	<0.00101	0.00399	0.00101	mg/kg	03.03.2020 10.14	U	1
Total Xylen	ec.	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	03.03.2020 10:14	U	1
Total BTEX	X	1550 20 7	<0.000344		0.000344	mg/kg	03.03.2020 10:14	U	
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag
1,4-Difluor	obenzene		103		70 - 130	%			
4-Bromoflu	orobenzene		82		70 - 130	%			



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Talon LPE-Artesia, Artesia, NM

Cooter 16St 1H

Sample Id:	E.COMP		Matrix:	Soil		Samp	le Depth:			
Lab Sample Id	: 653630-006		Date Collect	Date Collected: 02.25.2020 11:15			Date Received: 02.25.2020 13:55			
Analytical Met	thod: Inorganic Anions by E	PA 300/300.1				Prep M	Method: E300P			
Analyst:	CHE		% Moist:			Tech:	CHE			
Seq Number:	3117802		Date Prep: 0	2.26.2020 16:	:05					
Subcontractor:	SUB: T104704400-19-19		Prep seq: 7	697558						
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor	
Chloride		16887-00-6	10.2	5.02	0.862	mg/kg	02.26.2020 18:26		1	
Analytical Met	thod: TPH by SW8015 Mod					Prep M	Method: 8015			
Analyst:	ARM		% Moist:			Tech:	ARM			
Seq Number:	3118030		Date Prep: 0	2.27.2020 12:	:00					
Subcontractor:	SUB: T104704400-19-19		Prep seq: 7	697662						
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor	
Gasoline Ra	ange Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	02.27.2020 20:39	U	1	
Diesel Rang	ge Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	02.27.2020 20:39	U	1	
Total TPH	lige Hydrocarbons (WICO)	PHCG2835 PHC635	<15.0	49.9	15.0	mg/kg mg/kg	02.27.2020 20:39	U	1	
						00				
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag	
1-Chlorooct	tane		71		70 - 135	%			**	
o-1erpneny	1		69		/0 - 135	%			Φ.Φ.	
Analytical Met	thod: BTEX by EPA 8021B					Prep M	Method: 5030B			
Analyst:	KTL		% Moist:			Tech:	KTL			
Seq Number:	3118395		Date Prep: 0	3.02.2020 08:	:00					
Subcontractor:	SUB: T104704400-19-19		Prep seq: 7	697961						
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor	
Benzene		71-43-2	< 0.000386	0.00200	0.000386	mg/kg	03.02.2020 22:17	U	1	
Toluene		108-88-3	<0.000457	0.00200	0.000457	mg/kg	03.02.2020 22:17	UX	1	
m p-Xylene	s	100-41-4	<0.000388	0.00200	0.000388	mg/kg	03.02.2020 22:17		1	
o-Xvlene	5	95-47-6	< 0.000345	0.00200	0.000345	mg/kg	03.02.2020 22:17	U	1	
Total Xylen	es	1330-20-7	< 0.000345		0.000345	mg/kg	03.02.2020 22:17	U		
Total BTEX	Σ.		< 0.000345		0.000345	mg/kg	03.02.2020 22:17	U		
Surrogate			% Recovery		Limits	Units	Analysis Dat	e	Flag	
1,4-Difluor	obenzene		87		70 - 130	%				
4-Bromoflu	orobenzene		53		70 - 130	%			**	



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Talon LPE-Artesia, Artesia, NM

Cooter 16St 1H

Sample Id:	7697557-1-BLK		Matrix:	Solid		Samp	le Depth:		
Lab Sample Id	l: 7697557-1-BLK		Date Collecte	ed:		Date I	Received:		
Analytical Me	thod: Inorganic Anions by I	EPA 300/300.1				Prep M	Method: E300P		
Analyst:	CHE		% Moist:			Tech:	CHE		
Seq Number:	3117800		Date Prep: 02	2.26.2020 15	:50				
Subcontractor	: SUB: T104704400-19-19		Prep seq: 76	697557					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	<0.858	5.00	0.858	mg/kg	02.26.2020 15:55	U	1
Sample Id:	7697558-1-BLK		Matrix:	Solid		Samp	le Depth:		
Lab Sample Id	l: 7697558-1-BLK		Date Collecte	ed:		Date I	Received:		
Analytical Me	thod: Inorganic Anions by I	EPA 300/300.1				Prep M	Method: E300P		
Analyst:	CHE		% Moist:			Tech:	CHE		
Seq Number:	3117802		Date Prep: 02	2.26.2020 16	:05				
Subcontractor	: SUB: T104704400-19-19		Prep seq: 76	697558					
Paramete	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	<0.858	5.00	0.858	mg/kg	02.26.2020 16:15	U	1
Sample Id:	7697662-1-BLK		Matrix:	Solid		Samp	le Depth:		
Lab Sample Id	l: 7697662-1-BLK		Date Collecte	ed:		Date I	Received:		
Analytical Me	thod: TPH by SW8015 Mod	d				Prep M	Method: 8015		
Analyst:	ARM		% Moist:			Tech:	ARM		
Seq Number:	3118030		Date Prep: 02	2.27.2020 12	:00				
Subcontractor	: SUB: T104704400-19-19		Prep seq: 70	697662					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline R	ange Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	02.27.2020 11:57	U	1
Diesel Rang	ge Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	02.27.2020 11:57	U	1
Motor Oil Ra	ange Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	02.27.2020 11:57	U	1
Surrogate			% Recovery		Limits	Units	Analysis Da	te	Flag
1-Chlorooc	etane		81		70 - 135	%			
o-Terpheny	/1		81		70 - 135	%			



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Talon LPE-Artesia, Artesia, NM

Cooter 16St 1H

Sample Id:	7697666-1-BLK		Matrix:	Solid		Samp	le Depth:		
Lab Sample Id	: 7697666-1-BLK		Date Collecte	d:		Date I	Received:		
Analytical Met	hod: TPH by SW8015 Mod					Prep M	Method: 8015		
Analyst:	ARM		% Moist:			Tech:	ARM		
Seq Number:	3118031		Date Prep: 02	2.27.2020 14:	00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697666					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Ra	nge Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	02.27.2020 21:21	U	1
Diesel Rang	e Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	02.27.2020 21:21	U	1
Motor Oil Rar	nge Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	02.27.2020 21:21	U	1
Surrogate			% Recovery		Limits	Units	Analysis Date		Flag
1-Chlorooct	ane		77		70 - 135	%			
o-Terphenyl	1		79		70 - 135	%			
Sample Id:	7697961-1-BLK		Matrix:	Solid		Samp	le Depth:		
Lab Sample Id	: 7697961-1-BLK		Date Collecte	d:		Date I	Received:		
Analytical Met	hod: BTEX by EPA 8021B					Prep M	Method: 5030B		
Analyst:	KTL		% Moist:			Tech:	KTL		
Seq Number:	3118395		Date Prep: 03	3.02.2020 08:	00				
Subcontractor:	SUB: T104704400-19-19		Prep seq: 76	697961					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene		71-43-2	< 0.000385	0.00200	0.000385	mg/kg	03.02.2020 21:56	U	1
Toluene		108-88-3	< 0.000456	0.00200	0.000456	mg/kg	03.02.2020 21:56	U	1
Ethylbenzen	ie	100-41-4	< 0.000565	0.00200	0.000565	mg/kg	03.02.2020 21:56	U	1
m,p-Xylenes	S	179601-23-1	< 0.00101	0.00400	0.00101	mg/kg	03.02.2020 21:56	U	1
o-Xylene		95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.02.2020 21:56	U	1
Surrogate			% Recovery		Limits	Units	Analysis Date		Flag
1,4-Difluoro	obenzene		94		70 - 130	%			
4-Bromoflu	orobenzene		83		70 - 130	%			

Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL	Below Reporting Limit.	ND Not Detected.			
RL	Reporting Limit				
MDL	Method Detection Limit	SDL Sample Det	ection Limit	LOD Limit of Detection	
PQL	Practical Quantitation Limit	MQL Method Qua	antitation Limit	LOQ Limit of Quantitation	n
DL	Method Detection Limit				
NC	Non-Calculable				
SMP	Client Sample		BLK	Method Blank	
BKS/	LCS Blank Spike/Laboratory	Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labor	catory Control Sample Duplicate
MD/S	D Method Duplicate/Samp	le Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate
+ NE	ELAC certification not offered	for this compound.			

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Form 2 - Surrogate Recoveries

Project Name: Cooter 16St 1H

Work Ore	lers : 6536	30		Project I	D: 700794.31	3.01	
Lab Batch	#: 3118395	Sample: 7697961-1-BKS / E	3KS Bate	h: 1 Matrix	Solid		
Units:	mg/kg	Date Analyzed: 03.02.2020 19:57	50	RROGATE R	ECOVERY	STUDY	1
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes	[**]		[D]	/01	
1,4-Difluoro	benzene		0.0306	0.0300	102	70-130	
4-Bromoflue	orobenzene		0.0296	0.0300	99	70-130	
Lab Batch	# : 3118395	Sample: 7697961-1-BSD / E	BSD Batc	h: 1 Matrix	:Solid		
Units:	mg/kg	Date Analyzed: 03.02.2020 20:17	SU	RROGATE R	ECOVERY	STUDY	
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro	benzene	- 	0.0313	0.0300	104	70-130	
4-Bromoflue	orobenzene		0.0296	0.0300	99	70-130	
Lab Batch	#: 3118395	Sample: 653630-006 S / MS	Batc	h: 1 Matrix	:Soil	1	1
Units:	mg/kg	Date Analyzed: 03.02.2020 20:38	SU	RROGATE R	ECOVERY	STUDY	
	BTE	X by EPA 8021B	Amount Found	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes	[]	[2]	[D]	/ • • • •	
1,4-Difluoro	benzene		0.0311	0.0300	104	70-130	
4-Bromoflue	orobenzene		0.0284	0.0300	95	70-130	
Lab Batch	# : 3118395	Sample: 653630-006 SD / M	ISD Batc	h: 1 Matrix	:Soil		
Units:	mg/kg	Date Analyzed: 03.02.2020 20:58	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro	benzene		0.0315	0.0300	105	70-130	
4-Bromoflue	orobenzene		0.0283	0.0300	94	70-130	
Lab Batch	# : 3118395	Sample: 7697961-1-BLK / H	BLK Batc	h: 1 Matrix	:Solid	· · · ·	-
Units:	mg/kg	Date Analyzed: 03.02.2020 21:56	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes					
1,4-Difluoro	benzene	Analytes	0.0282	0.0300	94	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Cooter 16St 1H

Vork Orders :	653630	Samula: 7607662 1 BLK / B	N Dota	Project I	D: 700794.31 /: S olid	3.01	
Lab Datch #: 511	/kg	Date Analyzed: 02.27.2020 11:57	SU	RROGATE R	ECOVERY S	STUDY	
omts	TPH by	SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Α	nalytes			[D]		
1-Chlorooctane			162	200	81	70-135	
o-Terphenyl			81.2	100	81	70-135	
Lab Batch #: 311	8030 /kg	Sample: 7697662-1-BKS / B	KS Batel	h: 1 Matrix RROGATE R	a:Solid ECOVERY S	STUDY	
Units: mg						Control	
	TPH by	SW8015 Mod	Found [A]	Amount [B]	Recovery %R	Limits %R	Flags
1 Chlorocotoro	A	inarytes	177	200	[2]	70.125	
o-Terphenyl			87.1	100	87	70-135	
				100	07	70-135	
Lab Batch #: 311	8030	Sample: 7697662-1-BSD / B	SD Batel	h: 1 Matrix	COVEDV		
Units: mg	kg	Date Analyzed: 02.27.2020 12:38		KRUGATE K			
	TPH by	SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	А	nalytes			[D]		
1-Chlorooctane			167	200	84	70-135	
o-Terphenyl			82.0	100	82	70-135	
Lab Batch #: 311	8030	Sample: 653577-001 S / MS	Batch	h: 1 Matrix	:Soil		
Units: mg	/kg	Date Analyzed: 02.27.2020 13:20	SU.	RROGATE R	ECOVERY S	STUDY	
	TPH by	SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	1.		144	199	72	70-135	
			73.9	99.7	74	70-135	
o-Terphenyl			SD Batc	h: 1 Matrix	:Soil	<u> </u>	
o-Terphenyl Lab Batch #: 311	8030	Sample: 653577-001 SD / M				~~~~	
o-Terphenyl Lab Batch #: 311 Units: mg,	8030 /kg	Sample: 653577-001 SD7 M Date Analyzed: 02.27.2020 13:41	SU	RROGATE R	ECOVERY S	STUDY	
o-Terphenyl Lab Batch #: 311 Units: mg	8030 /kg TPH by	Sample: 653577-001 SD / M Date Analyzed: 02.27.2020 13:41 SW8015 Mod	SU Amount Found [A]	RROGATE R True Amount [B]	ECOVERY S Recovery %R [D]	STUDY Control Limits %R	Flags
o-Terphenyl Lab Batch #: 311 Units: mg. 1-Chlorooctane	8030 /kg TPH by A	Sample: 653577-001 SD / M Date Analyzed: 02.27.2020 13:41 SW8015 Mod nalytes	SU Amount Found [A]	RROGATE R True Amount [B]	Recovery %R [D] 74	Control Limits %R	Flags

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Cooter 16St 1H

Vork Or Lab Batch	ders : 6536 #: 3118031	30 Sample: 7697666-1-BLK /]	BLK Batcl	Project I h: 1 Matrix	D: 700794.31 :Solid	3.01	
Units:	mg/kg	Date Analyzed: 02.27.2020 21:21	SU	RROGATE R	ECOVERY	STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		154	200	77	70-135	
o-Terpheny	1		79.0	100	79	70-135	
Lab Batch	#: 3118031	Sample: 7697666-1-BKS / 1	BKS Bate	h: 1 Matrix	:Solid		
Units:	mg/kg	Date Analyzed: 02.27.2020 21:41	SU	RROGATE R	ECOVERYS	STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1 Chlorooc	tana	Anarytes	150	200	60	70 125	
o-Terpheny	1		78.8	100	79	70-135	
			78.8	100		70-135	<u> </u>
Lab Batch	#: 3118031	Sample: 7697666-1-BSD / I	BSD Batel	h: 1 Matrix	Solid		
Units:	mg/kg	Date Analyzed: 02.27.2020 22:02	50.	KRUGATE K			
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		166	200	83	70-135	
o-Terpheny	1		82.5	100	83	70-135	
Lab Batch	# : 3118031	Sample: 653680-001 S / MS	Batel	h: 1 Matrix	:Soil		
Units:	mg/kg	Date Analyzed: 02.27.2020 22:44	SU	RROGATE R	ECOVERY S	STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooc	tane		144	199	72	70-135	
1-C1101000	1		69.9	99.7	70	70-135	
o-Terpheny	1			•	. 0. 11		
o-Terpheny	#: 3118031	Sample: 653680-001 SD / N	ISD Bate	h: 1 Matrix	: 5011		
o-Terpheny Lab Batch Units:	#: 3118031 mg/kg	Sample: 653680-001 SD / M Date Analyzed: 02.27.2020 23:05	ISD Batel	h: 1 Matrix RROGATE R	ECOVERY S	STUDY	
o-Terpheny Lab Batch Units:	#: 3118031 mg/kg TPH	Sample: 653680-001 SD / M Date Analyzed: 02.27.2020 23:05 by SW8015 Mod Analytes	ISD Batcl SU Amount Found [A]	h: 1 Matrix RROGATE R True Amount [B]	ECOVERY S Recovery %R [D]	STUDY Control Limits %R	Flags
o-Terpheny Lab Batch Units: 1-Chlorooc	#: 3118031 mg/kg TPH	Sample: 653680-001 SD / M Date Analyzed: 02.27.2020 23:05 by SW8015 Mod Analytes	ISD Batel SU Amount Found [A] 151	h: 1 Matrix RROGATE R True Amount [B] 199	ECOVERY S Recovery %R [D] 76	STUDY Control Limits %R 70-135	Flags

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



BS / BSD Recoveries

Project Name: Cooter 16St 1H

Work Order	• #: 653630							Proj	ject ID: ´	700794.313	8.01	
Analyst:	KTL	D	ate Prepar	ed: 03.02.202	0			Date A	nalyzed: (03.02.2020		
Lab Batch ID	: 3118395 Sample: 7697961-1	-BKS	Bate	h #: 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK S	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
	BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analy	vtes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene		<0.000385	0.100	0.106	106	0.100	0.111	111	5	70-130	35	
Toluene		< 0.000456	0.100	0.106	106	0.100	0.106	106	0	70-130	35	
Ethylbenz	ene	< 0.000565	0.100	0.100	100	0.100	0.0991	99	1	70-130	35	
m,p-Xyler	nes	< 0.00101	0.200	0.200	100	0.200	0.197	99	2	70-130	35	
o-Xylene		< 0.000344	0.100	0.102	102	0.100	0.0999	100	2	70-130	35	
Analyst:	CHE	D	ate Prepar	red: 02.26.202	0			Date A	nalyzed: ()2.26.2020		
Lab Batch ID	: 3117800 Sample: 7697557-1	-BKS	Bate	h #: 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK S	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
Inorg Analy	anic Anions by EPA 300/300.1 /tes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride		< 0.858	250	254	102	250	254	102	0	90-110	20	
										-		

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Cooter 16St 1H

Work Orde	er #: 653630								Pro	ject ID:	700794.313	3.01	
Analyst:	CHE		Da	ate Prepar	ed: 02.26.202	20			Date A	nalyzed:	02.26.2020		
Lab Batch II	D: 3117802	Sample: 7697558-1-	-BKS	Batc	h #: 1					Matrix:	Solid		
Units:	mg/kg			BLAN	K /BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
Inorg	ganic Anions by E	CPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chlorida	lytes		.0.950	250	252	101	250	252	101	0	00.110	20	
Chioride	;		<0.858	250	252	101	250	252	101	0	90-110	20	
Analyst:	ARM		Da	ate Prepar	ed: 02.27.202	20			Date A	nalyzed:	02.27.2020		
Lab Batch II	D: 3118030	Sample: 7697662-1-	-BKS	Batc	h #: 1					Matrix:	Solid		
Units:	mg/kg	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
	TPH by SW801	5 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Anal	lytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
Gasoline	Range Hydrocarbons (Gl	RO)	<15.0	2000	1670	84	2000	1620	81	3	70-135	20	
Diesel Ra	ange Organics (DRO)		<15.0	2000	1790	90	2000	1720	86	4	70-135	20	
Analyst:	ARM		Da	ate Prepar	ed: 02.27.202	20	•	<u>.</u>	Date A	nalyzed:	02.27.2020	•	1
Lab Batch II	D: 3118031	Sample: 7697666-1	-BKS	Batc	h #: 1					Matrix:	Solid		
Units:	mg/kg			BLAN	K /BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
	TPH by SW801	5 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Bosult [F]	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Anal	lytes		15.0	[0]									
Gasoline	e Kange Hydrocarbons (G	KU)	<15.0	2000	1640	82	2000	1620	81	1	70-135	20	
Diesel Ra	ange Organics (DRO)		<15.0	2000	1660	83	2000	1710	86	3	70-135	20	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes

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Form 3 - MS / MSD Recoveries

Project Name: Cooter 16St 1H

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Work Order # :	653630					Project ID:	700794.313.01
Lab Batch ID:	3118395	QC- Sample ID:	653630-006 S	Batch #:	1	Matrix: Soil	
Date Analyzed:	03.02.2020	Date Prepared:	03.02.2020	Analyst: 1	KTL		
Reporting Units:	mg/kg						

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

	BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene		< 0.000384	0.0998	0.0820	82	0.0996	0.0764	77	7	70-130	35	
Toluene		< 0.000455	0.0998	0.0620	62	0.0996	0.0494	50	23	70-130	35	X
Ethylbenzene		< 0.000564	0.0998	0.0669	67	0.0996	0.0543	55	21	70-130	35	X
m,p-Xylenes		< 0.00101	0.200	0.126	63	0.199	0.100	50	23	70-130	35	X
o-Xylene		< 0.000344	0.0998	0.0832	83	0.0996	0.0720	72	14	70-130	35	
Lab Batch ID:	3117800 Q	C- Sample ID:	653630	-003 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed:	02.26.2020 D	ate Prepared:	02.26.2	020	An	alyst: (CHE					
Reporting Units:	mg/kg											

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	17.3	248	278	105	248	277	105	0	90-110	20	

 $\begin{array}{l} Matrix \ Spike \ Percent \ Recovery \quad [D] = 100^{*}(C\text{-}A) \ / \ B \\ Relative \ Percent \ Difference \quad RPD = 200^{*}|(C\text{-}F) \ / \ (C\text{+}F)| \end{array}$

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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Form 3 - MS / MSD Recoveries

Project Name: Cooter 16St 1H

Work Order # :	653630					Project ID:	700794.313.01
Lab Batch ID:	3117800	QC- Sample ID:	653630-004 S	Batch #:	1	Matrix: Soil	
Date Analyzed:	02.26.2020	Date Prepared:	02.26.2020	Analyst: (CHE		
Reporting Units:	mg/kg						

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorgai	nic Anions by EPA 300/300.1	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		48.5	249	311	105	249	311	105	0	90-110	20	
Lab Batch ID:	3117802	QC- Sample ID:	653687	-004 S	Ba	tch #:	1 Matri	x: Soil				
Date Analyzed:	02.26.2020	Date Prepared:	02.26.2	020	An	alyst: (CHE					

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorga	nic Anions by EPA 300/300.1	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]		[D]	[E]	[-]	[G]				
Chloride		342	250	580	95	250	579	95	0	90-110	20	
Lab Batch ID:	3117802	QC- Sample ID	: 653745	5-002 S	Ba	tch #:	1 Matri	x: Soil				
Date Analyzed:	02.26.2020	Date Prepared:	02.26.2	2020	Ar	alyst: (CHE					
Reporting Units:	mg/kg											

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	297	250	538	96	250	539	97	0	90-110	20	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A) / B$ Relative Percent Difference RPD = $200^{*}|(C-F) / (C+F)|$ Matrix Spike Duplicate Percent Recovery $[G] = 100^{*}(F-A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Page 20 of 25





Form 3 - MS / MSD Recoveries

Project Name: Cooter 16St 1H

.

Work Order # :	653630					Project ID:	700794.313.01
Lab Batch ID:	3118030	QC- Sample ID:	653577-001 S	Batch #:	1	Matrix: Soil	
Date Analyzed:	02.27.2020	Date Prepared:	02.27.2020	Analyst:	ARM		
Reporting Units:	mg/kg						

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

r	ГРН by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range	Hydrocarbons (GRO)	19.7	1990	1530	76	1990	1540	76	1	70-135	20	
Diesel Range Or	rganics (DRO)	22.6	1990	1540	76	1990	1540	76	0	70-135	20	
Lab Batch ID:	3118031	QC- Sample ID:	653680	-001 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	02.27.2020	Date Prepared:	02.27.2	.020	An	alyst: 4	ARM					
Reporting Units:	mg/kg											

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	23.9	1990	1550	77	1990	1560	77	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	1990	1510	76	1990	1510	76	0	70-135	20	

 $\begin{array}{l} Matrix \ Spike \ Percent \ Recovery \quad [D] = 100^{*}(C\text{-}A) \ / \ B \\ Relative \ Percent \ Difference \quad RPD = 200^{*}|(C\text{-}F) \ / \ (C\text{+}F)| \end{array}$

Matrix Spike Duplicate Percent Recovery $[G] = 100^{*}(F-A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Page 21 of 25

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Project Manager C.H.J.S. TORLE Billion of manual (non-state) (non-sta	Note of the second of	1631/245.1/7470 /7471 :		or Co Cu Pb Mn Mo Ni Se Ag	Sb As Ba Be Cd (pany to Xenco, its affiliates ar	LP 6010: 8RCRA	constitutes a valid purch	hment of samples	Notice: Signature of this document and relinquist
Project Manage CML (12) SCORD Allange, CL (17) of SCORD Manage, SCORD SCORD Manage, Manage, SCO	North Charles North Ch	Na Sr TI Sn II V Zn	Mn Mo Ni K Se Ag SiO2	B Cd Ca Cr Co Cu Fe Pb Mg	11 Al Sb As Ba Be	13PPM Texas 1	8RCRA	020:	Total 200.7 / 6010 200.8 / 6 Circle Method(s) and Metal(s)
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Inter-Office Shipment

Page 1 of 1

IOS Number 58927

Date/Time: 02/25/20 15:21

Created by: Martha Castro

Please send report to: Jessica Kramer

Lab# From: Carlsbad

Lab# To: Midland

Air Bill No.: 777860524719

Delivery Priority:

Address: 1089 N Canal Street

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
653630-001	S	N. COMP	02/25/20 10:30	E300	Inorganic Anions by EPA 300/300.1	03/02/20	03/24/20	JKR	CL	
653630-001	S	N. COMP	02/25/20 10:30	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/10/20	JKR	PHCC10C28 PHCC28C35	
653630-001	S	N. COMP	02/25/20 10:30	SW8021B	BTEX by EPA 8021B	03/02/20	03/10/20	JKR	BR4FBZ BZ BZME EBZ X	
653630-002	S	S. COMP-1	02/25/20 10:40	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/10/20	JKR	PHCC10C28 PHCC28C35	
653630-002	S	S. COMP-1	02/25/20 10:40	E300	Inorganic Anions by EPA 300/300.1	03/02/20	03/24/20	JKR	CL	
653630-002	S	S. COMP-1	02/25/20 10:40	SW8021B	BTEX by EPA 8021B	03/02/20	03/10/20	JKR	BR4FBZ BZ BZME EBZ X	
653630-003	S	S. COMP-2	02/25/20 10:50	E300	Inorganic Anions by EPA 300/300.1	03/02/20	03/24/20	JKR	CL	
653630-003	S	S. COMP-2	02/25/20 10:50	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/10/20	JKR	PHCC10C28 PHCC28C35	
653630-003	S	S. COMP-2	02/25/20 10:50	SW8021B	BTEX by EPA 8021B	03/02/20	03/10/20	JKR	BR4FBZ BZ BZME EBZ X	
653630-004	S	W. COMP-1	02/25/20 10:55	E300	Inorganic Anions by EPA 300/300.1	03/02/20	03/24/20	JKR	CL	
653630-004	S	W. COMP-1	02/25/20 10:55	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/10/20	JKR	PHCC10C28 PHCC28C35	
653630-004	S	W. COMP-1	02/25/20 10:55	SW8021B	BTEX by EPA 8021B	03/02/20	03/10/20	JKR	BR4FBZ BZ BZME EBZ X	
653630-005	S	W. COMP-2	02/25/20 11:05	E300	Inorganic Anions by EPA 300/300.1	03/02/20	03/24/20	JKR	CL	
653630-005	S	W. COMP-2	02/25/20 11:05	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/10/20	JKR	PHCC10C28 PHCC28C35	
653630-005	S	W. COMP-2	02/25/20 11:05	SW8021B	BTEX by EPA 8021B	03/02/20	03/10/20	JKR	BR4FBZ BZ BZME EBZ X	
653630-006	S	E.COMP	02/25/20 11:15	SW8021B	BTEX by EPA 8021B	03/02/20	03/10/20	JKR	BR4FBZ BZ BZME EBZ X	
653630-006	S	E.COMP	02/25/20 11:15	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/10/20	JKR	PHCC10C28 PHCC28C35	
653630-006	S	E.COMP	02/25/20 11:15	E300	Inorganic Anions by EPA 300/300.1	03/02/20	03/24/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Martha Castro

Date Relinquished: 02/25/2020

Received By:

Brianna Teel

Date Received: 02/26/2020 11:51

Cooler Temperature: 0.5

Page 23 of 25

Final 1.000

ABORATORIES

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland IOS #: 58927

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Temperature Measuring device used : R8

Sent By:	Martha Castro	Date Sent:	02/25/2020 03:21 PM
Received By:	Brianna Teel	Date Received:	02/26/2020 11:51 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Contact:

Nonconformance Documentation

Contacted by :

Date:

Checklist reviewed by: Kalla Ta Brianna Teel

Date: 02/26/2020

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Talon LPE-Artesia	Acceptable Temperature	e Range: 0 - 6 degC			
Date/ Time Received: 02.25.2020 01.55.00 PM	Air and Metal samples A	cceptable Range: Ambient			
Work Order #: 653630	Temperature Measuring device used : T NM 007				
Sample Re	ceipt Checklist	Comments			
#1 *Temperature of cooler(s)?	2.9				
#2 *Shipping container in good condition?	Yes				
#3 *Samples received on ice?	Yes				
#4 *Custody Seals intact on shipping container/ cooler?	Yes				
#5 Custody Seals intact on sample bottles?	Yes				
#6*Custody Seals Signed and dated?	No				
#7 *Chain of Custody present?	Yes				
#8 Any missing/extra samples?	No				
#9 Chain of Custody signed when relinquished/ received?	Yes				
#10 Chain of Custody agrees with sample labels/matrix?	Yes				
#11 Container label(s) legible and intact?	Yes				
#12 Samples in proper container/ bottle?	Yes				
#13 Samples properly preserved?	Yes				
#14 Sample container(s) intact?	Yes				
#15 Sufficient sample amount for indicated test(s)?	Yes				
#16 All samples received within hold time?	Yes				
#17 Subcontract of sample(s)?	Yes	Samples Succontracted to Xenco Midland			
#18 Water VOC samples have zero headspace?	N/A				

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Martha Castro

Date: 02.25.2020

Checklist reviewed by: Jessica Kramer

Date: 02.26.2020

Page 6

Oil Conservation Division

Incident ID	NAB1922428005
District RP	2RP-5572
Facility ID	
Application ID	pAB1922427755

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

<u>Closure Report Attachment Checklist</u>: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Rebecca Pons	Title: Project Manager
Signature: Rebecca Pons	Date: 4/29/2020
email:Rpons@talon.lpe.com	Telephone:575-441-0980
OCD Only	
Received by: <u>Robert Hamlet</u>	Date: <u>1/19/2021</u>

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: <u>Robert Hamlet</u>	Date: <u>1/19/2021</u>
Printed Name: Robert Hamlet	Title: Environmental Specialist - Advanced

From:	Hamlet, Robert, EMNRD
То:	DeHoyos, Kendra
Cc:	Bratcher, Mike, EMNRD; Eads, Cristina, EMNRD; "spills@slo.state.nm.us"
Subject:	Closure Approval - Devon - Cooter 16 St 1H Battery (Incident #NAB1922428005)
Date:	Tuesday, January 19, 2021 1:53:00 PM
Attachments:	Closure Approval - Devon - Cooter 16 St 1H Battery (NAB1922428005).pdf

Kendra,

We have received your closure report and final C-141 for Incident #NAB1922428005 Cooter 16 St 1H Battery, thank you. This closure is approved.

Please let me know if you have any further questions.

Regards,

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 811 S. First Street | Artesia, NM 88210 505.748.1283 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



District II

District IV

District I 1625 N. French Dr., Hobbs, NM 88240

Phone:(575) 393-6161 Fax:(575) 393-0720

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

District III 1000 Rio Brazos Rd., Aztec, NM 87410

CONDITIONS

Action 8581

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS OF APPROVAL

Operator:				OGRID:	Action Number:	Action Type:	
DEVON	I ENERGY PRODUCTION COMPAN	333 West Sheridan Ave.	Oklahoma City, OK73102	6137	8581	C-141	
OCD Reviewer	Condition						
rhamlet	melet We have received your closure report and final C-141 for Incident #NAB1922428005 Cooter 16 St 1H Battery, thank you. This closure is approved.						