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February 10, 2014

2014 FEB 12 P 2: 05

Mr. Leonard Lowe
Environmental Bureau Chief
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

**RE: Second 2013 Semi Annual Groundwater Monitoring Report
DCP Linam Ranch Gas Plant (GW-015)
Unit B, Section 6, Township 19 South, Range 37 East**

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review one copy of the Second 2013 Semi Annual Groundwater Monitoring Report for the DCP Linam Ranch Gas Plant located in Lea County, New Mexico (Unit B Section 6, Township 19 South, Range 37 East).

The groundwater sampling was completed on September 9, 2013. The groundwater data indicates that the groundwater conditions remain stable. The next monitoring event is scheduled for the first half of 2014.

If you have any questions regarding the report, please call at 303-605-1695 or e-mail me CECole@dcpmidstream.com.

Sincerely,

DCP Midstream, LP

A handwritten signature in cursive script that reads "Chandler E. Cole".

Chandler E Cole
Senior Environmental Specialist

Enclosure

cc: Larry Johnson – OCD District Office, Hobbs
Environmental Files

Second Half 2013 Semi-Annual Groundwater Monitoring Summary Report

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

Prepared for:



370 17th St., Suite 2500
Denver, CO 80202

Prepared by:



6899 Pecos Street, Unit C
Denver, CO 80221

January 23, 2014

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1. Introduction

This report summarizes groundwater monitoring and remediation activities conducted during the second half of 2013 at the Linam Ranch Natural Gas Plant (Site) in Lea County, New Mexico (Figure 1). Tasman Geosciences, LLC (Tasman) conducted these activities on behalf of DCP Midstream (DCP). The purpose of the field activities described herein were to determine the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons, measure groundwater levels, obtain groundwater samples for chemical analysis and evaluate and present groundwater flow and quality conditions. Current Site conditions were evaluated from field data and groundwater analytical laboratory results collected on September 9, 2013.

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 facility coordinates are 32.6965 degrees north and 103.2883 degrees west. This facility is active and includes an office complex and storage areas in addition to the main plant.

The Site currently has twelve groundwater monitoring wells - 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 (monitoring well MW-13 was destroyed during the second half of 2012 and has been removed from the sampling program.) All site monitoring wells were installed between 1991 and 1995 (Figure 2). 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).

3. Groundwater Monitoring

This section describes the field groundwater monitoring activities as well as the laboratory analyses performed during the second half 2013 semi-annual monitoring event. Monitoring activities included Site-wide groundwater gauging, LNAPL measurements, groundwater purging and sampling, and packaging and shipping of the samples to the laboratory for chemical analyses. Figure 2 illustrates the groundwater monitoring network utilized to perform these activities at the Site.

3.1 Groundwater and LNAPL Elevation Monitoring

During the second half 2013 semi-annual monitoring event conducted on September 9, 2013, groundwater levels and LNAPL thickness, where present, were measured at twelve Site monitoring well locations. Depth to groundwater and LNAPL were measured in order to evaluate hydraulic characteristics and provide information regarding fluctuations in groundwater and LNAPL elevations at the Site. Monitoring wells that did not have LNAPL present were measured for total depth and a sampling purge volume calculated.

Groundwater 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 levels were subsequently converted to elevations (feet above mean sea level [AMSL]). Measured groundwater level data and elevations collected during the second half 2013 semi-annual monitoring event in addition to historical elevations are presented in Table 1. A contour map of second half 2013 semi-annual groundwater elevations is presented in Figure 3. Groundwater elevations ranged from 3,666.49 feet AMSL at monitoring well MW-3 to 3,676.64 feet AMSL at monitoring well MW-5. As illustrated on Figure 3, groundwater flow at the Site generally trends to the southeast with a gradient of approximately 0.0035 foot per foot between monitoring wells MW-5 and MW-3. Monitoring well MW-7, located at the northwest corner of the Site, was not used to calculate the groundwater gradient as it exhibited anomalous results.

LNAPL was detected at MW-4 with a thickness of 0.06 feet and MW-6 with a thickness of 0.17 feet.

3.2 Groundwater Quality Monitoring

Prior to collecting groundwater samples, groundwater levels, the presence of LNAPL, and total depth (in wells without LNAPL) were measured within Site monitoring wells as described above. A minimum of three well casing volumes of groundwater (calculated from total depth of the well and groundwater level measurements) was then purged using dedicated polyethylene bailers from the subject well prior to collecting groundwater samples. Purge water was collected and transported to a waste water sump onsite. Groundwater samples were collected using the same dedicated polyethylene bailers, placed in clean laboratory supplied containers for the selected analytical methods, packed in an ice-filled cooler and maintained at approximately 4 degrees Celsius ($^{\circ}\text{C}$) for transportation. Groundwater samples were then shipped under chain-of-custody procedures to ALS Environmental (ALS) laboratory in Houston, Texas, for analysis.

Water quality samples were collected from ten of twelve wells. Monitoring wells MW-4 and MW-6 were not sampled due to the presence of measurable LNAPL detected in the wells. Water quality samples were submitted to ALS 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. Analytical results are summarized on Figure 4 and the laboratory analytical report is provided in Appendix A.

Analytical results for monitoring wells sampled are as follows:

- MW-2, MW-3, MW-7, MW-8, MW-9, and MW-11: BTEX concentrations were below laboratory detection limits at these sample locations;
- MW-1, MW-5, MW-10, MW-10D: Benzene concentrations were in exceedance of the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standard (0.01 mg/L) in all four wells with concentrations of 0.012 mg/L, 0.096 mg/L, 1.6 mg/L, and 0.034 mg/L, respectively. Ethylbenzene was detected at these monitoring locations, however only MW-5 exhibited concentrations in exceedance of NMWQCC Groundwater Standards.

3.3 Data Quality Assurance / Quality Control

The data were 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. A trip blank, matrix spike or matrix spike duplicate (MS/MSD) and field duplicate sample from well MW-5 were collected during the sampling event.

The trip blank was fully in control, having no detections of targets.

The duplicate sample collected from MW-5 was in compliance with QA/QC standards. MW-5 and duplicate sample returned results for benzene of 0.096 mg/L and 0.095 mg/L, respectively.

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

4. Remediation Activities

Active LNAPL recovery activities were initiated during December of 2012. An LNAPL recovery unit (Magnum Spill Buster – manufactured by Clean Earth Technology) was installed at monitoring well MW-6 and has remained in operation through the fourth quarter 2013. As of December 18, 2013, the Spill Buster pump has operated with minimal downtime due to pump cleaning and operational checks and has extracted approximately 34.97 gallons of LNAPL at an average extraction rate of 0.16 gallons per day (gpd) since it first became operational. However, The LNAPL thickness at MW-6 has decreased and consistently remained below the minimum pumping thickness of the Spill Buster pump since August

2013. A summary of the cumulative volume of LNAPL removed and the pumping rates during the second half 2013 are summarized in the Table below.

Second Half 2013 LNAPL Recovery Summary

Date	Volume of Product (gallons)	Pump Rate (gallons per day)
9-Jul-13	34.22	0.03
12-Aug-13	34.97	0.02
20-Sep-13	34.97	0.00
17-Oct-13	34.97	0.00
13-Nov-13	34.97	0.00
18-Dec-13	34.97	0.00

5. Conclusions

Measurable LNAPL persists at monitoring wells MW-4 and MW-6, located down gradient of the former oil water separator. The free phase hydrocarbon plume in this area does continue to impose an immediate threat to surrounding downgradient monitoring locations and the detection of benzene above the NMWQCC groundwater standard of 0.01 mg/L for the first time in monitoring well MW-1 during the reporting period indicates the plume has potentially impacted downgradient areas. However, the addition of the Spill Buster pump in MW-6 as described in the previous section has decreased LNAPL levels at the Site to a point where LNAPL recovery at MW-6 is not occurring. This indicates significant depletion of the LNAPL volume in the vicinity of the recovery location.

Elevated dissolved phase benzene concentrations persist at monitoring wells MW-10 and MW-10D in the central portion of the Site. However, BTEX concentrations in down-gradient monitoring well MW-9 remain below laboratory detection limits.

LNAPL movement is likely affected by the transmissivity of the subsurface formation and the hydraulic gradient across the Site. Although the subsurface may be transmissive, the overall plume velocity is relatively slow due to the minimal hydraulic gradient across the Site. Consequently, the LNAPL mobility is not significantly influenced by the subsurface formation. Dissolved phase petroleum hydrocarbon concentrations are minimal around residual LNAPL suggesting that biodegradation of source material over distance and time from the point of release is likely occurring. Constituent concentrations in point-of-compliance wells along the down gradient property boundary remain below laboratory detection limits.

Ongoing semi-annual groundwater sampling activities will provide for continued monitoring of dissolved-phase BTEX concentrations and LNAPL trends.

6. Recommendations

Based on evaluation of data collected during the reporting period 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.
- Due to the decreased LNAPL volume and recovery rate at MW-6, remove the Spill Buster unit and deploy passive LNAPL recovery bailers at monitoring wells MW-4 and MW-6. Utilize a 55-gallon drum contained within a secondary containment over pack drum placed near the wells to contain recovered LNAPL from the LNAPL bailers. The passive recovery bailers will be checked and the contents emptied into the containment drum on a monthly and/or as needed basis.

Tables

TABLE 1
SECOND HALF 2013 SEMI-ANNUAL
SUMMARY OF GROUNDWATER ELEVATION DATA
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location	Date	Depth to Groundwater (1) (feet)	Depth to Product (1) (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (2) (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-1	9/13/2011	46.05			54.31	3718.29	3672.24	-2.19
MW-1	3/5/2012	46.43			54.31	3718.29	3671.86	-0.38
MW-1	9/4/2012	46.91			54.31	3718.29	3671.38	-0.48
MW-1	2/18/2013	46.85			54.31	3718.29	3671.44	0.06
MW-1	9/9/2013	42.86			54.31	3718.29	3675.43	3.99
MW-2	9/12/2011	45.47			50.50	3714.80	3669.33	-7.41
MW-2	3/5/2012	45.95			50.50	3714.80	3668.85	-0.48
MW-2	9/4/2012	46.35			50.50	3714.80	3668.45	-0.40
MW-2	2/18/2013	46.50			50.50	3714.80	3668.30	-0.15
MW-2	9/9/2013	38.21			50.50	3714.80	3676.59	8.29
MW-3	9/12/2011	48.55			55.44	3715.50	3666.95	-2.42
MW-3	3/5/2012	48.82			55.44	3715.50	3666.68	-0.27
MW-3	9/4/2012	49.17			55.44	3715.50	3666.33	-0.35
MW-3	2/18/2013	49.36			55.44	3715.50	3666.14	-0.19
MW-3	9/9/2013	49.01			55.44	3715.50	3666.49	0.35
MW-4*	9/13/2011	47.29	47.01	0.28	NM	3720.46	3673.38	-0.34
MW-4*	3/5/2012	47.44	47.10	0.34	NM	3720.46	3673.28	-0.11
MW-4*	9/4/2012	48.00	47.57	0.43	NM	3720.46	3672.78	-0.49
MW-4*	2/18/2013	47.94	47.47	0.47	NM	3720.46	3672.87	0.09
MW-4*	9/9/2013	44.43	44.37	0.06	NM	3720.46	3676.08	3.20
MW-5	9/13/2011	47.36			56.35	3721.53	3674.17	-2.84
MW-5	3/5/2012	47.18			56.35	3721.53	3674.35	0.18
MW-5	9/4/2012	47.91			56.35	3721.53	3673.62	-0.73
MW-5	2/18/2013	47.64			56.35	3721.53	3673.89	0.27
MW-5	9/9/2013	44.89			55.50	3721.53	3676.64	2.75
MW-6*	9/13/2011	50.75	47.42	3.33	NM	3720.99	3672.74	-0.45
MW-6*	3/5/2012	50.84	47.74	3.1	NM	3720.99	3672.48	-0.26
MW-6*	9/4/2012	52.06	48.08	3.98	NM	3720.99	3671.92	-0.56
MW-6*	2/18/2013	50.43	48.11	2.32	NM	3720.99	3672.30	0.38
MW-6*	9/9/2013	45.96	45.79	0.17	NM	3720.99	3675.16	2.86
MW-7	9/13/2011	DRY			NM	3728.57	DRY	
MW-7	3/5/2012	DRY			62.56	3728.57	DRY	
MW-7	9/4/2012	62.11			62.56	3728.57	3666.46	NM
MW-7	2/18/2013	58.70			62.56	3728.57	3669.87	3.41 ⁽⁵⁾
MW-7	9/9/2013	58.26			62.56	3728.57	3670.31	0.44
MW-8	9/12/2011	44.78			58.00	3714.18	3669.40	-2.43
MW-8	3/5/2012	45.20			58.00	3714.18	3668.98	-0.42
MW-8	9/4/2012	45.71			58.00	3714.18	3668.47	-0.51
MW-8	2/18/2013	45.62			58.00	3714.18	3668.56	0.09
MW-8	9/9/2013	41.52			58.00	3714.18	3672.66	4.10
MW-9	9/12/2011	51.46			59.30	3720.48	3669.02	-2.04
MW-9	3/5/2012	51.81			59.30	3720.48	3668.67	-0.35
MW-9	9/4/2012	52.12			59.30	3720.48	3668.36	-0.31
MW-9	2/18/2013	52.14			59.30	3720.48	3668.34	-0.02
MW-9	9/9/2013	51.35			59.30	3720.48	3669.13	0.79

TABLE 1
SECOND HALF 2013 SEMI-ANNUAL
SUMMARY OF GROUNDWATER ELEVATION DATA
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location	Date	Depth to Groundwater (1) (feet)	Depth to Product (1) (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (2) (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-10	9/12/2011	51.35			65.15	3720.76	3669.41	-2.15
MW-10	3/5/2012	51.78			65.15	3720.76	3668.98	-0.43
MW-10	9/4/2012	52.40			65.15	3720.76	3668.36	-0.62
MW-10	2/18/2013	52.48			65.15	3720.76	3668.28	-0.08
MW-10	9/9/2013	50.89			65.15	3720.76	3669.87	1.59
MW-10D	9/12/2011	52.34			79.00	3720.85	3668.51	-2.63
MW-10D	3/5/2012	52.85			79.00	3720.85	3668.00	-0.51
MW-10D	9/4/2012	53.21			79.00	3720.85	3667.64	-0.36
MW-10D	2/18/2013	53.00			79.00	3720.85	3667.85	0.21
MW-10D	9/9/2013	51.82			79.00	3720.85	3669.03	1.18
MW-11	9/12/2011	52.05			62.95	3722.02	3669.97	-2.51
MW-11	3/5/2012	52.57			62.95	3722.02	3669.45	-0.52
MW-11	9/4/2012	53.04			62.95	3722.02	3668.98	-0.47
MW-11	2/18/2013	52.66			62.95	3722.02	3669.36	0.38
MW-11	9/9/2013	50.99			62.95	3722.02	3671.03	1.67
MW-13	9/12/2011	53.2			62.95	3721.63	3668.43	-2.53
MW-13	3/5/2012	53.56			62.95	3721.63	3668.07	-0.36
MW-13 ⁽⁴⁾	9/4/2012	NM			62.95	3721.63	NM	NM
MW-13	2/18/2013	NM			62.95	3721.63	NM	NM
MW-13	9/9/2013	NM			62.95	3721.63	NM	NM
Average change in groundwater elevation since the previous monitoring event								2.60

Notes:

1- Depths measured from the north edge of the well casing.

2- Total depths were collected and recorded during the first half 2013 semi-annual monitoring event. Total depths were not collected in wells that had LNAPL.

3- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring even from the measurement collected during the most recent monitoring event.

4- MW-13 was damaged during the second half 2012 and temporarily removed from the sampling schedule.

5- The change in elevation at MW-7 was not used to calculate the site-wide average change in elevation due to anomalous results during the second half 2013.

Data presented for all well locations includes previous four sampling events, when available. Historic groundwater analytical results for these locations may be found in Appendix B.

Sample locations are shown on Figure 2 and a groundwater elevation contour map is shown on Figure 3.

amsl - feet above mean sea level.

TOC - top of casing

NM - not measured

* Groundwater elevation was corrected for product thickness using the following calculation:

Groundwater elevation = (TOC Elevation - Measured Depth to Water) + (LNAPL Thickness in Well * LNAPL Density)

LNAPL density was assumed to be approximately 0.75 grams per cubic centimeter

TABLE 2
SECOND HALF 2013 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
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
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-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	<0.001	<0.001	
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-4	9/13/2011	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/4/2012	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/18/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/9/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	9/13/2011	0.1300	<0.010	0.86	<0.020	
MW-5	3/5/2012	0.240	<0.025	2.00	<0.075	
MW-5	9/4/2012	0.170	<0.005	1.00	0.038	Duplicate Sample Collected
MW-5	2/18/2013	0.210	<0.005	1.40	<0.015	Duplicate Sample Collected
MW-5	9/9/2013	0.096	<0.001	0.90	<0.001	Duplicate Sample Collected
MW-6	9/13/2011	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	3/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	9/4/2012	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	2/18/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	9/9/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-7	9/13/2011	NS	NS	NS	NS	
MW-7	3/5/2012	NS	NS	NS	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-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-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	

TABLE 2
SECOND HALF 2013 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
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
MW-10	9/12/2011	1.97	0.104	0.249	0.145	Duplicate Sample Collected
MW-10	3/5/2012	2.20	0.110	0.230	0.130	
MW-10	9/4/2012	2.70	0.0083	0.280	0.120	
MW-10	2/18/2013	2.00	0.0190	0.300	0.130	
MW-10	9/9/2013	1.60	0.022	0.26	0.11	
MW-10D	9/12/2011	0.0278	0.0131	0.0032	0.0060	
MW-10D	3/5/2012	0.024	0.0081	<0.005	<0.015	Duplicate Sample Collected
MW-10D	9/4/2012	0.023	0.0057	<0.005	<0.015	
MW-10D	2/18/2013	0.034	0.0140	0.0023	0.0031	
MW-10D	9/9/2013	0.034	0.019	<0.005	<0.005	
MW-11	9/12/2011	<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-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 ⁽¹⁾	9/4/2012	NS	NS	NS	NS	
MW-13	2/18/2013	NS	NS	NS	NS	
MW-13	9/9/2013	NS	NS	NS	NS	

Notes:

The environmental cleanup standards for water that are applicable to the Linam Ranch site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.

Data presented for the well locations includes previous four sampling events, when available. Historic groundwater analytical results may be found in Appendix B.

(1) MW-13 was damaged during the second half 2012 and was temporarily removed from the sampling schedule.

Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.

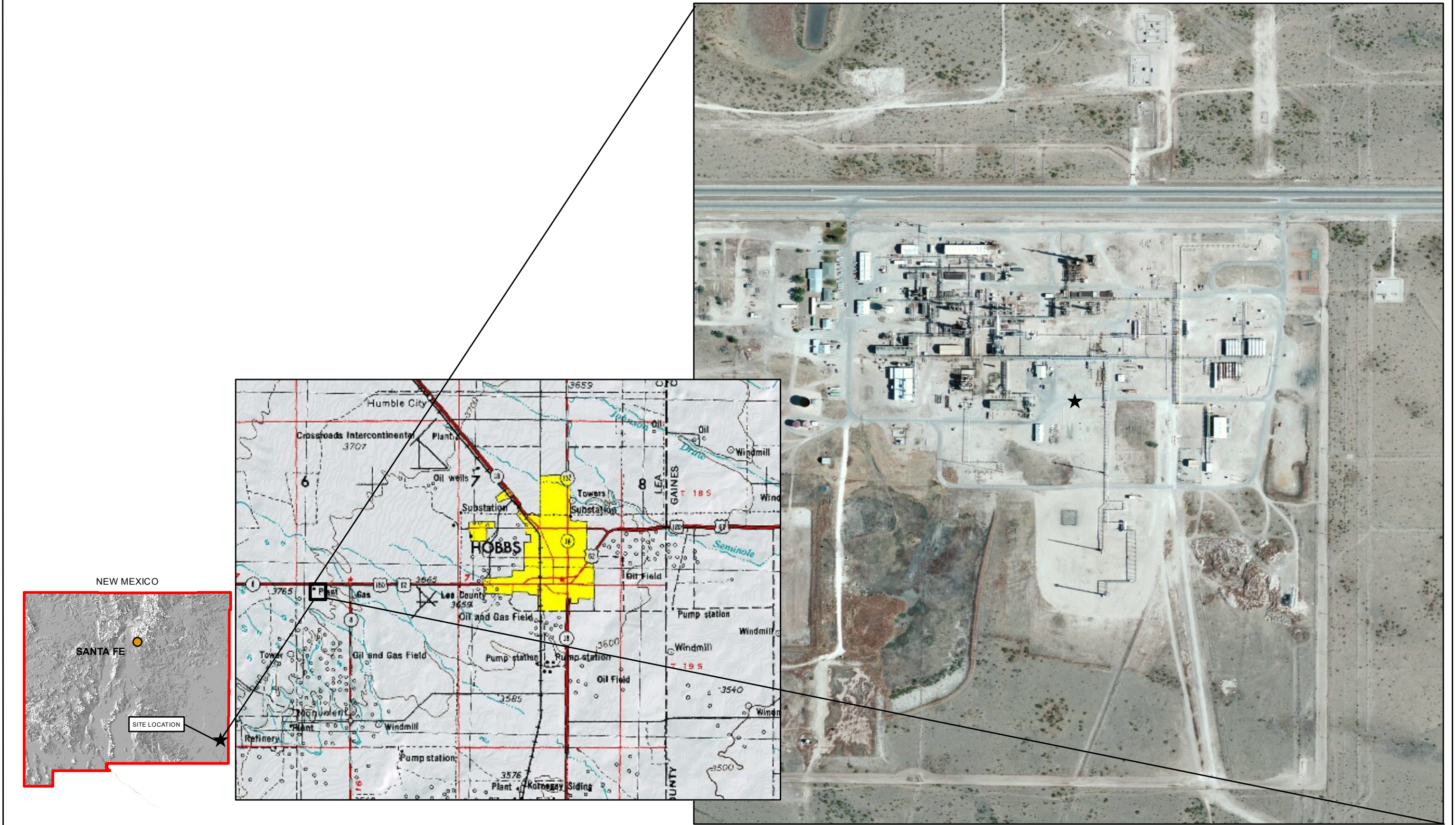
Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

LNAPL = Light Non-Aqueous Phase Liquid

NS = Not Sampled.

mg/L = milligrams per liter.

Figures



DATE:	January 2014
DESIGNED BY:	J. Barker
DRAWN BY:	D. Arnold



TASMAN
GEOSCIENCES

Tasman Geosciences, LLC
6899 Pecos Street - Unit C
Denver, CO 80221

LINAM RANCH GAS PLANT

SITE LOCATION

Figure
1



DATE:	January 2014
DESIGNED BY:	J. Barker
DRAWN BY:	D. Arnold



TASMAN
GEOSCIENCES

Tasman Geosciences, LLC
6899 Pecos Street - Unit C
Denver, CO 80221

**DCP Midstream
LINAM RANCH GAS PLANT**

SITE MAP

**Figure
2**



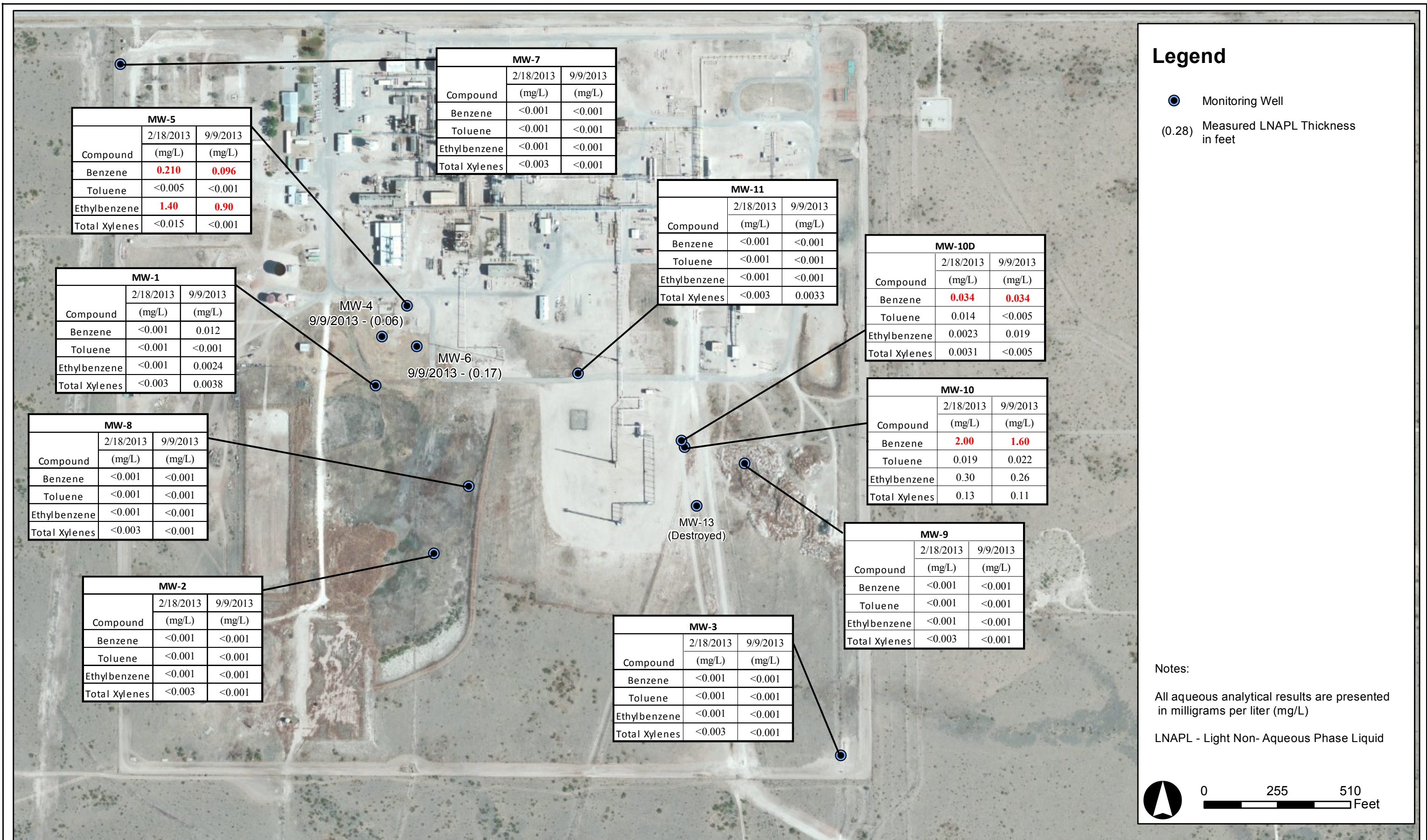
DATE:	January 2014
DESIGNED BY:	J. Barker
DRAWN BY:	D. Arnold



**DCP Midstream
LINAM RANCH GAS PLANT**
Second Half 2013 Groundwater Monitoring
Summary Report

GROUNDWATER ELEVATION
CONTOUR MAP
(September 9, 2013)

Figure
3



Appendix A

Laboratory Analytical Results



17-Sep-2013

Christine Wasko
Tasman Geosciences
5690 Webster Street
Arvada, CO 80002

Tel: (720) 988-2024
Fax:

Re: Linam Ranch Gas Plant

Work Order: **1309465**

Dear Christine,

ALS Environmental received 12 samples on 11-Sep-2013 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 27.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink that reads "Sonia West".

Electronically approved by: Dayna.Fisher

Sonia West
Project Manager



Certificate No: T104704231-13-12

ADDRESS 10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1309465

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1309465-01	MW-1	Water		9/9/2013 12:30	9/11/2013 09:30	☐
1309465-02	MW-2	Water		9/9/2013 10:15	9/11/2013 09:30	☐
1309465-03	MW-3	Water		9/9/2013 11:55	9/11/2013 09:30	☐
1309465-04	MW-5	Water		9/9/2013 12:40	9/11/2013 09:30	☐
1309465-05	MW-7	Water		9/9/2013 09:40	9/11/2013 09:30	☐
1309465-06	MW-8	Water		9/9/2013 10:30	9/11/2013 09:30	☐
1309465-07	MW-9	Water		9/9/2013 11:10	9/11/2013 09:30	☐
1309465-08	MW-10	Water		9/9/2013 11:05	9/11/2013 09:30	☐
1309465-09	MW-10D	Water		9/9/2013 11:20	9/11/2013 09:30	☐
1309465-10	MW-11	Water		9/9/2013 11:50	9/11/2013 09:30	☐
1309465-11	DUPLICATE	Water		9/9/2013	9/11/2013 09:30	☐
1309465-12	Trip Blank 081913-80	Water		9/11/2013	9/11/2013 09:30	☐

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1309465

Case Narrative

Low Level Volatile Organics surrogate recovery, 1,2-Dichloroethane-d4, was outside the control limits for Sample MW-7.

Low-Level Volatiles Organics, Sample MW-10D could not be analyzed at a lower dilution due to sample matrix.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-1
Collection Date: 9/9/2013 12:30 PM

Work Order: 1309465
Lab ID: 1309465-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260		Analyst: AKP	
Benzene	0.012		0.0010	mg/L	1	9/14/2013 04:40 AM
Ethylbenzene	0.0024		0.0010	mg/L	1	9/14/2013 04:40 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 04:40 AM
Xylenes, Total	0.0038		0.0010	mg/L	1	9/14/2013 04:40 AM
Surr: 1,2-Dichloroethane-d4	103		71-125	%REC	1	9/14/2013 04:40 AM
Surr: 4-Bromofluorobenzene	108		70-125	%REC	1	9/14/2013 04:40 AM
Surr: Dibromofluoromethane	103		74-125	%REC	1	9/14/2013 04:40 AM
Surr: Toluene-d8	90.1		75-125	%REC	1	9/14/2013 04:40 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-2
Collection Date: 9/9/2013 10:15 AM

Work Order: 1309465
Lab ID: 1309465-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	ND		0.0010	mg/L	1	9/14/2013 07:07 AM
Ethylbenzene	ND		0.0010	mg/L	1	9/14/2013 07:07 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 07:07 AM
Xylenes, Total	ND		0.0010	mg/L	1	9/14/2013 07:07 AM
Surr: 1,2-Dichloroethane-d4	103		71-125	%REC	1	9/14/2013 07:07 AM
Surr: 4-Bromofluorobenzene	95.1		70-125	%REC	1	9/14/2013 07:07 AM
Surr: Dibromofluoromethane	101		74-125	%REC	1	9/14/2013 07:07 AM
Surr: Toluene-d8	91.7		75-125	%REC	1	9/14/2013 07:07 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-3
Collection Date: 9/9/2013 11:55 AM

Work Order: 1309465
Lab ID: 1309465-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	ND		0.0010	mg/L	1	9/14/2013 05:04 AM
Ethylbenzene	ND		0.0010	mg/L	1	9/14/2013 05:04 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 05:04 AM
Xylenes, Total	ND		0.0010	mg/L	1	9/14/2013 05:04 AM
Surr: 1,2-Dichloroethane-d4	104		71-125	%REC	1	9/14/2013 05:04 AM
Surr: 4-Bromofluorobenzene	94.4		70-125	%REC	1	9/14/2013 05:04 AM
Surr: Dibromofluoromethane	101		74-125	%REC	1	9/14/2013 05:04 AM
Surr: Toluene-d8	90.2		75-125	%REC	1	9/14/2013 05:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-5
Collection Date: 9/9/2013 12:40 PM

Work Order: 1309465
Lab ID: 1309465-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	0.096		0.0010	mg/L	1	9/14/2013 05:29 AM
Ethylbenzene	0.89		0.010	mg/L	10	9/14/2013 07:31 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 05:29 AM
Xylenes, Total	ND		0.0010	mg/L	1	9/14/2013 05:29 AM
Surr: 1,2-Dichloroethane-d4	104		71-125	%REC	10	9/14/2013 07:31 AM
Surr: 1,2-Dichloroethane-d4	101		71-125	%REC	1	9/14/2013 05:29 AM
Surr: 4-Bromofluorobenzene	107		70-125	%REC	10	9/14/2013 07:31 AM
Surr: 4-Bromofluorobenzene	106		70-125	%REC	1	9/14/2013 05:29 AM
Surr: Dibromofluoromethane	107		74-125	%REC	10	9/14/2013 07:31 AM
Surr: Dibromofluoromethane	99.5		74-125	%REC	1	9/14/2013 05:29 AM
Surr: Toluene-d8	92.9		75-125	%REC	10	9/14/2013 07:31 AM
Surr: Toluene-d8	91.4		75-125	%REC	1	9/14/2013 05:29 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-7
Collection Date: 9/9/2013 09:40 AM

Work Order: 1309465
Lab ID: 1309465-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260		Analyst: AKP	
Benzene	ND		0.0010	mg/L	1	9/16/2013 05:30 PM
Ethylbenzene	ND		0.0010	mg/L	1	9/16/2013 05:30 PM
Toluene	ND		0.0010	mg/L	1	9/16/2013 05:30 PM
Xylenes, Total	ND		0.0010	mg/L	1	9/16/2013 05:30 PM
Surr: 1,2-Dichloroethane-d4	134	S	71-125	%REC	1	9/16/2013 05:30 PM
Surr: 4-Bromofluorobenzene	86.8		70-125	%REC	1	9/16/2013 05:30 PM
Surr: Dibromofluoromethane	122		74-125	%REC	1	9/16/2013 05:30 PM
Surr: Toluene-d8	96.3		75-125	%REC	1	9/16/2013 05:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
 Project: Linam Ranch Gas Plant
 Sample ID: MW-8
 Collection Date: 9/9/2013 10:30 AM

Work Order: 1309465
 Lab ID: 1309465-06
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	ND		0.0010	mg/L	1	9/14/2013 01:48 AM
Ethylbenzene	ND		0.0010	mg/L	1	9/14/2013 01:48 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 01:48 AM
Xylenes, Total	ND		0.0010	mg/L	1	9/14/2013 01:48 AM
Surr: 1,2-Dichloroethane-d4	105		71-125	%REC	1	9/14/2013 01:48 AM
Surr: 4-Bromofluorobenzene	96.3		70-125	%REC	1	9/14/2013 01:48 AM
Surr: Dibromofluoromethane	104		74-125	%REC	1	9/14/2013 01:48 AM
Surr: Toluene-d8	92.3		75-125	%REC	1	9/14/2013 01:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-9
Collection Date: 9/9/2013 11:10 AM

Work Order: 1309465
Lab ID: 1309465-07
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	ND		0.0010	mg/L	1	9/14/2013 06:18 AM
Ethylbenzene	ND		0.0010	mg/L	1	9/14/2013 06:18 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 06:18 AM
Xylenes, Total	ND		0.0010	mg/L	1	9/14/2013 06:18 AM
Surr: 1,2-Dichloroethane-d4	100		71-125	%REC	1	9/14/2013 06:18 AM
Surr: 4-Bromofluorobenzene	98.2		70-125	%REC	1	9/14/2013 06:18 AM
Surr: Dibromofluoromethane	102		74-125	%REC	1	9/14/2013 06:18 AM
Surr: Toluene-d8	91.1		75-125	%REC	1	9/14/2013 06:18 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-10
Collection Date: 9/9/2013 11:05 AM

Work Order: 1309465
Lab ID: 1309465-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	1.6		0.025	mg/L	25	9/14/2013 08:21 AM
Ethylbenzene	0.26		0.0050	mg/L	5	9/14/2013 07:56 AM
Toluene	0.022		0.0050	mg/L	5	9/14/2013 07:56 AM
Xylenes, Total	0.11		0.0050	mg/L	5	9/14/2013 07:56 AM
Surr: 1,2-Dichloroethane-d4	101		71-125	%REC	25	9/14/2013 08:21 AM
Surr: 1,2-Dichloroethane-d4	99.8		71-125	%REC	5	9/14/2013 07:56 AM
Surr: 4-Bromofluorobenzene	112		70-125	%REC	25	9/14/2013 08:21 AM
Surr: 4-Bromofluorobenzene	106		70-125	%REC	5	9/14/2013 07:56 AM
Surr: Dibromofluoromethane	101		74-125	%REC	25	9/14/2013 08:21 AM
Surr: Dibromofluoromethane	98.8		74-125	%REC	5	9/14/2013 07:56 AM
Surr: Toluene-d8	92.8		75-125	%REC	25	9/14/2013 08:21 AM
Surr: Toluene-d8	91.6		75-125	%REC	5	9/14/2013 07:56 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-10D
Collection Date: 9/9/2013 11:20 AM

Work Order: 1309465
Lab ID: 1309465-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260		Analyst: AKP	
Benzene	0.034		0.0050	mg/L	5	9/14/2013 08:45 AM
Ethylbenzene	ND		0.0050	mg/L	5	9/14/2013 08:45 AM
Toluene	0.019		0.0050	mg/L	5	9/14/2013 08:45 AM
Xylenes, Total	ND		0.0050	mg/L	5	9/14/2013 08:45 AM
Surr: 1,2-Dichloroethane-d4	101		71-125	%REC	5	9/14/2013 08:45 AM
Surr: 4-Bromofluorobenzene	116		70-125	%REC	5	9/14/2013 08:45 AM
Surr: Dibromofluoromethane	102		74-125	%REC	5	9/14/2013 08:45 AM
Surr: Toluene-d8	90.2		75-125	%REC	5	9/14/2013 08:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: MW-11
Collection Date: 9/9/2013 11:50 AM

Work Order: 1309465
Lab ID: 1309465-10
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260		Analyst: AKP	
Benzene	ND		0.0010	mg/L	1	9/14/2013 06:42 AM
Ethylbenzene	ND		0.0010	mg/L	1	9/14/2013 06:42 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 06:42 AM
Xylenes, Total	0.0033		0.0010	mg/L	1	9/14/2013 06:42 AM
Surr: 1,2-Dichloroethane-d4	102		71-125	%REC	1	9/14/2013 06:42 AM
Surr: 4-Bromofluorobenzene	97.1		70-125	%REC	1	9/14/2013 06:42 AM
Surr: Dibromofluoromethane	102		74-125	%REC	1	9/14/2013 06:42 AM
Surr: Toluene-d8	90.0		75-125	%REC	1	9/14/2013 06:42 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: DUPLICATE
Collection Date: 9/9/2013

Work Order: 1309465
Lab ID: 1309465-11
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	0.095		0.0010	mg/L	1	9/14/2013 09:10 AM
Ethylbenzene	0.90		0.010	mg/L	10	9/14/2013 09:34 AM
Toluene	ND		0.0010	mg/L	1	9/14/2013 09:10 AM
Xylenes, Total	ND		0.0010	mg/L	1	9/14/2013 09:10 AM
Surr: 1,2-Dichloroethane-d4	99.9		71-125	%REC	10	9/14/2013 09:34 AM
Surr: 1,2-Dichloroethane-d4	99.3		71-125	%REC	1	9/14/2013 09:10 AM
Surr: 4-Bromofluorobenzene	105		70-125	%REC	10	9/14/2013 09:34 AM
Surr: 4-Bromofluorobenzene	105		70-125	%REC	1	9/14/2013 09:10 AM
Surr: Dibromofluoromethane	100		74-125	%REC	10	9/14/2013 09:34 AM
Surr: Dibromofluoromethane	96.3		74-125	%REC	1	9/14/2013 09:10 AM
Surr: Toluene-d8	91.3		75-125	%REC	10	9/14/2013 09:34 AM
Surr: Toluene-d8	91.5		75-125	%REC	1	9/14/2013 09:10 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Sample ID: Trip Blank 081913-80
Collection Date: 9/11/2013

Work Order: 1309465
Lab ID: 1309465-12
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: PC
Benzene	ND		0.0010	mg/L	1	9/13/2013 09:40 PM
Ethylbenzene	ND		0.0010	mg/L	1	9/13/2013 09:40 PM
Toluene	ND		0.0010	mg/L	1	9/13/2013 09:40 PM
Xylenes, Total	ND		0.0010	mg/L	1	9/13/2013 09:40 PM
Surr: 1,2-Dichloroethane-d4	124		71-125	%REC	1	9/13/2013 09:40 PM
Surr: 4-Bromofluorobenzene	98.4		70-125	%REC	1	9/13/2013 09:40 PM
Surr: Dibromofluoromethane	111		74-125	%REC	1	9/13/2013 09:40 PM
Surr: Toluene-d8	101		75-125	%REC	1	9/13/2013 09:40 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Work Order: 1309465
Client: Tasman Geosciences
Project: Linam Ranch Gas Plant

DATES REPORT

Sample ID	Client Sample ID	Matrix	Collection Date	TCLP Date	Prep Date	Analysis Date
<u>Batch ID</u> R153746 <u>Test Name:</u> Low Level Volatiles - SW8260C						
1309465-01A	MW-1	Water	9/9/2013 12:30:00 PM			9/14/2013 04:40 AM
1309465-02A	MW-2		9/9/2013 10:15:00 AM			9/14/2013 07:07 AM
1309465-03A	MW-3		9/9/2013 11:55:00 AM			9/14/2013 05:04 AM
1309465-04A	MW-5		9/9/2013 12:40:00 PM			9/14/2013 05:29 AM
						9/14/2013 07:31 AM
1309465-06A	MW-8		9/9/2013 10:30:00 AM			9/14/2013 01:48 AM
1309465-07A	MW-9		9/9/2013 11:10:00 AM			9/14/2013 06:18 AM
1309465-08A	MW-10		9/9/2013 11:05:00 AM			9/14/2013 07:56 AM
						9/14/2013 08:21 AM
1309465-09A	MW-10D		9/9/2013 11:20:00 AM			9/14/2013 08:45 AM
1309465-10A	MW-11		9/9/2013 11:50:00 AM			9/14/2013 06:42 AM
1309465-11A	DUPLICATE		9/9/2013			9/14/2013 09:10 AM
						9/14/2013 09:34 AM
<u>Batch ID</u> R153748 <u>Test Name:</u> Low Level Volatiles - SW8260C						
1309465-12A	Trip Blank 081913-80	Water	9/11/2013			9/13/2013 09:40 PM
<u>Batch ID</u> R153805 <u>Test Name:</u> Low Level Volatiles - SW8260C						
1309465-05A	MW-7	Water	9/9/2013 9:40:00 AM			9/16/2013 05:30 PM

ALS Environmental

Date: 17-Sep-13

Client: Tasman Geosciences
Work Order: 1309465
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R153746** Instrument ID **VOA8** Method: **SW8260**

MBLK	Sample ID: VBLKW-130913-R153746					Units: µg/L	Analysis Date: 9/14/2013 12:34 AM			
Client ID:	Run ID: VOA8_130913B					SeqNo: 3355909	Prep Date:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	50.54	1.0	50	0	101	71-125	0			
Surr: 4-Bromofluorobenzene	46.64	1.0	50	0	93.3	70-125	0			
Surr: Dibromofluoromethane	49.81	1.0	50	0	99.6	74-125	0			
Surr: Toluene-d8	46.3	1.0	50	0	92.6	75-125	0			

LCS	Sample ID: VLCSW-130913-R153746					Units: µg/L	Analysis Date: 9/13/2013 11:21 PM			
Client ID:	Run ID: VOA8_130913B					SeqNo: 3355908	Prep Date:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.3	1.0	50	0	96.6	80-120				
Ethylbenzene	49.29	1.0	50	0	98.6	80-120				
Toluene	50.6	1.0	50	0	101	80-121				
Xylenes, Total	154.6	3.0	150	0	103	80-124				
Surr: 1,2-Dichloroethane-d4	47.58	1.0	50	0	95.2	71-125	0			
Surr: 4-Bromofluorobenzene	50.69	1.0	50	0	101	70-125	0			
Surr: Dibromofluoromethane	49.01	1.0	50	0	98	74-125	0			
Surr: Toluene-d8	47.26	1.0	50	0	94.5	75-125	0			

MS	Sample ID: 1309465-06AMS					Units: µg/L	Analysis Date: 9/14/2013 02:12 AM			
Client ID: MW-8	Run ID: VOA8_130913B					SeqNo: 3355913	Prep Date:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.32	1.0	50	0	98.6	80-120				
Ethylbenzene	49.93	1.0	50	0	99.9	80-120				
Toluene	50.48	1.0	50	0.4227	100	80-121				
Xylenes, Total	154.3	3.0	150	0	103	80-124				
Surr: 1,2-Dichloroethane-d4	48.65	1.0	50	0	97.3	71-125	0			
Surr: 4-Bromofluorobenzene	50.7	1.0	50	0	101	70-125	0			
Surr: Dibromofluoromethane	48.95	1.0	50	0	97.9	74-125	0			
Surr: Toluene-d8	46.77	1.0	50	0	93.5	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tasman Geosciences
Work Order: 1309465
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R153746** Instrument ID **VOA8** Method: **SW8260**

MSD	Sample ID: 1309465-06AMSD					Units: µg/L		Analysis Date: 9/14/2013 02:37 AM		
Client ID: MW-8		Run ID: VOA8_130913B			SeqNo: 3355914		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.55	1.0	50	0	101	80-120	49.32	2.47	20	
Ethylbenzene	51.65	1.0	50	0	103	80-120	49.93	3.37	20	
Toluene	52.39	1.0	50	0.4227	104	80-121	50.48	3.71	20	
Xylenes, Total	158.1	3.0	150	0	105	80-124	154.3	2.47	20	
Surr: 1,2-Dichloroethane-d4	48.16	1.0	50	0	96.3	71-125	48.65	0.995	20	
Surr: 4-Bromofluorobenzene	51.21	1.0	50	0	102	70-125	50.7	1	20	
Surr: Dibromofluoromethane	49.34	1.0	50	0	98.7	74-125	48.95	0.792	20	
Surr: Toluene-d8	47.47	1.0	50	0	94.9	75-125	46.77	1.49	20	

The following samples were analyzed in this batch:

1309465-01A	1309465-02A	1309465-03A
1309465-04A	1309465-05A	1309465-06A
1309465-07A	1309465-08A	1309465-09A
1309465-10A	1309465-11A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tasman Geosciences
Work Order: 1309465
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R153748** Instrument ID **VOA6** Method: **SW8260**

MBLK	Sample ID: VBLKW-130913-R153748				Units: µg/L		Analysis Date: 9/13/2013 12:07 PM			
Client ID:	Run ID: VOA6_130913B				SeqNo: 3355953		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	61.23	1.0	50	0	122	71-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	50.3	1.0	50	0	101	70-125	0			
<i>Surr: Dibromofluoromethane</i>	55.28	1.0	50	0	111	74-125	0			
<i>Surr: Toluene-d8</i>	50.76	1.0	50	0	102	75-125	0			

LCS	Sample ID: VLCSW-130913-R153748				Units: µg/L		Analysis Date: 9/13/2013 10:50 AM			
Client ID:	Run ID: VOA6_130913B				SeqNo: 3355952		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.65	1.0	50	0	99.3	80-120				
Ethylbenzene	50.14	1.0	50	0	100	80-120				
Toluene	50.94	1.0	50	0	102	80-121				
Xylenes, Total	150.1	3.0	150	0	100	80-124				
<i>Surr: 1,2-Dichloroethane-d4</i>	58.97	1.0	50	0	118	71-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	50.38	1.0	50	0	101	70-125	0			
<i>Surr: Dibromofluoromethane</i>	54.89	1.0	50	0	110	74-125	0			
<i>Surr: Toluene-d8</i>	50.99	1.0	50	0	102	75-125	0			

MS	Sample ID: 1309493-01AMS				Units: µg/L		Analysis Date: 9/13/2013 01:22 PM			
Client ID:	Run ID: VOA6_130913B				SeqNo: 3355955		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	4501	100	5000	0	90	80-120				
Ethylbenzene	4342	100	5000	0	86.8	80-120				
Toluene	4478	100	5000	0	89.6	80-121				
Xylenes, Total	13080	300	15000	0	87.2	80-124				
<i>Surr: 1,2-Dichloroethane-d4</i>	6045	100	5000	0	121	71-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	4975	100	5000	0	99.5	70-125	0			
<i>Surr: Dibromofluoromethane</i>	5520	100	5000	0	110	74-125	0			
<i>Surr: Toluene-d8</i>	5046	100	5000	0	101	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tasman Geosciences
Work Order: 1309465
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R153748** Instrument ID **VOA6** Method: **SW8260**

MSD	Sample ID: 1309493-01AMSD				Units: µg/L		Analysis Date: 9/13/2013 01:48 PM			
Client ID:	Run ID: VOA6_130913B				SeqNo: 3355956		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	4284	100	5000	0	85.7	80-120	4501	4.94	20	
Ethylbenzene	4222	100	5000	0	84.4	80-120	4342	2.8	20	
Toluene	4382	100	5000	0	87.6	80-121	4478	2.18	20	
Xylenes, Total	12680	300	15000	0	84.5	80-124	13080	3.17	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	5956	100	5000	0	119	71-125	6045	1.48	20	
<i>Surr: 4-Bromofluorobenzene</i>	5037	100	5000	0	101	70-125	4975	1.23	20	
<i>Surr: Dibromofluoromethane</i>	5494	100	5000	0	110	74-125	5520	0.479	20	
<i>Surr: Toluene-d8</i>	5204	100	5000	0	104	75-125	5046	3.09	20	

The following samples were analyzed in this batch:

1309465-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tasman Geosciences
Work Order: 1309465
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R153805** Instrument ID **VOA8** Method: **SW8260**

MBLK	Sample ID: VBLKW-130916-R153805				Units: µg/L		Analysis Date: 9/16/2013 11:12 AM			
Client ID:	Run ID: VOA8_130916A				SeqNo: 3357278		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	55.92	1.0	50	0	112	71-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	46.23	1.0	50	0	92.5	70-125	0			
<i>Surr: Dibromofluoromethane</i>	54.44	1.0	50	0	109	74-125	0			
<i>Surr: Toluene-d8</i>	48.24	1.0	50	0	96.5	75-125	0			

LCS	Sample ID: VLCSW-130916-R153805				Units: µg/L		Analysis Date: 9/16/2013 09:58 AM			
Client ID:	Run ID: VOA8_130916A				SeqNo: 3357277		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.7	1.0	50	0	95.4	80-120				
Ethylbenzene	48.32	1.0	50	0	96.6	80-120				
Toluene	49.63	1.0	50	0	99.3	80-121				
Xylenes, Total	152.5	3.0	150	0	102	80-124				
<i>Surr: 1,2-Dichloroethane-d4</i>	52.7	1.0	50	0	105	71-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	49.24	1.0	50	0	98.5	70-125	0			
<i>Surr: Dibromofluoromethane</i>	52.26	1.0	50	0	105	74-125	0			
<i>Surr: Toluene-d8</i>	49.56	1.0	50	0	99.1	75-125	0			

MS	Sample ID: 1309412-11CMS				Units: µg/L		Analysis Date: 9/16/2013 02:29 PM			
Client ID:	Run ID: VOA8_130916A				SeqNo: 3357286		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.9	1.0	50	0	102	80-120				
Ethylbenzene	49.48	1.0	50	0	99	80-120				
Toluene	50.03	1.0	50	0	100	80-121				
Xylenes, Total	153.4	3.0	150	0	102	80-124				
<i>Surr: 1,2-Dichloroethane-d4</i>	55.45	1.0	50	0	111	71-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	47.51	1.0	50	0	95	70-125	0			
<i>Surr: Dibromofluoromethane</i>	54.6	1.0	50	0	109	74-125	0			
<i>Surr: Toluene-d8</i>	48.36	1.0	50	0	96.7	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tasman Geosciences
Work Order: 1309465
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R153805** Instrument ID **VOA8** Method: **SW8260**

MS	Sample ID: 1309412-17CMS					Units: µg/L	Analysis Date: 9/16/2013 03:18 PM			
Client ID:	Run ID: VOA8_130916A				SeqNo:3357288	Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.49	1.0	50	0	101	80-120				
Ethylbenzene	49.61	1.0	50	0	99.2	80-120				
Toluene	50.36	1.0	50	0	101	80-121				
Xylenes, Total	153.8	3.0	150	0	103	80-124				
Surr: 1,2-Dichloroethane-d4	54.43	1.0	50	0	109	71-125		0		
Surr: 4-Bromofluorobenzene	48.43	1.0	50	0	96.9	70-125		0		
Surr: Dibromofluoromethane	53.56	1.0	50	0	107	74-125		0		
Surr: Toluene-d8	48.31	1.0	50	0	96.6	75-125		0		

MSD	Sample ID: 1309412-11CMSD					Units: µg/L		Analysis Date: 9/16/2013 02:54 PM		
Client ID:	Run ID: VOA8_130916A					SeqNo:3357287		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	52.54	1.0	50	0	105	80-120	50.9	3.18	20	
Ethylbenzene	51.53	1.0	50	0	103	80-120	49.48	4.05	20	
Toluene	52.19	1.0	50	0	104	80-121	50.03	4.23	20	
Xylenes, Total	159.9	3.0	150	0	107	80-124	153.4	4.11	20	
Surr: 1,2-Dichloroethane-d4	53.04	1.0	50	0	106	71-125	55.45	4.43	20	
Surr: 4-Bromofluorobenzene	47.43	1.0	50	0	94.9	70-125	47.51	0.166	20	
Surr: Dibromofluoromethane	52.81	1.0	50	0	106	74-125	54.6	3.33	20	
Surr: Toluene-d8	48.28	1.0	50	0	96.6	75-125	48.36	0.16	20	

MSD	Sample ID: 1309412-17CMSD					Units: µg/L	Analysis Date: 9/16/2013 03:43 PM			
Client ID:	Run ID: VOA8_130916A				SeqNo: 3357289	Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.75	1.0	50	0	99.5	80-120	50.49	1.46	20	
Ethylbenzene	50.29	1.0	50	0	101	80-120	49.61	1.37	20	
Toluene	50.39	1.0	50	0	101	80-121	50.36	0.0634	20	
Xylenes, Total	154.4	3.0	150	0	103	80-124	153.8	0.378	20	
Surr: 1,2-Dichloroethane-d4	54.19	1.0	50	0	108	71-125	54.43	0.439	20	
Surr: 4-Bromofluorobenzene	48.15	1.0	50	0	96.3	70-125	48.43	0.561	20	
Surr: Dibromofluoromethane	53.02	1.0	50	0	106	74-125	53.56	1.02	20	
Surr: Toluene-d8	49.17	1.0	50	0	98.3	75-125	48.31	1.76	20	

The following samples were analyzed in this batch:

1309465-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
WorkOrder: 1309465

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter

Sample Receipt Checklist

Client Name: **TASMAN GEOSCIENCES**

Date/Time Received: **11-Sep-13 09:30**

Work Order: **1309465**

Received by: **RDH**

Checklist completed by Johannie B. Allen
eSignature

12-Sep-13
Date

Reviewed by: Sonia West
eSignature

12-Sep-13
Date

Matrices: **water**

Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>1.1 C/1.1 C u/c</u> <u>IR 1</u>		
Cooler(s)/Kit(s):	<u>5410</u>		
Date/Time sample(s) sent to storage:	<u>9/12/13 12:20</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:	<u>-</u>		
Login Notes:	<u>Trip Blank logged in w/out Test codes</u>		

Client Contacted:

Date Contacted:

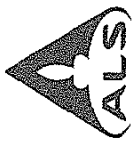
Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



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Chain of Custody Form

Page 1 of 2

COC ID: 87633

Environmental

ALS Project Manager:

1309465

TASMAN GEOSCIENCES: Tasman Geosciences
Project: Linam Ranch Gas Plant 400128006 GN00



Customer Information				Project Information													
Purchase Order	Project Name	Linam Ranch Gas Plant		A	B	C	D	E	F	G	H	I	J	Hold			
Work Order	Project Number	400128006 GN00		B													
Company Name	Bill To Company	DCP Midstream, LP		C													
Send Report To	Invoice Attn	Chandler Cole		D													
Address	Address	370 17th Street, Suite 2500		E													
City/State/Zip	City/State/Zip	Denver, Colorado 80102		F													
Phone	Phone			G													
Fax	Fax			H													
e-Mail Address	e-Mail Address			I													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	9/9/13	1230	Water	HCl	3	X										
2	MW-2		1015	Water													
3	MW-3		1155	Water													
4	MW-5		1240	Water													
5	MW-7		940	Water													
6	MW-8		1030	Water													
7	MW-8 MSD		1030	Water													
8	MW-8 MSD		1030	Water													
9	MW-9		1110	Water													
10	MW-10		1105	Water													

Sample(s) Please Print & Sign: Christine Wasko

Received by: Feaf

Received by (Laboratory): Feaf

Checked by (Laboratory): Feaf

Time: 9/10/13

Date: 9/10/13

Date: 9/10/13

Date: 9/10/13

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Required Turnaround Time: (Check Box)

☒ Std 10 WK Days ☐ 5 WK Days ☐ 24 Hour

Notes: (10 Day TAT)

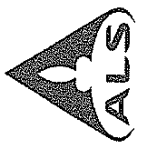
QC Package: (Check One Box Below)

☒ Level II Std QC ☐ TRAP Checklist

☐ Level III Std QC/Raw Data ☐ TRAP Level IV

☐ Level IV SW/846/CLP

Other / EDD



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Chain of Custody Form

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South Charleston, WV
+1 304 356 3168
York, PA
+1 717 505 5280

Environmental

Page 2 of 2

COC ID: **87632**

ALS Project Manager: <u>109465</u>		ALS Work Order #: <u>109465</u>	
Project Information		Parameter/Method Request for Analysis	

Purchase Order	Project Name	Linam Ranch Gas Plant	
Work Order	Project Number	400126006 GND00	
Company Name	Bill To Company	DCP Midstream, LP	
Send Report To	Invoice Attn	Chandler Cole	
Address	Address	370 17th Street, Suite 2500	
City/State/Zip	City/State/Zip	Denver, Colorado 80102	
Phone	Phone		
Fax	Fax		
e-Mail Address	e-Mail Address	Cmasco@tasman-gas.co.uk	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-10D	9/9/13	1120	Water	H2O	3	X										
2	MW-11	9/9/13	1150	Water	H2O	3											
3	MW-13			Water													
4	DUPLICATE			Water	H2O	3	X										
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <u>Christine Wargo</u>		Shipment Method <u>FedEx</u>		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour		Results Due Date:	
Relinquished by: <u>[Signature]</u>	Date: <u>9/10/13</u>	Time: <u>1600</u>	Received by (Laboratory): <u>[Signature]</u>	Date: <u>9/11/13</u>	Time: <u>0900</u>	Cooler ID:	Cooler Temp:
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	Date:	Time:	QC Package: (Check One Box Below) ☒ Level II Std QC ☐ TRRP Checklist ☐ Level III Std QC/RAW Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other / EDD	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other		8-4°C		9-5035			

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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FedEx Package Express **US Airbill** FedEx Tracking Number **8041 1922**

1 From [REDACTED] Date [REDACTED] Phone [REDACTED]

Sender's Name [REDACTED]

Company [REDACTED]

Address [REDACTED] Dept./Floor/Suite/Room [REDACTED]

City [REDACTED] State [REDACTED] ZIP [REDACTED]

2 Your Internal Billing Reference [REDACTED]

3 To Recipient's [REDACTED]

8658
09.11
A

FedEx
Express
Next Business Day
FedEx
Next Business Day
FedEx
Next Business Day
5 Package
FedEx
6 Special

ALS Environmental
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

CUSTODY SEAL

Date: 9/10/13 Time: 1600

Name: Christine West

Company: Labco

Seal Broken By: [Signature]
 Date: 9/11/13

Appendix B

Historical Analytical Results

APPENDIX B
HISTORICAL DATA
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
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
MW-1	05/02/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-1	03/12/09	<0.00046	<0.00048	<0.00045	<0.0014	
MW-1	09/24/09	<0.002	<0.002	<0.002	<0.006	
MW-1	09/24/09	<0.00050	<0.00043	<0.00055	<0.0017	
MW-1	03/24/10	<0.002	<0.002	<0.002	<0.006	
MW-1	03/24/10	<0.00050	<0.00043	<0.00055	<0.0017	
MW-1	09/28/10	<0.001	<0.002	<0.002	<0.004	
MW-1	09/29/10	0.00039	<0.0010	<0.00030	-	
MW-1	04/28/11	0.00054	<0.0010	<0.00030	<0.00060	
MW-1	04/28/11	<0.001	<0.002	<0.002	<0.002	
MW-1	09/13/11	<0.001	<0.002	<0.002	<0.004	
MW-1	03/05/12	<0.005	<0.005	<0.005	<0.015	
MW-1	09/04/12	<0.005	<0.005	<0.005	<0.015	
MW-1	02/18/13	<0.001	<0.001	<0.001	<0.003	
MW-1	9/9/2013	0.012	<0.001	0.0024	0.0038	
MW-2	05/02/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-2	03/12/09	<0.00046	<0.00048	<0.00045	<0.0014	
MW-2	09/24/09	<0.002	<0.002	<0.002	<0.006	
MW-2	09/24/09	<0.00050	<0.00043	<0.00055	<0.0017	
MW-2	03/24/10	<0.002	<0.002	<0.002	<0.006	
MW-2	03/24/10	<0.00050	<0.00043	<0.00055	<0.0017	
MW-2	09/28/10	<0.001	<0.002	<0.002	<0.004	
MW-2	09/29/10	<0.00030	<0.0010	<0.00030	-	
MW-2	04/28/11	<0.00030	<0.0010	<0.00030	<0.00060	
MW-2	04/28/11	<0.001	<0.002	<0.002	<0.002	
MW-2	09/12/11	<0.001	<0.002	<0.002	<0.004	
MW-2	03/05/12	<0.005	<0.005	<0.005	<0.015	
MW-2	09/04/12	<0.005	<0.005	<0.005	<0.015	
MW-2	02/18/13	<0.001	<0.001	<0.001	<0.003	
MW-2	9/9/2013	<0.001	<0.001	<0.01	<0.001	
MW-3	05/02/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-3	03/12/09	<0.00046	<0.00048	<0.00045	<0.0014	
MW-3	09/24/09	<0.002	<0.002	<0.002	<0.006	
MW-3	09/24/09	<0.00050	<0.00043	<0.00055	<0.0017	
MW-3	03/24/10	<0.002	<0.002	<0.002	<0.006	
MW-3	03/24/10	<0.00050	<0.00043	<0.00055	<0.0017	
MW-3	09/28/10	<0.001	<0.002	<0.002	<0.004	
MW-3	09/29/10	<0.00030	<0.0010	<0.00030	-	
MW-3	04/28/11	<0.00030	<0.0010	<0.00030	<0.00060	
MW-3	04/28/11	<0.001	<0.002	<0.002	<0.002	
MW-3	09/12/11	<0.001	<0.002	<0.002	<0.004	
MW-3	03/05/12	<0.005	<0.005	<0.005	<0.015	
MW-3	09/04/12	<0.005	<0.005	<0.005	<0.015	
MW-3	02/18/13	<0.001	<0.001	<0.001	<0.003	
MW-3	9/9/2013	<0.001	<0.001	<0.001	<0.001	

APPENDIX B
HISTORICAL DATA
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
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
MW-4	09/24/09	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	03/24/10	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	09/28/10	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	04/28/11	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	09/13/11	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	03/05/12	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	09/04/12	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	02/18/13	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/9/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	05/02/08	0.0108	<0.00048	0.184	0.0039	
MW-5	03/12/09	0.0092	<0.00048	0.102	<0.0014	
MW-5	09/24/09	0.0272	<0.002	0.227	<0.006	
MW-5	09/24/09	0.0272	<0.00043	0.227	<0.0017	
MW-5	03/24/10	0.1300	<0.002	0.482	0.460	
MW-5	03/24/10	0.119	<0.0022	0.702	0.916	
MW-5	09/28/10	0.0095	<0.004	0.188	<0.008	
MW-5	09/29/10	0.0095	<0.0020	0.188	-	
MW-5	04/28/11	0.149	<0.0020	0.776	<0.0012	
MW-5	04/28/11	0.1490	<0.004	0.776	<0.004	
MW-5	09/13/11	0.1300	<0.010	0.860	<0.020	
MW-5	03/05/12	0.240	<0.025	2.000	<0.075	
MW-5	09/04/12	0.170	<0.005	1.000	0.038	Duplicate Sample Collected
MW-5	2/18/2013	0.210	<0.005	1.40	<0.015	Duplicate Sample Collected
MW-5	9/9/2013	0.096	<0.001	0.90	<0.001	Duplicate Sample Collected
MW-6	09/24/09	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	03/24/10	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	09/28/10	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	04/28/11	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	09/13/11	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	03/05/12	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	09/04/12	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	02/18/13	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	9/9/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-7	05/02/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-7	09/24/09	NS	NS	NS	NS	
MW-7	03/24/10	NS	NS	NS	NS	
MW-7	09/28/10	NS	NS	NS	NS	
MW-7	04/28/11	NS	NS	NS	NS	
MW-7	09/13/11	NS	NS	NS	NS	
MW-7	03/05/12	NS	NS	NS	NS	
MW-7	09/04/12	<0.005	<0.005	<0.005	<0.015	
MW-7	02/18/13	<0.001	<0.001	<0.001	<0.003	
MW-7	9/9/2013	<0.001	<0.001	<0.001	<0.001	

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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
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
MW-8	05/02/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-8	03/12/09	<0.00046	<0.00048	<0.00045	<0.0014	
MW-8	09/24/09	<0.002	<0.002	<0.002	<0.006	
MW-8	09/24/09	<0.00050	<0.00043	<0.00055	<0.0017	
MW-8	03/24/10	<0.002	<0.002	<0.002	<0.006	
MW-8	03/24/10	<0.00050	<0.00043	<0.00055	<0.0017	
MW-8	09/28/10	<0.001	<0.002	<0.002	<0.004	
MW-8	09/29/10	<0.00030	<0.0010	<0.00030	-	
MW-8	04/28/11	<0.00030	<0.0010	<0.00030	<0.00060	
MW-8	04/28/11	<0.001	<0.002	<0.002	<0.002	
MW-8	09/12/11	<0.005	<0.005	<0.005	<0.015	
MW-8	03/05/12	<0.005	<0.005	<0.005	<0.015	
MW-8	09/04/12	<0.005	<0.005	<0.005	<0.015	
MW-8	02/18/13	<0.001	<0.001	<0.001	<0.003	
MW-8	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-9	04/30/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-9	04/29/09	<0.00046	<0.00048	<0.00045	<0.0014	
MW-9	09/24/09	<0.002	<0.002	<0.002	<0.006	
MW-9	09/24/09	<0.00050	<0.00043	<0.00055	<0.0017	
MW-9	03/24/10	<0.002	<0.002	<0.002	<0.006	
MW-9	03/24/10	<0.00050	<0.00043	<0.00055	<0.0017	
MW-9	09/28/10	<0.001	<0.002	<0.002	<0.004	
MW-9	09/28/10	<0.00030	<0.0010	<0.00030	-	
MW-9	04/28/11	<0.00030	<0.0010	<0.00030	<0.00060	
MW-9	04/28/11	<0.001	<0.002	<0.002	<0.002	
MW-9	09/12/11	<0.001	<0.002	<0.002	<0.004	
MW-9	03/05/12	<0.005	<0.005	<0.005	<0.015	
MW-9	09/04/12	<0.005	<0.005	<0.005	<0.015	
MW-9	02/18/13	<0.001	<0.001	<0.001	<0.003	
MW-9	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-10	04/30/08	0.769	0.0457	0.0851	0.05	
MW-10	04/29/09	0.883	0.23	0.0859	0.0759	
MW-10	09/24/09	1.070	0.126	0.148	0.154	
MW-10	09/24/09	1.07	0.126	0.148	0.154	
MW-10	03/24/10	1.640	0.175	0.246	0.156	
MW-10	03/24/10	1.64	0.175	0.246	0.156	
MW-10	09/28/10	1.900	0.055	0.240	0.104	
MW-10	09/28/10	1.900	0.0547	0.24	-	
MW-10	04/28/11	1.72	0.228	0.195	0.126	
MW-10	04/28/11	2.005	0.243	0.215	0.141	
MW-10	09/12/11	1.970	0.104	0.249	0.145	Duplicate Sample Collected
MW-10	03/05/12	2.200	0.110	0.230	0.130	
MW-10	09/04/12	2.700	0.0083	0.280	0.120	
MW-10	02/18/13	2.00	0.0190	0.300	0.130	
MW-10	9/9/2013	1.60	0.022	0.26	0.11	

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New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
MW-10D	04/30/08	0.195	0.0677	0.0144	0.0221	
MW-10D	04/29/09	0.179	0.0772	0.0203	0.0296	
MW-10D	09/24/09	0.103	0.0496	0.0127	0.0261	
MW-10D	09/24/09	0.103	0.0496	0.0127	0.0261	
MW-10D	03/24/10	0.196	0.0703	0.0129	0.0202	
MW-10D	03/24/10	0.196	0.0703	0.0129	0.0202	
MW-10D	09/28/10	0.0402	0.0358	0.006	0.0077	
MW-10D	09/28/10	0.0402	0.0358	0.006	-	
MW-10D	04/28/11	0.0512	0.0373	0.0063	0.0113	
MW-10D	04/28/11	0.0512	0.0373	0.0063	0.0113	
MW-10D	09/12/11	0.0278	0.0131	0.0032	0.0060	
MW-10D	03/05/12	0.0240	0.0081	<0.005	<0.015	Duplicate Sample Collected
MW-10D	09/04/12	0.0230	0.0057	<0.005	<0.015	
MW-10D	02/18/13	0.034	0.0140	0.0023	0.0031	
MW-10D	9/9/2013	0.034	0.019	<0.005	<0.005	
MW-11	04/30/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-11	04/29/09	<0.00046	<0.00048	<0.00045	<0.0014	
MW-11	09/24/09	<0.002	<0.002	<0.002	<0.006	
MW-11	09/24/09	<0.00050	<0.00043	<0.00055	<0.0017	
MW-11	03/24/10	<0.002	<0.002	<0.002	<0.006	
MW-11	03/24/10	<0.00050	<0.00043	<0.00055	<0.0017	
MW-11	09/28/10	0.0036	<0.002	<0.002	0.004	
MW-11	09/28/10	0.0036	<0.0010	<0.00030	-	
MW-11	04/28/11	<0.00030	<0.0010	<0.00030	<0.00060	
MW-11	04/28/11	<0.001	<0.002	<0.002	<0.002	
MW-11	09/12/01	<0.001	<0.002	<0.002	<0.004	
MW-11	03/05/12	<0.005	<0.005	<0.005	<0.015	
MW-11	09/04/12	<0.005	<0.005	<0.005	<0.015	
MW-11	02/18/13	<0.001	<0.001	<0.001	<0.003	
MW-11	9/9/2013	<0.001	<0.001	<0.001	0.0033	

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HISTORICAL DATA
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
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
MW-13	04/30/08	<0.00046	<0.00048	<0.00045	<0.0014	
MW-13	04/29/09	<0.00046	<0.00048	<0.00045	<0.0014	
MW-13	09/24/09	<0.002	<0.002	<0.002	<0.006	
MW-13	09/24/09	<0.00050	<0.00043	<0.00055	<0.0017	
MW-13	03/24/10	<0.002	<0.002	<0.002	<0.006	
MW-13	03/24/10	<0.00050	<0.00043	<0.00055	<0.0017	
MW-13	09/28/10	<0.001	<0.002	<0.002	<0.004	
MW-13	09/28/10	<0.00030	<0.0010	<0.00030	-	
MW-13	04/28/11	<0.00030	<0.0010	<0.00030	<0.00060	
MW-13	04/28/11	<0.001	<0.002	<0.002	<0.002	
MW-13	09/12/11	<0.001	<0.002	<0.002	<0.004	
MW-13	03/05/12	<0.005	<0.005	<0.005	<0.015	
MW-13	09/04/12	NS	NS	NS	NS	
MW-13	02/18/13	NS	NS	NS	NS	
MW-13	9/9/2013	NS	NS	NS	NS	

Notes:

The environmental cleanup standards for water that are applicable to the Linam Ranch site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.

Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.

Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

LNAPL = Light Non-Aqueous Phase Liquid

NS = Not Sampled.

mg/L = milligrams per liter.