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May 30, 2013

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

RE: First 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 First 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).

In December 2012, active LNAPL recovery was initiated on well MW06 and has remained in operation through the first quarter 2013. The groundwater sampling was completed on February 18, 2013. As of March 25, 2013, the Magnum Spill Buster has recovered approximately 31.25 gallons of LNAPL. The groundwater data indicates that the groundwater conditions remain stable. The next monitoring event is scheduled for the second half of 2013.

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

Chandler E Cole
Senior Environmental Specialist

Enclosure

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

First 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

April 29, 2013

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1. Introduction

This report summarizes groundwater monitoring and remediation activities conducted during the first 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: a) determine the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons; b) measure groundwater levels; c) obtain groundwater samples for chemical analysis; and d) evaluate and present groundwater flow and quality conditions. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period on February 18th, 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 has thirteen 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, MW-11, MW-13), which 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 first 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 first half 2013 semi-annual monitoring event conducted on February 18, 2013, groundwater levels and LNAPL thickness, where present, were measured at twelve of the thirteen Site monitoring

well locations. MW-13 was destroyed during the second half 2012 and was temporarily removed from the sampling program. 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 first half 2013 semi-annual monitoring event in addition to historical elevations are presented in Table 1. A contour map of first half 2013 semi-annual groundwater elevations is presented in Figure 3. Groundwater elevations ranged from 3,666.14 feet AMSL at monitoring well MW-3 to 3673.89 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 0.47 feet and MW-6 with a thickness of 2.32 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 (^{0}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 thirteen wells. Monitoring wells MW-4 and MW-6 were not sampled due to the presence of measurable LNAPL detected in the wells and monitoring well MW-13 was damaged at the time of the sampling event. 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 February 2013 event. 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-1, 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-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 three wells with concentrations of 0.210 mg/L, 2.0 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.

Water quality parameters were collected during the monitoring event. The Site monitoring wells did not require collection of more than three purge volumes to achieve parameter stabilization. As such, the analytical data are considered to be representative of Site conditions in that a minimum of 3 purge volumes were evacuated from all sampled monitoring wells during the 2013 first half semi-annual event.

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 0.20 mg/L and 0.21 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. A test recovery unit (Magnum Spill Buster – manufactured by Clean Earth Technology) was installed at monitoring well MW-6 and has remained in operation through the first quarter 2013. As of March 25, 2013, the Spill Buster pump has operated with minimal downtime and has extracted approximately 32 gallons of LNAPL at an average extraction rate of 0.29 gallons per day (gpd) since it first became operational. A summary of the cumulative volume of LNAPL removed and the pumping rates are summarized in Table 1 below.

Table 1 – LNAPL Recovery Summary

Date	Volume of Product (gallons)	Pump Rate (gallons per day)
5-Dec-12	6.18	
8-Dec-12	11.16	1.66
18-Dec-12	11.90	0.07
26-Dec-12	13.39	0.19
2-Jan-13	15.62	0.32
7-Jan-13	17.86	0.45
15-Jan-13	19.34	0.19
21-Jan-13	20.83	0.25
28-Jan-13	22.32	0.21
6-Feb-13	23.81	0.17
12-Feb-13	25.30	0.25
18-Feb-13	26.78	0.25
27-Feb-13	28.27	0.17
6-Mar-13	29.02	0.11
15-Mar-13	29.76	0.08
19-Mar-13	30.50	0.15
25-Mar-13	31.25	0.12

5. Conclusions

Measurable LNAPL persists at monitoring wells MW-4 and MW-6, located down gradient of the former oil water separator. Due to the relatively stable free phase hydrocarbon plume, the residual source material does impose an immediate threat to surrounding monitoring locations. LNAPL recovery progress has been observed with the addition of the Spill Buster pump in MW-6 as described in the previous Section.

Elevated dissolved phase benzene concentrations persist at monitoring wells MW-10 and MW-10D in the central portion of the Site, suggesting the possibility of a secondary contaminant source area. 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.
- Continue LNAPL recovery system operation and maintenance at MW-6.

Tables

TABLE 1
FIRST 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	4/28/2011	45.75			54.20	3718.29	3674.43	-1.70
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-2	4/28/2011	40.5			50.50	3714.80	3676.74	1.10
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-3	4/28/2011	48.33			55.30	3715.50	3669.37	-0.53
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-4*	4/28/2011	46.91	46.68	0.23	54.13	3720.46	3673.72	-1.83
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-5	4/28/2011	46.59			55.20	3721.53	3677.01	0.51
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-6*	4/28/2011	49.91	47.10	2.81	54.10	3720.99	3673.19	-2.98
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-7	4/28/2011	DRY			62.50	3728.57	DRY	
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-8	4/28/2011	44.35			58.30	3714.18	3671.83	-1.89
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-9	4/28/2011	51.42			59.10	3720.48	3671.06	-0.45
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

TABLE 1
FIRST 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	4/28/2011	51.34			65.00	3720.76	3671.56	-0.64
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-10D	4/28/2011	52.4			79.00	3720.85	3671.14	-0.49
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-11	4/28/2011	52.05			62.80	3722.02	3672.48	-0.56
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-13	4/28/2011	53.03			63.00	3721.63	3670.96	-0.63
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
							Average change in groundwater elevation since the previous monitoring event	0.09

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 was 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 first 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
FIRST 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	4/28/2011	<0.001	<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-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-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-4	4/28/2011	LNAPL	LNAPL	LNAPL	LNAPL	
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-5	4/28/2011	**0.1490**	<0.004	**0.776**	<0.004	
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-6	4/28/2011	LNAPL	LNAPL	LNAPL	LNAPL	
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-7	4/28/2011	NS	NS	NS	NS	
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-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-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	

TABLE 2
FIRST 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	4/28/2011	**2.005**	0.243	0.215	0.141	
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-10D	4/28/2011	**0.0512**	0.0373	0.0063	0.0113	
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-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-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 [3]	9/4/2012	NS	NS	NS	NS	
MW-13	2/18/2013	NS	NS	NS	NS	

Notes:

1.) 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.

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

3.) 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.

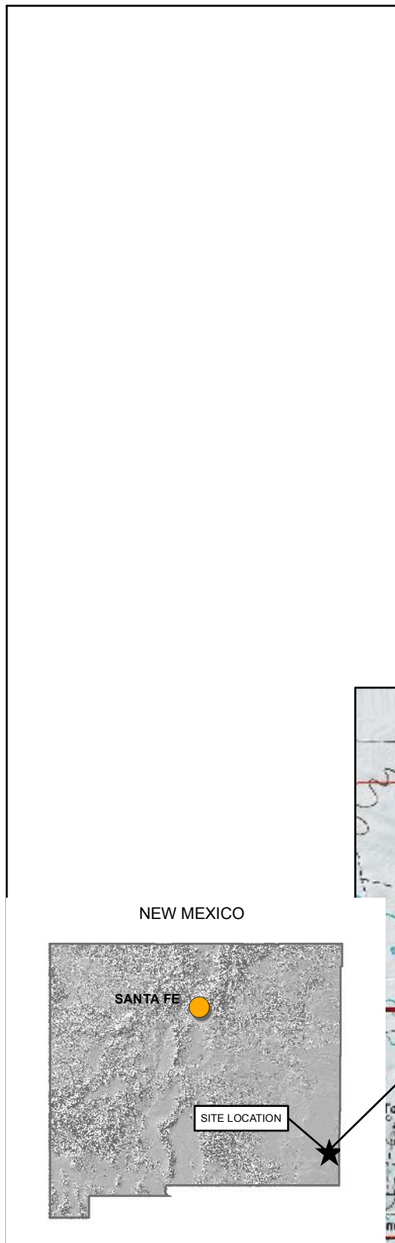
Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

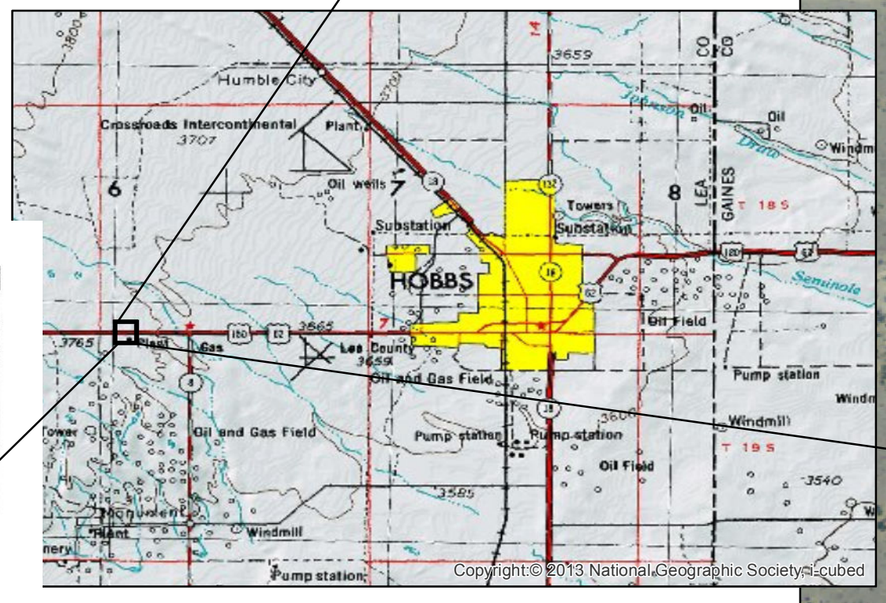
LNAPL = Light Non-Aqueous Phase Liquid

NS = Not Sampled.

mg/L = milligrams per liter.

Figures





DESIGNED BY: C. Wasko

DRAWN BY: J. Clonts

SHEET CHK'D BY: _____

CROSS CHK'D BY: _____

APPROVED BY: _____

APPROVED BY: _____

TASMAN GEOSCIENCES

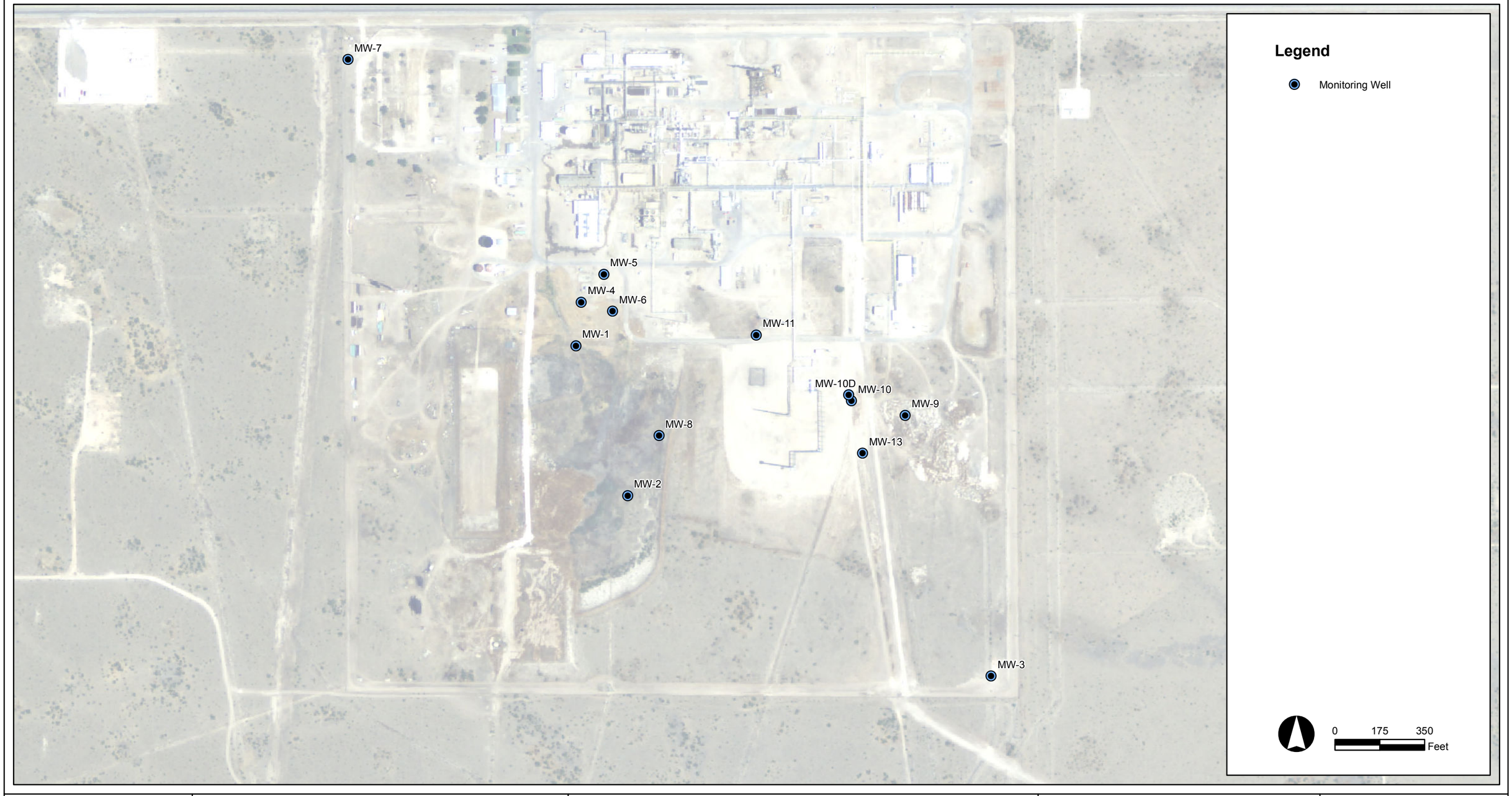
Tasman Geosciences, LLC
6899 Pecos Street - Unit C
Denver, CO 80221
303 487 1228

LINAM RANCH GAS PLANT

Groundwater Monitoring Summary Report

SITE LOCATION

FIGURE 1



DESIGNED BY: C. Wasko
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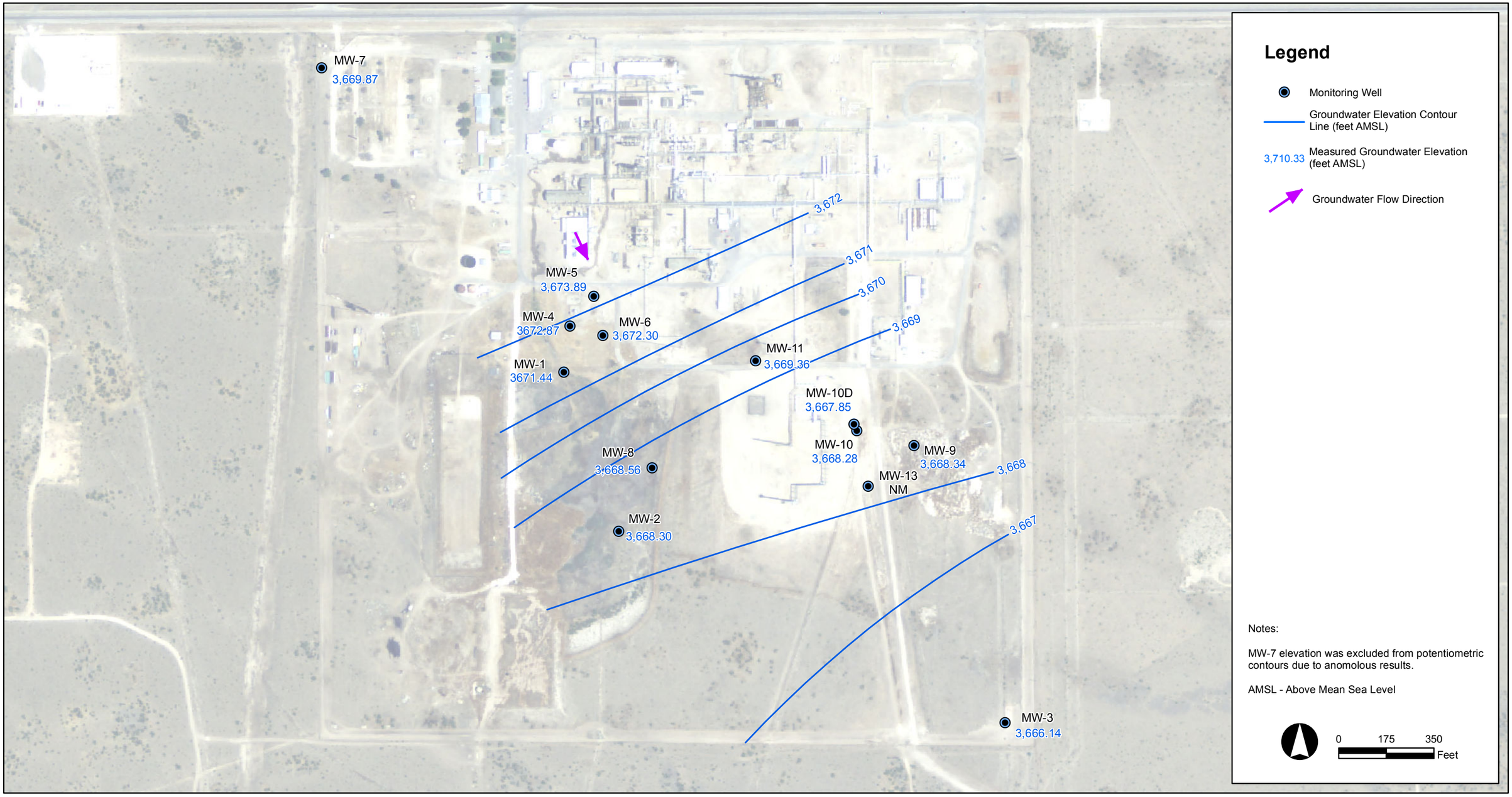
LINAM RANCH GAS PLANT

Groundwater Monitoring Summary Report

SITE MAP

FIGURE 2



DESIGNED BY: C. Wasko
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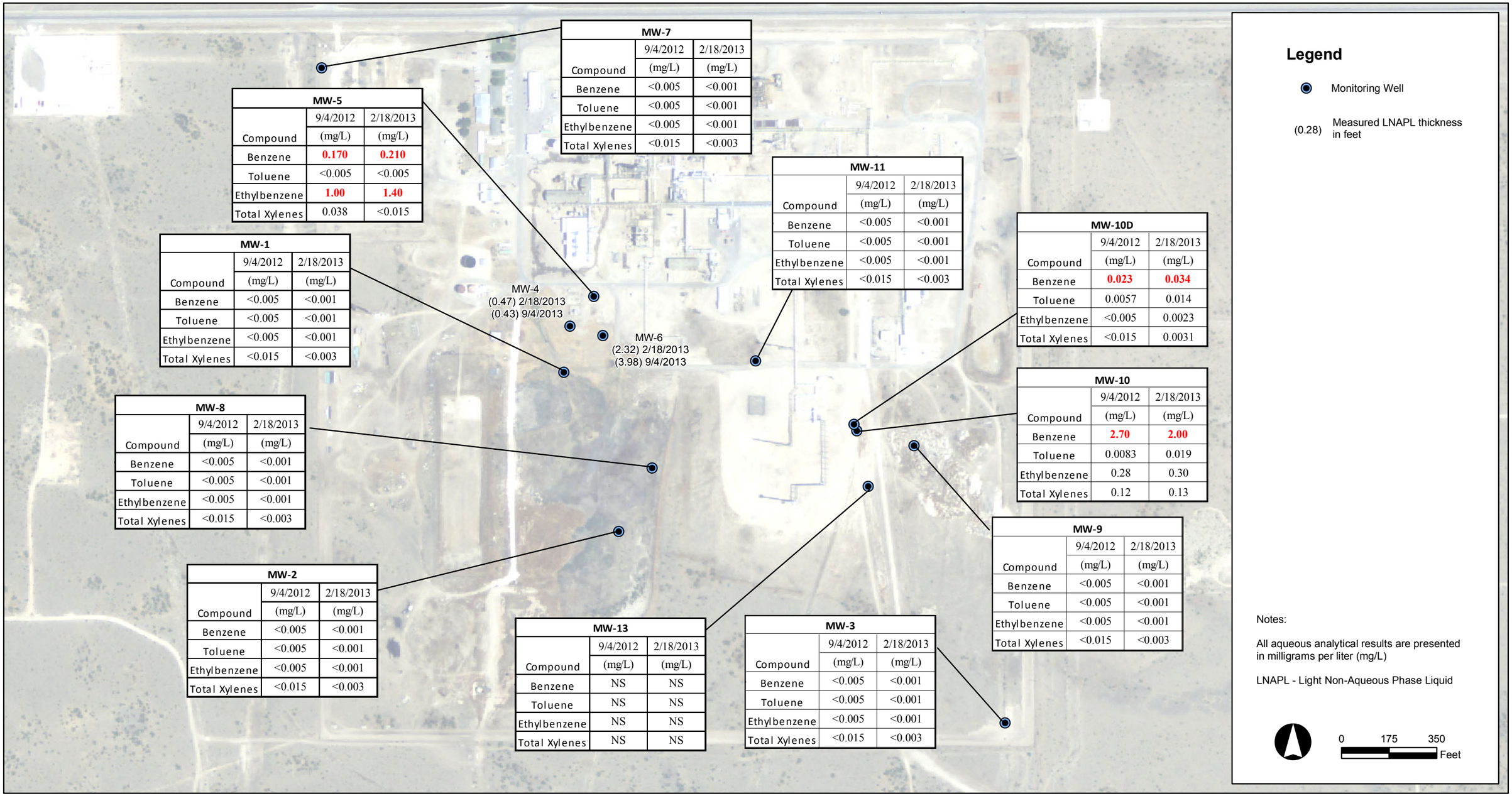
LINAM RANCH GAS PLANT

First Half 2013 Groundwater Monitoring Summary Report

GROUNDWATER ELEVATION CONTOUR MAP (FEBRRUARY 18, 2013)

FIGURE 3



MW-7		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	<0.005	<0.001
Toluene	<0.005	<0.001
Ethylbenzene	<0.005	<0.001
Total Xylenes	<0.015	<0.003

MW-5		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	**0.170**	**0.210**
Toluene	<0.005	<0.005
Ethylbenzene	**1.00**	**1.40**
Total Xylenes	0.038	<0.015

MW-11		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	<0.005	<0.001
Toluene	<0.005	<0.001
Ethylbenzene	<0.005	<0.001
Total Xylenes	<0.015	<0.003

MW-1		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	<0.005	<0.001
Toluene	<0.005	<0.001
Ethylbenzene	<0.005	<0.001
Total Xylenes	<0.015	<0.003

MW-4
(0.47) 2/18/2013
(0.43) 9/4/2013

MW-6
(2.32) 2/18/2013
(3.98) 9/4/2013

MW-10D		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	**0.023**	**0.034**
Toluene	0.0057	0.014
Ethylbenzene	<0.005	0.0023
Total Xylenes	<0.015	0.0031

MW-10		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	**2.70**	**2.00**
Toluene	0.0083	0.019
Ethylbenzene	0.28	0.30
Total Xylenes	0.12	0.13

MW-8		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	<0.005	<0.001
Toluene	<0.005	<0.001
Ethylbenzene	<0.005	<0.001
Total Xylenes	<0.015	<0.003

MW-9		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	<0.005	<0.001
Toluene	<0.005	<0.001
Ethylbenzene	<0.005	<0.001
Total Xylenes	<0.015	<0.003

MW-2		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	<0.005	<0.001
Toluene	<0.005	<0.001
Ethylbenzene	<0.005	<0.001
Total Xylenes	<0.015	<0.003

MW-13		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	NS	NS
Toluene	NS	NS
Ethylbenzene	NS	NS
Total Xylenes	NS	NS

MW-3		
Compound	9/4/2012 (mg/L)	2/18/2013 (mg/L)
Benzene	<0.005	<0.001
Toluene	<0.005	<0.001
Ethylbenzene	<0.005	<0.001
Total Xylenes	<0.015	<0.003

Legend

- Monitoring Well
- (0.28) Measured LNAPL thickness in feet

Notes:

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

LNAPL - Light Non-Aqueous Phase Liquid

0 175 350 Feet

DESIGNED BY: C. Wasko
DRAWN BY: J. Clonts
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
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LINAM RANCH GAS PLANT

First Half 2013 Groundwater Monitoring Summary Report

ANALYTICAL RESULTS MAP

FIGURE 4

Appendix A

Laboratory Analytical Results

25-Feb-2013

Christine Wasko
Tasman Geosciences
5690 Webster Street
Arvada, CO 80002

Tel: (720) 988-2024
Fax:

Re: Linam Ranch Gas Plant

Work Order: **1302648**

Dear Christine,

ALS Environmental received 12 samples on 20-Feb-2013 09:25 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 23.

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

Sincerely,

Electronically approved by: Luke F. Hernandez

Sonia West
Project Manager

Certificate No: T104704231-12-10

ALS Environmental

Date: 25-Feb-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: **1302648**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1302648-01	MW-1	Water		2/18/2013 15:10	2/20/2013 09:25	☐
1302648-02	MW-2	Water		2/18/2013 02:30	2/20/2013 09:25	☐
1302648-03	MW-3	Water		2/18/2013 14:15	2/20/2013 09:25	☐
1302648-04	MW-5	Water		2/18/2013 15:05	2/20/2013 09:25	☐
1302648-05	MW-7	Water		2/18/2013 11:45	2/20/2013 09:25	☐
1302648-06	MW-8	Water		2/18/2013 13:00	2/20/2013 09:25	☐
1302648-07	MW-9	Water		2/18/2013 14:00	2/20/2013 09:25	☐
1302648-08	MW-10	Water		2/18/2013 13:30	2/20/2013 09:25	☐
1302648-09	MW-10D	Water		2/18/2013 13:20	2/20/2013 09:25	☐
1302648-10	MW-11	Water		2/18/2013 14:45	2/20/2013 09:25	☐
1302648-11	Duplicate	Water		2/18/2013	2/20/2013 09:25	☐
1302648-12	Trip Blank	Water		2/18/2013	2/20/2013 09:25	☑

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648

Case Narrative

No Exceptions

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-1
Lab ID: 1302648-01
Collection Date: 2/18/2013 03:10 PM
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	2/22/2013 02:22 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/22/2013 02:22 AM
Toluene	ND		0.0010	mg/L	1	2/22/2013 02:22 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/22/2013 02:22 AM
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	1	2/22/2013 02:22 AM
Surr: 4-Bromofluorobenzene	*104*		*70-125*	*%REC*	1	2/22/2013 02:22 AM
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	1	2/22/2013 02:22 AM
Surr: Toluene-d8	*103*		*78-123*	*%REC*	1	2/22/2013 02:22 AM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-2
Lab ID: 1302648-02
Collection Date: 2/18/2013 02:30 AM
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	2/22/2013 02:46 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/22/2013 02:46 AM
Toluene	ND		0.0010	mg/L	1	2/22/2013 02:46 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/22/2013 02:46 AM
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	1	2/22/2013 02:46 AM
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	1	2/22/2013 02:46 AM
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	1	2/22/2013 02:46 AM
Surr: Toluene-d8	*102*		*78-123*	*%REC*	1	2/22/2013 02:46 AM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-3
Lab ID: 1302648-03
Collection Date: 2/18/2013 02:15 PM
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	2/22/2013 03:10 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/22/2013 03:10 AM
Toluene	ND		0.0010	mg/L	1	2/22/2013 03:10 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/22/2013 03:10 AM
Surr: 1,2-Dichloroethane-d4	*111*		*71-125*	*%REC*	1	2/22/2013 03:10 AM
Surr: 4-Bromofluorobenzene	*99.2*		*70-125*	*%REC*	1	2/22/2013 03:10 AM
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	1	2/22/2013 03:10 AM
Surr: Toluene-d8	*102*		*78-123*	*%REC*	1	2/22/2013 03:10 AM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-5
Lab ID: 1302648-04
Collection Date: 2/18/2013 03:05 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
Benzene	**0.20**		**0.0050**	**mg/L**	5	2/22/2013 04:19 PM
Ethylbenzene	**1.3**		**0.050**	**mg/L**	50	2/22/2013 03:54 PM
Toluene	ND		0.0050	mg/L	5	2/22/2013 04:19 PM
Xylenes, Total	ND		0.015	mg/L	5	2/22/2013 04:19 PM
Surr: 1,2-Dichloroethane-d4	*98.2*		*71-125*	*%REC*	5	2/22/2013 04:19 PM
Surr: 1,2-Dichloroethane-d4	*93.3*		*71-125*	*%REC*	50	2/22/2013 03:54 PM
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	5	2/22/2013 04:19 PM
Surr: 4-Bromofluorobenzene	*98.5*		*70-125*	*%REC*	50	2/22/2013 03:54 PM
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	5	2/22/2013 04:19 PM
Surr: Dibromofluoromethane	*99.0*		*74-125*	*%REC*	50	2/22/2013 03:54 PM
Surr: Toluene-d8	*98.1*		*78-123*	*%REC*	5	2/22/2013 04:19 PM
Surr: Toluene-d8	*94.9*		*78-123*	*%REC*	50	2/22/2013 03:54 PM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-7
Lab ID: 1302648-05
Collection Date: 2/18/2013 11:45 AM
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	2/22/2013 01:47 PM
Ethylbenzene	ND		0.0010	mg/L	1	2/22/2013 01:47 PM
Toluene	ND		0.0010	mg/L	1	2/22/2013 01:47 PM
Xylenes, Total	ND		0.0030	mg/L	1	2/22/2013 01:47 PM
Surr: 1,2-Dichloroethane-d4	*93.7*		*71-125*	*%REC*	1	2/22/2013 01:47 PM
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	1	2/22/2013 01:47 PM
Surr: Dibromofluoromethane	*99.7*		*74-125*	*%REC*	1	2/22/2013 01:47 PM
Surr: Toluene-d8	*99.4*		*78-123*	*%REC*	1	2/22/2013 01:47 PM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-8
Lab ID: 1302648-06
Collection Date: 2/18/2013 01:00 PM
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	2/22/2013 12:45 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/22/2013 12:45 AM
Toluene	ND		0.0010	mg/L	1	2/22/2013 12:45 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/22/2013 12:45 AM
Surr: 1,2-Dichloroethane-d4	*112*		*71-125*	*%REC*	1	2/22/2013 12:45 AM
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	1	2/22/2013 12:45 AM
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	1	2/22/2013 12:45 AM
Surr: Toluene-d8	*102*		*78-123*	*%REC*	1	2/22/2013 12:45 AM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-9
Lab ID: 1302648-07
Collection Date: 2/18/2013 02:00 PM
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	2/22/2013 03:34 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/22/2013 03:34 AM
Toluene	ND		0.0010	mg/L	1	2/22/2013 03:34 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/22/2013 03:34 AM
Surr: 1,2-Dichloroethane-d4	*112*		*71-125*	*%REC*	1	2/22/2013 03:34 AM
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	1	2/22/2013 03:34 AM
Surr: Dibromofluoromethane	*107*		*74-125*	*%REC*	1	2/22/2013 03:34 AM
Surr: Toluene-d8	*101*		*78-123*	*%REC*	1	2/22/2013 03:34 AM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-10
Lab ID: 1302648-08
Collection Date: 2/18/2013 01:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
Benzene	**2.0**		**0.025**	**mg/L**	25	2/22/2013 03:28 PM
Ethylbenzene	**0.30**		**0.025**	**mg/L**	25	2/22/2013 03:28 PM
Toluene	**0.019**		**0.0010**	**mg/L**	1	2/22/2013 02:13 PM
Xylenes, Total	**0.13**		**0.0030**	**mg/L**	1	2/22/2013 02:13 PM
Surr: 1,2-Dichloroethane-d4	*95.8*		*71-125*	*%REC*	25	2/22/2013 03:28 PM
Surr: 1,2-Dichloroethane-d4	*96.7*		*71-125*	*%REC*	1	2/22/2013 02:13 PM
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	25	2/22/2013 03:28 PM
Surr: 4-Bromofluorobenzene	*111*		*70-125*	*%REC*	1	2/22/2013 02:13 PM
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	25	2/22/2013 03:28 PM
Surr: Dibromofluoromethane	*94.7*		*74-125*	*%REC*	1	2/22/2013 02:13 PM
Surr: Toluene-d8	*97.5*		*78-123*	*%REC*	25	2/22/2013 03:28 PM
Surr: Toluene-d8	*98.9*		*78-123*	*%REC*	1	2/22/2013 02:13 PM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-10D
Lab ID: 1302648-09
Collection Date: 2/18/2013 01:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			**SW8260**			Analyst: **AKP**
Benzene	**0.034**		**0.0010**	**mg/L**	1	2/22/2013 03:58 AM
Ethylbenzene	**0.0023**		**0.0010**	**mg/L**	1	2/22/2013 03:58 AM
Toluene	**0.014**		**0.0010**	**mg/L**	1	2/22/2013 03:58 AM
Xylenes, Total	**0.0031**		**0.0030**	**mg/L**	1	2/22/2013 03:58 AM
Surr: 1,2-Dichloroethane-d4	*110*		*71-125*	*%REC*	1	2/22/2013 03:58 AM
Surr: 4-Bromofluorobenzene	*110*		*70-125*	*%REC*	1	2/22/2013 03:58 AM
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	1	2/22/2013 03:58 AM
Surr: Toluene-d8	*101*		*78-123*	*%REC*	1	2/22/2013 03:58 AM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: MW-11
Lab ID: 1302648-10
Collection Date: 2/18/2013 02:45 PM
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	2/22/2013 04:22 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/22/2013 04:22 AM
Toluene	ND		0.0010	mg/L	1	2/22/2013 04:22 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/22/2013 04:22 AM
Surr: 1,2-Dichloroethane-d4	*110*		*71-125*	*%REC*	1	2/22/2013 04:22 AM
Surr: 4-Bromofluorobenzene	*104*		*70-125*	*%REC*	1	2/22/2013 04:22 AM
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	1	2/22/2013 04:22 AM
Surr: Toluene-d8	*102*		*78-123*	*%REC*	1	2/22/2013 04:22 AM

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

ALS Environmental

Date: *25-Feb-13*

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
Work Order: 1302648
Sample ID: Duplicate
Lab ID: 1302648-11
Collection Date: 2/18/2013
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
Benzene	**0.21**		**0.0050**	**mg/L**	5	2/22/2013 05:11 PM
Ethylbenzene	**1.4**		**0.050**	**mg/L**	50	2/22/2013 04:45 PM
Toluene	ND		0.0050	mg/L	5	2/22/2013 05:11 PM
Xylenes, Total	ND		0.015	mg/L	5	2/22/2013 05:11 PM
Surr: 1,2-Dichloroethane-d4	*95.1*		*71-125*	*%REC*	5	2/22/2013 05:11 PM
Surr: 1,2-Dichloroethane-d4	*94.1*		*71-125*	*%REC*	50	2/22/2013 04:45 PM
Surr: 4-Bromofluorobenzene	*97.4*		*70-125*	*%REC*	5	2/22/2013 05:11 PM
Surr: 4-Bromofluorobenzene	*97.2*		*70-125*	*%REC*	50	2/22/2013 04:45 PM
Surr: Dibromofluoromethane	*98.0*		*74-125*	*%REC*	5	2/22/2013 05:11 PM
Surr: Dibromofluoromethane	*94.8*		*74-125*	*%REC*	50	2/22/2013 04:45 PM
Surr: Toluene-d8	*95.3*		*78-123*	*%REC*	5	2/22/2013 05:11 PM
Surr: Toluene-d8	*98.5*		*78-123*	*%REC*	50	2/22/2013 04:45 PM

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

QC BATCH REPORT

Batch ID: **R143128** Instrument ID **VOA4** Method: **SW8260**

MBLK Sample ID: **VBLKW2-130221-R143128** Units: **µg/L** Analysis Date: **2/21/2013 11:33 PM**

Client ID: Run ID: **VOA4_130221E** SeqNo: **3121328** 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	1.0								
Surr: 1,2-Dichloroethane-d4	54.88	1.0	*50*	0	*110*	*71-125*	0			
Surr: 4-Bromofluorobenzene	50.47	1.0	*50*	0	*101*	*70-125*	0			
Surr: Dibromofluoromethane	52.4	1.0	*50*	0	*105*	*74-125*	0			
Surr: Toluene-d8	50.76	1.0	*50*	0	*102*	*78-123*	0			

LCS Sample ID: **VLCSW2-130221-R143128** Units: **µg/L** Analysis Date: **2/21/2013 10:20 PM**

Client ID: Run ID: **VOA4_130221E** SeqNo: **3121324** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	52.09	1.0	50	0	104	80-120	0			
Ethylbenzene	52.3	1.0	50	0	105	80-120	0			
Toluene	52.47	1.0	50	0	105	80-121	0			
Xylenes, Total	158.2	1.0	150	0	105	80-124	0			
Surr: 1,2-Dichloroethane-d4	53.49	1.0	*50*	0	*107*	*71-125*	0			
Surr: 4-Bromofluorobenzene	53.86	1.0	*50*	0	*108*	*70-125*	0			
Surr: Dibromofluoromethane	51.65	1.0	*50*	0	*103*	*74-125*	0			
Surr: Toluene-d8	50.27	1.0	*50*	0	*101*	*78-123*	0			

LCSD Sample ID: **VLCSDW2-130221-R143128** Units: **µg/L** Analysis Date: **2/21/2013 10:44 PM**

Client ID: Run ID: **VOA4_130221E** SeqNo: **3121326** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	51.43	1.0	50	0	103	80-120	52.09	1.28	20	
Ethylbenzene	50.8	1.0	50	0	102	80-120	52.3	2.92	20	
Toluene	50.56	1.0	50	0	101	80-121	52.47	3.72	20	
Xylenes, Total	153	1.0	150	0	102	80-124	158.2	3.38	20	
Surr: 1,2-Dichloroethane-d4	53.75	1.0	*50*	0	*107*	*71-125*	53.49	*0.478*	*20*	
Surr: 4-Bromofluorobenzene	53.64	1.0	*50*	0	*107*	*70-125*	53.86	*0.408*	*20*	
Surr: Dibromofluoromethane	52.22	1.0	*50*	0	*104*	*74-125*	51.65	*1.11*	*20*	
Surr: Toluene-d8	50.73	1.0	*50*	0	*101*	*78-123*	50.27	*0.908*	*20*	

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

Client: Tasman Geosciences
Work Order: 1302648
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R143128** Instrument ID **VOA4** Method: **SW8260**

MS Sample ID: **1302648-06AMS** Units: **µg/L** Analysis Date: **2/22/2013 01:09 AM**

Client ID: **MW-8** Run ID: **VOA4_130221E** SeqNo: **3121336** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	56.11	1.0	50	0	112	80-120	0			
Ethylbenzene	55.72	1.0	50	0	111	80-120	0			
Toluene	55.59	1.0	50	0	111	80-121	0			
Xylenes, Total	167.5	1.0	150	0	112	80-124	0			
Surr: 1,2-Dichloroethane-d4	53.15	1.0	*50*	0	*106*	*71-125*	0			
Surr: 4-Bromofluorobenzene	53.68	1.0	*50*	0	*107*	*70-125*	0			
Surr: Dibromofluoromethane	52.13	1.0	*50*	0	*104*	*74-125*	0			
Surr: Toluene-d8	50.23	1.0	*50*	0	*100*	*78-123*	0			

MSD Sample ID: **1302648-06AMSD** Units: **µg/L** Analysis Date: **2/22/2013 01:33 AM**

Client ID: **MW-8** Run ID: **VOA4_130221E** SeqNo: **3121338** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	56.63	1.0	50	0	113	80-120	56.11	0.916	20	
Ethylbenzene	56.24	1.0	50	0	112	80-120	55.72	0.924	20	
Toluene	56.54	1.0	50	0	113	80-121	55.59	1.68	20	
Xylenes, Total	169.2	1.0	150	0	113	80-124	167.5	0.983	20	
Surr: 1,2-Dichloroethane-d4	53.95	1.0	*50*	0	*108*	*71-125*	53.15	*1.49*	*20*	
Surr: 4-Bromofluorobenzene	53.88	1.0	*50*	0	*108*	*70-125*	53.68	*0.363*	*20*	
Surr: Dibromofluoromethane	51.89	1.0	*50*	0	*104*	*74-125*	52.13	*0.451*	*20*	
Surr: Toluene-d8	50.44	1.0	*50*	0	*101*	*78-123*	50.23	*0.419*	*20*	

The following samples were analyzed in this batch:

1302648-01A	1302648-02A	1302648-03A
1302648-06A	1302648-07A	1302648-09A
1302648-10A		

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

Client: Tasman Geosciences
Work Order: 1302648
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R143189** Instrument ID **VOA6** Method: **SW8260**

MBLK Sample ID: **VBLKW-130222-R143189** Units: **µg/L** Analysis Date: **2/22/2013 12:31 PM**
Client ID: Run ID: **VOA6_130222A** SeqNo: **3122243** 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	1.0								
Surr: 1,2-Dichloroethane-d4	48.16	1.0	*50*	0	*96.3*	*71-125*	0			
Surr: 4-Bromofluorobenzene	49.01	1.0	*50*	0	*98*	*70-125*	0			
Surr: Dibromofluoromethane	49.14	1.0	*50*	0	*98.3*	*74-125*	0			
Surr: Toluene-d8	48.02	1.0	*50*	0	*96*	*78-123*	0			

LCS Sample ID: **VLCSW-130222-R143189** Units: **µg/L** Analysis Date: **2/22/2013 11:15 AM**
Client ID: Run ID: **VOA6_130222A** SeqNo: **3122242** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.77	1.0	50	0	91.5	80-120	0			
Ethylbenzene	45.57	1.0	50	0	91.1	80-120	0			
Toluene	45.1	1.0	50	0	90.2	80-121	0			
Xylenes, Total	135.1	1.0	150	0	90	80-124	0			
Surr: 1,2-Dichloroethane-d4	47.53	1.0	*50*	0	*95.1*	*71-125*	0			
Surr: 4-Bromofluorobenzene	49.74	1.0	*50*	0	*99.5*	*70-125*	0			
Surr: Dibromofluoromethane	49.28	1.0	*50*	0	*98.6*	*74-125*	0			
Surr: Toluene-d8	48.73	1.0	*50*	0	*97.5*	*78-123*	0			

MS Sample ID: **1302686-01AMS** Units: **µg/L** Analysis Date: **2/22/2013 02:37 PM**
Client ID: Run ID: **VOA6_130222A** SeqNo: **3122250** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.66	1.0	50	0	95.3	80-120	0			
Ethylbenzene	44	1.0	50	0	88	80-120	0			
Toluene	43.48	1.0	50	0	87	80-121	0			
Xylenes, Total	128.4	1.0	150	0	85.6	80-124	0			
Surr: 1,2-Dichloroethane-d4	45.71	1.0	*50*	0	*91.4*	*71-125*	0			
Surr: 4-Bromofluorobenzene	50.29	1.0	*50*	0	*101*	*70-125*	0			
Surr: Dibromofluoromethane	49.93	1.0	*50*	0	*99.9*	*74-125*	0			
Surr: Toluene-d8	49.34	1.0	*50*	0	*98.7*	*78-123*	0			

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

Client: Tasman Geosciences
Work Order: 1302648
Project: Linam Ranch Gas Plant

QC BATCH REPORT

Batch ID: **R143189** Instrument ID **VOA6** Method: **SW8260**

MSD Sample ID: **1302686-01AMSD** Units: **µg/L** Analysis Date: **2/22/2013 03:02 PM**

Client ID: Run ID: **VOA6_130222A** SeqNo: **3122251** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	44.66	1.0	50	0	89.3	80-120	47.66	6.49	20	
Ethylbenzene	43.91	1.0	50	0	87.8	80-120	44	0.193	20	
Toluene	43.46	1.0	50	0	86.9	80-121	43.48	0.0386	20	
Xylenes, Total	131.6	1.0	150	0	87.7	80-124	128.4	2.49	20	
Surr: 1,2-Dichloroethane-d4	47.95	1.0	*50*	0	*95.9*	*71-125*	45.71	*4.77*	*20*	
Surr: 4-Bromofluorobenzene	49.69	1.0	*50*	0	*99.4*	*70-125*	50.29	*1.2*	*20*	
Surr: Dibromofluoromethane	50.8	1.0	*50*	0	*102*	*74-125*	49.93	*1.73*	*20*	
Surr: Toluene-d8	48.56	1.0	*50*	0	*97.1*	*78-123*	49.34	*1.59*	*20*	

The following samples were analyzed in this batch: 1302648-04A 1302648-05A 1302648-08A 1302648-11A

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

ALS Environmental

Date: 25-Feb-13

Client: Tasman Geosciences
Project: Linam Ranch Gas Plant
WorkOrder: **1302648**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **TASMAN GEOSCIENCES** Date/Time Received: **20-Feb-13 09:25**

Work Order: **1302648** Received by: **RDH**

Checklist completed by Rachel D. Naran (eSignature) 20-Feb-13 (Date) Reviewed by: Sonia West (eSignature) 21-Feb-13 (Date)

Matrices: water
Carrier name: FedEx

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):	1.4c u/c	005	
Cooler(s)/Kit(s):	4795		
Date/Time sample(s) sent to storage:	2/20/13 15:03		
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:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental

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Chain of Custody Fo

Page 1 of 2

COC ID: 75671

1302648

TASMAN GEOSCIENCES: Tasman Geosciences

Project: Linam Ranch Gas Plant

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Linam Ranch Gas Plant
Work Order		Project Number	400126006 GN00
Company Name	Tasman Geosciences	Bill To Company	DCP Midstream, LP
Send Report To	Christine Wasko	Invoice Attn	Chandler Cole
Address	5690 Webster Street	Address	370 17th Street, Suite 2500
City/State/Zip	Arvada, CO 80002	City/State/Zip	Denver, Colorado 80102
Phone	(720) 988-2024	Phone	
Fax		Fax	
e-Mail Address		e-Mail Address	

A	BTEX (8260)
B	
C	
D	
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	2/18/13	1510	Water	HCl	3	X										☐
2	MW-2		1230	Water													☐
3	MW-3		1415	Water													☐
4	MW-5		1505	Water													☐
5	MW-7		1145	Water													☐
6	MW-8		1300	Water													☐
7	MW-8 MS		1300	Water													☐
8	MW-8 MSD		1300	Water													☐
9	MW-9		1400	Water													☐
10	MW-10		1330	Water													☐

21 of 23

Sampler(s) Please Print & Sign: Christine Wasko

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

	Date:	Time:	
Relinquished by:	2/19/13	1530	Received by: FedEx
Relinquished by:	Date:	Time:	Received by (Laboratory): 2/20/13 0825
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: 10 Day TAT

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 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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Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

COC ID: 75670

ALS Project Manager: | ALS Work Order #: 1302648

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Linam Ranch Gas Plant	A	BTEX (8260)
Work Order		Project Number	400126006 GN00	B	
Company Name	Tasman Geosciences	Bill To Company	DCP Midstream, LP	C	
Send Report To	Chrisline Wasko	Invoice Attn	Chandler Cole	D	
Address	5690 Webster Street	Address	370 17th Street, Suite 2500	E	
				F	
City/State/Zip	Arvada, CO 80002	City/State/Zip	Denver, Colorado 80102	G	
Phone	(720) 988-2024	Phone		H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-10D	2/18/13	1320	Water	HCl	3	X										☐
2	MW-11	2/18/13	1445	Water	HCl	3	X										☐
3	~~MW-13~~ Not sampled - Destroyed.			Water													☐
4	Duplicate			Water	HCl	3	X										☐
5				Water													☐
6																	
7																	
8																	
9																	
10																	

22 of 23

Sampler(s) Please Print & Sign: Christine Wasko

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: | Date: 2/19/13 | Time: 1530 | Received by: FedEx

Relinquished by: | Date: | Time: | Received by (Laboratory): 2/20/13 0925

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Day TAT

Cooler ID	Cooler Temp.

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_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 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.

1302648

00043

00500

FedEx Express Package US Airbill

FedEx Tracking Number 8013 7024 9179

1 From

Date 2/19/13

Sender's Name [redacted] Phone [redacted]

Company [redacted]

Address [redacted]

Dept./Floor/Suite/Room

City DENVER State CO ZIP 80221

2 Your Internal Billing Reference

3 To

Recipient's

FedEx 1.800.463.3339

ALS Environmental
10450 Stanciiff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5[illegible]87

CUSTODY SEAL

Date: 2/19/13 Time: 1530

Name: Christine Lasko

Company: ESAmerica

Seal Broken By:

Date: 2/20/13

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-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-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	

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-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-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-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	

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-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-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-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	

APPENDIX B
HISTORICAL DATA
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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-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-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	

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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	

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.