2017 Annual Groundwater Monitoring Report

DCP Plant to Lea Station 6-Inch Section 31 Plains SRS Number: 2009-084 Lea County, New Mexico

> March 27, 2018 Terracon Project No. AR187004 NMOCD Reference No. 1R-2166



Prepared for: Plains Marketing, LP Midland, Texas

Prepared by: Terracon Consultants, Inc. Lubbock, Texas



Terracon

March 27, 2018

Plains Marketing, L.P. 577 US Highway 385 North Seminole, Texas 79360 Attn: Ms. Camille Bryant

Telephone: (575) 441-1099

Re: 2017 Annual Groundwater Monitoring Report DCP Plant to Lea Station 6-Inch Section 31 U/L "K", Sec. 31, T20S, R37E Lea County, New Mexico NMOCD Reference No. 1R – 2166 Plains Marketing, L.P. SRS N0. 2009-084 Terracon Project No. AR187004

Dear Ms. Bryant:

Terracon is pleased to submit one electronic copy and one CD attached to the cover page of the 2017 Annual Groundwater Monitoring Report for the above-referenced site.

We appreciate the opportunity to perform these services for Plains Marketing, L.P. (Plains). Please contact either of the undersigned at (806) 300-0140 if you have questions regarding the information provided in the report.

Sincerely,

Prepared by:

Brett Dennis Field Scientist Lubbock

Reviewed by:

Ekin Loyd, P.G. Senior Associate Office Manager – Lubbock

Terracon Consultants Inc. 5827 50th Street, Suite 1 Lubbock, Texas 79424 P 806-300-0140 terracon.com/lubbock

Facilities

Geotechnical

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	FIELD ACTIVITIES	5
3.0	LABORATORY ANALYTICAL METHODS	6
4.0	DATA EVALUATION	6
5.0	SUMMARY	7
6.0	ANTICIPATED ACTIONS	8
7.0	DISTRIBUTION	9

LIST OF APPENDICES

Appendix A:	Figure 1 – Site Location Map
	Figure 2a – Groundwater Gradient Map (1Q2017)
	Figure 2b – Groundwater Gradient Map (2Q2017)
	Figure 2c – Groundwater Gradient Map (3Q2017)
	Figure 2d – Groundwater Gradient Map (4Q2017)
	Figure 3a – Groundwater Concentration Map (1Q2017)
	Figure 3b – Groundwater Concentration Map (2Q2017)
	Figure 3c – Groundwater Concentration Map (3Q2017)
	Figure 3d – Groundwater Concentration Map (4Q2017)
Appendix B:	Table 1 – Groundwater Elevation and PSH Thickness Data Table 2 – Groundwater Analytical Summary – BTEX
Appendix C:	Laboratory Data Sheets
Appendix D:	Table 3 – Historical Quarterly Groundwater Elevation and PSH Thickness Data Table 4 – Historical Groundwater Analytical Summary – BTEX Table 5 – Historical Groundwater Analytical Summary – PAHs
Appendix E:	CD of the 2017 Annual Groundwater Monitoring Report



2017 ANNUAL GROUNDWATER MONITORING REPORT

DCP Plant to Lea Station 6-Inch Section 31 Plains SRS No: 2009-084 Unit Letter "K", Section 31, Township 20 South, Range 37 East Lea County, New Mexico NMOCD Reference No. 1R – 2166 Terracon Project No. AR187004

1.0 INTRODUCTION

1.1 Site Description

The legal description of the DCP Plant to Lea Station 6-Inch Section 31 release site is Unit Letter "K" (NE/SW), Section 31, Township 20 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by The State of New Mexico and administered by the New Mexico State Land Office (NMSLO). The geographic coordinates of the release site are 32.52733° North latitude and 103.29060° West longitude. A "Site Location Map" is provided as Figure 1 in Appendix A.

Site Name	DCP Plant to Lea Station 6-Inch Section 31					
Site Location	Latitude 32.52733° North, Longitude 103.29060° West					
General Site Description	The site consists of six groundwater monitoring wells located in, and adjacent to, a pipeline right-of-way surrounded by native pasture land.					
Landowner	State of New Mexico					

1.2 Background Information

Based on information provided by the client, on April 2, 2009, Plains discovered a crude oil release from a six-inch steel pipeline. During initial response activities, Plains installed a temporary clamp on the pipeline to mitigate the release. The crude oil release resulted in a surface stain measuring approximately 6 feet (ft.) in width by 8 ft. in length. Plains initially classified the release as "non-reportable". Upon further investigation, Plains reclassified the release to "reportable" status and notified the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office and submitted a *Release Notification and Corrective Action* (Form C-141) on April 29, 2009. The cause of the release was attributed to external corrosion of the pipeline. The C-141 indicated approximately 20 barrels (bbls) of crude oil was released from the pipeline, with no recovery.

On April 15, 2009, soil boring (SB-1) was advanced approximately 10 ft. west of the release point to evaluate the vertical extent of soil impact. During advancement of the soil boring, groundwater



DCP Plant to Lea Station 6-Inch Section 31 Lea County, New Mexico March 27, 2018 Terracon Project Number AR187004

was encountered at approximately 77 ft. below ground surface (bgs). Temporary casing was installed in the boring to obtain a preliminary groundwater sample. On April 16, 2009, a groundwater sample (SB-1) was collected from the temporary casing and submitted to the laboratory for analysis of total dissolved solids (TDS), chlorides, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Following the collection of the groundwater sample, the temporary casing was removed from the soil boring and the soil boring was plugged with cement and bentonite, as required by the New Mexico Office of the State Engineer (NMOSE). Laboratory analytical results indicated a benzene concentration of 1.915 milligrams per liter (mg/L), a BTEX concentration of 4.7711 mg/L, a chloride concentration of 54.6 mg/L, and a TDS concentration of 788 mg/L. Based on the analytical results of the submitted groundwater sample, Plains notified NMOCD representatives in the Hobbs District Office and the Santa Fe Office of the laboratory confirmed impact to groundwater at the release site.

On June 2, 2009, following advancement of the soil boring, excavation of hydrocarbon-impacted soil commenced. Excavated soil was stockpiled on-site on a plastic liner to mitigate the potential leaching of the contaminants into the vadose zone. Approximately 1,400 cubic yards (cy) of soil was stockpiled on-site, pending final disposition. The final dimensions of the excavation were approximately 77 ft. in width, approximately 80 ft. in length, and 15 ft. in depth.

On September 21 through September 23, 2009, Plains installed and developed four monitor wells (MW-1 through MW-4) at the release site, as approved by the NMOCD. Soil samples were collected at 5-foot drilling intervals and field screened using a photo-ionization detector (PID). Selected soil samples were submitted to the laboratory for determination of concentrations of BTEX and total petroleum hydrocarbons (TPH) using EPA Methods SW-846 8021b and SW-846 8015M, respectively.

Monitor well MW-1 was installed on the floor of the excavation, at approximately 15 ft. bgs, to a total depth of approximately 86 ft. bgs. Soil samples collected at 25 ft. bgs, 35 ft. feet bgs, 45 ft. bgs, 55 ft. bgs, 65 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory method detection limit (MDL) for all of the submitted soil samples. BTEX concentrations ranged from 0.0359 milligrams per kilogram (mg/kg) for the soil sample collected at 25 ft. bgs to 13.444 mg/kg for the soil sample collected at 25 ft. bgs to 1,538 mg/kg for the soil sample collected at 55 ft. bgs.

Monitor well MW-2 is located approximately 75 ft. northwest (up-gradient) of the release point. The monitor well was installed to a total depth of approximately 90 ft. bgs. Soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, 60 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.



DCP Plant to Lea Station 6-Inch Section 31 Lea County, New Mexico March 27, 2018 Terracon Project Number AR187004

Monitor well MW-3 is located approximately 75 ft. to the southwest (cross-gradient) of the release point. The monitor well was installed to a total depth of approximately 90 ft. bgs. Soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, and 60 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, and 60 ft. bgs to 0.0025 mg/Kg for the soil sample collected at 60 ft. bgs. Analytical results indicated BTEX concentrations ranged from less than the appropriate laboratory MDL for the soil sample collected at 60 ft. bgs. TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

Monitor well MW-4 is located approximately 75 ft. to the southeast (down-gradient) of the release point. The monitor well was installed to a total depth of approximately 89 ft. bgs. Soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, and 60 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

On January 25, 2011, monitoring well MW-5 was installed to further monitor the down-gradient migration of the PSH plume. Monitor well MW-5 is located approximately 60 ft. to the southeast (down-gradient) of the release point. The monitor well was installed to a total depth of approximately 95 ft. bgs. Soil samples collected at 15 ft. bgs, 25 ft. bgs, 45 ft. bgs, 65 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. PSH was not observed in monitor well MW-5.

On September 11, 2013, monitoring well MW-6 was installed to further monitor the down-gradient migration of the PSH plume. Monitor well MW-6 is located approximately 95 ft. to the east (cross-gradient) of the release point. The monitor well was installed to a total depth of approximately 100 ft. bgs. Soil samples collected at 5 ft. bgs, 40 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. PSH was not observed in monitor well MW-6.

On October 18, 2016, Terracon assumed oversight of groundwater monitoring activities at the DCP Plant to Lea Station 6-Inch Section 31 release site. There are a total of six monitor wells located at the site. Monitor wells MW-2 through MW-6 are gauged and sampled on a quarterly schedule; monitor well MW-1 is not sampled due to the presence of PSH.



DCP Plant to Lea Station 6-Inch Section 31 Lea County, New Mexico March 27, 2018 Terracon Project Number AR187004

1.3 Scope of Work

Terracon's scope of work includes oversight of groundwater monitoring activities and preparation of an *Annual Groundwater Monitoring Report* in accordance with the NMOCD letter, dated May 1998, requiring submittal of and *Annual Groundwater Monitoring* Report by April 1st of each year. Groundwater monitoring activities include conducting quarterly groundwater monitoring events at the site. Quarterly groundwater monitoring events include measuring the static water levels in the monitor wells, checking for the presence of PSH, and the collection of groundwater samples from each of the on-site monitor wells not exhibiting a measurable thickness of PSH. In accordance with the approved scope of work, Terracon conducted the quarterly groundwater monitoring events on March 8, June 27, September 21, and November 14, 2017.

1.4 Standard of Care

Activities conducted prior to Terracon assuming oversight of the project (beginning on October 18, 2016) were performed by previous consultants hired by Plains. As such, Terracon makes no assumptions or warranties regarding the previous consultants services being performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report.

1.5 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this remediation activities. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.



DCP Plant to Lea Station 6-Inch Section 31 Lea County, New Mexico March 27, 2018 Terracon Project Number AR187004

1.6 Reliance

This report has been prepared for the exclusive use of Plains Marketing, L. P., and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Plains Marketing, L.P. and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in this report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

2.0 FIELD ACTIVITIES

2.1 Product Recovery

An estimated 40.50 gallons (0.9 bbls) of PSH were recovered from monitor well MW-1, by manual recovery, in 2017. During the 2nd (quarterly) 2017 groundwater monitoring event, the PSH thickness in MW-1 measured 2.37 feet. An estimated 5,750 gallons (137 bbls) of PSH has been manually recovered from MW-1 since recovery operations began in 2009.

In September 2012, a Mobile Dual-Phase Extraction (MDPE) unit was installed on monitor well MW-1 by Talon LPE. The MDPE unit was shared with the nearby release site known as DCP Plant to Lea Station 6-Inch #2 (NMOCD Reference #1RP-2136), and the location of the unit was alternated periodically until a Soil Vapor Extraction (SVE) unit was placed on the previously mentioned site on July 19, 2017. During the 2017 reporting period, an estimated 1,835 gallons (43.6 bbls) of PSH in the vapor phase and an estimated 252 gallons (6 bbls) of PSH in the liquid phase were recovered by the MDPE unit, for a total of an estimated 2,087 equivalent gallons (49.6 bbls) of PSH. To date, an estimated 12,426 equivalent gallons (295.8 bbls) of PSH has been recovered from monitor well MW-1 by MDPE. Recovered fluids are disposed of at an NMOCD-approved disposal facility.

2.2 Groundwater Monitoring

Quarterly groundwater monitoring events were conducted on March 8 (1Q2017), June 27 (2Q2017), September 21 (3Q2017) and November 14, 2017 (4Q2017). Quarterly groundwater monitoring events included measuring the static water level in the on-site monitor wells, checking for the presence of PSH, and the collection of groundwater samples from each of the on-site monitor wells not exhibiting a measurable thickness of PSH. Groundwater samples were collected utilizing low flow sampling equipment, including a bladder pump and multi-parameter meter. Prior to sample collection, readings on the multi-parameter meter were recorded for four cycles of five minutes each. Each collected sample was placed in laboratory-supplied containers appropriate to the analyses requested and placed on ice in a cooler. The sample coolers and completed



DCP Plant to Lea Station 6-Inch Section 31 Lea County, New Mexico March 27, 2018 Terracon Project Number AR187004

chain-of-custody forms were delivered to Xenco Laboratories in Lubbock, Texas for analysis of BTEX using EPA SW-846 Method 8021B. Purged water was placed into a polystyrene aboveground storage tank (AST) and disposed of at an NMOCD-approved disposal facility.

Based on sampling criteria provided by the NMOCD, groundwater samples collected from the onsite monitor wells were not subject to analysis of polynuclear aromatic hydrocarbons (PAHs).

Groundwater elevation gauging data collected during the respective quarterly sampling events were used to construct groundwater gradient maps, which are included as Figures 2a through 2d in Appendix A. Groundwater flow direction was relatively consistent during each quarter of 2017 in the southeasterly direction. Groundwater elevation and PSH thickness data is summarized in Table 1 in Appendix B.

3.0 LABORATORY ANALYTICAL METHODS

The groundwater samples collected from the on-site monitor wells were analyzed for BTEX using EPA SW-846 Method 8021B. Laboratory results from the analysis of groundwater samples collected from the monitor wells are summarized in Table 2 in Appendix B and presented on Figures 3a through 3d in Appendix A. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix C.

4.0 DATA EVALUATION

4.1 Groundwater Samples

Laboratory analytical results from groundwater samples collected on March 8 (1Q2017), June 27 (2Q2017), September 21 (3Q2017) and November 14, 2017 (4Q2017) were compared to NMOCD regulatory standards based on New Mexico Water Quality Control Commission (NMWQCC) groundwater standards found in Section 20.6.2.3103 of the New Mexico Administrative Code (NMAC).

Monitor Well MW-1

Monitor well MW-1 was not sampled during the 2017 reporting period due to the presence of PSH. PSH thicknesses of 1.52 ft and 2.37 ft were observed during the 1st Quarter and 2nd Quarter, respectively. Monitor well MW-1 was not gauged during the 3rd and 4th Quarters due to the presence of a mobile dual-phase extraction (MDPE) unit on the well.

Monitor Wells MW-2, MW-3, MW-4, and MW-6

Laboratory analytical results indicated BTEX concentrations were less than the applicable laboratory sample detection limit during each quarter of the 2017 reporting period.



DCP Plant to Lea Station 6-Inch Section 31 Lea County, New Mexico March 27, 2018 Terracon Project Number AR187004

Monitor Well MW-5

- Laboratory analytical results indicated benzene and toluene concentrations were less than NMOCD regulatory standards during the 2nd Quarter of 2017. Ethylbenzene and total xylene concentrations were less than the applicable laboratory sample detection limit.
- Laboratory analytical results indicated BTEX concentrations were less than the applicable laboratory sample detection limit during the 1st Quarter, 3rd Quarter, and 4th Quarter of the 2017 reporting period

5.0 SUMMARY

- Currently, there are six groundwater monitor wells (MW-1 through MW-6) located at the site.
- MW-1 was not sampled during the 2017 reporting period due to the presence of PSH.
- Monitor wells MW-2 through MW-6 were sampled during each quarter of 2017.
- Benzene, toluene, ethylbenzene and total xylene concentrations were less than the NMOCD regulatory standards in each of the submitted groundwater samples.
- The PSH thickness in monitor well MW-1 was 2.37 ft during the 2nd quarterly groundwater monitoring event conducted during the 2017 reporting period.
- An estimated 40.5 gallons (0.9 bbls) of PSH were recovered manually from monitor well MW-1 during the 2017 reporting period.
- An estimated 1,835 gallons (43.6 bbls) of PSH were recovered in the vapor phase and an estimated 252 gallons (6 bbls) of PSH in the liquid phase from monitor well MW-1 during the 2017 reporting period.
- The groundwater flow direction was relatively consistent during each quarter of 2017 in the southeasterly direction.

6.0 ANTICIPATED ACTIONS

- PSH recovery by MDPE will continue on monitor well MW-1 during the 2018 reporting period.
- Monitor wells MW-2 through MW-6 will be monitored and sampled quarterly for the presence of BTEX in 2018.
- An Annual Groundwater Monitoring Report will be prepared detailing field activities and the results of groundwater monitoring activities conducted during the 2017 reporting period.

Plains Marketing, L.P. DCP Plant to Lea Station 6-Inch Section 31 Lea County, New Mexico March 27, 2018 Terracon Project Number AR187004



7.0 **DISTRIBUTION**

- Copy 1: Bradford Billings, Hydrologist New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505
- Copy 2: Ms. Olivia Yu New Mexico Oil Conservation Division District 1 1625 N. French Drive Hobbs, New Mexico 88240
- Copy 3: Ms. Camille Bryant Plains Marketing, L.P. 577 US Highway 385 North Seminole, Texas 79360 cjbryant@paalp.com
- Copy 4: Mr. Jeff Dann Plains Marketing, L.P. 333 Clay Street, Suite 1600 Houston, Texas 77002 jpdann@paalp.com
- Copy 5: Mr. Kris Williams Terracon Consultants 5827 50th Street, Suite 1 Lubbock, Texas 79424 <u>kris.williams@terracon.com</u>

APPENDIX A

Figure 1– Site Location Map Figure 2a – Groundwater Gradient Map (1Q2017) Figure 2b – Groundwater Gradient Map (2Q2017) Figure 2c – Groundwater Gradient Map (3Q2017) Figure 2d – Groundwater Gradient Map (4Q2017) Figure 3a – Groundwater Concentration Map (1Q2017) Figure 3b – Groundwater Concentration Map (3Q2017) Figure 3c – Groundwater Concentration Map (3Q2017) Figure 3d – Groundwater Concentration Map (4Q2017)



















APPENDIX B

Table 1 – Groundwater Elevation and PSH Thickness Data Table 2 – Groundwater Analytical Summary - BTEX

TABLE 1

GROUNDWATER ELEVATION DATA DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 **TERRACON PROJECT #: AR187004**

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
	-	3,539.59	-	-	-	-
	-	3,539.59	-	-	-	-
	-	3,539.59	-	-	-	-
MW-1	12/22/2016	3,539.59	83.05	86.01	2.96	3,456.10
10100-1	03/01/2017	3,539.59	83.39	84.91	1.52	3,455.97
	06/27/2017	3,539.59	83.28	85.65	2.37	3,455.95
	09/21/2017	3,539.59	-	-	-	-*
	11/14/2017	3,539.59	-	-	-	-*
	02/10/2016	3,539.37	-	83.10	-	3,456.27
	05/03/2016	3,539.37	-	83.10	-	3,456.27
	08/04/2016	3,539.37	-	83.08	-	3,456.29
MW-2	12/22/2016	3,539.37	-	83.21	-	3,456.16
10100-2	03/01/2017	3,539.37	-	83.17	-	3,456.20
	06/27/2017	3,539.37	-	83.28	-	3,456.09
	09/21/2017	3,539.37	-	83.16	-	3,456.21
	11/14/2017	3,539.37	-	83.31	-	3,456.06
	02/10/2016	3,539.28	-	83.48	-	3,455.80
	05/03/2016	3,539.28	-	83.45	-	3,455.83
	08/04/2016	3,539.28	-	83.44	-	3,455.84
	12/22/2016	3,539.28	-	83.51	-	3,455.77
MW-3	03/01/2017	3,539.28	-	83.49	-	3,455.79
	06/27/2017	3,539.28	-	83.61	-	3,455.67
	09/21/2017	3,539.28	-	83.51	-	3,455.77
	11/14/2017	3,539.28	-	83.62	-	3,455.66
	02/10/2016	3,540.07	-	84.50	-	3,455.57
	05/03/2016	3,540.07	-	84.47	-	3,455.60
	08/04/2016	3,540.07	-	84.48	-	3,455.59
	12/22/2016	3,540.07	-	84.54	-	3,455.53
MW-4	03/01/2017	3,540.07	-	84.53	-	3,455.54
	06/27/2017	3.540.07	-	84.63	-	3,455,44
	09/21/2017	3,540.07	-	84.54	-	3,455.53
	11/14/2017	3,540.07	-	84.71	-	3,455.36
						-,
	02/10/2016	3,539.90	-	84.14	_	3,455.76
	05/03/2016	3,539.90	-	84.10	-	3,455.80
	08/04/2016	3,539.90	_	84.12	-	3,455.78
	12/22/2016	3,539.90	-	84.18	_	3,455.72
MW-5	03/01/2017	3.539.90	-	84.16	-	3.455.74
	06/27/2017	3,539.90	-	84.28	_	3,455.62
	09/21/2017	3,539.90	-	84.16	-	3,455.74
	11/14/2017	3,539.90	-	85.40	-	3,454.50
		0,000.00		00.10		0,101.00
	02/10/2016	3540.82	-	85.00	-	3,455.82
	05/03/2016	3540.82	-	84.96	-	3,455.86
	08/04/2016	3540.82	-	85.03		3,455.79
	12/22/2016	3540.82	-	85.05		3,455.77
MW-6	03/01/2017	3540.82		85.06		3,455.76
	06/27/2017	3540.82	-	85.14	-	3,455.68
	09/21/2017		-	85.04	-	
	08/21/2017	3540.82	-	00.04	-	3,455.78
	11/14/2017	3540.82		85.23		3,455.59

- = Not applicable -* = Not gauged due to presence of MDPE unit. Elevations based on the North American Vertical Datum of 1988

TABLE 2

GROUNDWATER ANALYTICAL SUMMARY - BTEX DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 TERRACON PROJECT #: AR187004

	METHODS: EPA SW 846-8260b										
SAMPLE	SAMPLE	BENZENE	TOLUENE	ETHYL-	M,P-	0-	TOTAL	TOTAL			
LOCATION	DATE			BENZENE	XYLENES	XYLENES	XYLENES	BTEX			
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)			
	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020			
	05/03/2016	<0.00200	<0.00200	<0.00200	< 0.00200	<0.00200	<0.00200	<0.00200			
	08/04/2016	<0.00200	<0.00200	<0.00200	< 0.00200	<0.00200	<0.00200	<0.00200			
MW-2	12/22/2016	< 0.00100	<0.00100	<0.00100	< 0.00200	<0.00100	< 0.00200	<0.00200			
10100-2	03/08/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
	06/27/2017	<0.00200	<0.00150	<0.00200	< 0.00200	<0.00200	<0.00200	<0.00200			
	09/21/2017	<0.00200	<0.00150	<0.00200	< 0.00200	<0.00200	<0.00200	<0.00200			
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
		-			-		-				
	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020			
	05/03/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
	08/04/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
MW-3	12/22/2016	0.00110	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	0.00110			
	03/08/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
	06/27/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
	09/21/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
		1									
	02/10/2016	0.0021	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0021			
	05/03/2016	0.00205	< 0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.00205			
	08/04/2016	< 0.00200	<0.00200	< 0.00200	< 0.00200	< 0.00200	<0.00200	< 0.00200			
MW-4	12/22/2016	< 0.00100	< 0.00100	<0.00100	< 0.00200	<0.00100	<0.00200	< 0.00200			
	03/08/2017	< 0.00200	< 0.00150	<0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200			
	06/27/2017	< 0.00200	< 0.00150	< 0.00200	< 0.00200	< 0.00200	<0.00200	< 0.00200			
	09/21/2017	< 0.00200	< 0.00150	< 0.00200	< 0.00200	< 0.00200	<0.00200	< 0.00200			
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020			
	02/10/2016 05/03/2016	<0.0010 <0.00200	<0.0020 <0.00200	< 0.0010	<0.0020	<0.0010 <0.00200	<0.0020	<0.0020			
	03/03/2010	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
	12/22/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
MW-5	03/08/2017	< 0.00100	<0.00100	< 0.00200	<0.00200	< 0.00200	<0.00200	<0.00200			
	06/27/2017	0.00200	0.00191	<0.00200	<0.00200	<0.00200	<0.00200	0.00509			
	09/21/2017	< 0.00200	< 0.00150	<0.00200	<0.00200	<0.00200	<0.00200	< 0.00200			
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200			
		0.00200	0.00100	0.00200	0.00200	0.00200	0.00200	0.00200			
	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020			
	05/03/2016	< 0.00200	<0.00200	< 0.00200	<0.00200	< 0.00200	< 0.00200	< 0.00200			
	08/04/2016	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200			
	12/22/2016	< 0.00100	< 0.00100	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00200			
MW-6	03/08/2017	< 0.00200	< 0.00150	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200			
	06/27/2017	< 0.00200	< 0.00150	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200			
	09/21/2017	< 0.00200	< 0.00150	< 0.00200	< 0.00200	< 0.00200	< 0.00200	<0.00200			
	11/14/2017	< 0.00200	< 0.00150	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200			
	•		•								
NMOCD CR	ITERIA	0.01	0.75	0.75	ΤΟΤΑ	L XYLENE	S 0.62				

APPENDIX C

Laboratory Data Sheets



Joel Lowry

Contact:

Project Location:

Certificate of Analysis Summary 548226

Terracon Lubbock, Lubbock, TX

Project Name: DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)



Date Received in Lab:Thu Mar-09-17 08:50 amReport Date:16-MAR-17Project Manager:Kelsey Brooks

	Lab Id:	548226-	001	548226-	002	548226-0	003	548226-	004	548226-0	005	
Analysis Requested	Field Id:	MW-2	2	MW-3	3	MW-4	+	MW-5	5	MW-6	5	
Analysis Kequestea	Depth:											
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	
	Sampled:	Mar-08-17	Mar-08-17 12:24		15:02	Mar-08-17	14:08	Mar-08-17	15:49	Mar-08-17	13:15	
BTEX by EPA 8021B	Extracted:	Mar-15-17	Mar-15-17 07:20		07:20	Mar-15-17 07:20		Mar-15-17 07:20		Mar-15-17 07:20		
	Analyzed:	Mar-15-17	Mar-15-17 18:12		20:06	Mar-15-17 18:28		Mar-15-17 20:54		Mar-15-17 18:44		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Benzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	
Toluene		< 0.00150	0.00150	< 0.00150	0.00150	< 0.00150	0.00150	< 0.00150	0.00150	< 0.00150	0.00150	
Ethylbenzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	
m,p-Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	
o-Xylene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	
Total Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	
Total BTEX		< 0.00150	0.00150	< 0.00150	0.00150	< 0.00150	0.00150	< 0.00150	0.00150	< 0.00150	0.00150	

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Huns Boah

Kelsey Brooks Project Manager

Analytical Report 548226

for Terracon Lubbock

Project Manager: Joel Lowry

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

AR 167322

16-MAR-17

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)



16-MAR-17





Project Manager: **Joel Lowry Terracon Lubbock** 5827 50th st, Suite 1 Lubbock, TX 79424

Reference: XENCO Report No(s): 548226 DCP Plant to Lea Station 6'' Sec. 31 (SRS#2009-084) Project Address:

Joel Lowry:

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) 548226. 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. 548226 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,

Huns hoah

Kelsey Brooks Project Manager

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Sample Cross Reference 548226



Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	03-08-17 12:24		548226-001
MW-3	W	03-08-17 15:02		548226-002
MW-4	W	03-08-17 14:08		548226-003
MW-5	W	03-08-17 15:49		548226-004
MW-6	W	03-08-17 13:15		548226-005



CASE NARRATIVE

Client Name: Terracon Lubbock Project Name: DCP Plant to Lea Station 6'' Sec. 31 (SRS#2009-084)

Project ID: AR 167322 Work Order Number(s): 548226
 Report Date:
 16-MAR-17

 Date Received:
 03/09/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 548226



1

Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

Sample Id: MW-2 Lab Sample Id: 548226-001	Matrix: Date Colle	Water ected: 03.08.17 12.24	Date Received:03.09.17 08.50				
Analytical Method: BTEX by EPA	A 8021B]	Prep Method: SW	5030B	
Tech: ALJ					% Moisture:		
Analyst: ALJ		Date Prep:	03.15.17 07.20				
Seq Number: 3012475							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Parameter Benzene	Cas Number 71-43-2		RL 0.00200	Units mg/L	Analysis Date 03.15.17 18.12	Flag U	Dil
		< 0.00200			•		Dil 1 1
Benzene	71-43-2	<0.00200 <0.00150	0.00200	mg/L	03.15.17 18.12	U	Dil 1 1 1 1 1
Benzene Toluene	71-43-2 108-88-3	<0.00200 <0.00150 <0.00200	0.00200 0.00150	mg/L mg/L	03.15.17 18.12 03.15.17 18.12	U U U	Dil 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Benzene Toluene Ethylbenzene	71-43-2 108-88-3 100-41-4	<0.00200 <0.00150 <0.00200 <0.00200	0.00200 0.00150 0.00200	mg/L mg/L mg/L	03.15.17 18.12 03.15.17 18.12 03.15.17 18.12	U U U U	Dil 1 1 1 1 1 1

Total BTEX	< 0.00150	<0.00150 0.00150			03.15.17 18.12	U
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	80-120	03.15.17 18.12	
4-Bromofluorobenzene	460-00-4	100	%	80-120	03.15.17 18.12	



o-Xylene

Total Xylenes

Total BTEX

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

Certificate of Analytical Results 548226



03.15.17 20.06

03.15.17 20.06

03.15.17 20.06

Analysis Date

03.15.17 20.06

03.15.17 20.06

mg/L

mg/L

mg/L

Limits

80-120

80-120

U

U

U

Flag

1

1

1

Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

Sample Id: MW Lab Sample Id: 5482		Matrix: Date Coll	Water ected: 03.08.17 15.02	Date Received:03.09.17 08.50				
Analytical Method: Tech: ALJ Analyst: ALJ Seq Number: 30124	BTEX by EPA 8021B 75	Date Prep	p: 03.15.17 07.20		Prep Method: SW % Moisture:	5030B		
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00200	0.00200	mg/L	03.15.17 20.06	U	1	
Toluene	108-88-3	< 0.00150	0.00150	mg/L	03.15.17 20.06	U	1	
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/L	03.15.17 20.06	U	1	
m,p-Xylenes	179601-23-1	< 0.00200	0.00200	mg/L	03.15.17 20.06	U	1	

0.00200

0.00200

0.00150

%

Recovery

96

101

Units

%

%

< 0.00200

< 0.00200

< 0.00150

Cas Number

540-36-3

460-00-4

95-47-6

1330-20-7

Page 7 of 14



Certificate of Analytical Results 548226



Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

Sample Id:MW-4Lab Sample Id:548226-003	Matrix: Date Collec	Water cted: 03.08.17 14.08	Date Received:03.09.17 08.50				
Analytical Method:BTEX by EPA 8Tech:ALJAnalyst:ALJSeq Number:3012475	021B	Date Prep:	03.15.17 07.20		Prep Method: SW	5030B	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200 (0.00200	mg/L	03.15.17 18.28	U	1
Toluene	108-88-3	< 0.00150 (0.00150	mg/L	03.15.17 18.28	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/L	03.15.17 18.28	U	1

m,p-Xylenes	179601-23-1	< 0.00200	0.00200		mg/L	03.15.17 18.28	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/L	03.15.17 18.28	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/L	03.15.17 18.28	U	1
Total BTEX		< 0.00150	0.00150		mg/L	03.15.17 18.28	U	1
S			%	T T . •4	T • • • • •			
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	117	%	80-120	03.15.17 18.28		
4-Bromofluorobenzene		460-00-4	95	%	80-120	03.15.17 18.28		



o-Xylene

Total Xylenes

Total BTEX

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

Certificate of Analytical Results 548226



03.15.17 20.54

03.15.17 20.54

03.15.17 20.54

Analysis Date

03.15.17 20.54

03.15.17 20.54

mg/L

mg/L

mg/L

Limits

80-120

80-120

U

U

U

Flag

1

1

1

Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

Sample Id: Lab Sample Id	MW-5 d: 548226-004		Matrix: Date Col	Water lected: 03.08.17 15.49		Date Received:03.0	09.17 08.5	50
Analytical Me Tech: Analyst: Seq Number:	ethod: BTEX by EPA 8 ALJ ALJ 3012475	021B	Date Prep	o: 03.15.17 07.20		Prep Method: SW % Moisture:	5030B	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene		71-43-2	< 0.00200	0.00200	mg/L	03.15.17 20.54	U	1
Toluene		108-88-3	< 0.00150	0.00150	mg/L	03.15.17 20.54	U	1
Ethylbenzene		100-41-4	< 0.00200	0.00200	mg/L	03.15.17 20.54	U	1
m,p-Xylenes		179601-23-1	< 0.00200	0.00200	mg/L	03.15.17 20.54	U	1

0.00200

0.00200

0.00150

%

Recovery

110

120

Units

%

%

< 0.00200

< 0.00200

< 0.00150

Cas Number

540-36-3

460-00-4

95-47-6

1330-20-7

Page 9 of 14



Certificate of Analytical Results 548226



03.15.17 18.44

03.15.17 18.44

03.15.17 18.44

Analysis Date

03.15.17 18.44

03.15.17 18.44

mg/L

mg/L

mg/L

Limits

80-120

80-120

U

U

U

Flag

1

1

1

Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

Sample Id: MW-6 Lab Sample Id: 548226-005		Matrix: Date Coll	Water lected: 03.08.17 13.15		Date Received:03.0	09.17 08.5	50
Analytical Method: BTEX by EPA Tech: ALJ Analyst: ALJ Seq Number: 3012475	8021B	Date Prep	o: 03.15.17 07.20		Prep Method: SW % Moisture:	5030B	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200	mg/L	03.15.17 18.44	U	1
Toluene	108-88-3	< 0.00150	0.00150	mg/L	03.15.17 18.44	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/L	03.15.17 18.44	U	1
m,p-Xylenes	179601-23-1	< 0.00200	0.00200	mg/L	03.15.17 18.44	U	1

0.00200

0.00200

0.00150

%

Recovery

112

104

Units

%

%

< 0.00200

< 0.00200

< 0.00150

Cas Number

540-36-3

460-00-4

95-47-6

1330-20-7

o-Xylene

Total Xylenes

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

Total BTEX

Page 10 of 14



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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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	


Terracon Lubbock

DCP Plant to Lea Station 6" Sec. 31 (SRS#2009-084)

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3012475 721564-1-BLK	1B		Matrix: nple Id:	Water 721564-1-	-BKS			rep Meth Date Pr D Sample	ep: 03.1	5030B 5.17 564-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0859	86	0.0890	89	70-125	4	25	mg/L	03.15.17 06:58	
Toluene	< 0.00150	0.100	0.0958	96	0.0930	93	70-125	3	25	mg/L	03.15.17 06:58	
Ethylbenzene	< 0.00200	0.100	0.0910	91	0.0932	93	71-129	2	25	mg/L	03.15.17 06:58	
m,p-Xylenes	< 0.00200	0.200	0.178	89	0.181	91	70-131	2	25	mg/L	03.15.17 06:58	
o-Xylene	< 0.00200	0.100	0.0967	97	0.0938	94	71-133	3	25	mg/L	03.15.17 06:58	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Ree			imits	Units	Analysis Date	
1,4-Difluorobenzene	100		ç	95		119		80)-120	%	03.15.17 06:58	
4-Bromofluorobenzene	87		ç	90		99		80)-120	%	03.15.17 06:58	

Analytical Method:	BTEX by EPA 8021	lB						Pi	rep Meth	od: SW3	5030B	
Seq Number:	3012475			Matrix:	Water				Date Pr	ep: 03.1	5.17	
Parent Sample Id:	548227-005		MS San	nple Id:	548227-00	05 S		MS	D Sample	e Id: 5482	227-005 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0917	92	0.0921	92	70-125	0	25	mg/L	03.15.17 08:04	
Toluene	< 0.00150	0.100	0.0990	99	0.101	101	70-125	2	25	mg/L	03.15.17 08:04	
Ethylbenzene	< 0.00200	0.100	0.0992	99	0.101	101	71-129	2	25	mg/L	03.15.17 08:04	
m,p-Xylenes	< 0.00200	0.200	0.194	97	0.196	98	70-131	1	25	mg/L	03.15.17 08:04	
o-Xylene	< 0.00200	0.100	0.102	102	0.103	103	71-133	1	25	mg/L	03.15.17 08:04	
Surrogate				1S Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
1,4-Difluorobenzene			ç	96		108		80	0-120	%	03.15.17 08:04	
4-Bromofluorobenzene			1	04		105		80	0-120	%	03.15.17 08:04	

CENCIPICATION Address: 1111 West Florida Ave. Midland, TX 79701 REQUESTER Midland, TX 79701 ext Nanager: Joel Jowry piper's Name: Froject Name Project Name (432) 563-1800 (SG 8t) (4				Laboratory:	ory: Xenco Laboratories	ratories	ANALYSIS	CHAIN OF CUSTODY RECORD	STODY REC
Interference Midland, TX 79701 Interference Midland, TX 79701 Interference Midland, TX 79701 Interference Martinez Project Name Martinez Project Name Milan Martinez Project Name Milan Martinez Project Name Milan Martinez Project Name DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084) Mo. Type of Containers 1002 X MW-2 MW-4 MW-4 1102 X MW-3 Identifying Marks of Sample(s) But to Deepth 1102 X MW-4 Identifying Marks of Sample(s) But to Deepth 1102 X MW-4 Identifying Marks of Sample(s) But to Deepth 1103 X MW-5 Identifying Marks of Sample(s) BTEX (EPA Method 80218) 1104 X MW-6 X MW-6 X MW-6 X MW-6 1113 X MW-6 X MW-6 X MW-6 X MW-6 1135 X MW-6 X MW-6 X MW-6 X M X M 1135 X MW-6 X MW-6 X M X M X M X M 1136 X MW-6 X M X M X M X M X M 1137 Hattinez Market Katte Katte X M X M X M<]		Florida Ave.	REQUESTED		
Introduction Project Name (432) 563-1800 Contact: Julian Martinez Project Name Time No. Type of Containers Project Name Time No. Type of Containers Project Name Time No. Type of Containers Time No. Type of Containers <th></th> <th>ſ</th> <th></th> <th></th> <th></th> <th>79701</th> <th></th> <th></th> <th></th>		ſ				79701			
Project Name Project Name Contact: ulian Martinez r Project Name DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084) Nn. Type of Containers r DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084) Nn. Type of Containers r DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084) Nn. Type of Containers r Statute Nn. Type of Containers r MMV-2 Nn. Type of Containers r MMV-3 Statute r NMW-4 Statute r NMW-5 Statute r NMW-6 Statute r NMW-6 Statute r N N <t< td=""><td>Office Location</td><td></td><td></td><td>Phone:</td><td>(432) 563-1</td><td>800</td><td></td><td></td><td></td></t<>	Office Location			Phone:	(432) 563-1	800			
Ampler's Signature Signature Signature Not Project Name Comp rab Identifying Marks of Sample(s) Signature Not With 2	Project Manag		<	Contact PO/SO		nez			_
ble Thrash Project Name Project Name No. Type of Containers AR167322 DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084) No. Type of Containers Date Time OP G Identifying Marks of Sample(s) Identifying Marks of Sample(s) 03/08/17 1322 X MW-2 Identifying Marks of Sample(s) Ist to beptine 03/08/17 1323 X MW-4 Identifying Marks of Sample(s) Ist to beptine 03/08/17 1348 X MW-5 Ist to beptine X Ist to beptine 03/08/17 1348 X MW-4 Ist to beptine X Ist to beptine 03/08/17 1348 X MW-5 Ist to beptine X Ist to beptine 03/08/17 1349 X MW-6 Ist to beptine X Ist to beptine 03/08/17 1345 X MW-6 Ist to beptine X Ist to beptine 03/08/17 1345 X MW-6 Ist to beptine X Ist to beptine 0	Sampler's Nan			Sample	's Signature	X	218)		
ect Number Project Name No. Type of Containers Date Time Rp didentifying Marks of Sample(s) Depth Vol 03/08/17 1302 X MW-2 X MW-3 Depth End of the marks Sample(s) Depth Marks Sample(s) Sample(s) <t< td=""><td>Kimble Thrash</td><td></td><td>2</td><td>-</td><td></td><td></td><td>d 80</td><td></td><td></td></t<>	Kimble Thrash		2	-			d 80		
AR167322 DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084) Date Time Mp Identifying Marks of Sample(s) Depth 03/08/17 1324 X MW-2 Depth Depth 03/08/17 1302 X MW-3 Depth Depth 03/08/17 1302 X MW-4 Depth New-3 03/08/17 1315 X MW-4 X X X 03/08/17 1315 X MW-4 X	roject Numbe	er	_	Project Name		No. Type of Containe			
Date Time mp Identifying Marks of Sample(S) start Depth 03/08/17 1224 X MW-2 Start Depth Start Depth 03/08/17 1502 X MW-2 Start Depth Start Depth 03/08/17 1502 X MW-4 Start Depth Start Depth 03/08/17 1599 X MW-4 Start Depth Start Depth 03/08/17 1315 X MW-4 Start Depth Start Depth 03/08/17 1315 X MW-6 Start Depth Start Depth 03/08/17 Start Depth	AR1	167322		DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009		A	-		
03/08/17 122.4 X MW-2 X X X X X 03/08/17 1502 X MW-3 X X X X X 03/08/17 1502 X MW-4 X X X X X 03/08/17 1549 X MW-5 X X X X X X 03/08/17 1315 X MW-6 X X X X X X X X 03/08/17 1315 X MW-6 X		Comp		Identifying Marks of Sample(s)		40 ml VC	BTEX (EPA		
03/08/17 1502 X MW-3 X X X X 03/08/17 1408 X MW-4 X X X 03/08/17 1549 X MW-5 X X X X 03/08/17 1549 X MW-6 X X X X X 03/08/17 1549 X MW-5 X X X X X X 03/08/17 1549 X MW-5 X		1224	1000	MW-2		×	ω		
03/08/17 1408 X MW-4 03/08/17 1549 X MW-5 X 03/08/17 1315 X MW-5 X 03/08/17 1315 X MW-6 X X 03/08/17 1315 X MW-6 X X X 03/08/17 1315 X MW-6 X X X X 03/08/17 1315 X MW-6 X X X X X 03/08/17 1315 X MW-6 X <td></td> <td>1502</td> <td></td> <td>MW-3</td> <td></td> <td>×</td> <td>3</td> <td></td> <td></td>		1502		MW-3		×	3		
03/08/17 1549 X MW-5 X MW-6 X I 3 03/08/17 1315 X MW-6 X X X X X X 03/08/17 1315 X MW-6 X X X X X X X 03/08/17 1315 X MW-6 X		1408		MW-4		x	3		
03/08/17 1315 X MW-6 X 3 03/08/17 1315 X MW-6 Image: Status and Statu	GW 03/08/17	1549		MW-5		x	3		
WW Watered 1- Ligdd Concol text		1315	-	MW-6		×	3		
MARQUND TIME Mormal 48-Hour Rush 24-Hour Rush TRP Laboratory Review Checklist ushed by (signature) 0an 7 7 7 7 ushed by (signature) 0an 3 7 1 7 7 ushed by (signature) 0an 3 7 1 7 0 ushed by (signature) 0an 3 7 1 7 0 ushed by (signature) 0an 3 7 1 0 1 0 ushed by (signature) 0an 3 7 1 0 1 0 0 ushed by (signature) 0an 3 7 1 0 1 0 0 ushed by (signature) 0an 3 7 1 0 1 0 0 ushed by (signature) 0an 1 1 0 1 0 0 1 1 ushed by (signature) 0an 1 1 1 0 1 0 0 ushed by (signature) 0an 1 1 1 1 0 0 1 0 ushed by (signature) 0an 1 1 1 0 <td< td=""><td></td><td></td><td></td><td>*******END OF</td><td>**</td><td></td><td></td><td></td><td></td></td<>				*******END OF	**				
MAROUND TIME Mormal 48-Hour Rush 24-Hour Rush TRRP Laboratory Review Checklist ushed by (signature) Bar 3 7 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Number by (Signature) 3 1 Nov Annual developed by (Signature) 3/9 1/1 0000 annual developed by (Signature) Date: Time: Received by (Signature) Date: Time: Received by (Signature) Date: Time: Nov Air No	TURNAROUND T	IME ure)	Le	Date 48-Hour Rush 24-Hc	ire)	Laboratory Review	Time:		NOTES:
uished by (Signature) Date: I Time: Received by (Signature) Date:	Relinghished by (Signatu	Line hu	6	17 17 0819	ion Nor	T 3	0000 TI		IOTES:
WW-Wastewater W-Water S-Soil L-Liquid A-Air Dag C- Charcoal tube SL-Sludge	Relinquished by (Signatu	lor tin	Cr	1-17 3:50 (Signature)	AC 39	17 BSO Time:		
	Matrix W		v - Wate	S - Soil	C - Charcoal tube	SL - Sludge			
				Lubbock Office = 5827 5	5827 50th Street LL	Lubbock. Texas 79424		806-300-0140	

Responsive
Resourceful
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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Terracon Lubbock Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 03/09/2017 08:50:00 AM Temperature Measuring device used : R8 Work Order #: 548226 Comments Sample Receipt Checklist 1.5 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seal present on shipping container/ cooler? N/A #5 *Custody Seals intact on shipping container/ cooler? N/A N/A #6 Custody Seals intact on sample bottles? #7 *Custody Seals Signed and dated? N/A #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 relinguished/ 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? Yes #22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for Yes samples for the analysis of HEM or HEM-SGT which are verified by the analysts. #23 >10 for all samples preserved with NaAsO2+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 WAMER Jessica Kramer Checklist reviewed by: Kelsey Brooks

Date: 03/09/2017

Date: 03/09/2017



Project Id:AR167322Contact:Joel Lowry

Project Location:

Certificate of Analysis Summary 556429

Terracon Lubbock, Lubbock, TX

Project Name: DCP Plant to Lea Station 6" Section 31

Date Received in Lab:Tue Jun-27-17 04:25 pmReport Date:03-JUL-17Project Manager:Kelsey Brooks

	Lab Id:	556429-0	001	556429-	002	556429-0	003	556429-	004	556429-0	005	
Analysis Requested	Field Id:	MW-2	2	MW-	3	MW-4	ŀ	MW-	5	MW-6	5	
Analysis Kequesieu	Depth:											
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	
	Sampled:	Jun-27-17	11:15	Jun-27-17	12:15	Jun-27-17	11:16	Jun-27-17	12:31	Jun-27-17	11:24	
BTEX by EPA 8021B	Extracted:	Jul-01-17	13:00	Jul-01-17	13:00	Jul-01-17 1	3:00	Jul-01-17	13:00	Jul-01-17	13:00	
	Analyzed:	Jul-02-17 (05:30	Jul-02-17	05:57	Jul-02-17 (06:24	Jul-02-17	07:45	Jul-02-17 (08:12	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Benzene		< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	0.00318	0.00106	< 0.00106	0.00106	
Toluene		< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	0.00191	0.00106	< 0.00106	0.00106	
Ethylbenzene		< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	
m,p-Xylenes		< 0.00212	0.00212	< 0.00212	0.00212	< 0.00212	0.00212	< 0.00212	0.00212	< 0.00212	0.00212	
o-Xylene		< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	
Total Xylenes		< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	
Total BTEX		< 0.00106	0.00106	< 0.00106	0.00106	< 0.00106	0.00106	0.00509	0.00106	< 0.00106	0.00106	

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Huns Boah

Kelsey Brooks Project Manager

Final 1.000

Analytical Report 556429

for Terracon Lubbock

Project Manager: Joel Lowry DCP Plant to Lea Station 6'' Section 31 AR167322

03-JUL-17

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

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)



03-JUL-17

Project Manager: **Joel Lowry Terracon Lubbock** 5827 50th st, Suite 1 Lubbock, TX 79424

Reference: XENCO Report No(s): **556429 DCP Plant to Lea Station 6'' Section 31** Project Address:

Joel Lowry:

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) 556429. 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. 556429 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,

Huns hoah

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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 556429

Terracon Lubbock, Lubbock, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	06-27-17 11:15		556429-001
MW-3	W	06-27-17 12:15		556429-002
MW-4	W	06-27-17 11:16		556429-003
MW-5	W	06-27-17 12:31		556429-004
MW-6	W	06-27-17 11:24		556429-005



CASE NARRATIVE

Client Name: Terracon Lubbock Project Name: DCP Plant to Lea Station 6'' Section 31

Project ID: AR167322 Work Order Number(s): 556429
 Report Date:
 03-JUL-17

 Date Received:
 06/27/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Terracon Lubbock, Lubbock, TX

Sample Id: Lab Sample I	MW-2 d: 556429-001		Matrix: Date Collecte	Water d: 06.27.17 11.15]	Date Received:06.2	27.17 16.2	5
Tech:	ethod: BTEX by EPA 802 MIT	21B		07.01.17.12.00		Prep Method: SW % Moisture:	5030B	
Analyst: Seq Number:	MIT 3021365		Date Prep:	07.01.17 13.00				Dil
Seq Number: Parameter	3021365	Cas Number	Result F	RL .	Units	Analysis Date	Flag	

r al alletel	Cas Nulliber	Kesuit	KL		Units	Analysis Date	riag	DII
Benzene	71-43-2	< 0.00106	0.00106		mg/L	07.02.17 05.30	U	1.06
Toluene	108-88-3	< 0.00106	0.00106		mg/L	07.02.17 05.30	U	1.06
Ethylbenzene	100-41-4	< 0.00106	0.00106		mg/L	07.02.17 05.30	U	1.06
m,p-Xylenes	179601-23-1	< 0.00212	0.00212		mg/L	07.02.17 05.30	U	1.06
o-Xylene	95-47-6	< 0.00106	0.00106		mg/L	07.02.17 05.30	U	1.06
Total Xylenes	1330-20-7	< 0.00106	0.00106		mg/L	07.02.17 05.30	U	1.06
Total BTEX		< 0.00106	0.00106		mg/L	07.02.17 05.30	U	1.06
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
a,a,a-Trifluorotoluene		98-08-8	99	%	66-120	07.02.17 05.30		
4-Bromofluorobenzene		460-00-4	94	%	67-120	07.02.17 05.30		



Terracon Lubbock, Lubbock, TX

Sample Id: MW-3 Lab Sample Id: 556429-002	Matrix: Water Date Collected: 06.27.17 12.15	Date Received:06.27.17 16.25
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MIT		% Moisture:
Analyst: MIT	Date Prep: 07.01.17 13.00	
Seq Number: 3021365		

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00106	0.00106		mg/L	07.02.17 05.57	U	1.06
Toluene	108-88-3	< 0.00106	0.00106		mg/L	07.02.17 05.57	U	1.06
Ethylbenzene	100-41-4	< 0.00106	0.00106		mg/L	07.02.17 05.57	U	1.06
m,p-Xylenes	179601-23-1	< 0.00212	0.00212		mg/L	07.02.17 05.57	U	1.06
o-Xylene	95-47-6	< 0.00106	0.00106		mg/L	07.02.17 05.57	U	1.06
Total Xylenes	1330-20-7	< 0.00106	0.00106		mg/L	07.02.17 05.57	U	1.06
Total BTEX		< 0.00106	0.00106		mg/L	07.02.17 05.57	U	1.06
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
a,a,a-Trifluorotoluene		98-08-8	96	%	66-120	07.02.17 05.57		
4-Bromofluorobenzene		460-00-4	94	%	67-120	07.02.17 05.57		



Terracon Lubbock, Lubbock, TX

Sample Id: MW-4 Lab Sample Id: 556429-003		Matrix: Date Collecte	Water ed: 06.27.17 11.16]	Date Received:06.2	27.17 16.25	5
Analytical Method: BTEX by EPA 80 Tech: MIT Analyst: MIT Seq Number: 3021365)21B	Date Prep:	07.01.17 13.00		Prep Method: SW % Moisture:	5030B	
Parameter	Cas Number	Result 1	RL	Units	Analysis Date	Flag	Dil

1 41 4110001	cub i (unio)		ILL I		Onto	Thatysis Date	Thes	Di
Benzene	71-43-2	< 0.00106	0.00106		mg/L	07.02.17 06.24	U	1.06
Toluene	108-88-3	< 0.00106	0.00106		mg/L	07.02.17 06.24	U	1.06
Ethylbenzene	100-41-4	< 0.00106	0.00106		mg/L	07.02.17 06.24	U	1.06
m,p-Xylenes	179601-23-1	< 0.00212	0.00212		mg/L	07.02.17 06.24	U	1.06
o-Xylene	95-47-6	< 0.00106	0.00106		mg/L	07.02.17 06.24	U	1.06
Total Xylenes	1330-20-7	< 0.00106	0.00106		mg/L	07.02.17 06.24	U	1.06
Total BTEX		< 0.00106	0.00106		mg/L	07.02.17 06.24	U	1.06
			%	T T 1 /	. ,			
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
a,a,a-Trifluorotoluene		98-08-8	95	%	66-120	07.02.17 06.24		
4-Bromofluorobenzene		460-00-4	96	%	67-120	07.02.17 06.24		



Terracon Lubbock, Lubbock, TX

Sample Id: MW-5 Lab Sample Id: 556429-0	04	Matrix: Date Collecte	Water ed: 06.27.17 12.31	Date Received:06.27.17 16.25
Analytical Method: BTE Tech: MIT Analyst: MIT Seq Number: 3021365	X by EPA 8021B	Date Prep:	07.01.17 13.00	Prep Method: SW5030B % Moisture:
Parameter	Cas Number	Result I	DT	Units Analysis Data Flag Dil

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00318	0.00106		mg/L	07.02.17 07.45		1.06
Toluene	108-88-3	0.00191	0.00106		mg/L	07.02.17 07.45		1.06
Ethylbenzene	100-41-4	< 0.00106	0.00106		mg/L	07.02.17 07.45	U	1.06
m,p-Xylenes	179601-23-1	< 0.00212	0.00212		mg/L	07.02.17 07.45	U	1.06
o-Xylene	95-47-6	< 0.00106	0.00106		mg/L	07.02.17 07.45	U	1.06
Total Xylenes	1330-20-7	< 0.00106	0.00106		mg/L	07.02.17 07.45	U	1.06
Total BTEX		0.00509	0.00106		mg/L	07.02.17 07.45		1.06
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
a,a,a-Trifluorotoluene		98-08-8	95	%	66-120	07.02.17 07.45		
4-Bromofluorobenzene		460-00-4	97	%	67-120	07.02.17 07.45		



Terracon Lubbock, Lubbock, TX

Sample Id: MW-6 Lab Sample Id: 556429-005		Matrix: Date Collecte	Water ed: 06.27.17 11.24	D	ate Received:06.2	7.17 16.25	
Analytical Method:BTEX by EPA 80Tech:MITAnalyst:MITSeq Number:3021365	21B	Date Prep:	07.01.17 13.00		rep Method: SW5 Moisture:	5030B	
Parameter	Cas Number	Result I	RL	Units	Analysis Date	Flag	Dil

						v	0	
Benzene	71-43-2	< 0.00106	0.00106		mg/L	07.02.17 08.12	U	1.06
Toluene	108-88-3	< 0.00106	0.00106		mg/L	07.02.17 08.12	U	1.06
Ethylbenzene	100-41-4	< 0.00106	0.00106		mg/L	07.02.17 08.12	U	1.06
m,p-Xylenes	179601-23-1	< 0.00212	0.00212		mg/L	07.02.17 08.12	U	1.06
o-Xylene	95-47-6	< 0.00106	0.00106		mg/L	07.02.17 08.12	U	1.06
Total Xylenes	1330-20-7	< 0.00106	0.00106		mg/L	07.02.17 08.12	U	1.06
Total BTEX		< 0.00106	0.00106		mg/L	07.02.17 08.12	U	1.06
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
a,a,a-Trifluorotoluene		98-08-8	101	%	66-120	07.02.17 08.12		
4-Bromofluorobenzene		460-00-4	97	%	67-120	07.02.17 08.12		



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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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



Terracon Lubbock

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3021365 727101-1-BLK	1B	LCS Sar	Matrix: nple Id:	Water 727101-1	-BKS			rep Meth Date Pr D Sample	ep: 07.0	5030B 1.17 101-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00106	0.106	0.105	99	0.103	97	74-120	2	20	mg/L	07.01.17 23:13	
Toluene	< 0.00106	0.106	0.106	100	0.106	100	74-120	0	20	mg/L	07.01.17 23:13	
Ethylbenzene	< 0.00106	0.106	0.100	94	0.103	97	74-120	3	20	mg/L	07.01.17 23:13	
m,p-Xylenes	< 0.00212	0.212	0.202	95	0.209	99	73-120	3	25	mg/L	07.01.17 23:13	
o-Xylene	< 0.00106	0.106	0.101	95	0.105	99	73-120	4	25	mg/L	07.01.17 23:13	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			imits	Units	Analysis Date	
a,a,a-Trifluorotoluene	99		1	02		101		66	5-120	%	07.01.17 23:13	
4-Bromofluorobenzene	103		ç	97		98		67	7-120	%	07.01.17 23:13	

Analytical Method:	: BTEX by EPA 8021B Prep Method: SW5030B											
Seq Number:	3021365			Matrix:	atrix: Water				Date Prep: 07.01.17			
Parent Sample Id:	556741-004		MS San	nple Id:	556741-00)4 S		MS	D Sample	e Id: 556	741-004 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00106	0.106	0.107	101	0.110	104	15-147	3	25	mg/L	07.02.17 01:27	
Toluene	< 0.00106	0.106	0.109	103	0.112	106	11-147	3	25	mg/L	07.02.17 01:27	
Ethylbenzene	< 0.00106	0.106	0.106	100	0.109	103	10-149	3	25	mg/L	07.02.17 01:27	
m,p-Xylenes	< 0.00212	0.212	0.214	101	0.221	104	62-124	3	25	mg/L	07.02.17 01:27	
o-Xylene	< 0.00106	0.106	0.107	101	0.112	106	62-124	5	25	mg/L	07.02.17 01:27	
Surrogate				1S Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
a,a,a-Trifluorotoluene			ç	€7		99		66	5-120	%	07.02.17 01:27	
4-Bromofluorobenzene			1	00		101		67	7-120	%	07.02.17 01:27	

			CHAIN OF CUSTODY RECORD	ECORD
LPHOICC.	Laboratory:)	Xenco Laboratories	ANALYSIS	LAB USE ONLY DUIF DATE:
	Address:	1211 W. Florida Ave. Midland, TX 79701 432-563-1800	REQUESTED	TEMP OF COOLER WHEN RECEIVED (°C) NB 3/2.2
	Phone:			Darra 1 of 1
		Joel Lowry		1
Project Manager Joel Lowry		SRS 2009-084	(81	
Sampler's Name Joel Lowry	Sampler's Sign	Signature	208 bor	
	Project Name		iteM A	
AKID/322 AKID/322 Date Time pp 200	Identifying Marks of Sample(s)	nt Depth Jog Dig DV Im O	TEX (EP.	Lab Sample ID
CC		E	8 >	001
GW 6/27/2017 11:15	MW-2) (007
GW 6/27/2017 12:15	MW-3	£ 1	×	200
	MW-4	3	×	
6/27/2017	MW-5	3	×	
6/27/2017	MW-6	e S	×	7
1 - 1 - 10				
		TDBD1ahoratory Review Checklist		
TURNAROUND TIME	48-Hour		NOTES:	Please Email Results to
Relinquished by (Signature)	25			erin.loyd@terracon.com inel.lowrv@terracon.com
Relifiquismed by (Signathre)	Date: Time: Received by (Signature)			cibryant@paapl.com
/ Relinquished by (Signature)	Date: Time: Received by (Signature)		1me:	
Relinquished by (Signature)	Date: Time: Received Manau	TO AL DI	G7:011 L1/1	
WW-Wastewater		C - Charcoal tube St - Sludge		
Container VOA · 40 ml vial A/G - Amber Glass 1L	250 ml = Glass wide mount	Tovac 1. 1. 1. 1.	24 = 806-300-0140	
	Lubbock Office = 5827 50th S	5827 50th Street = Lubbock, lexas / 3424		
	Kesponsive	Kesponsive E Kesourceiui E Neirang		

Page 13 of 14

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Terracon Lubbock	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 06/27/2017 04:25:00 PM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 556429	Temperature Measuring device used : IR-3
Sample Recei	pt Checklist Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	Νο
#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)?	No
#21 VOC samples have zero headspace?	Yes

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

Analyst:

PH Device/Lot#:

Date: 06/28/2017

 Checklist completed by:
 Brenda Ward

 Brenda Ward
 Brenda Ward

 Checklist reviewed by:
 Massessing

 Kelsey Brooks
 Kelsey Brooks

Date: 06/28/2017

Analytical Report 563581

for Terracon Lubbock

Project Manager: Kris Williams DCP Plant to Lea Station 6'' Section 31 AR167322

25-SEP-17

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

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)



Table of Contents

Cover Page	1
Cover Letter	3
Sample ID Cross Reference	4
Case Narrative	5
Certificate of Analysis (Detailed Report)	6
Explanation of Qualifiers (Flags)	9
SURR_QC_V62	10
LCS / LCSD Recoveries	11
MS / MSD Recoveries	12
Chain of Custody	13
Sample Receipt Conformance Report	14



25-SEP-17

Project Manager: **Kris Williams Terracon Lubbock** 5827 50th st, Suite 1 Lubbock, TX 79424

Reference: XENCO Report No(s): **563581 DCP Plant to Lea Station 6'' Section 31** Project Address:

Kris Williams:

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) 563581. 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. 563581 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,

Huns hoah

Kelsey Brooks Project Manager

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Sample Cross Reference 563581

Terracon Lubbock, Lubbock, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	09-21-17 14:25		563581-001
MW-3	W	09-21-17 11:25		563581-002
MW-4	W	09-21-17 11:50		563581-003
MW-5	W	09-21-17 13:00		563581-004
MW-6	W	09-21-17 13:45		563581-005



CASE NARRATIVE

Client Name: Terracon Lubbock Project Name: DCP Plant to Lea Station 6'' Section 31

Project ID:AR167322Work Order Number(s):563581

Report Date:25-SEP-17Date Received:09/22/2017

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



Seq Number: 3028531

Certificate of Analytical Results 563581

Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Section 31

Sample Id: MW-2		Matrix:	Water		Sample	Depth:		
Lab Sample Id: 563581-001		Date Collecte	d: 09.21.17 1	4.25	Date R	eceived: 09.22.	17 09.3	34
Analytical Method: BTEX by EPA 8021B					Prep M	lethod: 5030B		
Analyst: MIT		% Moist:			Tech:	MIT		
Seq Number: 3028531		Date Prep: 09	.22.17 11.30					
		Prep seq: 73	1379					
Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	< 0.000480	0.00100	0.000480	mg/L	09.22.17 21:21	U	1
Toluene	108-88-3	< 0.000512	0.00100	0.000512	mg/L	09.22.17 21:21	U	1

Toluene	108-88-3	< 0.000512	0.00100	0.000512	mg/L	09.22.17 21:2	1 U	1
Ethylbenzene	100-41-4	< 0.000616	0.00100	0.000616	mg/L	09.22.17 21:2	1 U	1
m,p-Xylenes	179601-23-1	< 0.000454	0.00200	0.000454	mg/L	09.22.17 21:2	1 U	1
o-Xylene	95-47-6	< 0.000270	0.00100	0.000270	mg/L	09.22.17 21:2	1 U	1
Total Xylenes	1330-20-7	< 0.000270		0.000270	mg/L	09.22.17 21:2	1 U	
Total BTEX		< 0.000270		0.000270	mg/L	09.22.17 21:2	1 U	
Surrogate		% Recovery		Limits	Un	its Analys	sis Date	Flag
a,a,a-Trifluorotoluene		92		66 - 1	20 %	,)		
4-Bromofluorobenzene		94		67 - 1	20 %	Ď		
Sample Id: MW-3		Matrix:	Water		Sample	e Depth:		
Lab Sample Id: 563581-002		Date Collecte	ed: 09.21.17 1	1.25	Date R	eceived: 09.2	2.17 09.3	4
Analytical Method: BTEX by EF	PA 8021B				Prep M	lethod: 5030	B	
Analyst: MIT		% Moist:			Tech:	MIT		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	< 0.000480	0.00100	0.000480	mg/L	09.22.17 21:47	U	1
Toluene	108-88-3	< 0.000512	0.00100	0.000512	mg/L	09.22.17 21:47	U	1
Ethylbenzene	100-41-4	< 0.000616	0.00100	0.000616	mg/L	09.22.17 21:47	U	1
m,p-Xylenes	179601-23-1	< 0.000454	0.00200	0.000454	mg/L	09.22.17 21:47	U	1
o-Xylene	95-47-6	< 0.000270	0.00100	0.000270	mg/L	09.22.17 21:47	U	1
Total Xylenes	1330-20-7	< 0.000270		0.000270	mg/L	09.22.17 21:47	U	
Total BTEX		< 0.000270		0.000270	mg/L	09.22.17 21:47	U	
Surrogate		% Recovery		Limits	Uni	its Analysis	Date	Flag

Date Prep: 09.22.17 11.30

Prep seq: 731379

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	87	66 - 120	%		
4-Bromofluorobenzene	86	67 - 120	%		



Terracon Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Section 31

Sample Id: MW-4		Matrix:	Water		Sample	e Depth:		
Lab Sample Id: 563581-003		Date Collected: 09.21.17 11.50			Date Received: 09.22.17 09.34			
Analytical Method: BTEX by EPA 8021B					Prep M	lethod: 5030B		
Analyst: MIT		% Moist:			Tech:	MIT		
Seq Number: 3028531		Date Prep: 09	.22.17 11.30)				
		Prep seq: 73	1379					
Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	< 0.000480	0.00100	0.000480	mg/L	09.22.17 23:09	U	1
Toluene	108-88-3	< 0.000512	0.00100	0.000512	mg/L	09.22.17 23:09	U	1
Ethylbenzene	100-41-4	< 0.000616	0.00100	0.000616	mg/L	09.22.17 23:09	U	1

< 0.000454

< 0.000270

179601-23-1

95-47-6

Total Xylenes	1330-20-7	< 0.000270		0.000270	mg/L (09.22.17 23:09	U	
Total BTEX		< 0.000270		0.000270	U	09.22.17 23:09	U	
Surrogate		% Recovery		Limits	Units	Analysis D	ate Flag	
a,a,a-Trifluorotoluene		91		66 - 120) %			
4-Bromofluorobenzene		90		67 - 120) %			
Sample Id: MW-5		Matrix:	Water		Sample I)enth:		
Sumple Id. MIW-5		1,14411/1.	,, ator		Sumple L	opun.		

0.00200

0.00100

Lab Sample Id: 563581-004

4-Bromofluorobenzene

m,p-Xylenes

o-Xylene

Analytical Method: BTEX by EPA 8021B

Analyst:MIT% MoistSeq Number:3028531Date Pre

91		00 - 120	%	
90		67 - 120	%	
Matrix:	Water	Sa	mple Depth:	
Date Collected:	09.21.17 13.00	Da	te Received:	09.22.17
		Pr	ep Method:	5030B
% Moist:		Те	ch:	MIT
Date Prep: 09.22	2.17 11.30			

0.000454

0.000270

mg/L

mg/L

09.22.17 23:09

09.22.17 23:09

U

U

09.34

1

1

Prep seq: 731379

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	< 0.000480	0.00100	0.000480	mg/L	09.22.17 23:36	U	1
Toluene	108-88-3	< 0.000512	0.00100	0.000512	mg/L	09.22.17 23:36	U	1
Ethylbenzene	100-41-4	< 0.000616	0.00100	0.000616	mg/L	09.22.17 23:36	U	1
m,p-Xylenes	179601-23-1	< 0.000454	0.00200	0.000454	mg/L	09.22.17 23:36	U	1
o-Xylene	95-47-6	< 0.000270	0.00100	0.000270	mg/L	09.22.17 23:36	U	1
Total Xylenes	1330-20-7	< 0.000270		0.000270	mg/L	09.22.17 23:36	U	
Total BTEX		<0.000270		0.000270	mg/L	09.22.17 23:36	U	
Surrogate		% Recovery		Limits	Un	its Analysis	Date	Flag
a,a,a-Trifluorotoluene		93		66 -	120 %	, D		

95

%

67 - 120



Terracon Lubbock, Lubbock, TX

Sample Id:	MW-6		Matrix:	Water	Sample Depth:		
Lab Sample Id	1: 563581-005		Date Collected	: 09.21.17 13.45	Date Received	: 09.22.17 09.2	34
Analytical Me	thod: BTEX by EPA 8021B				Prep Method:	5030B	
Analyst:	MIT		% Moist:		Tech:	MIT	
Seq Number:	3028531		Date Prep: 09.2	22.17 11.30			
			Prep seq: 731	379			
		CAS			Ana	lysis	Dil I

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	< 0.000480	0.00100	0.000480	mg/L	09.23.17 00:03	U	1
Toluene	108-88-3	< 0.000512	0.00100	0.000512	mg/L	09.23.17 00:03	U	1
Ethylbenzene	100-41-4	< 0.000616	0.00100	0.000616	mg/L	09.23.17 00:03	U	1
m,p-Xylenes	179601-23-1	< 0.000454	0.00200	0.000454	mg/L	09.23.17 00:03	U	1
o-Xylene	95-47-6	< 0.000270	0.00100	0.000270	mg/L	09.23.17 00:03	U	1
Total Xylenes	1330-20-7	< 0.000270		0.000270	mg/L	09.23.17 00:03	U	
Total BTEX		<0.000270		0.000270	mg/L	09.23.17 00:03	U	
Surrogate		% Recovery		Limits	Un	its Analysis	Date	Flag

a,a,a-Trifluorotoluene	92	66 - 120	%
4-Bromofluorobenzene	95	67 - 120	%



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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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" Section 31

Vork Orders : 563581 Lab Batch #: 3028531	, Sample: 731379-1-BKS / B	KS Bate	-	D: AR167322 ::Water	2	
Units: mg/L	Date Analyzed: 09/22/17 13:39		RROGATE R		STUDY	
	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
a,a,a-Trifluorotoluene		0.0914	0.100	91	66-120	
4-Bromofluorobenzene		0.0874	0.100	87	67-120	
Lab Batch #: 3028531	Sample: 731379-1-BSD / B	SD Bate	h: ¹ Matrix	Water		
Units: mg/L	Date Analyzed: 09/22/17 14:35	SU	RROGATE R	ECOVERY S	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	Anarytes	0.0901	0.100	90	66-120	
4-Bromofluorobenzene		0.0872	0.100	87	67-120	
Lab Batch #: 3028531	Sample: 731379-1-BSD / B	SD Bate	h: 1 Matrix	:Water		
Units: mg/L	Date Analyzed: 09/22/17 15:56		RROGATE R		STUDY	
втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	•	0.0912	0.100	91	66-120	
4-Bromofluorobenzene		0.0888	0.100	89	67-120	
Lab Batch #: 3028531	Sample: 563393-001 S / M	S Bate	h: 1 Matrix	Water		
Units: mg/L	Date Analyzed: 09/22/17 17:17	SU	RROGATE R	ECOVERY S	STUDY	
втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
a,a,a-Trifluorotoluene		0.0920	0.100	92	66-120	
4-Bromofluorobenzene		0.0960	0.100	96	67-120	
Lab Batch #: 3028531	Sample: 563393-001 SD / N			Water		
Units: mg/L	Date Analyzed: 09/22/17 17:44	SU	RROGATE R	ECOVERY S	STUDY	
втех	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	1 11111 y U O	0.0944	0.100	94	66-120	

* 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: DCP Plant to Lea Station 6'' Section 31

Work Order	#: 563581							Proj	ject ID: 4	AR167322					
Analyst:	MIT	D	ate Prepar	red: 09/22/201	17		Date Analyzed: 09/22/2017								
Lab Batch ID:	Sample: 731379-1-H	3KS	Batc	h #: 1					Matrix: V	Water					
Units:	mg/L		BLAN	LANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analy	BTEX by EPA 8021B 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			
Benzene		0.0944	0.100	0.0944	94	0.100	0.0931	93	1	74-120	20				
Toluene		0.0938	0.100	0.0938	94	0.100	0.0918	92	2	74-120	20				
Ethylbenze	ene	0.0893	0.100	0.0893	89	0.100	0.0866	87	3	74-120	20				
m,p-Xylen	es	0.179	0.200	0.179	90	0.200	0.174	87	3	73-120	25				
o-Xylene		0.0880	0.100	0.0880	88	0.100	0.0859	86	2	73-120	25				

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: DCP Plant to Lea Station 6" Section 31

Work Order # :	563581						Project II	D: AR167	322					
Lab Batch ID:	3028531	QC- Sample ID:	563393	-001 S	Ba	tch #:	1 Matrix	k: Water						
Date Analyzed:	09/22/2017	Date Prepared:	09/22/2	017	An	alyst: N	ЛIТ							
Reporting Units:	mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
]	BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	-	RPD	Control Limits	Control Limits	Flag		
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD			
Benzene		<0.000480	0.100	0.0937	94	0.100	0.0959	96	2	15-147	25			
Toluene		<0.000512	0.100	0.0932	93	0.100	0.0958	96	3	11-147	25			
Ethylbenzene		<0.000616	0.100	0.0927	93	0.100	0.0928	93	0	10-149	25			
m,p-Xylenes		< 0.000454	0.200	0.185	93	0.200	0.183	92	1	62-124	25			
o-Xylene		<0.000270	0.100	0.0919	92	0.100	0.0911	91	1	62-124	25			

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.

Laboratory: Xenco Address: 6701 Aberdeen Phone: 6701 Aberdeen Phone: Contact: Pol/So #: No. Type of Containers 5 3 6 3 7 3 8 3 8 3 9 3 9 3 16"Section 31 (SRS# 2009-084) 17 18	ANALYSIS REQUESTED DUE DATE: 12 3.4	WHEN RECEIVED (°C)	Pageof	(120)	8 bodł	99 MA9		Lab Sample ID		10								klist	e-mail results to:	erin.loyd@terracon.com kcwilliams@terracon.com	zach.conder@terracon.com	
Laboratory: Address: Address: Address: Contact: Phone: Phone	Xenco 6701 Aberdeen Luhbork Taxas 7947.4			ature		τp	iq90 bn3) (n) a	, m) m						I KKP Laboratory Keview Check			Thomas HT	2
bbock bbock ch Config th Conder th Conder bbock ch Config th DCC P th DCC P th DCC P th DCC P th DCC P th DCC P	C		Contact: PO/SO #:	Sampler's Sign	ne	ant to Lea Station 6" Section 31 (SRS# 2009	dentifying Marks of Sample(s)	MW-2	MW-3	MW-4	MW-5	MW-6						IN IN			AV7 Processy Received ((Manuel)	L-Liquid A-Air Bag
			s Williams	ch Conder	Project Nar	q	Gra	×	×	×	x	×						Date	Date	Date:	Silve a	W - Water
		Office Location	Project Manager	oampier s name	Project Number		Mate	GW 9/21/2017	GW 9/21/2017	GW 9/21/2017	GW 9/21/2017	GW 9/21/2017	_	_	_	_	 TURNAROUND TIME	Relinquished by (Signature)	Relinquished by (Signature)	Relinquished by (Signature)	Relinquished by (Signature)	Matrix Container

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Terracon Lubbock Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 09/22/2017 09:34:00 AM Temperature Measuring device used : IR-3 Work Order #: 563581 Comments Sample Receipt Checklist 3.3 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6*Custody Seals Signed and dated? N/A #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)? No #18 Water VOC samples have zero headspace? Yes

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

Analyst:

PH Device/Lot#:

Date: 09/22/2017

Checklist completed by: Brenda Ward Brenda Ward Checklist reviewed by: Mms Moah Kelsev Brooks

Date: 09/22/2017

Analytical Report 568793

for Terracon Lubbock

Project Manager: Kris Williams

DCP Section 31(SRS # 2009-084)

AR167322

28-NOV-17

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12) Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



28-NOV-17

Project Manager: **Kris Williams Terracon Lubbock** 5827 50th st, Suite 1 Lubbock, TX 79424

Reference: XENCO Report No(s): 568793 DCP Section 31(SRS # 2009-084) Project Address:

Kris Williams:

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) 568793. 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. 568793 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,

le p

Mike Kimmel Client Services Manager

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Sample Cross Reference 568793

Terracon Lubbock, Lubbock, TX

DCP Section 31(SRS # 2009-084)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	11-14-17 13:14		568793-001
MW-3	W	11-14-17 13:35		568793-002
MW-4	W	11-14-17 14:15		568793-003
MW-5	W	11-14-17 13:27		568793-004
MW-6	W	11-14-17 13:55		568793-005



CASE NARRATIVE

Client Name: Terracon Lubbock Project Name: DCP Section 31(SRS # 2009-084)

Project ID: AR167322 Work Order Number(s): 568793
 Report Date:
 28-NOV-17

 Date Received:
 11/17/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Project Id:AR167322Contact:Kris Williams

Project Location:

Certificate of Analysis Summary 568793

Terracon Lubbock, Lubbock, TX

Project Name: DCP Section 31(SRS # 2009-084)

Date Received in Lab:Fri Nov-17-17 10:12 amReport Date:28-NOV-17Project Manager:Kelsey Brooks

Lab Id:		568793-	001	568793-	002	568793-	003	568793-	004	568793-005		
Analysis Requested	Field Id:	MW-2	2	MW-	3	MW-4	4	MW-	5	MW-6		
Analysis Kequesieu	Depth:											
	Matrix:			GROUND W	VATER	GROUND W	VATER	GROUND W	VATER	GROUND WATER		
	Sampled:		13:14	Nov-14-17	13:35	Nov-14-17	14:15	Nov-14-17	13:27	Nov-14-17 13:55		
BTEX by EPA 8021	BTEX by EPA 8021 Extracted:		Nov-17-17 12:30		Nov-17-17 15:00		Nov-17-17 15:00		15:00	Nov-17-17 15:00		
	Analyzed:	Nov-17-17 13:24		Nov-17-17 16:53		Nov-17-17 17:19		Nov-17-17	17:46	Nov-17-17 18:14		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Benzene		< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	
Toluene		< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	
Ethylbenzene		< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	
m_p-Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	
o-Xylene		< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	
Xylenes, Total		< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	
Total BTEX		< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	< 0.00100	0.00100	

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.%

Mike Kimmel Client Services 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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1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 8	85282 (602) 437-0330	



Form 2 - Surrogate Recoveries Project Name: DCP Section 31(SRS # 2009-084)

Work Ord Lab Batch #:	ers: 56879 3033698	3, Sample: 568793-001 / SMP	Batc		: AR167322 : Ground Wate	r		
Units:	mg/L	Date Analyzed: 11/17/17 13:24			RECOVERY STUDY			
	BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
a,a,a-Trifluoro	toluene		0.0961	0.100	96	66-120		
4-Bromofluoro			0.0985	0.100	99	67-120		
Lab Batch #:	3033698	Sample: 568793-002 / SMP	Batc	h: 1 Matrix	: Ground Wate	r		
Units:	mg/L	Date Analyzed: 11/17/17 16:53	su	JRROGATE R	ECOVERYS	STUDY		
	BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
a,a,a-Trifluoro	toluene	Analytes	0.0965	0.100	97	66-120		
4-Bromofluoro			0.101	0.100	101	67-120		
Lab Batch #:	3033698	Sample: 568793-003 / SMP	Batc		: Ground Wate			
Units:	mg/L	Date Analyzed: 11/17/17 17:19	SURROGATE RECOVERY STUDY					
	BTE	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
	. 1	Analytes	0.00.00	0.100				
a,a,a-Trifluoro			0.0963	0.100	96	66-120		
4-Bromofluoro		Sample: 568793-004 / SMP	0.0954 Batc	0.100	95 Ground Wate	67-120		
		-						
Units:	mg/L	Date Analyzed: 11/17/17 17:46	SU	JRROGATE R	ECOVERY	STUDY		
	BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
a,a,a-Trifluoro	toluene		0.0946	0.100	95	66-120		
4-Bromofluoro	benzene		0.0954	0.100	95	67-120		
Lab Batch #:	3033698	Sample: 568793-005 / SMP	Batc	h: 1 Matrix	: Ground Wate	r		
Units:	mg/L	Date Analyzed: 11/17/17 18:14	SU	JRROGATE R	ECOVERY S	STUDY		
	BTE	X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
a,a,a-Trifluoro	toluene		0.0060	0.100		66 120		
			0.0969	0.100	97	66-120		
4-Bromofluoro	Joenzene		0.0965	0.100	97	67-120		

* 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: DCP Section 31(SRS # 2009-084)

	#: 3033698	Sample: 7634610-1-BLK / BL								
Units:	mg/L	Date Analyzed: 11/17/17 11:53	SU	RROGATE R	ECOVERY S	STUDY				
	BTE	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
a,a,a-Trifluo	orotoluene		0.0958	0.100	96	66-120				
4-Bromoflu	orobenzene		0.0962	0.100	96	67-120				
Lab Batch	#: 3033698	Sample: 7634610-1-BKS / BK	BKS Batch: 1 Matrix: Water							
Units:	mg/L	Date Analyzed: 11/17/17 10:32	SURROGATE RECOVERY STUDY							
		X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
		Analytes	0.0050	0.100						
a,a,a-Trifluo 4-Bromoflu			0.0978	0.100	98	66-120				
	#: 3033698	Samely 7624610 1 BSD / BSI	0.0983	0.100	98 : Water	67-120				
		Sample: 7634610-1-BSD / BSI			-					
Units:	mg/L	Date Analyzed: 11/17/17 10:59	st	RROGATE R	ECOVERY S	STUDY				
	BTE	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
a,a,a-Trifluo	orotoluene		0.0934	0.100	93	66-120				
4-Bromoflu			0.0958	0.100	96	67-120				
Lab Batch	#: 3033698	Sample: 568793-001 S / MS	Batc	h: 1 Matrix	: Ground Wate	r				
Units:	mg/L	Date Analyzed: 11/17/17 13:51	st	RROGATE R	ECOVERY S	STUDY				
		X by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
a,a,a-Trifluo			0.0942	0.100	94	66-120				
4-Bromoflu	orobenzene		0.0957	0.100	96	67-120				
Lab Batch	#: 3033698	Sample: 568793-001 SD / MSI	D Batc		: Ground Wate					
Units:	mg/L	Date Analyzed: 11/17/17 14:18	SU	RROGATE R	ECOVERY	STUDY				
BTEX by EPA 8021			Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
	protoluene	Analytes	0.0981	0.100	98	66-120				
					1 UX	⊢ <u>66-120</u>				

* 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: DCP Section 31(SRS # 2009-084)

Work Order #: 568793	Project ID: AR167322										
Analyst: MIT	D	ate Prepar	red: 11/17/201	7			Date A	nalyzed:	1/17/2017		
Lab Batch ID: 3033698 Sample: 7634610-1-	BKS	KS Batch #: 1 Matrix:					Matrix: \	Water			
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
BTEX by EPA 8021 Analytes	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
Benzene	<0.00100	0.100	0.103	103	0.100	0.0992	99	4	74-120	20	
Toluene	< 0.00100	0.100	0.102	102	0.100	0.0964	96	6	74-120	20	
Ethylbenzene	< 0.00100	0.100	0.106	106	0.100	0.100	100	6	74-120	20	
m_p-Xylenes	< 0.00200	0.200	0.212	106	0.200	0.201	101	5	73-120	25	
o-Xylene	< 0.00100	0.100	0.105	105	0.100	0.101	101	4	73-120	25	

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: DCP Section 31(SRS # 2009-084)

Work Order # :	568793	Project ID: AR167322										
Lab Batch ID:	3033698	QC- Sample ID:	568793	-001 S	Ba	tch #:	1 Matrix	c: Ground	l Water			
Date Analyzed:	11/17/2017	Date Prepared: 11/17/2017		Analyst: MIT								
Reporting Units:	mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021		Parent Sample	Spike	Spiked Sample Result	Sample		Duplicate Spiked Sample	-	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene		<0.00100	0.100	0.0998	100	0.100	0.105	105	5	15-147	25	
Toluene		<0.00100	0.100	0.0955	96	0.100	0.102	102	7	11-147	25	
Ethylbenzene		<0.00100	0.100	0.0996	100	0.100	0.106	106	6	10-149	25	
m_p-Xylenes		<0.00200	0.200	0.200	100	0.200	0.212	106	6	62-124	25	
o-Xylene		<0.00100	0.100	0.101	101	0.100	0.106	106	5	62-124	25	

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 10 of 12

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	Responsive Resourceful Reliable	Lu Lu	5827 50th Street, Suite 1		300-0140

Page 11 of 12

Final 1.000



XENCO Laboratories ATORIES Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon Lubbock	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 11/17/2017 10:12:00 AM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 568793	Temperature Measuring device used : IR-3
Sample Recei	pt Checklist Comments
#1 *Temperature of cooler(s)?	3.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#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)?	No
#18 Water VOC samples have zero headspace?	Yes

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brenda Ward Brenda Ward

Date: 11/17/2017

Checklist reviewed by: Muckic

Date: 11/20/2017

APPENDIX D

Table 3 – Historical Quarterly Groundwater Elevation and PSH Thickness DataTable 4 – Historical Groundwater Analytical Summary - BTEXTable 5 – Historical Groundwater Analytical Summary - PAHs

TABLE 3 2017 ANNUAL REPORT

HISTORIC QUARTERLY GROUNDWATER ELEVATION AND PSH THICKNESS DATA DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 TERRACON PROJECT #: AR187004

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
	09/29/09	3,539.59	69.82	69.83	0.01	3,469.77
	12/10/09	3,539.59	69.51	71.41	1.90	3,469.80
	2/3/2012	3,539.59	79.55	83.00	3.45	3,459.52
	5/1/2012	3.539.59	78.46	83.00	4.54	3,460,45
	8/20/2012	3,539.59	78.50	82.95	4.45	3,460,42
	11/9/2012	3,539.59	*	*	*	*
	2/5/2013	3,539.59	79.95	82.80	2.85	3,459.21
	5/30/2013	3,539.59	83.64	86.23	2.59	3,455,56
	8/5/2013	3.539.59	*	*	*	*
	11/13/2013	3,539.59	*	*	*	*
	02/14/2014	3,539.59	82.68	86.32	3.64	3,456.36
MW-1	05/08/2014	3,539.59	*	*	*	*
	08/05/2014	3,539.59	82.68	85.77	3.09	3,456.45
	11/07/2014	3,539.59	*	*	*	*
	02/19/2015	3,539.59	83.39	86.32	2.93	3,455.76
	05/06/2015	3,539.59	83.57	84.07	0.50	3,455.95
	08/20/2015	3,539.59	83.67	86.19	2.52	3,455.54
	11/19/2015	3,539.59	83.43	86.00	2.57	3,455.77
	02/10/2016	3,539.59	*	*	*	*
	05/03/2016	3,539.59	*	*	*	*
	08/04/2016	3.539.59	*	*	*	*
	12/22/2016	3,539.59	83.05	86.01	2.96	3.456.10
	12/22/2010	0,000.00	00.00	00.01	2.00	0,400.10
	09/29/09	3,539.39	-	82.26	-	3,457.13
	12/10/09	3.539.39	-	82.36	-	3.457.03
	2/3/2012	3,539.37	-	81.00	-	3,458.37
	5/1/2012	3,539.37	-	82.60	-	3,456.77
	8/20/2012	3,539.37	-	82.75	-	3,456.62
	11/9/2012	3.539.37	-	82.76	-	3.456.61
	2/5/2013	3,539.37	-	82.75	-	3,456.62
	5/30/2013	3,539.37	-	82.90	-	3,456.47
	8/5/2013	3,539.37	-	82.91	-	3,456.46
	11/13/2013	3,539.37	-	82.89	-	3,456.48
	02/14/2014	3,539.37	-	82.92	-	3,456.45
MW-2	05/08/2014	3,539.37	-	82.93	-	3,456.44
	08/05/2014	3,539.37	-	82.97	-	3,456.40
	11/07/2014	3,539.37	-	83.02		3,456.35
	02/19/2015	3,539.37	-	83.04	-	3.456.33
	05/06/2015	3,539.37	-	83.03	-	3,456.34
	08/14/2015	3,539.37	-	82.73	-	3,456.64
	11/19/2015	3,539.37	-	83.10	-	3,456.27
	02/10/2016	3.539.37	-	83.10	-	3.456.27
	05/03/2016	3,539.37	-	83.10	-	3,456.27
	08/04/2016	3,539.37	-	83.08		3,456.29
	12/22/2016	3,539.37	-	83.21		3,456.16
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TABLE 3 2017 ANNUAL REPORT

HISTORIC QUARTERLY GROUNDWATER ELEVATION AND PSH THICKNESS DATA DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 TERRACON PROJECT #: AR187004

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
	09/29/09	3,539.31	-	82.54	-	3,456.77
	12/10/09	3,539.31	-	82.67	-	3,456.64
	2/3/2012	3,539.28	-	83.00	-	3,456.28
	5/1/2012	3,539.28	-	83.00	-	3,456.28
	8/20/2012	3,539.28	-	83.06	-	3,456.22
	11/9/2012	3,539.28	-	83.01	-	3,456.27
	2/5/2013	3,539.28	-	83.08	-	3,456.20
	5/30/2013	3.539.28	-	83.21	-	3,456.07
	8/5/2013	3,539.28	-	83.20	-	3,456.08
	11/13/2013	3.539.28	-	83.24	-	3,456.04
	02/14/2014	3,539.28	-	83.31	-	3,455.97
MW-3	05/08/2014	3,539.28	-	83.26	-	3,456.02
	08/05/2014	3,539.28	-	83.31	-	3,455.97
	11/07/2014	3,539.28	-	83.39	-	3,455.89
	02/19/2015	3,539.28	-	83.34	-	3,455.94
	05/06/2015	3,539.28	-	83.35	-	3,455.93
	08/14/2015	3,539.28	-	83.29	-	3,455.99
	11/19/2015	3,539.28	-	83.43	-	3,455.85
	02/10/2016	3,539.28	-	83.48	-	3.455.80
	05/03/2016	3.539.28	-	83.45	-	3,455.83
	08/04/2016	3,539.28	-	83.44	-	3.455.84
	12/22/2016	3,539.28	-	83.51	-	3.455.77
	12/22/2010	0,000.20		00.01		0,100.11
	09/29/09	3,540.12		83.58	-	3,456.54
	12/10/09	3.540.12	-	84.68	-	3.455.44
	2/3/2012	3,540.07	-	84.05	-	3,456.02
	5/1/2012	3,540.07	-	83.93	-	3,456.14
	8/20/2012	3,540.07	-	84.11	-	3,455.96
	11/9/2012	3,540.07	-	83.99	-	3.456.08
	2/5/2013	3,540.07	-	84.13	-	3,455.94
	5/30/2013	3,540.07	-	84.28	-	3,455.79
	8/5/2013	3,540.07	-	84.25	-	3,455.82
	11/13/2013	3,540.07	-	84.29	-	3.455.78
	02/14/2014	3,540.07	-	84.33	-	3,455.74
MW-4	05/08/2014	3,540.07	-	84.32	-	3,455.75
	08/05/2014	3,540.07	-	84.34	-	3,455.73
	11/07/2014	3,540.07	-	84.46		3,455.61
	02/19/2015	3.540.07	-	84.41	-	3,455.66
	05/06/2015	3,540.07	-	84.40	-	3,455.67
	08/14/2015	3,540.07	-	84.34	-	3,455.73
	11/19/2015	3,540.07	-	84.50	-	3,455.57
	02/10/2016	3,540.07	-	84.50		3,455.57
	05/03/2016	3,540.07	-	84.47	_	3,455.60
	08/04/2016	3,540.07	-	84.48		3,455.59
	12/22/2016	3,540.07	-	84.54	_	3,455.53
	12/22/2010	0,040.07	-	07.04		0,400.00

TABLE 3 2017 ANNUAL REPORT

HISTORIC QUARTERLY GROUNDWATER ELEVATION AND PSH THICKNESS DATA DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 TERRACON PROJECT #: AR187004

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
	2/3/2012	3,539.90		83.60		3,456.30
	5/1/2012	3,539.90		83.75		3,456.15
	8/20/2012	3,539.90		83.68		3,456.22
	11/9/2012	3,539.90		83.72		3,456.18
	2/5/2013	3,539.90	-	83.80	-	3,456.10
	5/30/2013	3,539.90	-	83.89	-	3,456.01
	8/5/2013	3,539.90	-	83.85	-	3,456.05
	11/13/2013	3,539.90	-	83.90	-	3,456.00
	02/14/2014	3,539.90	-	83.95	-	3,455.95
MW-5	05/08/2014	3,539.90	-	83.94	-	3,455.96
10100-5	08/05/2014	3,539.90	-	84.00	-	3,455.90
	11/07/2014	3,539.90	-	84.00	-	3,455.90
	02/19/2015	3,539.90	-	84.02	-	3,455.88
	05/06/2015	3,539.90	-	84.04	-	3,455.86
	08/14/2015	3,539.90	-	84.00	-	3,455.90
	11/19/2015	3,539.90	-	84.12	-	3,455.78
	02/10/2016	3,539.90	-	84.14	-	3,455.76
	05/03/2016	3,539.90	-	84.10	-	3,455.80
	08/04/2016	3,539.90	-	84.12	-	3,455.78
	12/22/2016	3,539.90	-	84.18	-	3,455.72
	9/25/2013	3540.82	-	83.80	-	3,457.02
	11/13/2013	3540.82	-	84.79	-	3,456.03
	02/14/2014	3540.82	-	84.81	-	3,456.01
	05/08/2014	3540.82	-	84.81	-	3,456.01
	08/05/2014	3540.82	-	84.85	-	3,455.97
	11/07/2014	3540.82	-	84.91	-	3,455.91
MW-6	02/19/2015	3540.82	-	84.91	-	3,455.91
10100-0	05/06/2015	3540.82	-	84.92	-	3,455.90
	08/14/2015	3540.82	-	84.65	-	3,456.17
	11/19/2015	3540.82	-	85.00	-	3,455.82
	02/10/2016	3540.82	-	85.00	-	3,455.82
	05/03/2016	3540.82	-	84.96	-	3,455.86
	08/04/2016	3540.82	-	85.03	-	3,455.79
	12/22/2016	3540.82	-	85.05	-	3,455.77

Elevations based on the North American Vertical Datum of 1988

- = Not applicable

* Indicates Monitor Well was not gauged due to the presences of a Mobile Dual Phase Estraction (MDPE) unit.

TABLE 4 2017 ANNUAL REPORT

HISTORIC GROUNDWATER ANALYTICAL SUMMARY - BTEX DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 TERRACON PROJECT #: AR187004

				METHOD	S: EPA SW 8	46-8260b		
SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL- BENZENE (mg/L)	M,P- XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)
MW-1	12/10/2009	19.0	13.09	0.812	1.894	0.729	2.623	35.525
	9/29/2009	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01
	12/10/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	3/18/2010	< 0.0010	<0.0020	< 0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	5/27/2010	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	8/26/2010	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	10/29/2010	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	< 0.0020
	3/25/2011	0.0072	0.0068	<0.0010	<0.0020	< 0.0010	<0.0020	0.0139
	5/26/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	8/17/2011	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	11/29/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	2/3/2012	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	5/1/2012	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	8/20/2012	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	11/9/2012	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
MW-2	2/5/2013	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	5/30/2013	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	8/5/2013	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	11/13/2013	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	2/14/2014	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	5/8/2014	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	8/5/2014	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	11/7/2014	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	2/19/2015	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	5/6/2015	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	8/18/2015	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0020
	12/8/2015	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	2/10/2016	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<0.00200
	5/3/2016	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	<0.00200
	8/4/2016	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200
	12/22/2016	< 0.00100	< 0.00100	< 0.00100	< 0.00200	< 0.00100	<0.00200	<0.00200

TABLE 4 2017 ANNUAL REPORT

HISTORIC GROUNDWATER ANALYTICAL SUMMARY - BTEX DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 TERRACON PROJECT #: AR187004

9/29/2009 <0.005 <0.005 <0.005 <0.005 <0.002 <0.001 <0.0020 <0.0011 <0.0020 <0.0011 3/18/2010 0.0054 <0.0020 <0.0010 <0.0020 <0.0011 <0.0020 <0.0011 5/27/2010 0.0063 0.0022 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 3/25/2011 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 3/25/2011 <0.0010 <0.0020 <0.0010 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 3/17/2011 <0.0050 <0.0020 <0.0010 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011 <0.0020 <0.0011									
3/18/2010 0.0054 0.0020 0.0010 c0.0021 0.0014 0.0020 0.0014 5/27/2010 0.0053 0.0023 0.0010 c0.0020 c0.0010 c0.0020 0.0017 10/29/2010 0.0042 c0.0010 c0.0020 c0.0011 c0.0020		9/29/2009	< 0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01
WW-3		12/10/2009	0.0031	<0.0020	<0.0010	<0.0020	< 0.0010	<0.0020	0.0031
B2/26/2010 0.0053 0.0023 -0.0010 -0.0020 -0.0010 -0.0020 0.00175 3/25/2011 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0010 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0010 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0011 -0.0020 -0.0011 -			0.0054	< 0.0020	< 0.0010	< 0.0020	< 0.0010	< 0.0020	0.0054
Internal 10/29/2010 0.0129 0.0146 3/25/2011 0.0010 0.0020 <0.0010		5/27/2010	0.0043	< 0.0020	<0.0010	< 0.0020	<0.0010	< 0.0020	0.0043
Internal 10/29/2010 0.0129 0.0146 3/25/2011 0.0010 0.0020 <0.0010		8/26/2010	0.0053	0.0023	<0.0010	< 0.0020	<0.0010	< 0.0020	0.0076
3/25/2011 0.0010 <0.0020			0.0129	0.0046	< 0.0010	< 0.0020	< 0.0010	< 0.0020	0.0175
Si26/2011 0.0425 <0.0020									
Bit/172011 0.0138 0.0020 <0.0010 <0.0020 <0.0010 <0.0020 0.0010 <0.0020 0.0010 <0.0020 0.0010 <0.0020 0.0010 <0.0020 0.0020 0.0010 <0.0020 0.0020 <th0< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th0<>									
11/29/2011 0.0020 <0.0010									
2/3/2012 0.024 <0.0020									
S1/12012 0.031 0.0022 <0.0010 <0.0020 <0.0032 <0.0033 8/20/2012 0.011 <0.0020									
8/20/2012 0.011 <0.0020									
MW-3 119/2012 0.026 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0									
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MW-3 5/30/2013 0.0101 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020									
8/5/2013 <0.0010	MW-3								
11/13/2013 -0.0010 -0.0020 -0.0020									
2/14/2014 <0.0010									
5/8/2014 0.0024 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200									
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2/19/2015 0.0013 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.00200 <0.00200 <0.0020 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020									
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12/8/2015 <0.0010									
2/10/2016 <0.00100									
5/3/2016 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200									
8/4/2016 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00110 <0.00200 <0.00100 <0.00200 <0.00100 <0.00200 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020									
12/22/2016 0.00110 <0.00100 <0.00200 <0.00100 <0.00200 0.00110 9/29/2009 <0.005									
9/29/2009 <0.005 <0.005 <0.01 <0.005 <0.01 <0.005 <0.01 <0.01 <0.01 <0.01 12/10/2009 <0.0010									
MW-4 12/10/2009 <0.0010		12/22/2016	0.00110	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	0.00110
MW-4 12/10/2009 <0.0010		0/20/2000	<0.005	<0.005	<0.005	-0.01	<0.005	-0.01	10.01
3/25/2011 0.0051 0.0046 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
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MW-4 11/29/2011 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <t< td=""><td rowspan="3"></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
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MW-4 8/20/2012 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>									
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MW-4 5/30/2013 <0.0010 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>									
MW-4 8/5/2013 0.0033 <0.0020 <0.0010 <0.0020 <0.0010 <0.0020 0.0033 11/13/2013 0.0023 <0.0020	MW-4								
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$									
2/14/20140.0240<0.0020<0.0010<0.0020<0.0010<0.00200.00205/8/20140.0079<0.0020									
5/8/20140.0079<0.0020<0.0010<0.0020<0.0010<0.00200.00798/5/20140.0069<0.0020									
8/5/20140.0069<0.0020<0.0010<0.0020<0.0010<0.00200.006911/7/20140.0047<0.0020									
11/7/20140.0047<0.0020<0.0010<0.0020<0.0010<0.00200.00472/19/20150.0045<0.0020									
2/19/20150.0045<0.0020<0.0010<0.0020<0.0010<0.00200.00455/6/20150.0027<0.0020									
5/6/20150.0027<0.0020<0.0010<0.0020<0.0010<0.00200.00278/18/20150.0020<0.0020									
8/18/20150.0020<0.0020<0.0010<0.0020<0.0010<0.00200.002012/8/20150.0010<0.0020									
12/8/20150.0010<0.0020<0.0010<0.0020<0.0010<0.00200.00102/10/20160.00214<0.00200									
2/10/20160.00214<0.00200<0.00100<0.00200<0.00100<0.002000.002145/3/20160.00205<0.00200									
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8/4/2016 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200									
		12/22/2016	<0.00100	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	<0.00200

TABLE 4 2017 ANNUAL REPORT

HISTORIC GROUNDWATER ANALYTICAL SUMMARY - BTEX DCP PLANT TO LEA STATION 6-INCH SEC. 31 LEA COUNTY, NEW MEXICO PLAINS SRS #: 2009-084 NMOCD REFERENCE #: 1RP-2166 TERRACON PROJECT #: AR187004

	3/25/2011	0.371	<0.0020	< 0.0050	0.0115	0.0060	0.0175	0.3885	
	5/26/2011	1.12	0.0265	< 0.0010	0.0137	0.0138	0.0275	1.17	
	8/17/2011	1.73	0.0560	< 0.0020	< 0.0040	0.0210	0.0210	1.81	
	11/29/2011	0.233	0.0073	< 0.0010	0.0020	0.00188	0.00388	0.244	
	2/3/2012	0.442	0.0053	< 0.0010	< 0.0020	0.0020		0.449	
	5/1/2012	0.477	< 0.0020	< 0.0010	< 0.0020	< 0.0010	< 0.0020	0.477	
	8/20/2012	0.249	0.0046	< 0.0010	< 0.0020	< 0.0010	< 0.0020	0.254	
	11/9/2012	0.541	0.0145	< 0.0050	< 0.0100	< 0.0050	< 0.0100	0.556	
	2/5/2013	0.0042	<0.0020	<0.0010	< 0.0020	< 0.0010	< 0.0020	0.0042	
	5/30/2013	0.0201	< 0.0020	< 0.0010	< 0.0020	< 0.0010	< 0.0020	0.0201	
	8/5/2013	0.0107	< 0.0020	< 0.0010	<0.0020	<0.0010	< 0.0020	0.0107	
MW-5	11/13/2013	0.0013	< 0.0020	<0.0010	<0.0020	< 0.0010	< 0.0020	0.0013	
0-10101	2/14/2014	< 0.0010	< 0.0020	<0.0010	< 0.0020	< 0.0010	< 0.0020	< 0.0020	
	5/8/2014	< 0.0010	< 0.0020	<0.0010	< 0.0020	< 0.0010	< 0.0020	< 0.0020	
	8/5/2014	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0020	
	11/7/2014	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	< 0.0020	
	2/19/2015	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	
	5/6/2015	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	
	8/18/2015	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	
	12/8/2015	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	
	2/10/2016	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100		< 0.00200	
	5/3/2016	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200	<0.00200	
	8/4/2016	< 0.00200		< 0.00200	< 0.00200	< 0.00200	<0.00200		
	12/22/2016	<0.00100	< 0.00100	<0.00100	< 0.00200	< 0.00100	<0.00200	<0.00200	
							-	-	
	9/25/2013	<0.0050	<0.0050					<0.0100	
	11/13/2013	<0.0010	<0.0020					<0.0020	
	2/14/2014	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	
	5/8/2014	<0.0010	<0.0020	200 <0.00100 <0.00200 <0.00100 200 <0.00200	<0.0020	<0.0020			
MW-6	8/5/2014	<0.0010	<0.0020					<0.0020	
	11/7/2014	<0.0010	<0.0020					<0.0020	
	2/19/2015	<0.0010	<0.0020					<0.0020	
	5/6/2015	<0.0010	<0.0020					<0.0020	
	8/18/2015	<0.0010	<0.0020					<0.0020	
	12/8/2015	<0.0010	<0.0020					<0.0020	
	2/10/2016	<0.00100	< 0.00200	<0.00100	< 0.00200	< 0.00100		<0.00200	
	5/3/2016	<0.00200	<0.00200	<0.00200	< 0.00200	< 0.00200		< 0.00200	
	8/4/2016	<0.00200	<0.00200	<0.00200		< 0.00200		<0.00200	
	12/22/2016	<0.00100	< 0.00100	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<0.00200	
								_	
NMOCD CR	ITERIA	0.01	0.75	0.75	TOTA	L XYLENE	S 0.62		

TABLE 5 2017 ANNUAL REPORT

HISTORIC CONCENTRATIONS OF POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)¹ IN GROUNDWATER DCP PLANT TO LEA STATION 6-INCH SEC 31 PLAINS SRS #: 2009-084 LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER 1RP-2166 TERRACON PROJECT #: AR187004

-								All water conce	entrations are re	eported in mg/L									
		EPA SW846-8270C, 3510																	
SAMPLE LOCATION	SAMPLE DATE	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
MW-1	12/10/2009	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
		T					•	-		•			•	•	•				
MW-2	9/29/2009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005		<0.005	<0.005
MW-3	9/29/2009	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		< 0.005		< 0.005	< 0.005
MW-3	12/16/2011	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	< 0.00556	<0.0111	<0.0111	<0.0111	<0.0111
MW-3	11/9/2012	< 0.00035	< 0.00033	<0.00016	<0.00024	<0.00019	<0.00036	<0.00049	<0.00028	<0.00022	<0.00019	<0.00024	<0.00030	<0.00032	<0.00031	<0.00048	< 0.00031	<0.00027	<0.00027
	9/29/2009	-0.005	10,005	10.005	<0.005	-0.005	10,005	10,005	-0.005	-0.005	10.005	10.005	-0.005	-0.005			10.005	10.005	10.005
MW-4 MW-4	9/29/2009	<0.005 <0.0102	< 0.005	< 0.005		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	- <0.00510	- <0.0102	< 0.005	< 0.005	< 0.005
IVIVV-4	12/21/2011	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.00510	<0.0102	<0.0102	<0.0102	<0.0102
MW-5	3/25/2011	<0.0100	< 0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	[<0.0100		<0.0100	<0.0100
MW-5	11/9/2012	< 0.00037	< 0.00034	<0.00016	<0.00025	<0.00020	<0.00038	<0.00051	<0.00029	< 0.00023	<0.00020	<0.00025	< 0.00031	< 0.00034	< 0.00032		< 0.00032	<0.00028	<0.0100
MW-5	12/23/2013			< 0.00018								< 0.00025				< 0.000049			
10100-5	12/23/2013	~0.000049	~0.000049	<0.000049	~0.000049	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049	~0.000049	<0.000049	~0.000049	<0.000049	<0.000049	<0.000049	0.00034	~0.000049	<0.000049
MW-6	5/13/2014	<0.000051	< 0.000051	< 0.000051	<0.000051	<0.000051	< 0.000051	<0.000051	< 0.000051	< 0.000051	< 0.000051	<0.000051	< 0.000051	<0.000051		< 0.00051		<0.000051	< 0.000051
	0/10/2014	3.000001	5.000001	5.000001	3.000001	5.000001	0.000001	0.000001	0.000001	0.000001	3.000001	0.000001	3.000001	0.000001		2.00001		0.000001	0.000001
Maximum Contaminant Levels for NM WQCC Drinking Water Standards Sections 1-101.UU and 3-103A.		NA	NA	0.001	0.0001	0.0007	0.001	NA	0.001	0.0002	0.0003	0.001	0.001	0.0004		0.03		0.001	0.001

PAH¹=Polynuclear aromatic hydrocarbon concentrations analyzed in accordance with EPA SW846-8270C and 3510

APPENDIX E

CD of the 2017 Annual Groundwater Monitoring Report