Second Half 2020 Semi-Annual Groundwater Monitoring Summary Report

Linam Ranch Natural Gas Plant
Lea County, New Mexico
GW-015

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1. Introduction

This report summarizes groundwater monitoring and remediation activities conducted during the second half 2020 at the Linam Ranch Natural Gas Plant (Site) in Lea County, New Mexico (Figure 1). Tasman Geosciences (Tasman) performed these activities on behalf of DCP Midstream (DCP). The field activities described herein were conducted with the purpose of monitoring groundwater flow and quality conditions and assessing the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons in the Site subsurface. Current Site conditions were evaluated from field data and analytical laboratory results collected on September 16, 2020. The data collected was used to develop the groundwater elevation map and analytical results figure presented herein.

2. Site Location and Background

The Site is located in New Mexico Oil Conservation Division (OCD) designated Unit B, Section 6, Township 19 South, Range 37 East (Figure 1). The approximate facility coordinates are 32.6965 degrees north and 103.2883 degrees west. The facility is an active natural gas processing facility and includes an office complex and storage areas in addition to the main plant.

In February 1994, hydrocarbon-impacted groundwater was detected during subsurface investigations performed at two areas within the plant. A follow-up subsurface investigation was performed in May 1994 to delineate the horizontal extent of hydrocarbon-impacted soils and groundwater. The OCD subsequently requested a work plan to completely define the extent of groundwater contamination at the plant. In October 1995, the OCD approved a quarterly sampling and monitoring program for the Site, which was reduced to semi-annual frequency in 1997 after the recommendations of a 1996 report submitted by Geoscience Consultants Ltd. (GCL).

There are currently twelve groundwater monitoring wells at the Site: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-10D and MW-11 (Figure 2); monitoring well MW-13 was destroyed during the second half of 2012 and has been removed from the sampling program. These wells were installed between 1991 and 1995.

3. Groundwater Monitoring

This section describes the groundwater field and laboratory activities performed during the second half 2020 semi-annual monitoring event on September 16, 2020. Monitoring activities included Site-wide groundwater gauging, LNAPL measurements, and groundwater sampling. Figure 2 illustrates the groundwater monitoring network utilized to perform these activities at the Site.

3.1 Groundwater and LNAPL Elevation Monitoring

Groundwater and LNAPL levels were measured to evaluate hydraulic characteristics and provide information regarding seasonal and annual fluctuations in groundwater elevations at the Site. During the reporting period, groundwater levels were measured at all of the 12 Site monitoring wells.

Groundwater and LNAPL levels were measured on the north side of the well casing to the nearest 0.01-foot using an oil-water interface probe (IP). Groundwater level data was converted to elevation (feet above mean sea level [AMSL]). Measured groundwater levels, calculated groundwater elevations, and LNAPL level data are presented in Table 1.

A second half 2020 groundwater elevation map, included as Figure 3, indicates that groundwater flow at the Site trends generally to the southeast. Groundwater elevations ranges, average elevation changes from previous monitoring events, and calculated hydraulic gradients at the Site are summarized in the table below.

Summary of Measured Hydraulic Parameters

	Second Half 2020 (9/16/2020)
Maximum Elevation (Well ID)	3,670.43' (MW-5)
Minimum Elevation (Well ID)	3,664.91' (MW-3)
Average Change from Previous Monitoring Event (ft) – All Wells	-0.34
Hydraulic Gradient (ft/ft) / (Well IDs)	0.0026 (MW-5 to MW-3)

LNAPL was observed at MW-6 (0.25 ft) and MW-4 (0.16 ft) during the second half 2020. Historically, the thickness of LNAPL at MW-6 location has fluctuated since 2009.

3.2 Groundwater Quality Monitoring

After recording groundwater level measurements, groundwater samples were collected from ten of the twelve wells. MW-6 was not sampled due to the presence of LNAPL, and MW-7 was not sampled this event due to an insufficient amount of water needed for sample collection.

A minimum of three well casing volumes of groundwater was purged from each monitoring well prior to collection of groundwater samples. Groundwater samples were collected using disposable polyethylene bailers, placed in clean laboratory-supplied containers for the selected analytical methods, packed in an ice-filled cooler, and maintained at approximately four (4) degrees Celsius (°C) for transportation to the laboratory. Groundwater samples were then shipped under chain-of-custody procedures to Pace Analytical laboratory (Pace) in Mount Juliet, Tennessee for analysis.

Water quality samples were submitted for analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) by United States Environmental Protection Agency (USEPA) Method 8260B.

Table 2 summarizes BTEX concentrations in groundwater samples collected during the reporting period. Historical analytical results up to and including the September 2020 event are contained in Appendix A, and the laboratory analytical report for the second half 2020 event is included in Appendix B. Analytical results are also displayed on Figure 4.

Analytical results/observations are summarized below:

- Benzene was detected in exceedance of the New Mexico Water Quality Control Commission (NMWQCC) groundwater standard of (0.005 milligrams per liter [mg/L]) in monitoring wells MW-4 (18.5 mg/L), MW-5 (0.0358 mg/L), MW-10 (2.96 mg/L), MW-10D (0.0466 mg/L, Duplicate 0.0523 mg/L), and MW-11 (0.0148 mg/L).
- Ethylbenzene was detected in exceedance of the NMWQCC standard of 0.70 mg/L in monitoring well MW-5 with a concentration of 2.12 mg/L.
- Groundwater samples at remaining monitoring well locations were reported below applicable NMWQCC standards or below laboratory detection limits.

3.3 Data Quality Assurance / Quality Control

A trip blank and field duplicate sample (MW-10D) was collected during the September 2020 sampling event. The data was reviewed for compliance with the analytical method and the associated quality assurance/quality control (QA/QC) procedures. All samples were analyzed using the correct analytical methods and within the correct holding times. Chain of custody forms were in order and properly executed and indicate that samples were received at the proper temperature with no headspace. All data were reported using the correct method number and reporting units. QA/QC items of note for the second half 2020 include the following:

- Target analytes were not detected in the trip blank; and
- MW-10D and the associated duplicate sample exhibited benzene concentrations of 0.0466 mg/L and 0.0523 mg/L, respectively. The calculated relative percent difference (RPD) is 11.5%, which is within the target range of 20%.

The overall QA/QC assessment, based on the data review, indicate that data precision and accuracy are acceptable.

4. Remediation Activities

Active LNAPL recovery using a Clean Earth Technologies Magnum Spill Buster™ automatic LNAPL recovery system (Magnum Spill Buster™) deployed at MW-6 was shut down in November 2018 based on the LNAPL being absent in the well at that time. Due to the presence of LNAPL observed at this location during the second half 2019, the Spill Buster was re-initiated on September 18, 2019. Recovery levels were not recorded following the first half 2020 sampling event; however, the recovery measurements were collected in the second half 2020. The LNAPL recovery tank for the Spill Buster contains approximately 80 gallons of LNAPL and approximately 30 gallons since re-initiation in late 2019 and the recovery tank will continue to be gauged during subsequent events to determine the amount of LNAPL present.

5. Conclusions

Comparison of the first half semi-annual 2020 monitoring data with historical information provides the following general observations:

- Based on historical groundwater level measurements, groundwater elevations at the Site typically exhibit seasonal and annual fluctuations. Measurements collected during the second half 2020 monitoring event exhibited a decrease in elevation compared to the first half 2020. The observed decrease is likely due to seasonal groundwater fluctuations.
- Dissolved phase benzene concentrations above NMWQCC standards persist in the central portion of the Site, represented by wells MW-4, MW-5, MW-10, MW-10D, and MW-11. Generally, benzene concentrations at these locations demonstrate stable conditions.
- While separate and dissolved phase hydrocarbon impacts persist on-Site, BTEX concentrations in downgradient monitoring wells MW-3 and MW-9 remain below laboratory detection limits.

6. Recommendations

Based on evaluation of second half 2020 and historical Site observations and monitoring results, the following recommendation has been developed for future activities:

- Continue semi-annual groundwater monitoring and sampling at the monitoring locations illustrated on Figure 2.
- Continue active LNAPL recovery at monitoring well MW-6 using Spill Buster LNAPL recovery system and continue to evaluate conditions at MW-4.

Tables

TABLE 1
SECOND HALF 2020 SEMI-ANNUAL
SUMMARY OF GROUNDWATER ELEVATION DATA
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location	Date	Depth to Groundwater (feet)	Depth to Product (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (*) (feet amsl)	Change in Groundwater Elevation Since Previous Event (1) (feet)
MW-1	09/18/19	45.86			54.55	3718.29	3672.43	-0.49
MW-1	06/23/20	47.84			54.55	3718.29	3670.45	-1.98
MW-1	09/16/20	48.49			54.55	3718.29	3669.80	-0.65
MW-2	09/18/19	46.43			50.57	3714.80	3668.37	-0.81
MW-2	06/23/20	46.84			50.57	3714.80	3667.96	-0.41
MW-2	09/16/20	47.22			50.57	3714.80	3667.58	-0.38
MW-3	09/18/19	49.95			55.41	3715.50	3665.55	-0.33
MW-3	06/24/20	50.40			55.41	3715.50	3665.10	-0.45
MW-3	09/16/20	50.59			55.41	3715.50	3664.91	-0.19
MW-4	09/18/19	47.61			54.76	3720.46	3672.85	-1.24
*MW-4	06/23/20	49.78	49.55	0.23	54.76	3720.46	3670.85	-2.00
*MW-4	09/16/20	50.31	50.15	0.16	54.76	3720.46	3670.27	-0.58
MW-5	09/18/19	48.92			56.62	3721.53	3672.61	-2.00
MW-5	06/23/20	50.65			56.62	3721.53	3670.88	-1.73
MW-5	09/16/20	51.10			56.62	3721.53	3670.43	-0.45
*MW-6	09/18/19	51.09	48.47	2.62	54.30	3720.99	3671.87	-1.66
*MW-6	06/23/20	54.30	50.94	3.36	54.30	3720.99	3669.21	-2.66
*MW-6	09/16/20	51.75	51.5	0.25	54.30	3720.99	3669.43	0.22
MW-7	09/18/19	62.24			62.86	3728.57	3666.33	-2.54
MW-7	06/24/20	DRY						
MW-7	09/16/20	DRY						
MW-8	09/18/19	45.88			58.05	3714.18	3668.30	-0.88
MW-8	06/23/20	46.56			58.05	3714.18	3667.62	-0.68
MW-8	09/16/20	47.04			58.05	3714.18	3667.14	-0.48
MW-9	09/18/19	52.78			59.35	3720.48	3667.70	-0.48
MW-9	06/24/20	53.51			59.35	3720.48	3666.97	-0.73
MW-9	09/16/20	53.77			59.35	3720.48	3666.71	-0.26
MW-10	09/18/19	52.77			66.10	3720.76	3667.99	-0.62
MW-10	06/23/20	53.54			66.10	3720.76	3667.22	-0.77
MW-10	09/16/20	53.84			66.10	3720.76	3666.92	-0.30
MW-10D	09/18/19	54.12			79.01	3720.85	3666.73	-0.69
MW-10D	06/23/20	54.86			79.01	3720.85	3665.99	-0.74
MW-10D	09/16/20	55.15			79.01	3720.85	3665.70	-0.29
MW-11	09/18/19	53.73			63.27	3722.02	3668.29	-0.90
MW-11	06/23/20	54.64			63.27	3722.02	3667.38	-0.91
MW-11	09/16/20	55.06			63.27	3722.02	3666.96	-0.42
							Average change in groundwater elevation (6/24/20 to 9/16/20)	-0.34

1- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring event from the measurement collected during the most recent monitoring event.
amsl = feet above mean sea leve
TOC = top of casing
Groundwater elevation = (TOC Elevation - Measured Depth to Water
* Groundwater elevation was corrected for product thickness using the following calculation, when applicable

Groundwater elevation = (TOC Elevation - Measured Depth to Water) + (LNAPL Thickness in Well * LNAPL Relative Density
LNAPL relative density is assumed to be approximately 0.75 grams per cubic centimeter (g/cm^3)

NM = Not Measured
NA = Not Applicable

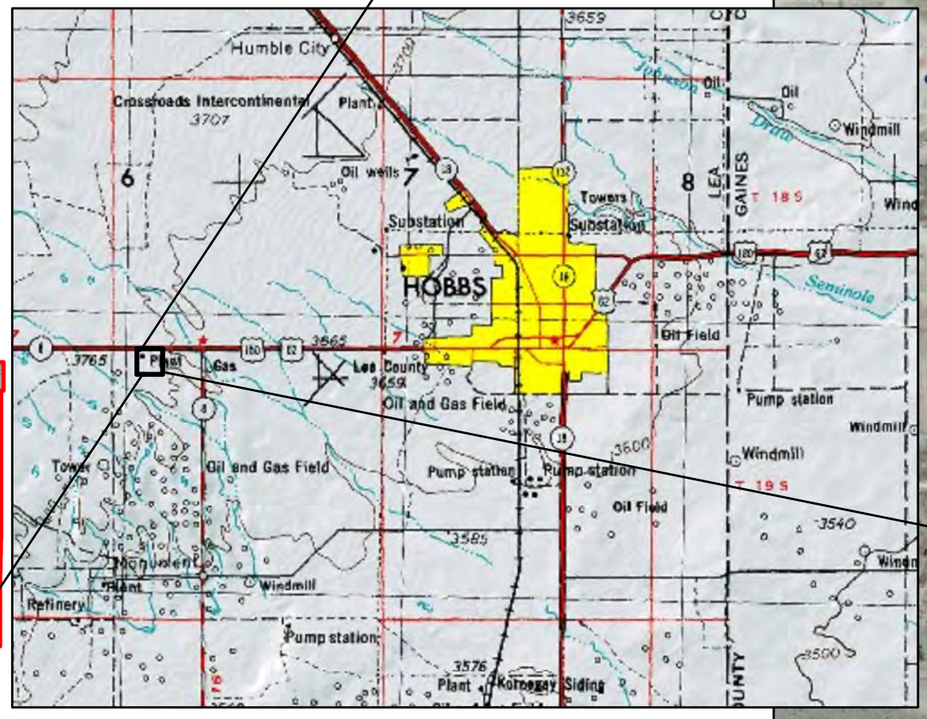
TABLE 2
SECOND HALF 2020 SEMI-ANNUAL
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-1	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-4	9/16/2020	**18.5**	<0.100	0.601	<0.300	LNAPL (0.16 feet)
MW-5	9/16/2020	**0.0358**	<0.0200	**2.12**	<0.0600	
MW-6	9/16/2020	LNAPL				LNAPL (0.25 feet)
MW-7	9/16/2020	NS				DRY
MW-8	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-10	9/16/2020	**2.96**	<0.0200	0.500	0.119	
MW-10D	9/16/2020	**0.0466**	0.0138	0.0103	0.00248 J	Duplicate Sample Collected
MW-10D (Duplicate)	9/16/2020	**0.0523**	0.0124	0.0129	0.00261 J	
MW-11	9/16/2020	**0.0148**	0.00138	0.000301 J	0.000603 J	
Trip Blank	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	

Notes:
Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.
NMWQCC = New Mexico Water Quality Control Commission
LNAPL = light non-aqueous phase liquid
J = A qualifier indicating an estimated value of a concentration above the laboratory's Method Detection Limit (MDL) but below the Reported Detection Limit (RDL).
mg/L = milligrams per liter
NS = Not Sampled

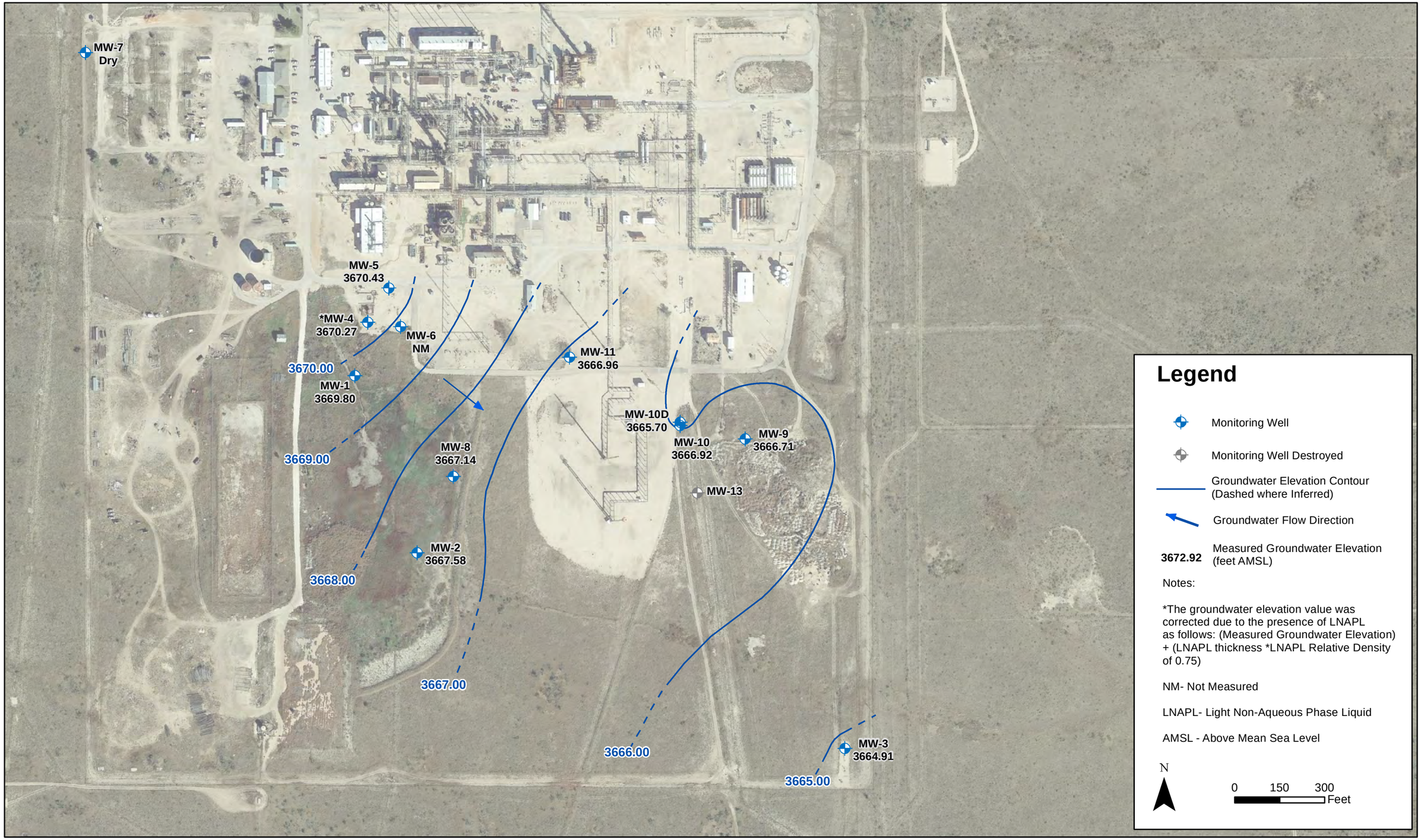
Figures

N

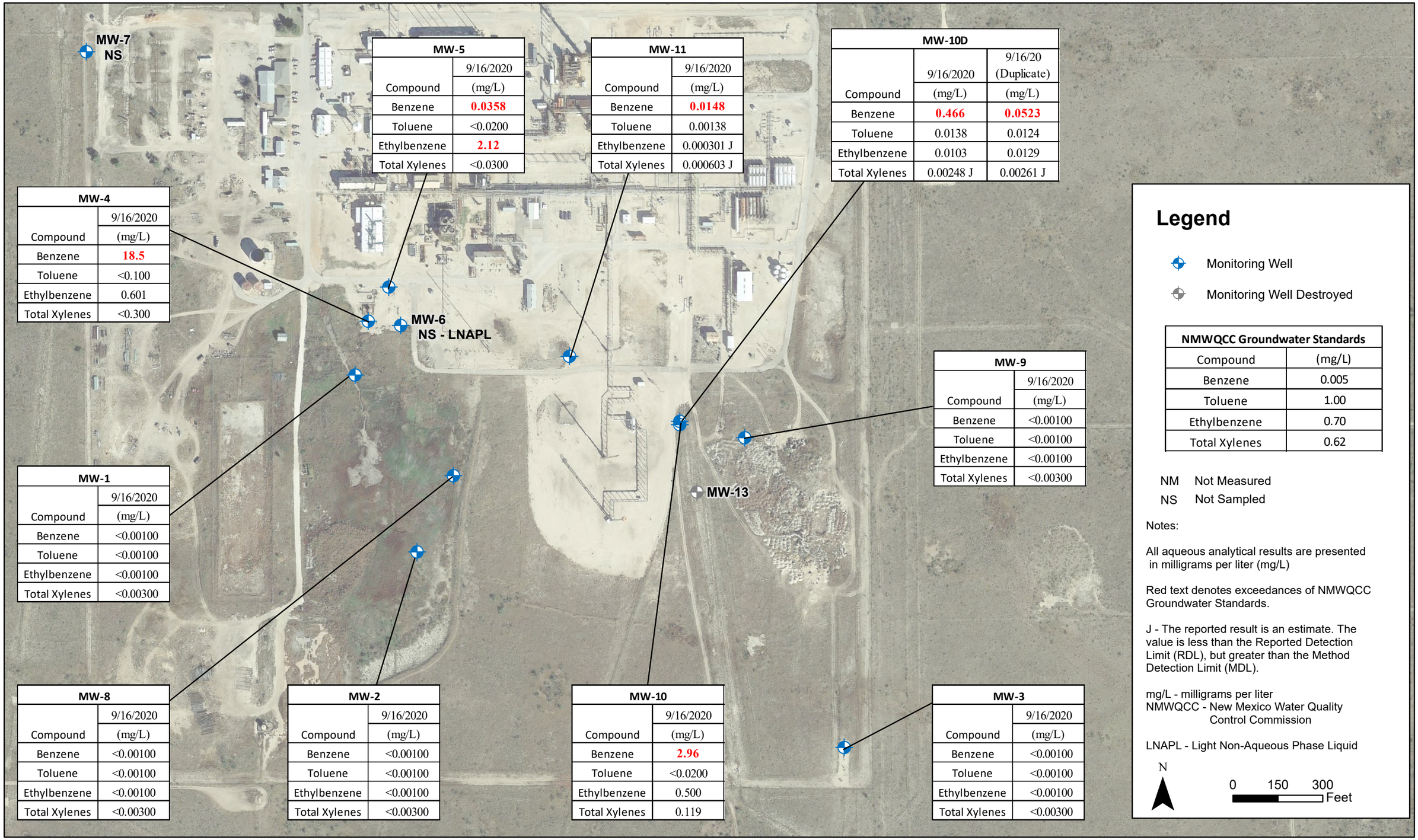


DATE: June 2014 DESIGNED BY: T. Johansen DRAWN BY: D. Arnold	TASMAN GEOSCIENCES Tasman Geosciences, LLC 6899 Pecos Street - Unit C Denver, CO 80221	**DCP Midstream** **Linam Ranch Gas Plant** Unit B, Section 6, Township 19 South, Range 37 East Lea County, New Mexico	Site Location Map	Figure 1

DATE: May 2019 DESIGNED BY: B. Humphrey DRAWN BY: C. Olson	TASMAN GEOSCIENCES **Tasman Geosciences, Inc.** **6899 Pecos Street - Unit C** **Denver, CO 80221**	**DCP Midstream** **Linam Gas Plant** Second Half 2020 Semi-Annual Groundwater Monitoring Summary Report	Site Map with Monitoring Well Locations	Figure 2



DATE: October 2020 DESIGNED BY: B. Humphrey DRAWN BY: A. Dahl	TASMAN GEOSCIENCES **Tasman Geosciences, Inc.** **6855 W. 119th Avenue** **Broomfield, Colorado 80020**	**DCP Midstream** **Linam Ranch Gas Plant** Second Half 2020 Semi-Annual Groundwater Monitoring Summary Report	Groundwater Elevation Contour Map (September 16, 2020)	Figure 3



MW-5	
	9/16/2020
Compound	(mg/L)
Benzene	**0.0358**
Toluene	<0.0200
Ethylbenzene	**2.12**
Total Xylenes	<0.0300

MW-11	
	9/16/2020
Compound	(mg/L)
Benzene	**0.0148**
Toluene	0.00138
Ethylbenzene	0.000301 J
Total Xylenes	0.000603 J

MW-10D		
	9/16/2020	9/16/20 (Duplicate)
Compound	(mg/L)	(mg/L)
Benzene	**0.466**	**0.0523**
Toluene	0.0138	0.0124
Ethylbenzene	0.0103	0.0129
Total Xylenes	0.00248 J	0.00261 J

MW-4	
	9/16/2020
Compound	(mg/L)
Benzene	**18.5**
Toluene	<0.100
Ethylbenzene	0.601
Total Xylenes	<0.300

MW-9	
	9/16/2020
Compound	(mg/L)
Benzene	<0.00100
Toluene	<0.00100
Ethylbenzene	<0.00100
Total Xylenes	<0.00300

MW-1	
	9/16/2020
Compound	(mg/L)
Benzene	<0.00100
Toluene	<0.00100
Ethylbenzene	<0.00100
Total Xylenes	<0.00300

MW-8	
	9/16/2020
Compound	(mg/L)
Benzene	<0.00100
Toluene	<0.00100
Ethylbenzene	<0.00100
Total Xylenes	<0.00300

MW-2	
	9/16/2020
Compound	(mg/L)
Benzene	<0.00100
Toluene	<0.00100
Ethylbenzene	<0.00100
Total Xylenes	<0.00300

MW-10	
	9/16/2020
Compound	(mg/L)
Benzene	**2.96**
Toluene	<0.0200
Ethylbenzene	0.500
Total Xylenes	0.119

MW-3	
	9/16/2020
Compound	(mg/L)
Benzene	<0.00100
Toluene	<0.00100
Ethylbenzene	<0.00100
Total Xylenes	<0.00300

Legend

- Monitoring Well
- Monitoring Well Destroyed

NMWQCC Groundwater Standards	
Compound	(mg/L)
Benzene	0.005
Toluene	1.00
Ethylbenzene	0.70
Total Xylenes	0.62

NM Not Measured
NS Not Sampled

Notes:

All aqueous analytical results are presented in milligrams per liter (mg/L)

Red text denotes exceedances of NMWQCC Groundwater Standards.

J - The reported result is an estimate. The value is less than the Reported Detection Limit (RDL), but greater than the Method Detection Limit (MDL).

mg/L - milligrams per liter
NMWQCC - New Mexico Water Quality Control Commission

LNAPL - Light Non-Aqueous Phase Liquid

N

0 150 300 Feet

DATE: October 2020
DESIGNED BY: B. Humphrey
DRAWN BY: A. Dahl

TASMAN GEOSCIENCES
Tasman Geosciences, Inc.
6855 W. 119th Avenue
Broomfield, Colorado 80020

DCP Midstream
Linam Ranch Gas Plant
Second Half 2020 Semi-Annual Groundwater Monitoring Summary Report

Analytical Results Map (September 16, 2020)

Figure 4

Appendix A

Historical Analytical Results

APPENDIX A
HISTORICAL ANALYTICAL RESULTS
BTEX CONCENTRATIONS IN GROUNDWATER
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-1	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-1	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-1	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-1	4/28/2011	0.00054 J	<0.002	<0.002	<0.002	
MW-1	9/13/2011	<0.001	<0.002	<0.002	<0.004	
MW-1	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-1	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-1	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-1	9/9/2013	**0.012**	<0.001	0.0024	0.0038	
MW-1	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-1	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-1	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-1	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-1	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-1	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-1	3/7/2017	<0.0010	<0.0010	<0.0010	<0.0010	
MW-1	10/3/2017	<0.0010	<0.0010	<0.0010	<0.0030	
MW-1	3/14/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-1	9/7/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-1	3/25/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-1	9/18/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-1	6/23/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-1	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-2	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-2	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-2	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-2	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-2	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-2	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-2	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-2	9/9/2013	<0.001	<0.001	<0.01	<0.001	
MW-2	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-2	9/23/2014	NS	NS	NS	NS	Inaccessible
MW-2	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-2	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-2	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-2	9/28/2016	NS				Well inaccessible due to flooding
MW-2	3/7/2017	<0.0010	<0.0010	<0.0010	<0.0010	
MW-2	10/3/2017	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	3/14/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	9/7/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	3/25/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	9/18/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	6/23/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	

APPENDIX A
HISTORICAL ANALYTICAL RESULTS
BTEX CONCENTRATIONS IN GROUNDWATER
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-3	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-3	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-3	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-3	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-3	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-3	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-3	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-3	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-3	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-3	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-3	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-3	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-3	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-3	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-3	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	3/7/2017	<0.0010	<0.0010	<0.0010	<0.0010	
MW-3	10/3/2017	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	3/14/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	9/7/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	3/26/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	9/18/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	6/24/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-4	9/24/2009	LNAPL				
MW-4	3/24/2010	LNAPL				
MW-4	9/28/2010	LNAPL				
MW-4	4/28/2011	LNAPL				LNAPL (0.23 feet)
MW-4	9/13/2011	LNAPL				LNAPL (0.28 feet)
MW-4	3/5/2012	LNAPL				LNAPL (0.34 feet)
MW-4	9/4/2012	LNAPL				LNAPL (0.43 feet)
MW-4	2/18/2013	LNAPL				LNAPL (0.47 feet)
MW-4	9/9/2013	LNAPL				LNAPL (0.06 feet)
MW-4	2/25/2014	LNAPL				LNAPL (0.02 feet)
MW-4	2/24/2015	**9.8**	<0.005	0.59	<0.015	LNAPL (0.01 feet)
MW-4	9/1/2015	**8.6**	<0.005	0.53	<0.015	
MW-4	3/24/2016	**6.9**	<0.005	0.38	<0.015	
MW-4	10/12/2016	**5**	<0.010	0.027	0.053	
MW-4	3/7/2017	**8.9**	<0.005	0.024	0.0051	
MW-4	10/3/2017	**16.9**	<0.100	0.618	<0.300	
MW-4	3/14/2018	**18.7**	<0.010	0.686	<0.030	
MW-4	9/7/2018	**12.3**	<0.200	0.74	<0.600	
MW-4	3/26/2019	**15.9**	<0.200	0.516	<0.600	
MW-4	9/18/2019	**19.3**	<0.0010	**0.829**	0.00356	
MW-4	6/23/2020	**12.9**	<0.0010	0.561	0.0351	
MW-4	9/16/2020	**18.5**	<0.100	0.601	<0.300	LNAPL (0.16 feet)

APPENDIX A
HISTORICAL ANALYTICAL RESULTS
BTEX CONCENTRATIONS IN GROUNDWATER
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-5	9/24/2009	**0.0272**	<0.002	0.227	<0.006	
MW-5	3/24/2010	**0.13**	<0.002	0.482	0.46	
MW-5	9/28/2010	0.0095	<0.004	0.188	<0.008	
MW-5	4/28/2011	**0.149**	<0.004	**0.776**	<0.004	
MW-5	9/13/2011	**0.13**	<0.010	**0.86**	<0.020	
MW-5	3/5/2012	**0.24**	<0.025	**2**	<0.075	
MW-5	9/4/2012	**0.17**	<0.005	**1**	0.038	Duplicate Sample Collected
MW-5	2/18/2013	**0.21**	<0.005	**1.4**	<0.015	Duplicate Sample Collected
MW-5	9/9/2013	**0.096**	<0.001	**0.89**	<0.001	Duplicate Sample Collected
MW-5 (Duplicate)	9/9/2013	**0.095**	<0.001	**0.9**	<0.001	
MW-5	2/25/2014	**0.18**	<0.005	**1.3**	<0.005	
MW-5	9/23/2014	**0.33**	<0.005	**2**	<0.015	
MW-5	2/24/2015	**0.16**	<0.005	**1.3**	<0.015	
MW-5	9/1/2015	**0.1**	<0.005	0.57	<0.015	
MW-5	3/24/2016	**0.095**	<0.005	**1.4**	<0.015	
MW-5	9/28/2016	**0.081**	<0.0050	**1.6**	<0.015	
MW-5	3/7/2017	**0.081**	<0.0050	**0.91**	<0.0050	
MW-5	10/3/2017	**0.151**	0.00906 J	**2.34**	<0.060	
MW-5	3/14/2018	**0.0609**	<0.010	**0.930**	<0.030	
MW-5	9/7/2018	**0.131**	<0.001	**2.040**	0.00267 J	
MW-5	3/26/2019	**0.08**	0.000443 J	**2.530**	<0.003	
MW-5	9/18/2019	**0.0980**	<0.0200	**1.97**	<0.0600	
MW-5	6/23/2020	**0.0266**	<0.0200	**1.73**	0.00356 J	
MW-5	9/16/2020	**0.0358**	<0.0200	**2.12**	<0.0600	
MW-6	9/24/2009	LNAPL				
MW-6	3/24/2010	LNAPL				
MW-6	9/28/2010	LNAPL				
MW-6	4/28/2011	LNAPL				LNAPL (2.81 feet)
MW-6	9/13/2011	LNAPL				LNAPL (3.33 feet)
MW-6	3/5/2012	LNAPL				LNAPL (3.1 feet)
MW-6	9/4/2012	LNAPL				LNAPL (3.98 feet)
MW-6	2/18/2013	LNAPL				LNAPL (2.32 feet) Active Spill Buster
MW-6	9/9/2013	LNAPL				LNAPL (0.17 feet) Active Spill Buster
MW-6	2/25/2014	LNAPL				LNAPL (1.99 feet) Active Spill Buster
MW-6	9/23/2014	LNAPL				LNAPL (0.09 feet)
MW-6	2/24/2015	LNAPL				LNAPL (0.07 feet)
MW-6	9/1/2015	LNAPL				LNAPL (0.01 feet)
MW-6	3/24/2016	LNAPL				LNAPL (0.13 feet)
MW-6	9/28/2016	LNAPL				LNAPL (3.74 feet)
MW-6	3/7/2017	LNAPL				LNAPL (0.7 feet) Active Spill Buster
MW-6	10/3/2017	LNAPL				LNAPL (0.25 feet) Active Spill Buster
MW-6	3/14/2018	LNAPL				LNAPL (NM) Active Spill Buster
MW-6	9/7/2018	LNAPL				LNAPL (0.32 feet) Active Spill Buster
MW-6	3/26/2019	**0.543**	<0.001	0.188	<0.003	
MW-6	9/18/2019	LNAPL				LNAPL (2.62 feet)
MW-6	6/23/2020	LNAPL				LNAPL (3.36 feet)
MW-6	9/16/2020	LNAPL				LNAPL (0.25 feet)

APPENDIX A
HISTORICAL ANALYTICAL RESULTS
BTEX CONCENTRATIONS IN GROUNDWATER
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-7	9/24/2009	NS				
MW-7	3/24/2010	NS				
MW-7	9/28/2010	NS				
MW-7	4/28/2011	NS				DRY
MW-7	9/13/2011	NS				
MW-7	3/5/2012	NS				
MW-7	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-7	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-7	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-7	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-7	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-7	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-7	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-7	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-7	10/12/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	3/7/2017	<0.0010	<0.0010	<0.0010	<0.0010	
MW-7	10/3/2017	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	3/14/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	9/7/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	3/25/2019	<0.0010	<0.0010	0.000421 J	<0.0030	
MW-7	9/18/2019	NS				Not enough water for sample
MW-7	6/24/2020	NS				DRY
MW-7	9/16/2020	NS				DRY
MW-8	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-8	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-8	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-8	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-8	9/12/2011	<0.005	<0.005	<0.005	<0.015	
MW-8	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-8	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-8	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-8	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-8	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-8	9/23/2014	NS				Inaccessible
MW-8	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-8	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-8	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-8	9/28/2016	NS				Well inaccessible due to flooding
MW-8	3/7/2017	<0.0010	<0.0010	<0.0010	<0.0010	
MW-8	10/3/2017	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	3/14/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	9/7/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	3/25/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	9/18/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	6/23/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	

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LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-9	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-9	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-9	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-9	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-9	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-9	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-9	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-9	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-9	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-9	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-9	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-9	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-9	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-9	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-9	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	3/7/2017	<0.0010	<0.0010	<0.0010	<0.0010	
MW-9	10/3/2017	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	3/14/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	9/7/2018	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	3/26/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	9/18/2019	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	6/24/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-9	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	
MW-10	4/30/2008	**0.769**	0.0457	0.0851	0.05	
MW-10	4/29/2009	**0.883**	0.23	0.0859	0.0759	
MW-10	9/24/2009	**1.07**	0.126	0.148	0.154	
MW-10	3/24/2010	**1.64**	0.175	0.246	0.156	
MW-10	9/28/2010	**1.9**	0.0547 J	0.24	0.104 J	
MW-10	4/28/2011	**1.72**	0.228	0.195	0.126	Duplicate Sample Collected
MW-10 (Duplicate)	4/28/2011	**2.29**	0.258	0.234	0.155	
MW-10	9/12/2011	**1.97**	0.104	0.249	0.145	Duplicate Sample Collected
MW-10 (Duplicate)	9/12/2011	**2.08**	0.0964	0.25	0.153	
MW-10	3/5/2012	**2.2**	0.11	0.23	0.13	
MW-10	9/4/2012	**2.7**	0.0083	0.28	0.12	
MW-10	2/18/2013	**2.0**	0.019	0.3	0.13	
MW-10	9/9/2013	**1.6**	0.022	0.26	0.11	
MW-10	2/25/2014	**1.7**	0.0054	0.35	0.098	
MW-10	9/23/2014	**2.2**	<0.005	0.53	0.15	
MW-10	2/24/2015	**1.6**	0.012	0.29	0.086	
MW-10	9/1/2015	**1.6**	0.012	0.19	0.078	
MW-10	3/24/2016	**4.6**	0.0068	0.22	0.054	
MW-10	9/28/2016	**3.1**	0.012	0.25	0.19	
MW-10	3/7/2017	**3.1**	0.011	0.23	0.09	
MW-10	10/3/2017	**4.27**	0.0202	0.311	0.158	
MW-10	3/14/2018	**4.24**	<0.010	0.440	0.109	
MW-10	9/7/2018	**3.32**	0.0274	0.332	0.155	
MW-10	3/26/2019	**2.0**	0.0182	0.197	0.0826	
MW-10	9/18/2019	**1.66**	<0.200	0.284	0.202	
MW-10	6/23/2020	**2.66**	0.0100 J	0.522	0.141	
MW-10	9/16/2020	**2.96**	<0.0200	0.500	0.119	

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LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-10D	4/30/2008	**0.195**	0.0677	0.0144	0.0221	
MW-10D	4/29/2009	**0.179**	0.0772	0.0203	0.0296	
MW-10D	9/24/2009	**0.103**	0.0496	0.0127	0.0261	
MW-10D	3/24/2010	**0.196**	0.0703	0.0129	0.0202	
MW-10D	9/28/2010	**0.0402**	0.0358	0.006	0.0077 J	
MW-10D	4/28/2011	**0.0512**	0.0373	0.0063	0.0113	
MW-10D	9/12/2011	**0.0278**	0.0131	0.0032	0.006	
MW-10D	3/5/2012	**0.024**	0.0081	<0.005	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	3/5/2012	**0.022**	0.0089	<0.005	<0.015	
MW-10D	9/4/2012	**0.023**	0.0057	<0.005	<0.015	
MW-10D	2/18/2013	**0.034**	0.014	0.0023	0.0031	
MW-10D	9/9/2013	**0.034**	0.019	<0.005	<0.005	
MW-10D	2/25/2014	**0.046**	0.021	0.005	<0.005	Duplicate Sample Collected
MW-10D (Duplicate)	2/25/2014	**0.043**	0.019	<0.005	<0.005	
MW-10D	9/23/2014	**0.059**	0.024	<0.005	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	9/23/2014	**0.058**	0.024	<0.005	<0.015	
MW-10D	2/24/2015	**0.062**	0.026	0.008	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	2/24/2015	**0.058**	0.024	0.0074	<0.015	
MW-10D	9/1/2015	**0.062**	0.025	0.006	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	9/1/2015	**0.065**	0.026	0.0075	<0.015	
MW-10D	3/24/2016	**0.079**	0.021	0.021	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	3/24/2016	**0.079**	0.019	0.013	<0.015	
MW-10D	9/28/2016	**0.024**	0.013	<0.0050	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	9/28/2016	**0.025**	0.013	<0.0050	<0.015	
MW-10D	3/7/2017	**0.15**	0.017	0.026	0.0072	Duplicate Sample Collected
MW-10D (Duplicate)	3/7/2017	**0.15**	0.016	0.025	0.0066	
MW-10D	10/3/2017	**0.0510**	0.0153	<0.010	<0.030	Duplicate Sample Collected
MW-10D (Duplicate)	10/3/2017	**0.0614**	0.020	<0.020	<0.060	
MW-10D	3/14/2018	**0.116**	0.0178	0.0194	0.00472	Duplicate Sample Collected
MW-10D (Duplicate)	3/14/2018	**0.104**	0.0169	0.0176	<0.0150	
MW-10D	9/7/2018	**0.0499**	0.0163	0.00769	0.0033	Duplicate Sample Collected
MW-10D (Duplicate)	9/7/2018	**0.0497**	0.0181	0.00899	0.00384	
MW-10D	3/26/2019	**0.047**	0.0126	0.00647	0.00238 J	Duplicate Sample Collected
MW-10D (Duplicate)	3/26/2019	**0.0477**	0.0124	0.00642	0.00227 J	
MW-10D	9/18/2019	**0.0588**	0.0119	0.0182	0.00272 J	Duplicate Sample Collected
MW-10D (Duplicate)	9/18/2019	**0.0574**	0.0116	0.0185	0.00264 J	
MW-10D	6/23/2020	**0.0297**	0.0151	0.00472	0.00318	Duplicate Sample Collected
MW-10D (Duplicate)	6/23/2020	**0.0290**	0.0145	0.00418	0.00323	
MW-10D	9/16/2020	**0.0466**	0.0138	0.0103	0.00248 J	Duplicate Sample Collected
MW-10D (Duplicate)	9/16/2020	**0.0523**	0.0124	0.0129	0.00261 J	

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LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.005**	**1.00**	**0.70**	**0.62**	
MW-11	4/29/2009	<0.00046	<0.00048	<0.00045	<0.0014	
MW-11	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-11	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-11	9/28/2010	0.0036	<0.002	<0.002	0.004	
MW-11	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-11	9/12/2001	<0.001	<0.002	<0.002	<0.004	
MW-11	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-11	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-11	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-11	9/9/2013	<0.001	<0.001	<0.001	0.0033	
MW-11	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-11	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-11	2/24/2015	0.0019	<0.001	<0.001	<0.003	
MW-11	9/1/2015	**0.019**	<0.001	<0.001	0.0031	
MW-11	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-11	9/28/2016	0.0036	<0.0010	<0.0010	<0.0030	
MW-11	3/7/2017	0.0081	<0.0010	<0.0010	0.0017	
MW-11	10/3/2017	0.000951 J	<0.0010	<0.0010	<0.0030	
MW-11	3/14/2018	0.00385	<0.0010	<0.0010	<0.0030	
MW-11	9/7/2018	0.000467 J	<0.0010	<0.0010	<0.0030	
MW-11	3/26/2019	**0.0135**	0.00082 J	<0.0010	<0.0030	
MW-11	9/18/2019	**0.0207**	0.00138	0.000459 J	0.00166 J	
MW-11	6/23/2020	**0.05**	0.00263	0.000628 J	0.00211 J	
MW-11	9/16/2020	**0.0148**	0.00138	0.000301 J	0.000603 J	
MW-13	4/29/2009	<0.00046	<0.00048	<0.00045	<0.0014	
MW-13	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-13	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-13	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-13	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-13	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-13	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-13	Well Destroyed					
Trip Blank	2/25/2014	<0.001	<0.001	<0.001	<0.001	
Trip Blank	9/23/2014	<0.001	<0.001	<0.001	<0.003	
Trip Blank	2/24/2015	<0.001	<0.001	<0.001	<0.003	
Trip Blank	9/1/2015	<0.001	<0.001	<0.001	<0.003	
Trip Blank	3/24/2016	<0.001	<0.001	<0.001	<0.003	
Trip Blank	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
Trip Blank	3/7/2017	<0.0010	<0.0010	<0.0010	<0.0010	
Trip Blank	10/3/2017	<0.0010	<0.0010	<0.0010	<0.0030	
Trip Blank	3/14/2018	<0.0010	<0.0010	<0.0010	<0.0030	
Trip Blank	9/7/2018	<0.0010	<0.0010	<0.0010	<0.0030	
Trip Blank	3/26/2019	<0.0010	<0.0010	<0.0010	<0.0030	
Trip Blank	9/18/2019	<0.0010	<0.0010	<0.0010	<0.0030	
Trip Blank	6/24/2020	<0.0010	<0.0010	<0.0010	<0.0030	
Trip Blank	9/16/2020	<0.0010	<0.0010	<0.0010	<0.0030	

Notes:
Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.
NMWQCC = New Mexico Water Quality Control Commission
LNAPL = Light Non-Aqueous Phase Liquid
J = A qualifier indicating an estimated value of a concentration above the laboratory's Method Detection Limit (MDL) but below the Reported Detection Limit (RDL).
NS = Not Sampled
NM = Not Measured
mg/L = milligrams per liter

Appendix B

Laboratory Analytical Report

- Pace Job #: L1263945

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 30, 2020

DCP Midstream - Tasman

Sample Delivery Group:	L1263945
Samples Received:	09/18/2020
Project Number:	
Description:	Linam Ranch

Report To: Kyle Norman
2620 W. Marland Blvd
Hobbs, NM 88240

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

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MW-1 L1263945-01 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 09:30 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1548327	1	09/24/20 10:29	09/24/20 10:29	JCP	Mt. Juliet, TN

MW-2 L1263945-02 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 10:25 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1548327	1	09/24/20 10:49	09/24/20 10:49	JCP	Mt. Juliet, TN

MW-3 L1263945-03 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 12:05 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1548327	1	09/24/20 11:09	09/24/20 11:09	JCP	Mt. Juliet, TN

MW-4 L1263945-04 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 14:20 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549767	100	09/27/20 01:23	09/27/20 01:23	JHH	Mt. Juliet, TN

MW-5 L1263945-05 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 13:50 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549767	20	09/27/20 01:44	09/27/20 01:44	JHH	Mt. Juliet, TN

MW-8 L1263945-06 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 10:00 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549286	1	09/26/20 06:26	09/26/20 06:26	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1550020	1	09/27/20 15:55	09/27/20 15:55	ADM	Mt. Juliet, TN

MW-9 L1263945-07 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 11:30 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549286	1	09/26/20 06:46	09/26/20 06:46	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1550020	1	09/27/20 16:16	09/27/20 16:16	ADM	Mt. Juliet, TN

MW-10 L1263945-08 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 15:10 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549767	20	09/27/20 02:06	09/27/20 02:06	JHH	Mt. Juliet, TN

MW-10D L1263945-09 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 13:00 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549767	1	09/26/20 21:47	09/26/20 21:47	JHH	Mt. Juliet, TN

MW-11 L1263945-10 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 11:00 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549767	1	09/26/20 22:09	09/26/20 22:09	JHH	Mt. Juliet, TN

DUPLICATE L1263945-11 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 00:00 | Received date/time: 09/18/20 09:30

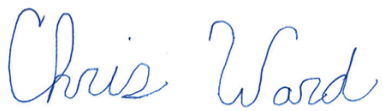
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1550713	1	09/29/20 17:50	09/29/20 17:50	ADM	Mt. Juliet, TN

TRIP BLANK L1263945-12 GW

Collected by: Becky Griffin | Collected date/time: 09/16/20 00:00 | Received date/time: 09/18/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1549286	1	09/26/20 05:46	09/26/20 05:46	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1550020	1	09/27/20 14:31	09/27/20 14:31	ADM	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/24/2020 10:29	WG1548327
Toluene	U		0.000278	0.00100	1	09/24/2020 10:29	WG1548327
Ethylbenzene	U		0.000137	0.00100	1	09/24/2020 10:29	WG1548327
Total Xylenes	U		0.000174	0.00300	1	09/24/2020 10:29	WG1548327
(S) Toluene-d8	*90.5*			*80.0-120*		*09/24/2020 10:29*	WG1548327
(S) 4-Bromofluorobenzene	*94.3*			*77.0-126*		*09/24/2020 10:29*	WG1548327
(S) 1,2-Dichloroethane-d4	*128*			*70.0-130*		*09/24/2020 10:29*	WG1548327

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/24/2020 10:49	WG1548327
Toluene	U		0.000278	0.00100	1	09/24/2020 10:49	WG1548327
Ethylbenzene	U		0.000137	0.00100	1	09/24/2020 10:49	WG1548327
Total Xylenes	U		0.000174	0.00300	1	09/24/2020 10:49	WG1548327
(S) Toluene-d8	*91.1*			*80.0-120*		*09/24/2020 10:49*	WG1548327
(S) 4-Bromofluorobenzene	*95.7*			*77.0-126*		*09/24/2020 10:49*	WG1548327
(S) 1,2-Dichloroethane-d4	*131*	J1		*70.0-130*		*09/24/2020 10:49*	WG1548327

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/24/2020 11:09	WG1548327
Toluene	U		0.000278	0.00100	1	09/24/2020 11:09	WG1548327
Ethylbenzene	U		0.000137	0.00100	1	09/24/2020 11:09	WG1548327
Total Xylenes	U		0.000174	0.00300	1	09/24/2020 11:09	WG1548327
(S) Toluene-d8	*90.1*			*80.0-120*		*09/24/2020 11:09*	WG1548327
(S) 4-Bromofluorobenzene	*94.6*			*77.0-126*		*09/24/2020 11:09*	WG1548327
(S) 1,2-Dichloroethane-d4	*128*			*70.0-130*		*09/24/2020 11:09*	WG1548327

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	18.5		0.00941	0.100	100	09/27/2020 01:23	WG1549767
Toluene	U		0.0278	0.100	100	09/27/2020 01:23	WG1549767
Ethylbenzene	0.601		0.0137	0.100	100	09/27/2020 01:23	WG1549767
Total Xylenes	U		0.0174	0.300	100	09/27/2020 01:23	WG1549767
(S) Toluene-d8	*106*			*80.0-120*		*09/27/2020 01:23*	WG1549767
(S) 4-Bromofluorobenzene	*85.6*			*77.0-126*		*09/27/2020 01:23*	WG1549767
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*09/27/2020 01:23*	WG1549767

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0358		0.00188	0.0200	20	09/27/2020 01:44	WG1549767
Toluene	U		0.00556	0.0200	20	09/27/2020 01:44	WG1549767
Ethylbenzene	2.12		0.00274	0.0200	20	09/27/2020 01:44	WG1549767
Total Xylenes	U		0.00348	0.0600	20	09/27/2020 01:44	WG1549767
(S) Toluene-d8	*91.4*			*80.0-120*		*09/27/2020 01:44*	WG1549767
(S) 4-Bromofluorobenzene	*86.4*			*77.0-126*		*09/27/2020 01:44*	WG1549767
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*09/27/2020 01:44*	WG1549767

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/26/2020 06:26	WG1549286
Toluene	U		0.000278	0.00100	1	09/26/2020 06:26	WG1549286
Ethylbenzene	U		0.000137	0.00100	1	09/27/2020 15:55	WG1550020
Total Xylenes	U		0.000174	0.00300	1	09/27/2020 15:55	WG1550020
(S) Toluene-d8	*103*			*80.0-120*		*09/26/2020 06:26*	WG1549286
(S) Toluene-d8	*113*			*80.0-120*		*09/27/2020 15:55*	WG1550020
(S) 4-Bromofluorobenzene	*83.9*			*77.0-126*		*09/26/2020 06:26*	WG1549286
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*09/27/2020 15:55*	WG1550020
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*09/26/2020 06:26*	WG1549286
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*		*09/27/2020 15:55*	WG1550020

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/26/2020 06:46	WG1549286
Toluene	U		0.000278	0.00100	1	09/26/2020 06:46	WG1549286
Ethylbenzene	U		0.000137	0.00100	1	09/27/2020 16:16	WG1550020
Total Xylenes	U		0.000174	0.00300	1	09/27/2020 16:16	WG1550020
(S) Toluene-d8	*88.1*			*80.0-120*		*09/26/2020 06:46*	WG1549286
(S) Toluene-d8	*111*			*80.0-120*		*09/27/2020 16:16*	WG1550020
(S) 4-Bromofluorobenzene	*88.4*			*77.0-126*		*09/26/2020 06:46*	WG1549286
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*09/27/2020 16:16*	WG1550020
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*09/26/2020 06:46*	WG1549286
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*		*09/27/2020 16:16*	WG1550020

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	2.96		0.00188	0.0200	20	09/27/2020 02:06	WG1549767
Toluene	U		0.00556	0.0200	20	09/27/2020 02:06	WG1549767
Ethylbenzene	0.500		0.00274	0.0200	20	09/27/2020 02:06	WG1549767
Total Xylenes	0.119		0.00348	0.0600	20	09/27/2020 02:06	WG1549767
(S) Toluene-d8	*100*			*80.0-120*		*09/27/2020 02:06*	WG1549767
(S) 4-Bromofluorobenzene	*92.9*			*77.0-126*		*09/27/2020 02:06*	WG1549767
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/27/2020 02:06*	WG1549767

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0466		0.0000941	0.00100	1	09/26/2020 21:47	WG1549767
Toluene	0.0138		0.000278	0.00100	1	09/26/2020 21:47	WG1549767
Ethylbenzene	0.0103		0.000137	0.00100	1	09/26/2020 21:47	WG1549767
Total Xylenes	0.00248	J	0.000174	0.00300	1	09/26/2020 21:47	WG1549767
(S) Toluene-d8	*105*			*80.0-120*		*09/26/2020 21:47*	WG1549767
(S) 4-Bromofluorobenzene	*97.5*			*77.0-126*		*09/26/2020 21:47*	WG1549767
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/26/2020 21:47*	WG1549767

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0148		0.0000941	0.00100	1	09/26/2020 22:09	WG1549767
Toluene	0.00138		0.000278	0.00100	1	09/26/2020 22:09	WG1549767
Ethylbenzene	0.000301	J	0.000137	0.00100	1	09/26/2020 22:09	WG1549767
Total Xylenes	0.000603	J	0.000174	0.00300	1	09/26/2020 22:09	WG1549767
(S) Toluene-d8	*104*			*80.0-120*		*09/26/2020 22:09*	WG1549767
(S) 4-Bromofluorobenzene	*93.6*			*77.0-126*		*09/26/2020 22:09*	WG1549767
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*09/26/2020 22:09*	WG1549767

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0523		0.0000941	0.00100	1	09/29/2020 17:50	WG1550713
Toluene	0.0124		0.000278	0.00100	1	09/29/2020 17:50	WG1550713
Ethylbenzene	0.0129		0.000137	0.00100	1	09/29/2020 17:50	WG1550713
Total Xylenes	0.00261	J	0.000174	0.00300	1	09/29/2020 17:50	WG1550713
(S) Toluene-d8	*106*			*80.0-120*		*09/29/2020 17:50*	WG1550713
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*09/29/2020 17:50*	WG1550713
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*09/29/2020 17:50*	WG1550713

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/26/2020 05:46	WG1549286
Toluene	U		0.000278	0.00100	1	09/26/2020 05:46	WG1549286
Ethylbenzene	U		0.000137	0.00100	1	09/27/2020 14:31	WG1550020
Total Xylenes	U		0.000174	0.00300	1	09/27/2020 14:31	WG1550020
(S) Toluene-d8	*95.1*			*80.0-120*		*09/26/2020 05:46*	WG1549286
(S) Toluene-d8	*103*			*80.0-120*		*09/27/2020 14:31*	WG1550020
(S) 4-Bromofluorobenzene	*89.6*			*77.0-126*		*09/26/2020 05:46*	WG1549286
(S) 4-Bromofluorobenzene	*98.8*			*77.0-126*		*09/27/2020 14:31*	WG1550020
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*09/26/2020 05:46*	WG1549286
(S) 1,2-Dichloroethane-d4	*96.4*			*70.0-130*		*09/27/2020 14:31*	WG1550020

Method Blank (MB)

(MB) R3574131-3 09/24/20 03:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Ethylbenzene	U		0.000137	0.00100
Toluene	U		0.000278	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*91.5*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*127*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3574131-1 09/24/20 02:24 • (LCSD) R3574131-2 09/24/20 02:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00565	0.00571	113	114	70.0-123			1.06	20
Ethylbenzene	0.00500	0.00441	0.00445	88.2	89.0	79.0-123			0.903	20
Toluene	0.00500	0.00459	0.00450	91.8	90.0	79.0-120			1.98	20
Xylenes, Total	0.0150	0.0130	0.0131	86.7	87.3	79.0-123			0.766	20
(S) Toluene-d8				*90.9*	*91.0*	*80.0-120*				
(S) 4-Bromofluorobenzene				*94.9*	*97.1*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*126*	*127*	*70.0-130*				

Method Blank (MB)

(MB) R3574805-3 09/26/20 05:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
(S) Toluene-d8	*96.5*			*80.0-120*
(S) 4-Bromofluorobenzene	*84.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3574805-1 09/26/20 04:07 • (LCSD) R3574805-2 09/26/20 04:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00471	0.00450	94.2	90.0	70.0-123			4.56	20
Toluene	0.00500	0.00430	0.00408	86.0	81.6	79.0-120			5.25	20
(S) Toluene-d8				*90.7*	*91.6*	*80.0-120*				
(S) 4-Bromofluorobenzene				*82.3*	*81.3*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*105*	*96.9*	*70.0-130*				

Method Blank (MB)

(MB) R3575428-2 09/26/20 17:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Ethylbenzene	U		0.000137	0.00100
Toluene	U		0.000278	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*86.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3575428-3 09/26/20 18:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00497	99.4	70.0-123	
Ethylbenzene	0.00500	0.00460	92.0	79.0-123	
Toluene	0.00500	0.00507	101	79.0-120	
Xylenes, Total	0.0150	0.0131	87.3	79.0-123	
(S) Toluene-d8			*104*	*80.0-120*	
(S) 4-Bromofluorobenzene			*94.1*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

Method Blank (MB)

(MB) R3575089-4 09/27/20 12:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*96.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3575089-1 09/27/20 11:29 • (LCSD) R3575089-2 09/27/20 11:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	0.00500	0.00516	0.00536	103	107	79.0-123			3.80	20
Xylenes, Total	0.0150	0.0146	0.0162	97.3	108	79.0-123			10.4	20
(S) Toluene-d8				*93.4*	*98.6*	*80.0-120*				
(S) 4-Bromofluorobenzene				*87.3*	*92.0*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*97.1*	*97.4*	*70.0-130*				

Method Blank (MB)

(MB) R3575998-2 09/29/20 17:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Ethylbenzene	U		0.000137	0.00100
Toluene	U		0.000278	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*106*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.7*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3575998-1 09/29/20 16:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00530	106	70.0-123	
Ethylbenzene	0.00500	0.00550	110	79.0-123	
Toluene	0.00500	0.00560	112	79.0-120	
Xylenes, Total	0.0150	0.0161	107	79.0-123	
(S) Toluene-d8			*105*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*107*	*70.0-130*	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

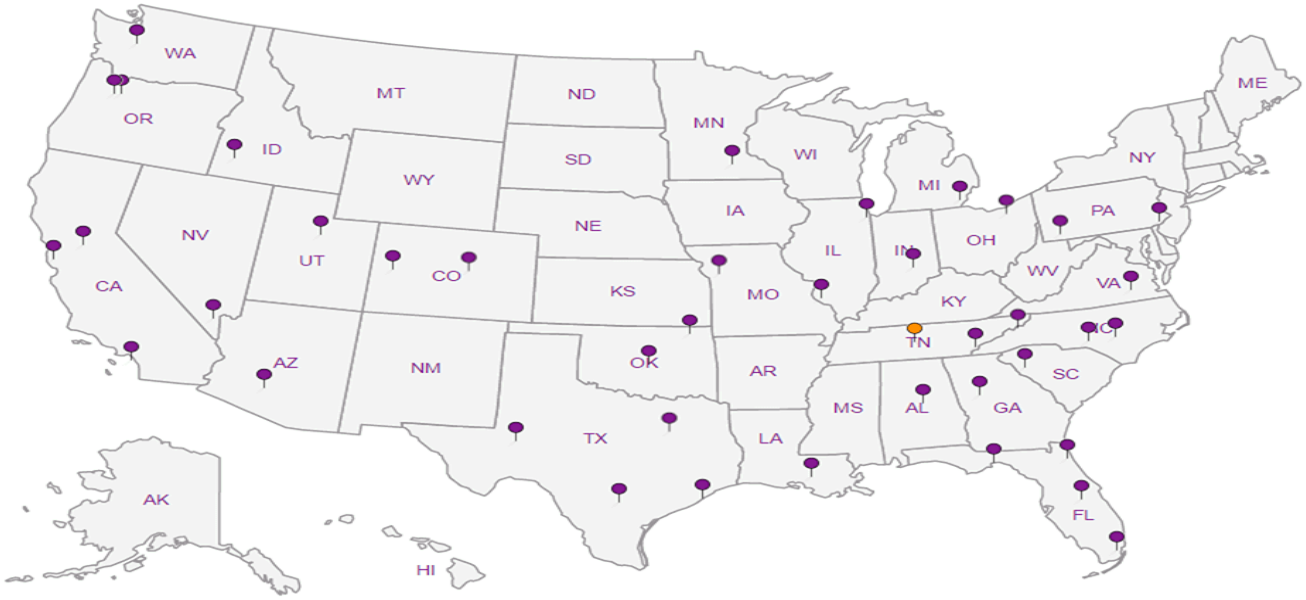
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



DCP Midstream - Tasman

2620 W. Marland Blvd
Hobbs, NM 88240

Billing Information:
Steve Weathers
370 17th St, Ste 2500
Denver, CO 80202

J.BHUMPHREY@TASMAN-GEO.COM KNORMAN@TASMAN-GEO.COM

Report to: ~~Nick Kopiasz~~ KYLE NORMAN

Project Description: Linam Ranch
City/State Collected:
Please Circle: PT MT CT ET

Phone: 720-218-4003
Client Project #
Lab Project # DCPTASMAN-LINAM

Collected by (print): BECKY GRIFFIN
Site/Facility ID #
P.O. # 0000524227

Collected by (signature): Becky Griffin
Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # L1263945
Ta B230
Acctnum: DCPTASMAN
Template: T127845
Prelogin: P796044
PM: 824 - Chris Ward
PB: DN 9/4
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEX 40mlAmb-HCl	Pres Chk	Remarks	Sample # (lab only)
MW-1		GW		9-16-20	0930	3	✓			-01
MW-2		GW		9-16-20	1025	3	✓			-02
MW-3		GW		9-16-20	1205	3	✓			-03
MW-4		GW		9-16-20	1420	3	✓			-04
MW-5		GW		9-16-20	1350	3	✓			-05
MW-6		GW								
MW-7		GW								
MW-8		GW		9-16-20	1000	3	✓			-06
MW-9		GW		9-16-20	1130	3	✓			-07
MW-10		GW		9-16-20	1510	3	✓			-08

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS (__ FedEx) __ Courier _____
Tracking # 9158 8781 2352

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
Becky Griffin	9-16-20	1500		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: NA °C Bottles Received: 5.3, 3.5 33
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/17/20 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

DCP Midstream - Tasman

2620 W. Marland Blvd
Hobbs, NM 88240

Billing Information:
Steve Weathers
370 17th St, Ste 2500
Denver, CO 80202

Email To: SHUMPHREY@TASMAN-GEO.COM; KNORMAN@TASMAN-GEO.COM

Report to: KYLE NORMAN

Project Description: Linam Ranch
City/State Collected:
Please Circle: PT MT CT ET

Phone: 720-218-4003
Client Project #
Lab Project # DCPTASMAN-LINAM

Collected by (print): BECKY GRIFFIN
Site/Facility ID #
P.O. # 0000524227

Collected by (signature): Becky Griffin
Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-10D		GW		9-16-20	1300	3	✓		-09
MW-11		GW		9-16-20	1100	3	✓		-10
DUPLICATE		GW		9-16-20		3	✓		-11
		GW							
TRIP BLANK		GW		9-16-20		1			-12

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
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SDG # L1263945
Table #
Acctnum: DCPTASMAN
Template: T127845
Prelogin: P796044
PM: 824 - Chris Ward
PB: DN 9/4
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____
Tracking # 9159 8780 2362

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Becky Griffin	9-16-20	1500	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: 5.3, 3.5 °C Bottles Received: 8

Date: 9/18/20 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK