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Remediation Work Plan
Devon Energy: Parkway West SWD #1
[30-015-40835|2RP-3906]

October 28, 2016

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

Prepared For:
Devon Energy Corporation
6488 Seven Rivers Hwy. Artesia, NM 88210

Ms. Heather Patterson
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Work Plan**
Devon Energy Production Company, LP
Parkway West SWD #1
|30-015-40835|2RP-3906|

Dear Ms. Patterson,

Devon Energy Production Company, LP (Devon) has contracted Talon/LPE (Talon) to perform initial spill response, soil sampling and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

Site Information

The Parkway West SWD #1 is located approximately twenty-nine (29) miles southeast of Artesia, New Mexico. The legal location for this facility is Unit Letter D, Section 27, Township 19 South and Range 29 East in Eddy County, New Mexico. More specifically the latitude and longitude are 32.6354904 North and -104.0698929 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 Service (NRCS), the soil in this area is made up of Reeves-gypsum land complex with 0 to 3 percent slopes. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

According to the New Mexico Office of the State Engineer the ground water in this area is approximately 60-feet below ground surface (BGS). Therefore the ranking for this site is a **10** based on the following:

Depth to ground water	50-100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **10**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 1,000 mg/kg for TPH and 1,000 mg/kg for total chlorides.

Incident Description and Initial Remedial Actions

On September 17, 2016 a connection on a flex hose failed resulting in the release of approximately 21bbls of produced water. The concrete containment surrounding the pump retained 10bbls of fluid. This fluid was recovered by a vacuum truck. The remaining fluid flowed south into the pasture for approximately 550-feet. Talon mobilized personnel to conduct a site assessment and collect soil samples within the impacted area. The results of our soil analysis are summarized in the table below.

Laboratory Results

See [Appendix IV](#) for complete report of laboratory results.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	ND	10100	ND	ND
S-1	1	ND	541	ND	ND
S-1	2	ND	1060	ND	ND
S-1	3	ND	97	ND	ND
S-2	0	ND	14100	ND	ND
S-2	1	ND	2440	ND	ND
S-2	2	ND	4050	ND	ND
S-2	3	--	626	--	--
S-2	4	--	71	--	--
S-2	5	--	90.6	--	--
S-3	0	ND	22700	ND	16.4
S-3	1	ND	13800	ND	15.1
S-3	2	ND	1720	ND	ND
S-3	3	ND	1230	ND	ND
S-3	4	--	450	--	--
S-3	5	--	132	--	--
S-3	6	--	112	--	--
S-4	0	ND	12200	ND	65
S-4	1	ND	11000	ND	ND
S-4	2	ND	13500	ND	ND
S-4	3	ND	9260	ND	ND
S-4	4	ND	6590	ND	ND
S-4	5	--	238	--	--
S-4	6	--	216	--	--
S-4	7	--	360	--	--

(--) Analyte Not Tested

(ND) Analyte Not Detected

Proposed Remedial Actions

- The impacted area in the vicinity of sample location S-1 will be excavated to a depth of 1-foot BGS.
- The impacted area in the vicinity of sample location S-2 will be excavated to a depth of 2-feet BGS.
- The impacted area in the vicinity of sample location S-3 will be excavated to a depth of 3-feet BGS.
- The impacted area in the vicinity of sample location S-4 will be excavated to a depth of 4-feet BGS.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- The excavation will be backfilled with topsoil and contoured as described in the below revegetation plan.

Revegetation Plan

- The area in the pasture will be backfilled with loamy top soil and contoured to match the surrounding terrain and left in a “rough” condition to approximate natural surface deviations, control erosion and promote revegetation.
- The area will be seeded with BLM #1 seed mixture utilizing a seed drill at the recommended application rate.
- The site will be periodically monitored to insure that revegetation matching or exceeding natural potential plant cover and diversity levels are achieved.
- The site will be monitored for noxious weeds development specifically African Rue.
- Should noxious weed issues occur or revegetation is slow to occur (accounting for precipitation levels) NMSLO will be consulted on the best course of action to reconcile the issue.

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


Sheldon L. Hitchcock
Project Manager


David J. Adkins
District Manager

Attachments

Appendix I Site Plan
Appendix II Groundwater Data
Appendix III Initial C-141
Appendix IV Laboratory Results

APPENDIX I

SITE PLAN

Pin Parkway west SWD #1

Legend

-  Impacted Area
-  Parkway west SWD #1
-  Sample Location

S-3

S-4

S-2

S-1

300 ft

N

APPENDIX II

GROUNDWATER DATA



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00741			ED	1	3	2	34	19S	29E	588030	3609533*	2169	230	60	170
CP 00681			ED	1	1	3	34	19S	29E	587230	3609127*	2414			

Average Depth to Water: 60 feet

Minimum Depth: 60 feet

Maximum Depth: 60 feet

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 587209

Northing (Y): 3611541

Radius: 3000

*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.

APPENDIX III

INITIAL C-141

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

NM OIL CONSERVATION
ARTESIA DISTRICT
State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

SEP 22 2016

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB 1626756917 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company <u>6137</u>		Contact Danny Velo, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210		Telephone No. 575-703-3360
Facility Name Parkway West SWD I		Facility Type Salt Water Disposal

Surface Owner State	Mineral Owner State	API No 30-015-40835
---------------------	---------------------	---------------------

LOCATION OF RELEASE

Unit Letter D	Section 27	Township 19S	Range 29E	Feet from the 1255'	North/South Line FNL	Feet from the 430'	East/West Line FWL	County Eddy
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Latitude: 32.6354904

Longitude: -104.0698929

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 21bbbls	Volume Recovered 10bbbls
Source of Release Suction hose	Date and Hour of Occurrence September 17, 2016 @ 12:00 PM	Date and Hour of Discovery September 17, 2016 @ 12:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Shelly Tucker, BLM Mike Bratcher, OCD	
By Whom? Danny Velo, Production Foreman	Date and Hour Shelly Tucker, BLM September 17, 2016 @ 3:30 PM Mike Bratcher, OCD September 17, 2016 @ 3:35 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*

Due to vibration from the horizontal pump the clamps on the suction flex hose connected to the pump became loose causing the flex hose to loosen at the connection. The line was immediately isolated to stop the release. Repairs are scheduled to be completed.

Describe Area Affected and Cleanup Action Taken.*

Approximately 21bbbls produced water was released into surrounding cement containment overflowing out of containment onto location and into the pasture. Approximately 10bbbls produced water was recovered from cement containment with 0bbbls produced water recovered from location or pasture that had overflowed from containment. The produced water that overflowed from the cement containment flowed in a Southern direction affecting an area approximately 22'x22' on location and traveled South into pasture affecting an area approximately 14'x370'. An environmental agency will be contacted for remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <u>Sheila Fisher</u>	OIL CONSERVATION DIVISION	
Printed Name: Sheila Fisher	Signed By <u>[Signature]</u> Approved by Environmental Specialist:	
Title: Field Admin Support	Approval Date: <u>9/22/16</u>	Expiration Date: <u>NIA</u>
E-mail Address: <u>Sheila.fisher@dmv.com</u>	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines ☐ SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <u>10/26/16</u>	
Date: 9/19/16 Phone: 575.748.1829		

* Attach Additional Sheets If Necessary

2RP-3906

APPENDIX IV

LABORATORY RESULTS

Analytical Report 537855

**for
Talon LPE**

Project Manager: Kimberly Wilson

Devon Parkway West SWD #1

700794.202.01

07-OCT-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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07-OCT-16

Project Manager: **Kimberly Wilson**

Talon LPE

408 W. Texas St.
Artesia, NM 88210

Reference: XENCO Report No(s): **537855**

Devon Parkway West SWD #1

Project Address:

Kimberly Wilson:

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) 537855. 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. 537855 will be filed for 60 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,

Kelsey Brooks

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 537855



Talon LPE, Artesia, NM

Devon Parkway West SWD #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1	S	09-26-16 09:00	- 0 ft	537855-001
S-1	S	09-26-16 09:03	- 1 ft	537855-002
S-1	S	09-26-16 09:07	- 2 ft	537855-003
S-1	S	09-26-16 09:09	- 3 ft	537855-004
S-2	S	09-26-16 09:18	- 0	537855-005
S-2	S	09-26-16 09:23	- 1 ft	537855-006
S-2	S	09-26-16 09:26	- 2 ft	537855-007
S-3	S	09-26-16 09:35	- 0 ft	537855-008
S-3	S	09-26-16 09:38	- 1 ft	537855-009
S-3	S	09-26-16 09:41	- 2 ft	537855-010
S-3	S	09-26-16 09:45	- 3 ft	537855-011
S-4	S	09-26-16 09:53	- 0 ft	537855-012
S-4	S	09-26-16 09:56	- 1 ft	537855-013
S-4	S	09-26-16 09:59	- 2 ft	537855-014
S-4	S	09-26-16 10:03	- 3 ft	537855-015
S-4	S	09-26-16 10:05	- 4 ft	537855-016



CASE NARRATIVE



Client Name: Talon LPE

Project Name: Devon Parkway West SWD #1

Project ID: 700794.202.01
Work Order Number(s): 537855

Report Date: 07-OCT-16
Date Received: 09/30/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3001201 BTEX by EPA 8021B

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



Project Id: 700794.202.01
Contact: Kimberly Wilson
Project Location:

Certificate of Analysis Summary 537855

Talon LPE, Artesia, NM



Project Name: Devon Parkway West SWD #1

Date Received in Lab: Fri Sep-30-16 10:05 am
Report Date: 07-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	537855-001	537855-002	537855-003	537855-004	537855-005	537855-006
	Field Id:	S-1	S-1	S-1	S-1	S-2	S-2
	Depth:	0 ft	1 ft	2 ft	3 ft	0	1 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-26-16 09:00	Sep-26-16 09:03	Sep-26-16 09:07	Sep-26-16 09:09	Sep-26-16 09:18	Sep-26-16 09:23
BTEX by EPA 8021B	Extracted:	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00
	Analyzed:	Sep-30-16 21:51	Sep-30-16 22:07	Sep-30-16 22:24	Sep-30-16 22:40	Oct-01-16 02:10	Sep-30-16 22:56
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00150
		ND 0.00199	ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00199	ND 0.00200
Ethylbenzene		ND 0.00199	ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00199	ND 0.00200
		ND 0.00199	ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00199	ND 0.00200
		ND 0.00299	ND 0.00298	ND 0.00299	ND 0.00298	ND 0.00298	ND 0.00299
		ND 0.00199	ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00199	ND 0.00200
		ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00150
Total BTEX		ND 0.00199	ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00199	ND 0.00200
		ND 0.00199	ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00199	ND 0.00200
		ND 0.00299	ND 0.00298	ND 0.00299	ND 0.00298	ND 0.00298	ND 0.00299
		ND 0.00199	ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00199	ND 0.00200
		ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00150
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00
	Analyzed:	Oct-06-16 16:57	Oct-06-16 17:18	Oct-06-16 17:25	Oct-06-16 17:32	Oct-06-16 17:39	Oct-06-16 18:01
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		10100 100	541 50.0	1060 50.0	97.2 50.0	14100 250	2440 25.0
		ND	ND	ND	ND	ND	ND
Chloride		ND	ND	ND	ND	ND	ND
		ND	ND	ND	ND	ND	ND
		ND	ND	ND	ND	ND	ND
		ND	ND	ND	ND	ND	ND
		ND	ND	ND	ND	ND	ND
TPH by SW 8015B	Extracted:	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00
	Analyzed:	Sep-30-16 17:03	Sep-30-16 18:35	Sep-30-16 19:05	Sep-30-16 19:32	Sep-30-16 19:57	Sep-30-16 20:22
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
Total TPH		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0
		ND 15.0	ND 15.0	ND 14.9	ND 14.9	ND 15.0	ND 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Kelsey Brooks

Kelsey Brooks
Project Manager



Project Id: 700794.202.01
Contact: Kimberly Wilson
Project Location:

Certificate of Analysis Summary 537855

Talon LPE, Artesia, NM



Project Name: Devon Parkway West SWD #1

Date Received in Lab: Fri Sep-30-16 10:05 am
Report Date: 07-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	537855-007	537855-008	537855-009	537855-010	537855-011	537855-012
	Field Id:	S-2	S-3	S-3	S-3	S-3	S-4
	Depth:	2 ft	0 ft	1 ft	2 ft	3 ft	0 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-26-16 09:26	Sep-26-16 09:35	Sep-26-16 09:38	Sep-26-16 09:41	Sep-26-16 09:45	Sep-26-16 09:53
BTEx by EPA 8021B	Extracted:	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00
	Analyzed:	Sep-30-16 23:12	Oct-01-16 02:26	Oct-01-16 01:54	Sep-30-16 23:28	Sep-30-16 23:45	Oct-01-16 00:33
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150	ND 0.00150
		ND 0.00200	ND 0.00199	ND 0.00198	ND 0.00200	ND 0.00200	ND 0.00200
Benzene							
Toluene							
Ethylbenzene							
m,p-Xylenes							
o-Xylene							
Total Xylenes							
Total BTEx							
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00
	Analyzed:	Oct-06-16 18:08	Oct-06-16 18:15	Oct-06-16 18:22	Oct-06-16 18:29	Oct-06-16 18:36	Oct-06-16 18:57
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		4050 50.0	22700 250	13800 250	1720 50.0	1230 50.0	12200 100
Chloride							
TPH by SW 8015B	Extracted:	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00
	Analyzed:	Sep-30-16 20:47	Sep-30-16 21:13	Sep-30-16 21:38	Sep-30-16 22:04	Sep-30-16 22:55	Sep-30-16 23:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
		ND 15.0	16.4 15.0	15.1 15.0	ND 15.0	ND 15.0	65.0 15.0
C6-C10 Gasoline Range Hydrocarbons							
C10-C28 Diesel Range Hydrocarbons							
Total TPH							

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of this data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.1%

Kelsey Brooks

Kelsey Brooks
Project Manager



Project Id: 700794.202.01
Contact: Kimberly Wilson
Project Location:

Certificate of Analysis Summary 537855

Talon LPE, Artesia, NM

Project Name: Devon Parkway West SWD #1

Date Received in Lab: Fri Sep-30-16 10:05 am
Report Date: 07-OCT-16
Project Manager: Kelsey Brooks



Analysis Requested		Lab Id:	537855-013	537855-014	537855-015	537855-016	
		Field Id:	S-4	S-4	S-4	S-4	
		Depth:	1 ft	2 ft	3 ft	4 ft	
		Matrix:	SOIL	SOIL	SOIL	SOIL	
		Sampled:	Sep-26-16 09:56	Sep-26-16 09:59	Sep-26-16 10:03	Sep-26-16 10:05	
BTEX by EPA 8021B	Extracted:		Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	Sep-30-16 11:00	
	Analyzed:		Oct-01-16 00:50	Oct-01-16 01:06	Oct-01-16 01:22	Oct-01-16 01:38	
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
			ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00149	
			ND 0.00200	ND 0.00199	ND 0.00199	ND 0.00199	
Toluene			ND 0.00200	ND 0.00199	ND 0.00199	ND 0.00199	
			ND 0.00200	ND 0.00199	ND 0.00199	ND 0.00199	
			ND 0.00200	ND 0.00199	ND 0.00199	ND 0.00199	
			ND 0.00300	ND 0.00299	ND 0.00299	ND 0.00298	
Total Xylenes			ND 0.00200	ND 0.00199	ND 0.00199	ND 0.00199	
			ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00149	
Total BTEX							
Inorganic Anions by EPA 300/300.1	Extracted:		Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	Oct-06-16 12:00	
	Analyzed:		Oct-06-16 19:04	Oct-06-16 19:25	Oct-06-16 19:32	Oct-06-16 19:39	
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
			11000 100	13500 100	9260 100	6590 50.0	
Chloride	Extracted:		Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	Sep-30-16 14:00	
	Analyzed:		Sep-30-16 23:45	Oct-01-16 00:10	Oct-01-16 00:35	Oct-01-16 01:01	
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
			ND 14.9	ND 15.0	ND 15.0	ND 14.9	
			ND 14.9	ND 15.0	ND 15.0	ND 14.9	
C6-C10 Gasoline Range Hydrocarbons			ND 14.9	ND 15.0	ND 15.0	ND 14.9	
C10-C28 Diesel Range Hydrocarbons			ND 14.9	ND 15.0	ND 15.0	ND 14.9	
Total TPH			ND 14.9	ND 15.0	ND 15.0	ND 14.9	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.0%

Kelsey Brooks

Kelsey Brooks
Project Manager



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.
- RL** Reporting Limit
- MDL** Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection
- PQL** Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation
- DL** Method Detection Limit
- NC** Non-Calculable
- +** NELAC certification not offered for this compound.
- *** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001190

Sample: 537855-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 17:03

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.7	99.7	93	70-135	
o-Terphenyl	50.9	49.9	102	70-135	

Lab Batch #: 3001190

Sample: 537855-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 18:35

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.8	99	70-135	
o-Terphenyl	53.5	49.9	107	70-135	

Lab Batch #: 3001190

Sample: 537855-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 19:05

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	99.6	98	70-135	
o-Terphenyl	52.7	49.8	106	70-135	

Lab Batch #: 3001190

Sample: 537855-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 19:32

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.6	102	70-135	
o-Terphenyl	55.6	49.8	112	70-135	

Lab Batch #: 3001190

Sample: 537855-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 19:57

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.8	105	70-135	
o-Terphenyl	57.0	49.9	114	70-135	

* 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 / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001190

Sample: 537855-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 20:22

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	104	99.7	104	70-135	
o-Terphenyl	55.8	49.9	112	70-135	

Lab Batch #: 3001190

Sample: 537855-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 20:47

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	56.2	50.0	112	70-135	

Lab Batch #: 3001190

Sample: 537855-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 21:13

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	104	99.9	104	70-135	
o-Terphenyl	56.3	50.0	113	70-135	

Lab Batch #: 3001190

Sample: 537855-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 21:38

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.8	99.9	99	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 3001201

Sample: 537855-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 21:51

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001190

Sample: 537855-010 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/30/16 22:04

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	99.6	99.7	100	70-135	
o-Terphenyl	53.8	49.9	108	70-135	

Lab Batch #: 3001201

Sample: 537855-002 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/30/16 22:07

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 3001201

Sample: 537855-003 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/30/16 22:24

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 3001201

Sample: 537855-004 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/30/16 22:40

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 3001190

Sample: 537855-011 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/30/16 22:55

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	103	99.8	103	70-135	
o-Terphenyl	55.5	49.9	111	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001201

Sample: 537855-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 22:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene <10/03/2016 12:49>	0.0288	0.0300	96	80-120	

Lab Batch #: 3001201

Sample: 537855-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 23:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 3001190

Sample: 537855-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 23:20

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.8	99.8	98	70-135	
o-Terphenyl	52.7	49.9	106	70-135	

Lab Batch #: 3001201

Sample: 537855-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 23:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 3001201

Sample: 537855-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 23:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

* 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 / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001190

Sample: 537855-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 23:45

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	105	99.6	105	70-135	
o-Terphenyl	57.3	49.8	115	70-135	

Lab Batch #: 3001190

Sample: 537855-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 00:10

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	64.6	49.9	129	70-135	

Lab Batch #: 3001201

Sample: 537855-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 00:33

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 3001190

Sample: 537855-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 00:35

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	103	99.7	103	70-135	
o-Terphenyl	56.2	49.9	113	70-135	

Lab Batch #: 3001201

Sample: 537855-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 00:50

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001190

Sample: 537855-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 01:01

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.6	101	70-135	
o-Terphenyl	54.5	49.8	109	70-135	

Lab Batch #: 3001201

Sample: 537855-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 01:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 3001201

Sample: 537855-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 01:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 3001201

Sample: 537855-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 01:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene <10/03/2016 13:05>	0.0323	0.0300	108	80-120	

Lab Batch #: 3001201

Sample: 537855-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 01:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001201

Sample: 537855-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 02:10

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 3001201

Sample: 537855-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 02:26

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	80-120	

Lab Batch #: 3001201

Sample: 714470-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/16 13:05

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 3001190

Sample: 714461-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/16 15:34

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	61.6	50.0	123	70-135	

Lab Batch #: 3001201

Sample: 714470-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/16 03:38

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001190

Sample: 714461-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/16 16:03

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	56.6	50.0	113	70-135	

Lab Batch #: 3001201

Sample: 714470-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/16 12:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 3001190

Sample: 714461-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/16 16:33

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	56.4	50.0	113	70-135	

Lab Batch #: 3001190

Sample: 537855-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 17:34

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.9	110	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 3001201

Sample: 537855-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 02:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0359	0.0300	120	80-120	

* 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 / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries
Project Name: Devon Parkway West SWD #1

Work Orders : 537855,

Project ID: 700794.202.01

Lab Batch #: 3001190

Sample: 537855-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/16 18:06

SURROGATE RECOVERY STUDY					
TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	106	99.8	106	70-135	
o-Terphenyl	50.6	49.9	101	70-135	

Lab Batch #: 3001201

Sample: 537855-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/16 03:15

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



BS / BSD Recoveries



Project Name: Devon Parkway West SWD #1

Work Order #: 537855

Analyst: PJB

Lab Batch ID: 3001201

Units: mg/kg

Date Prepared: 09/29/2016

Batch #: 1

Sample: 714470-1-BKS

Project ID: 700794.202.01

Date Analyzed: 09/30/2016

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
BTEX by EPA 8021B		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
Analytes												
Benzene		<0.00150	0.100	0.0968	97	0.100	0.101	101	4	70-130	35	
Toluene		<0.00200	0.100	0.0994	99	0.100	0.102	102	3	70-130	35	
Ethylbenzene		<0.00200	0.100	0.100	100	0.100	0.105	105	5	71-129	35	
m,p-Xylenes		<0.00200	0.200	0.209	105	0.200	0.216	108	3	70-135	35	
o-Xylene		<0.00300	0.100	0.102	102	0.100	0.105	105	3	71-133	35	

Analyst: MNR

Lab Batch ID: 3001551

Units: mg/kg

Date Prepared: 10/06/2016

Batch #: 1

Sample: 714636-1-BKS

Date Analyzed: 10/06/2016

Matrix: Solid

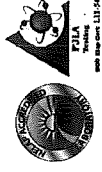
BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg												
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analytes												
Chloride	<5.00	250	270	108	250	270	108	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: Devon Parkway West SWD #1



Work Order #: 537855

Analyst: ARM

Lab Batch ID: 3001190

Units: mg/kg

Date Prepared: 09/30/2016

Batch #: 1

Sample: 714461-1-BKS

Project ID: 700794.202.01

Date Analyzed: 09/30/2016

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
TPH by SW 8015B		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
Analytes												
C6-C10 Gasoline Range Hydrocarbons		<15.0	1000	891	89	1000	924	92	4	70-135	35	
C10-C28 Diesel Range Hydrocarbons		<15.0	1000	950	95	1000	915	92	4	70-135	35	

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



Form 3 - MS / MSD Recoveries

Project Name: Devon Parkway West SWD #1



Work Order #: 537855

Lab Batch ID: 3001201

Date Analyzed: 10/01/2016

Reporting Units: mg/kg

Project ID: 700794.202.01

QC- Sample ID: 537855-006 S Batch #: 1 Matrix: Soil

Date Prepared: 09/30/2016 Analyst: PJB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00149	0.0992	0.0798	80	0.0994	0.0881	89	10	70-130	35	
Toluene	<0.00198	0.0992	0.0769	78	0.0994	0.0875	88	13	70-130	35	
Ethylbenzene	<0.00198	0.0992	0.0798	80	0.0994	0.0868	87	8	71-129	35	
m,p-Xylenes	<0.00198	0.198	0.168	85	0.199	0.178	89	6	70-135	35	
o-Xylene	<0.00298	0.0992	0.0867	87	0.0994	0.0886	89	2	71-133	35	

QC- Sample ID: 537855-001 S Batch #: 1 Matrix: Soil

Date Prepared: 10/06/2016 Analyst: MNR

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	10100	5000	15100	100	5000	15400	106	2	90-110	20	

Lab Batch ID: 3001551

Date Analyzed: 10/06/2016

Reporting Units: mg/kg

QC- Sample ID: 537855-011 S

Date Prepared: 10/06/2016 Analyst: MNR

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	1230	2500	3690	98	2500	3740	100	1	90-110	20	

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

ND = Not Detected, I = 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.

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



Form 3 - MS / MSD Recoveries
Project Name: Devon Parkway West SWD #1



Work Order #: 537855

Lab Batch ID: 3001190

Date Analyzed: 09/30/2016

Reporting Units: mg/kg

Project ID: 700794.202.01

QC- Sample ID: 537855-001 S Batch #: 1 Matrix: Soil

Date Prepared: 09/30/2016 Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B 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
C6-C10 Gasoline Range Hydrocarbons		<15.0	999	815	82	998	783	78	4	70-135	35	
C10-C28 Diesel Range Hydrocarbons		<15.0	999	821	82	998	825	83	0	70-135	35	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times [(C-F)/(C+F)]$

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.

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



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Service Center - San Antonio, Texas (210-508-8334)

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Olesea, Texas (432-583-1800)

Notcross, Georgia (770-449-8800)

Lakeland, Florida (888-646-8526)
Tampa, Florida (813-820-2000)

Xencon Quote #

Xencon Job #

557865

Client / Reporting Information

Company Name / Branch

Talton/LPE

Company Address:

1103 W. Texas Artesia Hwy, Ste 200
Kerrville, TX 78644

Email:

Karlson@taltonlpe.com
575-602-3826

Project Contact:

Kimberly Wilson

Sample Name:

Kim Wilson

Project Information

Project Name/Number:

700794, 202.01

Project Location:

Devon Parkway West, Ste 200 #1

Invoice To:

Talton LPE

PO Number:

Analytical Information

Matrix Codes

A = Air
S = Solid/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW = Waste Water
W = Wipe
O = Oil
WW = Waste Water

Field Comments

Chlorides
TPH
BTEX

Field ID / Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long

of

HC1

NaOH/Zn

Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field ID

Point of Collection

Sample

Depth

Date

Time

Lat/Long



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CHAIN OF CUSTODY

Page 2 of 2

Dallas, Texas (432-563-1800)

Notcross, Georgia (770-449-8800)

Lakeland, Florida (888-646-5525)

Tampa, Florida (813-420-2000)

Xenon Quote #

Xenon Job #

557855

Client / Reporting Information

Company Name / Branch: Talton / LPE

Company Address:

408 W TEXAS HIGHWAY 190

Deven Parkway West SWOT

Chlorides

TPH

BTEX

Matrix Codes

Waste Water

Project Contact:

Kim Wilson

Project Name/Number:

700794, 202.01

Invoice To:

Talton / LPE

PO Number:

700794, 202.01

Sample Name:

Kim Wilson

Field ID / Point of Collection

No. Field ID / Point of Collection

Sample Depth

Date Time Mark

of bottles

HCl

NaOH/Zn Acetate

HNO3

H2SO4

NaOH

NaHSO4

MEOH

NONE

Notes

Field Comments

Temp: IR ID: R: 8
C/F: 0 4.4°C
Corrected Temp: 0

No.	Field ID / Point of Collection	Sample Depth	Date Time Mark	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Notes	Field Comments
1	S-3	3'	9/26/09 9:45	3	1	1	1	1	1	1	1	1		
2	S-4	0'	9/26/09 9:53	3	1	1	1	1	1	1	1	1		
3	S-4	1'	9/26/09 9:56	3	1	1	1	1	1	1	1	1		
4	S-4	2'	9/26/09 9:59	3	1	1	1	1	1	1	1	1		
5	S-4	3'	10/03/09 3:1	3	1	1	1	1	1	1	1	1		
6	S-4	4'	10/05/09 4:1	3	1	1	1	1	1	1	1	1		
7														
8														
9														
10														

TAT Starts Day received by Lab, if received by 3:00 pm	
☐ Same Day TAT	☐ 5 Day TAT
☐ Next Day EMERGENCY	☐ 7 Day TAT
☐ 2 Day EMERGENCY	☐ Contract TAT
☐ 3 Day EMERGENCY	☐ TRAP Checklist

SAMPLE CUSTODY MUST BE DOCUMENTED BEFORE EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY	
Relinquished By: <u>Kim Wilson</u>	Received By: <u>Kim Wilson</u>
Date Time: <u>9/28/09 12:09</u>	Date Time: <u>9/28/09 12:09</u>
Relinquished By: <u>Kim Wilson</u>	Received By: <u>Kim Wilson</u>
Date Time: <u>9/28/09 12:09</u>	Date Time: <u>9/28/09 12:09</u>
Relinquished By: <u>Kim Wilson</u>	Received By: <u>Kim Wilson</u>
Date Time: <u>9/28/09 12:09</u>	Date Time: <u>9/28/09 12:09</u>
Relinquished By: <u>Kim Wilson</u>	Received By: <u>Kim Wilson</u>
Date Time: <u>9/28/09 12:09</u>	Date Time: <u>9/28/09 12:09</u>

FED-EX / UPS Tracking #	
Temp: IR ID: R: 8 C/F: 0 4.4°C Corrected Temp: 0	On line



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: Talon LPE

Date/ Time Received: 09/30/2016 10:05:00 AM

Work Order #: 537855

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	Yes
#5 *Custody Seals intact on shipping container/ cooler?	Yes
#6 Custody Seals intact on sample bottles?	Yes
#7 *Custody Seals Signed and dated?	Yes
#8 *Chain of Custody present?	Yes TAT not filled out, I put 5 Day TAT
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer

Date: 09/30/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 09/30/2016

Analytical Report 538790

**for
Talon LPE**

Project Manager: Kimberly Wilson

Parkway West SWD 1

700794.202.01

18-OCT-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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MS / MSD Recoveries	10
Chain of Custody	11
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18-OCT-16

Project Manager: **Kimberly Wilson**
Talon LPE
408 W. Texas St.
Artesia, NM 88210

Reference: XENCO Report No(s): **538790**
Parkway West SWD 1
Project Address:

Kimberly Wilson:

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) 538790. 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. 538790 will be filed for 60 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,

Kelsey Brooks
Project Manager

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 538790



Talon LPE, Artesia, NM

Parkway West SWD 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-2	S	10-13-16 00:00	3	538790-001
S-2	S	10-13-16 00:00	4	538790-002
S-2	S	10-13-16 00:00	5	538790-003
S-3	S	10-13-16 00:00	4	538790-004
S-3	S	10-13-16 00:00	5	538790-005
S-3	S	10-13-16 00:00	6	538790-006
S-4	S	10-13-16 00:00	5	538790-007
S-4	S	10-13-16 00:00	6	538790-008
S-4	S	10-13-16 00:00	7	538790-009



CASE NARRATIVE



Client Name: Talon LPE

Project Name: Parkway West SWD 1

Project ID: 700794.202.01
Work Order Number(s): 538790

Report Date: 18-OCT-16
Date Received: 10/15/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 538790

Talon LPE, Artesia, NM

Project Name: Parkway West SWD 1



Project Id: 700794.202.01
Contact: Kimberly Wilson
Project Location:

Date Received in Lab: Sat Oct-15-16 01:30 pm
Report Date: 18-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	538790-001	538790-002	538790-003	538790-004	538790-005	538790-006
	Field Id:	S-2	S-2	S-2	S-3	S-3	S-3
	Depth:	3-	4-	5-	4-	5-	6-
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Oct-13-16 00:00	Oct-13-16 00:00	Oct-13-16 00:00	Oct-13-16 00:00	Oct-13-16 00:00	Oct-13-16 00:00
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-17-16 13:40	Oct-17-16 13:40	Oct-17-16 13:40	Oct-17-16 13:40	Oct-17-16 13:40	Oct-17-16 13:40
	Analyzed:	Oct-17-16 13:40	Oct-17-16 17:21	Oct-17-16 17:42	Oct-17-16 14:15	Oct-17-16 17:49	Oct-17-16 17:56
	Units/RL:	mg/kg RL 50.0	mg/kg RL 5.00	mg/kg RL 5.00	mg/kg RL 450	mg/kg RL 132	mg/kg RL 112
Chloride		626	71.6	90.6	50.0	5.00	5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 538790
Talon LPE, Artesia, NM
Project Name: Parkway West SWD 1



Project Id: 700794.202.01
Contact: Kimberly Wilson
Project Location:

Date Received in Lab: Sat Oct-15-16 01:30 pm
Report Date: 18-OCT-16
Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	538790-007	538790-008	538790-009		
	<i>Field Id:</i>	S-4	S-4	S-4		
	<i>Depth:</i>	5-	6-	7-		
	<i>Matrix:</i>	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-13-16 00:00	Oct-13-16 00:00	Oct-13-16 00:00		
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Oct-17-16 13:40	Oct-17-16 13:40	Oct-17-16 13:40		
	<i>Analyzed:</i>	Oct-17-16 14:50	Oct-17-16 14:57	Oct-17-16 15:04		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		238	216	360	25.0	25.0

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Kelsey Brooks

Kelsey Brooks
Project Manager



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.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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(602) 437-0330	



BS / BSD Recoveries
Project Name: Parkway West SWD 1



Work Order #: 538790

Analyst: MNR

Lab Batch ID: 3002187

Units: mg/kg

Date Prepared: 10/17/2016
Batch #: 1

Sample: 715039-1-BKS

Project ID: 700794.202.01

Date Analyzed: 10/17/2016

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Inorganic Anions by EPA 300/300.1		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
Analytes												
Chloride		<5.00	250	237	95	250	239	96	1	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



Form 3 - MS / MSD Recoveries

Project Name: Parkway West SWD 1



Work Order #: 538790

Lab Batch ID: 3002187

Date Analyzed: 10/17/2016

Reporting Units: mg/kg

Project ID: 700794.202.01

QC- Sample ID: 538790-001 S Batch #: 1 Matrix: Soil

Date Prepared: 10/17/2016 Analyst: MNR

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	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
Analytes											
Chloride	626	2500	2930	92	2500	2930	92	0	90-110	20	

Lab Batch ID: 3002187

Date Analyzed: 10/17/2016

Reporting Units: mg/kg

QC- Sample ID: 538806-002 S Batch #: 1 Matrix: Soil

Date Prepared: 10/17/2016 Analyst: MNR

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	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
Analytes											
Chloride	279	250	511	93	250	513	94	0	90-110	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

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.

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

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Odessa, Texas (409-363-1500)	Lakeand, Florida (866-646-8526)
Northcross, Georgia (770-449-8800)	Tampa, Florida (813-620-2000)
Kenico Quota #	Kenico Job #
	088796

Final 1.000



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: Talon LPE

Date/ Time Received: 10/15/2016 01:30:00 PM

Work Order #: 538790

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	7.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	Yes
#5 *Custody Seals intact on shipping container/ cooler?	Yes
#6 Custody Seals intact on sample bottles?	Yes
#7 *Custody Seals Signed and dated?	Yes
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer

Date: 10/17/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 10/17/2016