Second Half 2016 Semi-Annual Groundwater Monitoring Summary Report

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

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1. Introduction

This report summarizes groundwater monitoring and remediation activities conducted during the second half 2016 at the Linam Ranch Natural Gas Plant (Site) in Lea County, New Mexico (Figure 1). Tasman Geosciences (Tasman) performed these activities on behalf of DCP Midstream (DCP). The field activities described herein were conducted with the purpose of monitoring groundwater flow and quality conditions and assessing the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons in the Site subsurface. Current Site conditions were evaluated from field data and analytical laboratory results collected on September 28, 2016 and October 12, 2016. The data collected were used to develop the groundwater elevation map and analytical results figure presented herein.

2. Site Location and Background

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

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

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

3. Groundwater Monitoring

This section describes the groundwater field and laboratory activities performed during the second half 2016 semi-annual monitoring event on September 28, 2016 and October 12, 2016. Monitoring activities included Site-wide groundwater gauging, LNAPL measurements, and groundwater sampling. Figure 2 illustrates the groundwater monitoring network utilized to perform these activities at the Site.

3.1 Groundwater and LNAPL Elevation Monitoring

Groundwater and LNAPL levels were measured in order to evaluate hydraulic characteristics and provide information regarding seasonal and annual fluctuations in groundwater elevations at the Site. During the reporting period, groundwater levels were measured at 10 of the 12 Site monitoring wells. Monitoring wells MW-2 and MW-8 were inaccessible during the monitoring event on September 28, 2016 due to localized flooding from heavy precipitation. LNAPL was detected at MW-6 with a measured thickness of 3.74 feet.

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

A second half 2016 groundwater elevation map, included as Figure 3, indicates that groundwater flow at the Site trends generally to the east. Groundwater elevations ranges, average elevation changes from previous monitoring events, and calculated hydraulic gradients at the Site are summarized in the table below.

Summary of Measured Hydraulic Parameters

	Second Half 2016 (9/28/16)
Maximum Elevation (Well ID)	3,684.88 (MW-1)
Minimum Elevation (Well ID)	3,667.5 (MW-3)
Average Change from Previous Monitoring Event (ft) – All Wells	2.44
Hydraulic Gradient (ft/ft) / (Well IDs)	0.0084 (MW-1 to MW-3)

3.2 Groundwater Quality Monitoring

After recording groundwater level measurements, groundwater samples were collected from nine of the twelve wells. MW-6 was not sampled due to the presence of LNAPL and MW-2 and MW-8 were not sampled due to inaccessibility from flooding. Additionally, during sample shipment to the laboratory, the shipping company (FedEx) misplaced the cooler which contained the groundwater samples for MW-4 and MW-7. As such, the cooler did not arrive at the laboratory for a 5-day period and the samples were out of the recommended temperature specifications of 4 degrees Celsius (^{0}C) at that time. Therefore, on October 12, 2016, re-sampling activities at monitoring well MW-4 and MW-7 were conducted and the analytical results from that event are provided in this report.

A minimum of three well casing volumes of groundwater were purged from each monitoring well prior to collection of groundwater samples. Groundwater samples were collected using 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 ^{0}C for transportation to the laboratory.

Groundwater samples were then shipped under chain-of-custody procedures to ALS Environmental (ALS) laboratory in Houston, Texas, for analysis.

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

Table 2 summarizes BTEX concentrations in groundwater samples collected during the reporting period. Historic analytical results up to and including the September and October 2016 events are contained in Appendix A, and the laboratory analytical reports for the second half 2016 events are included in Appendix B. Analytical results are also displayed on Figure 4.

Benzene was detected at concentrations in excess of the New Mexico Water Quality Control Commission (NMWQCC) groundwater standard of 0.01 milligrams per liter (mg/L) at the following locations, at the concentrations listed:

- MW-4: 5.0 mg/L
- MW-5: 0.081 mg/L
- MW-10: 3.1 mg/L
- MW-10D: 0.024 mg/L (Duplicate – 0.025 mg/L)

Ethylbenzene was detected in monitoring well MW-5 above the NMWQCC standard of 0.75 mg/L with a concentration of 1.6 mg/L. The remaining monitoring well locations that were sampled during the second half 2016 monitoring events were below applicable standards.

3.3 Data Quality Assurance / Quality Control

A trip blank and field duplicate sample (MW-10D) were collected during the September 2016 sampling event. 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. QA/QC items of note for the second half 2016 include the following:

- Target analytes were not detected in the trip blank; and
- MW-10D and the associated duplicate sample exhibited benzene concentrations of 0.024 mg/L and 0.025 mg/L, respectively. The calculated relative percent difference (RPD) is 4, which is within the target range of 20.

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

4. Remediation Activities

A passive LNAPL collection bailer was deployed within monitoring well MW-6 during the second half

2016. On September 28, 2016, the LNAPL bailer was observed to be full which attributes to approximately 1 liter of product. Additionally, 3.74 feet of LNAPL was observed within the well. Total accumulation since initiation of passive and active (as discussed in previous reports) LNAPL recovery efforts is approximately 53.52 gallons. The contents of the LNAPL bailer were emptied and the bailer was redeployed at MW-6.

5. Conclusions

Comparison of the second half semi-annual 2016 monitoring data with historic information provides the following general observations:

- Based on historic groundwater level measurements, groundwater elevations at the Site typically exhibit seasonal and annual fluctuations. Measurements collected during the second half 2016 monitoring event reflected an overall increase due to heavy precipitation and flooding that occurred in the area.
- Dissolved phase benzene concentrations above NMWQCC standards persist in the central portion of the Site, represented by wells MW-4, MW-5, MW-10, and MW-10D.
- The BTEX concentrations at MW-11 which is located within the central portion of the Site remains below NMWQCC standards.
- The increase in LNAPL thickness observed at MW-6 is likely attributable to the elevated groundwater levels caused by heavy precipitation that occurred during the second half 2016 resulting in flushing of LNAPL material from the vadose zone beneath the Site.

While separate and dissolved phase hydrocarbon impacts persist on-Site, BTEX concentrations in downgradient monitoring wells MW-3 and MW-9 remain below laboratory detection limits. This in conjunction with the overall decreasing trend in dissolved phase concentrations indicate that the plume is relatively stable and/or shrinking.

6. Recommendations

Based on evaluation of second half 2016 and historic 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.
- Remove the passive recovery bailer and re-initiate active LNAPL recovery at monitoring well MW-6 using the Magnum Spill Buster™ automatic LNAPL recovery system.

Tables

TABLE 1
SECOND HALF 2016 SEMI-ANNUAL
SUMMARY OF GROUNDWATER ELEVATION DATA
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location	Date	Depth to Groundwater (feet)	Depth to Product (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (*) (feet amsl)	Change in Groundwater Elevation Since Previous Event (1) (feet)
MW-1	03/24/16	44.41			54.35	3718.29	3673.88	-0.03
MW-1	09/28/16	33.41			54.40	3718.29	3684.88	11.00
MW-2	03/24/16	44.45			50.49	3714.80	3670.35	-0.99
MW-2	09/28/16	NM			NM	3714.80	NA	NA
MW-3	03/24/16	48.75			55.35	3715.50	3666.75	-0.16
MW-3	09/28/16	48.00			55.29	3715.50	3667.50	0.75
MW-4	03/24/16	45.4			54.15	3720.46	3675.06	0.42
MW-4	09/28/16	39.78			54.12	3720.46	3680.68	5.62
MW-5	03/24/16	45.60			55.48	3721.53	3675.93	0.80
MW-5	09/28/16	43.89			55.61	3721.53	3677.64	1.71
MW-6	03/24/16	47.45	47.32	0.13	54.55	3720.99	3673.64	-0.24
MW-6	09/28/16	45.71	41.97	3.74	54.55	3720.99	3678.09	4.45
MW-7	03/24/16	57.09			62.52	3728.57	3671.48	2.56
MW-7	09/28/16	57.43			62.55	3728.57	3671.14	-0.34
MW-8	03/24/16	43.71			57.90	3714.18	3670.47	-0.14
MW-8	09/28/16	NM			NM	3714.18	NA	NA
MW-9	03/24/16	51.1			59.25	3720.48	3669.38	-0.01
MW-9	09/28/16	51.41			59.22	3720.48	3669.07	-0.31
MW-10	03/24/16	50.86			67.79	3720.76	3669.90	-0.07
MW-10	09/28/16	50.99			65.20	3720.76	3669.77	-0.13
MW-10D	03/24/16	52.08			79.55	3720.85	3668.77	-0.08
MW-10D	09/28/16	51.17			78.90	3720.85	3669.68	0.91
MW-11	03/24/16	51.28			62.98	3722.02	3670.74	0.05
MW-11	09/28/16	50.57			62.80	3722.02	3671.45	0.71
							Average change in groundwater elevation (3/24/2016 to 9/28/16)	2.44

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

Groundwater elevation = (TOC Elevation - Measured Depth to Water) + (LNAPL Thickness in Well * LNAPL Relative Density)
LNAPL relative density is assumed to be approximately 0.75

NM = Not Measured
NA = Not Applicable

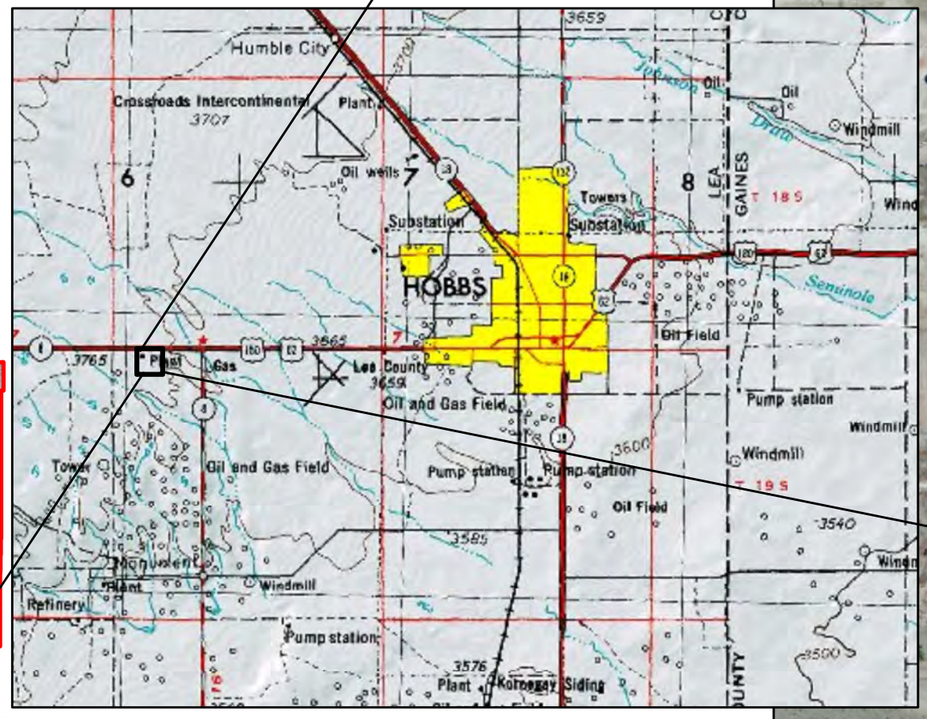
TABLE 2
SECOND HALF 2016 SEMI-ANNUAL
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
LINAM RANCH
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	
MW-1	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	9/28/2016	NS				Well inaccessible due to flooding
MW-3	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-4	10/12/2016	**5.0**	<0.010	0.027	0.053	
MW-5	9/28/2016	**0.081**	<0.0050	**1.6**	<0.015	
MW-6	9/28/2016	LNAPL				
MW-7	10/12/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	9/28/2016	NS				Well inaccessible due to flooding
MW-9	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-10	9/28/2016	**3.1**	0.012	0.25	0.19	
MW-10D	9/28/2016	**0.024**	0.013	<0.0050	<0.015	
MW-10D (Duplicate)	9/28/2016	**0.025**	0.013	<0.0050	<0.015	
MW-11	9/28/2016	0.0036	<0.0010	<0.0010	<0.0030	
Trip Blank	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	

Notes:
Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.
NMWQCC = New Mexico Water Quality Control Commission
LNAPL = light non-aqueous phase liquid
J = Estimated Value
NS = Not Sampled
mg/L = milligrams per liter

Figures

N



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

DATE: January 2017 DESIGNED BY: B. Humphrey DRAWN BY: D. Arnold	TASMAN GEOSCIENCES **Tasman Geosciences, Inc.** **6899 Pecos Street - Unit C** **Denver, CO 80221**	**DCP Midstream** **Linam Gas Plant** Second Half 2016 Semi-Annual Groundwater Monitoring Summary Report	Site Map with Monitoring Well Locations	Figure 2

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour (Dashed where Inferred)
- **3669.38** Measured Groundwater Elevation (feet AMSL)
- **NM** Not Measured

Notes:

* - The groundwater elevation value was corrected due to the presence of LNAPL as follows: (Measured Groundwater Elevation) + (LNAPL thickness * LNAPL Relative Density of 0.75)

AMSL - Above Mean Sea Level

LNAPL - Light Non-Aqueous Phase Liquid

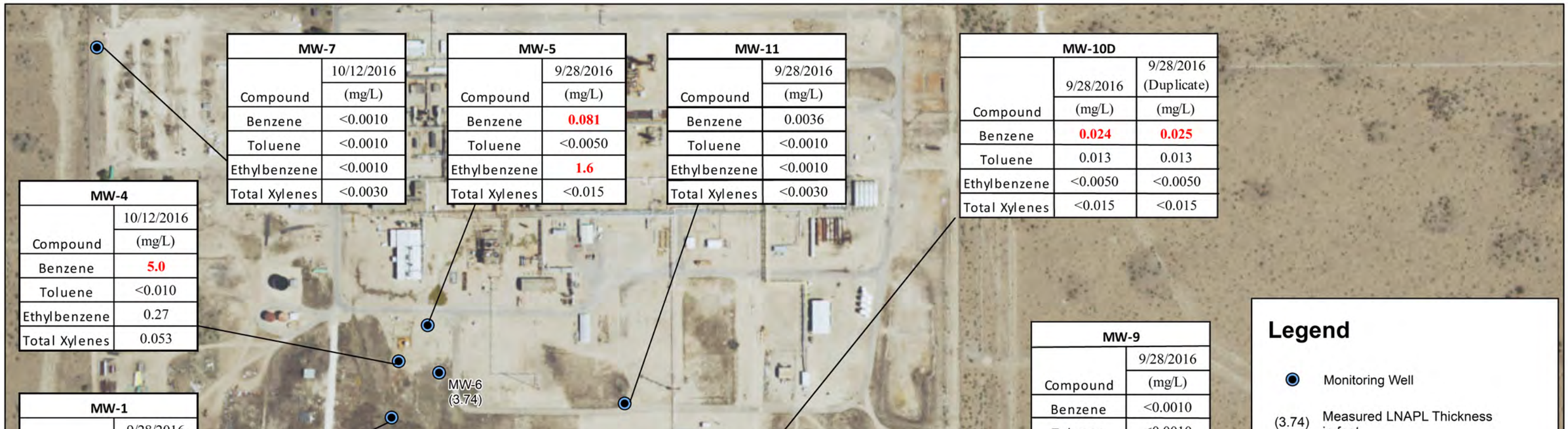
Monitoring wells MW-8 and MW-2 were not sampled due to flooding.

Monitoring point MW-7 was not utilized to develop groundwater contours

N

0 160 320 Feet

DATE: July 2016 DESIGNED BY: B. Humphrey DRAWN BY: D. Arnold	TASMAN GEOSCIENCES **Tasman Geosciences, Inc.** **6899 Pecos Street - Unit C** **Denver, CO 80221**	**DCP Midstream** **Linam Ranch Gas Plant** Second Half 2016 Semi-Annual Groundwater Monitoring Summary Report	Groundwater Elevation Contour Map (September 28, 2016)	Figure 3



MW-7	
	10/12/2016
Compound	(mg/L)
Benzene	<0.0010
Toluene	<0.0010
Ethylbenzene	<0.0010
Total Xylenes	<0.0030

MW-5	
	9/28/2016
Compound	(mg/L)
Benzene	**0.081**
Toluene	<0.0050
Ethylbenzene	**1.6**
Total Xylenes	<0.015

MW-11	
	9/28/2016
Compound	(mg/L)
Benzene	0.0036
Toluene	<0.0010
Ethylbenzene	<0.0010
Total Xylenes	<0.0030

MW-10D		
	9/28/2016	9/28/2016 (Duplicate)
Compound	(mg/L)	(mg/L)
Benzene	**0.024**	**0.025**
Toluene	0.013	0.013
Ethylbenzene	<0.0050	<0.0050
Total Xylenes	<0.015	<0.015

MW-4	
	10/12/2016
Compound	(mg/L)
Benzene	**5.0**
Toluene	<0.010
Ethylbenzene	0.27
Total Xylenes	0.053

MW-1	
	9/28/2016
Compound	(mg/L)
Benzene	<0.0010
Toluene	<0.0010
Ethylbenzene	<0.0010
Total Xylenes	<0.0030

MW-9	
	9/28/2016
Compound	(mg/L)
Benzene	<0.0010
Toluene	<0.0010
Ethylbenzene	<0.0010
Total Xylenes	<0.0030

MW-10	
	9/28/2016
Compound	(mg/L)
Benzene	**3.1**
Toluene	0.012
Ethylbenzene	0.25
Total Xylenes	0.19

MW-3	
	9/28/2016
Compound	(mg/L)
Benzene	<0.0010
Toluene	<0.0010
Ethylbenzene	<0.0010
Total Xylenes	<0.0030

Legend

- Monitoring Well
- (3.74) Measured LNAPL Thickness in feet
- NS Not Sampled

NMWQCC Groundwater Standards	
Compound	(mg/L)
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Total Xylenes	0.62

Notes:

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

LNAPL - Light Non- Aqueous Phase Liquid

mg/L - milligrams per liter

Monitoring wells MW-2 and MW-8 were not sampled due to flooding.

N

0 155 310 Feet

DATE: February 2017
DESIGNED BY: B. Humphrey
DRAWN BY: D. Arnold

TASMAN GEOSCIENCES
Tasman Geosciences, Inc.
6899 Pecos Street - Unit C
Denver, CO 80221

DCP Midstream
Linam Ranch Gas Plant
Second Half 2016 Semi-Annual Groundwater Monitoring Summary Report

Analytical Results Map (September 28, 2016 & October 12, 2016)

Figure 4

Appendix A

Historic Analytical Results

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

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	
MW-1	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-1	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-1	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-1	4/28/2011	<0.0054 J	<0.002	<0.002	<0.002	
MW-1	9/13/2011	<0.001	<0.002	<0.002	<0.004	
MW-1	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-1	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-1	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-1	9/9/2013	**0.012**	<0.001	0.0024	0.0038	
MW-1	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-1	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-1	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-1	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-1	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-1	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-2	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-2	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-2	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-2	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-2	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-2	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-2	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-2	9/9/2013	<0.001	<0.001	<0.01	<0.001	
MW-2	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-2	9/23/2014	NS	NS	NS	NS	Inaccessible
MW-2	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-2	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-2	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-2	9/28/2016	NS				Well inaccessible due to flooding
MW-3	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-3	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-3	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-3	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-3	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-3	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-3	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-3	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-3	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-3	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-3	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-3	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-3	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-3	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-3	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-4	9/24/2009	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/24/2010	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/28/2010	LNAPL	LNAPL	LNAPL	LNAPL	

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

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	
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-4	9/9/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/25/2014	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/24/2015	**9.8**	<0.005	0.59	<0.015	
MW-4	9/1/2015	**8.6**	<0.005	0.53	<0.015	
MW-4	3/24/2016	**6.9**	<0.005	0.38	<0.015	
MW-4	10/12/2016	**5**	<0.010	0.027	0.0530	
MW-5	9/24/2009	**0.0272**	<0.002	0.227	<0.006	
MW-5	3/24/2010	**0.1300**	<0.002	0.482	0.460	
MW-5	9/28/2010	0.0095	<0.004	0.188	<0.008	
MW-5	4/28/2011	**0.1490**	<0.004	**0.776**	<0.004	
MW-5	9/13/2011	**0.1300**	<0.010	**0.860**	<0.020	
MW-5	3/5/2012	**0.240**	<0.025	**2.000**	<0.075	
MW-5	9/4/2012	**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-5	2/25/2014	**0.18**	<0.005	**1.3**	<0.005	
MW-5	9/23/2014	**0.33**	<0.005	**2.0**	<0.015	
MW-5	2/24/2015	**0.16**	<0.005	**1.3**	<0.015	
MW-5	9/1/2015	**0.10**	<0.005	0.57	<0.015	
MW-5	3/24/2016	**0.095**	<0.005	**1.4**	<0.015	
MW-5	9/28/2016	**0.081**	<0.0050	**1.6**	<0.015	
MW-6	9/24/2009	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	3/24/2010	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	9/28/2010	LNAPL	LNAPL	LNAPL	LNAPL	
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-6	9/9/2013	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	2/25/2014	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	9/23/2014	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	2/24/2015	Not Sampled - LNAPL				
MW-6	9/1/2015	Not Sampled - LNAPL				
MW-6	3/24/2016	Not Sampled - LNAPL				
MW-6	9/28/2016	Not Sampled - LNAPL				
MW-7	9/24/2009	NS	NS	NS	NS	
MW-7	3/24/2010	NS	NS	NS	NS	
MW-7	9/28/2010	NS	NS	NS	NS	
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	

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

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	
MW-7	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-7	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-7	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-7	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-7	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-7	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-7	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-7	10/12/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-8	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-8	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-8	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-8	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-8	9/12/2011	<0.005	<0.005	<0.005	<0.015	
MW-8	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-8	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-8	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-8	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-8	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-8	9/23/2014	NS	NS	NS	NS	Inaccessible
MW-8	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-8	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-8	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-8	9/28/2016	NS				Well inaccessible due to flooding
MW-9	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-9	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-9	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-9	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-9	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-9	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-9	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-9	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-9	9/9/2013	<0.001	<0.001	<0.001	<0.001	
MW-9	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-9	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-9	2/24/2015	<0.001	<0.001	<0.001	<0.003	
MW-9	9/1/2015	<0.001	<0.001	<0.001	<0.003	
MW-9	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-9	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	
MW-10	4/30/2008	**0.769**	0.0457	0.0851	0.05	
MW-10	4/29/2009	**0.883**	0.23	0.0859	0.0759	
MW-10	9/24/2009	**1.07**	0.126	0.148	0.154	
MW-10	3/24/2010	**1.64**	0.175	0.246	0.156	
MW-10	9/28/2010	**1.900**	0.0547 J	0.24	0.104 J	
MW-10	4/28/2011	**2.005**	0.243	0.215	0.141	
MW-10	9/12/2011	**1.970**	0.104	0.249	0.145	Duplicate Sample Collected
MW-10	3/5/2012	**2.200**	0.110	0.230	0.130	
MW-10	9/4/2012	**2.700**	0.0083	0.280	0.120	
MW-10	2/18/2013	**2.00**	0.0190	0.300	0.130	

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

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	
MW-10	9/9/2013	**1.60**	0.022	0.26	0.11	
MW-10	2/25/2014	**1.70**	0.0054	0.35	0.098	
MW-10	9/23/2014	**2.20**	<0.005	0.53	0.150	
MW-10	2/24/2015	**1.6**	0.012	0.29	0.086	
MW-10	9/1/2015	**1.6**	0.012	0.19	0.078	
MW-10	3/24/2016	**4.6**	0.0068	0.22	0.054	
MW-10	9/28/2016	**3.1**	0.012	0.25	0.190	
MW-10D	4/30/2008	**0.195**	0.0677	0.0144	0.0221	
MW-10D	4/29/2009	**0.179**	0.0772	0.0203	0.0296	
MW-10D	9/24/2009	**0.103**	0.0496	0.0127	0.0261	
MW-10D	3/24/2010	**0.196**	0.0703	0.0129	0.0202	
MW-10D	9/28/2010	**0.0402**	0.0358	0.006	0.0077 J	
MW-10D	4/28/2011	**0.0512**	0.0373	0.0063	0.0113	
MW-10D	9/12/2011	**0.0278**	0.0131	0.0032	0.0060	
MW-10D	3/5/2012	**0.0240**	0.0081	<0.005	<0.015	Duplicate Sample Collected
MW-10D	9/4/2012	**0.0230**	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-10D	2/25/2014	**0.046**	0.021	0.005	<0.005	Duplicate Sample Collected
MW-10D (Duplicate)	2/25/2014	**0.043**	0.019	<0.005	<0.005	
MW-10D	9/23/2014	**0.059**	0.024	<0.005	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	9/23/2014	**0.058**	0.024	<0.005	<0.015	
MW-10D	2/24/2015	**0.062**	0.026	0.008	<0.015	Duplicate Sample Collected
MW-10D (Duplicate)	2/24/2015	**0.058**	0.024	0.0074	<0.015	
MW-10D	9/1/2015	**0.062**	0.025	0.0060	<0.015	
MW-10D (Duplicate)	9/1/2015	**0.065**	0.026	0.0075	<0.015	
MW-10D	3/24/2016	**0.079**	0.021	0.021	<0.015	
MW-10D (Duplicate)	3/24/2016	**0.079**	0.019	0.013	<0.015	
MW-10D	9/28/2016	**0.024**	0.013	<0.0050	<0.015	
MW-10D (Duplicate)	9/28/2016	**0.025**	0.013	<0.0050	<0.015	
MW-11	4/29/2009	<0.00046	<0.00048	<0.00045	<0.0014	
MW-11	9/24/2009	<0.002	<0.002	<0.002	<0.006	
MW-11	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-11	9/28/2010	0.0036	<0.002	<0.002	0.004	
MW-11	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-11	9/12/2001	<0.001	<0.002	<0.002	<0.004	
MW-11	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-11	9/4/2012	<0.005	<0.005	<0.005	<0.015	
MW-11	2/18/2013	<0.001	<0.001	<0.001	<0.003	
MW-11	9/9/2013	<0.001	<0.001	<0.001	0.0033	
MW-11	2/25/2014	<0.001	<0.001	<0.001	<0.001	
MW-11	9/23/2014	<0.001	<0.001	<0.001	<0.003	
MW-11	2/24/2015	0.0019	<0.001	<0.001	<0.003	
MW-11	9/1/2015	**0.019**	<0.001	<0.001	0.0031	
MW-11	3/24/2016	<0.001	<0.001	<0.001	<0.003	
MW-11	9/28/2016	0.0036	<0.0010	<0.0010	<0.0030	
MW-13	4/29/2009	<0.00046	<0.00048	<0.00045	<0.0014	
MW-13	9/24/2009	<0.002	<0.002	<0.002	<0.006	

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

Location Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	
MW-13	3/24/2010	<0.002	<0.002	<0.002	<0.006	
MW-13	9/28/2010	<0.001	<0.002	<0.002	<0.004	
MW-13	4/28/2011	<0.001	<0.002	<0.002	<0.002	
MW-13	9/12/2011	<0.001	<0.002	<0.002	<0.004	
MW-13	3/5/2012	<0.005	<0.005	<0.005	<0.015	
MW-13	Well Destroyed					
Trip Blank	2/25/2014	<0.001	<0.001	<0.001	<0.001	
Trip Blank	9/23/2014	<0.001	<0.001	<0.001	<0.003	
Trip Blank	2/24/2015	<0.001	<0.001	<0.001	<0.003	
Trip Blank	9/1/2015	<0.001	<0.001	<0.001	<0.003	
Trip Blank	3/24/2016	<0.001	<0.001	<0.001	<0.003	
Trip Blank	9/28/2016	<0.0010	<0.0010	<0.0010	<0.0030	

Notes:
Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.
NMWQCC = New Mexico Water Quality Control Commission
LNAPL = Light Non-Aqueous Phase Liquid
J = Estimated Value
NS = Not Sampled
mg/L = milligrams per liter

Appendix B

Laboratory Analytical Report

- ALS Environmental Job #: HS16100013 & HS16100588

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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October 05, 2016

Brian Humphrey
Tasman Geosciences
6899 Pecos St
Unit C
Denver, CO 80221

Work Order: **HS16100013**

Laboratory Results for: **DCP Linam Ranch Gas Plant**

Dear Brian,

ALS Environmental received 10 sample(s) on Oct 01, 2016 for the analysis 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.

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

Sincerely,

Sonia West

Generated By: Dayna.Fisher
Sonia West
Project Manager

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Work Order: HS16100013

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16100013-01	MW-1	Water		28-Sep-2016 13:30	01-Oct-2016 10:30	☐
HS16100013-02	MW-3	Water		28-Sep-2016 12:35	01-Oct-2016 10:30	☐
HS16100013-03	MW-5	Water		28-Sep-2016 12:45	01-Oct-2016 10:30	☐
HS16100013-04	MW-9	Water		28-Sep-2016 12:50	01-Oct-2016 10:30	☐
HS16100013-05	MW-10	Water		28-Sep-2016 12:30	01-Oct-2016 10:30	☐
HS16100013-06	MW-10D	Water		28-Sep-2016 12:15	01-Oct-2016 10:30	☐
HS16100013-07	MW-11	Water		28-Sep-2016 14:20	01-Oct-2016 10:30	☐
HS16100013-08	DUP-1	Water		28-Sep-2016 00:00	01-Oct-2016 10:30	☐
HS16100013-09	Trip Blank - 091516-08	Water		28-Sep-2016 00:00	01-Oct-2016 10:30	☐
HS16100013-10	Trip Blank - 091516-10	Water		28-Sep-2016 00:00	01-Oct-2016 10:30	☑

Client: Tasman Geosciences **CASE NARRATIVE**
Project: DCP Linam Ranch Gas Plant
Work Order: HS16100013

Work Order Comments

- Samples MW-4 and MW-7 were not received. 2 sets of Trip Blank samples were received in this cooler. The lab analyzed only 1 sample. The client was notified on October 4, 2016.

GCMS Volatiles by Method SW8260

Batch ID: R282469

Sample ID: **HS16100012-09**
- MS/MSD is for an unrelated sample.

Batch ID: R282465

Sample ID: **DUP-1 (HS16100013-08)**
Sample ID: **MW-10D (HS16100013-06)**
- Lowest practical dilution due to high concentration of non-target analyte(s).

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-1
Collection Date: 28-Sep-2016 13:30

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	ND		0.0010	mg/L	1	04-Oct-2016 18:54
Toluene	ND		0.0010	mg/L	1	04-Oct-2016 18:54
Ethylbenzene	ND		0.0010	mg/L	1	04-Oct-2016 18:54
Xylenes, Total	ND		0.0030	mg/L	1	04-Oct-2016 18:54
Surr: 1,2-Dichloroethane-d4	*115*		*71-125*	*%REC*	*1*	*04-Oct-2016 18:54*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*04-Oct-2016 18:54*
Surr: Dibromofluoromethane	*118*		*74-125*	*%REC*	*1*	*04-Oct-2016 18:54*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*04-Oct-2016 18:54*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-3
Collection Date: 28-Sep-2016 12:35

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-02
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	ND		0.0010	mg/L	1	04-Oct-2016 20:33
Toluene	ND		0.0010	mg/L	1	04-Oct-2016 20:33
Ethylbenzene	ND		0.0010	mg/L	1	04-Oct-2016 20:33
Xylenes, Total	ND		0.0030	mg/L	1	04-Oct-2016 20:33
Surr: 1,2-Dichloroethane-d4	*113*		*71-125*	*%REC*	*1*	*04-Oct-2016 20:33*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*04-Oct-2016 20:33*
Surr: Dibromofluoromethane	*116*		*74-125*	*%REC*	*1*	*04-Oct-2016 20:33*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*04-Oct-2016 20:33*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-5
Collection Date: 28-Sep-2016 12:45

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-03
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	**0.081**		**0.0050**	**mg/L**	5	04-Oct-2016 21:50
Toluene	ND		0.0050	mg/L	5	04-Oct-2016 21:50
Ethylbenzene	**1.6**		**0.025**	**mg/L**	25	04-Oct-2016 22:17
Xylenes, Total	ND		0.015	mg/L	5	04-Oct-2016 21:50
Surr: 1,2-Dichloroethane-d4	*115*		*71-125*	*%REC*	*5*	*04-Oct-2016 21:50*
Surr: 1,2-Dichloroethane-d4	*112*		*71-125*	*%REC*	*25*	*04-Oct-2016 22:17*
Surr: 4-Bromofluorobenzene	*99.1*		*70-125*	*%REC*	*5*	*04-Oct-2016 21:50*
Surr: 4-Bromofluorobenzene	*97.0*		*70-125*	*%REC*	*25*	*04-Oct-2016 22:17*
Surr: Dibromofluoromethane	*115*		*74-125*	*%REC*	*5*	*04-Oct-2016 21:50*
Surr: Dibromofluoromethane	*113*		*74-125*	*%REC*	*25*	*04-Oct-2016 22:17*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*25*	*04-Oct-2016 22:17*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*5*	*04-Oct-2016 21:50*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-9
Collection Date: 28-Sep-2016 12:50

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-04
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	ND		0.0010	mg/L	1	04-Oct-2016 20:58
Toluene	ND		0.0010	mg/L	1	04-Oct-2016 20:58
Ethylbenzene	ND		0.0010	mg/L	1	04-Oct-2016 20:58
Xylenes, Total	ND		0.0030	mg/L	1	04-Oct-2016 20:58
Surr: 1,2-Dichloroethane-d4	*116*		*71-125*	*%REC*	*1*	*04-Oct-2016 20:58*
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	*1*	*04-Oct-2016 20:58*
Surr: Dibromofluoromethane	*119*		*74-125*	*%REC*	*1*	*04-Oct-2016 20:58*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*04-Oct-2016 20:58*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-10
Collection Date: 28-Sep-2016 12:30

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-05
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	**3.1**		**0.10**	**mg/L**	100	04-Oct-2016 14:36
Toluene	**0.012**		**0.010**	**mg/L**	10	04-Oct-2016 14:08
Ethylbenzene	**0.25**		**0.010**	**mg/L**	10	04-Oct-2016 14:08
Xylenes, Total	**0.19**		**0.030**	**mg/L**	10	04-Oct-2016 14:08
Surr: 1,2-Dichloroethane-d4	*116*		*71-125*	*%REC*	*10*	*04-Oct-2016 14:08*
Surr: 1,2-Dichloroethane-d4	*115*		*71-125*	*%REC*	*100*	*04-Oct-2016 14:36*
Surr: 4-Bromofluorobenzene	*96.1*		*70-125*	*%REC*	*100*	*04-Oct-2016 14:36*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*10*	*04-Oct-2016 14:08*
Surr: Dibromofluoromethane	*111*		*74-125*	*%REC*	*10*	*04-Oct-2016 14:08*
Surr: Dibromofluoromethane	*118*		*74-125*	*%REC*	*100*	*04-Oct-2016 14:36*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*100*	*04-Oct-2016 14:36*
Surr: Toluene-d8	*104*		*75-125*	*%REC*	*10*	*04-Oct-2016 14:08*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-10D
Collection Date: 28-Sep-2016 12:15

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-06
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	**0.024**		**0.0050**	**mg/L**	5	04-Oct-2016 13:14
Toluene	**0.013**		**0.0050**	**mg/L**	5	04-Oct-2016 13:14
Ethylbenzene	ND		0.0050	mg/L	5	04-Oct-2016 13:14
Xylenes, Total	ND		0.015	mg/L	5	04-Oct-2016 13:14
Surr: 1,2-Dichloroethane-d4	*123*		*71-125*	*%REC*	*5*	*04-Oct-2016 13:14*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*5*	*04-Oct-2016 13:14*
Surr: Dibromofluoromethane	*121*		*74-125*	*%REC*	*5*	*04-Oct-2016 13:14*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*5*	*04-Oct-2016 13:14*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-11
Collection Date: 28-Sep-2016 14:20

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-07
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	**0.0036**		**0.0010**	**mg/L**	1	04-Oct-2016 21:22
Toluene	ND		0.0010	mg/L	1	04-Oct-2016 21:22
Ethylbenzene	ND		0.0010	mg/L	1	04-Oct-2016 21:22
Xylenes, Total	ND		0.0030	mg/L	1	04-Oct-2016 21:22
Surr: 1,2-Dichloroethane-d4	*111*		*71-125*	*%REC*	*1*	*04-Oct-2016 21:22*
Surr: 4-Bromofluorobenzene	*99.7*		*70-125*	*%REC*	*1*	*04-Oct-2016 21:22*
Surr: Dibromofluoromethane	*116*		*74-125*	*%REC*	*1*	*04-Oct-2016 21:22*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*04-Oct-2016 21:22*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: DUP-1
Collection Date: 28-Sep-2016 00:00

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-08
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	**0.025**		**0.0050**	**mg/L**	5	04-Oct-2016 13:41
Toluene	**0.013**		**0.0050**	**mg/L**	5	04-Oct-2016 13:41
Ethylbenzene	ND		0.0050	mg/L	5	04-Oct-2016 13:41
Xylenes, Total	ND		0.015	mg/L	5	04-Oct-2016 13:41
Surr: 1,2-Dichloroethane-d4	*123*		*71-125*	*%REC*	*5*	*04-Oct-2016 13:41*
Surr: 4-Bromofluorobenzene	*99.6*		*70-125*	*%REC*	*5*	*04-Oct-2016 13:41*
Surr: Dibromofluoromethane	*117*		*74-125*	*%REC*	*5*	*04-Oct-2016 13:41*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*5*	*04-Oct-2016 13:41*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: Trip Blank - 091516-08
Collection Date: 28-Sep-2016 00:00

ANALYTICAL REPORT
WorkOrder:HS16100013
Lab ID:HS16100013-09
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	ND		0.0010	mg/L	1	05-Oct-2016 02:02
Toluene	ND		0.0010	mg/L	1	05-Oct-2016 02:02
Ethylbenzene	ND		0.0010	mg/L	1	05-Oct-2016 02:02
Xylenes, Total	ND		0.0030	mg/L	1	05-Oct-2016 02:02
Surr: 1,2-Dichloroethane-d4	*114*		*71-125*	*%REC*	*1*	*05-Oct-2016 02:02*
Surr: 4-Bromofluorobenzene	*99.6*		*70-125*	*%REC*	*1*	*05-Oct-2016 02:02*
Surr: Dibromofluoromethane	*117*		*74-125*	*%REC*	*1*	*05-Oct-2016 02:02*
Surr: Toluene-d8	*104*		*75-125*	*%REC*	*1*	*05-Oct-2016 02:02*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100013

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R282465	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS16100013-01	MW-1	28 Sep 2016 13:30			04 Oct 2016 18:54	1
HS16100013-02	MW-3	28 Sep 2016 12:35			04 Oct 2016 20:33	1
HS16100013-03	MW-5	28 Sep 2016 12:45			04 Oct 2016 22:17	25
HS16100013-03	MW-5	28 Sep 2016 12:45			04 Oct 2016 21:50	5
HS16100013-04	MW-9	28 Sep 2016 12:50			04 Oct 2016 20:58	1
HS16100013-05	MW-10	28 Sep 2016 12:30			04 Oct 2016 14:36	100
HS16100013-05	MW-10	28 Sep 2016 12:30			04 Oct 2016 14:08	10
HS16100013-06	MW-10D	28 Sep 2016 12:15			04 Oct 2016 13:14	5
HS16100013-07	MW-11	28 Sep 2016 14:20			04 Oct 2016 21:22	1
HS16100013-08	DUP-1	28 Sep 2016 00:00			04 Oct 2016 13:41	5
Batch ID R282469	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS16100013-09	Trip Blank - 091516-08	28 Sep 2016 00:00			05 Oct 2016 02:02	1

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100013

QC BATCH REPORT

Batch ID: R282465 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-161004** Units: **ug/L** Analysis Date: **04-Oct-2016 12:46**
Client ID: Run ID: **VOA2_282465** SeqNo: **3848242** PrepDate: 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	*58.15*	*1.0*	*50*	*0*	*116*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.6*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*58.68*	*1.0*	*50*	*0*	*117*	*74 - 125*				
Surr: Toluene-d8	*52.62*	*1.0*	*50*	*0*	*105*	*75 - 125*				

LCS Sample ID: **VLCSW-161004** Units: **ug/L** Analysis Date: **04-Oct-2016 11:57**
Client ID: Run ID: **VOA2_282465** SeqNo: **3848241** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.43	1.0	50	0	98.9	75 - 122				
Ethylbenzene	47.62	1.0	50	0	95.2	80 - 120				
Toluene	49.12	1.0	50	0	98.2	75 - 121				
Xylenes, Total	161.2	3.0	150	0	107	79 - 124				
Surr: 1,2-Dichloroethane-d4	*60.25*	*1.0*	*50*	*0*	*121*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.3*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*55.13*	*1.0*	*50*	*0*	*110*	*74 - 125*				
Surr: Toluene-d8	*50.37*	*1.0*	*50*	*0*	*101*	*75 - 125*				

MS Sample ID: **HS16100013-01MS** Units: **ug/L** Analysis Date: **04-Oct-2016 19:19**
Client ID: **MW-1** Run ID: **VOA2_282465** SeqNo: **3848257** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.63	1.0	50	0	101	75 - 122				
Ethylbenzene	49.22	1.0	50	0	98.4	80 - 120				
Toluene	50.04	1.0	50	0	100	75 - 121				
Xylenes, Total	164.9	3.0	150	0	110	80 - 124				
Surr: 1,2-Dichloroethane-d4	*59.97*	*1.0*	*50*	*0*	*120*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.66*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*53.02*	*1.0*	*50*	*0*	*106*	*74 - 125*				
Surr: Toluene-d8	*50.71*	*1.0*	*50*	*0*	*101*	*75 - 125*				

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100013

QC BATCH REPORT

Batch ID: R282465 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS16100013-01MSD** Units: **ug/L** Analysis Date: **04-Oct-2016 19:43**
Client ID: **MW-1** Run ID: **VOA2_282465** SeqNo: **3848258** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	49.31	1.0	50	0	98.6	75 - 122	50.63	2.65	20	
Ethylbenzene	48.22	1.0	50	0	96.4	80 - 120	49.22	2.07	20	
Toluene	49.52	1.0	50	0	99.0	75 - 121	50.04	1.05	20	
Xylenes, Total	163.5	3.0	150	0	109	80 - 124	164.9	0.85	20	
Surr: 1,2-Dichloroethane-d4	*59.77*	*1.0*	*50*	*0*	*120*	*71 - 125*	*59.97*	*0.344*	*20*	
Surr: 4-Bromofluorobenzene	*52.29*	*1.0*	*50*	*0*	*105*	*70 - 125*	*51.66*	*1.21*	*20*	
Surr: Dibromofluoromethane	*55.1*	*1.0*	*50*	*0*	*110*	*74 - 125*	*53.02*	*3.85*	*20*	
Surr: Toluene-d8	*50.93*	*1.0*	*50*	*0*	*102*	*75 - 125*	*50.71*	*0.429*	*20*	

The following samples were analyzed in this batch:

HS16100013-01	HS16100013-02	HS16100013-03	HS16100013-04
HS16100013-05	HS16100013-06	HS16100013-07	HS16100013-08

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100013

QC BATCH REPORT

Batch ID: R282469 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-161004** Units: **ug/L** Analysis Date: **05-Oct-2016 01:13**
Client ID: Run ID: **VOA2_282469** SeqNo: **3848301** PrepDate: 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	*56.55*	*1.0*	*50*	*0*	*113*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.32*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*59.11*	*1.0*	*50*	*0*	*118*	*74 - 125*				
Surr: Toluene-d8	*52.22*	*1.0*	*50*	*0*	*104*	*75 - 125*				

LCS Sample ID: **VLCSW-161004** Units: **ug/L** Analysis Date: **05-Oct-2016 00:24**
Client ID: Run ID: **VOA2_282469** SeqNo: **3848300** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.47	1.0	50	0	96.9	75 - 122				
Ethylbenzene	46.33	1.0	50	0	92.7	80 - 120				
Toluene	47.59	1.0	50	0	95.2	75 - 121				
Xylenes, Total	157.3	3.0	150	0	105	79 - 124				
Surr: 1,2-Dichloroethane-d4	*58.83*	*1.0*	*50*	*0*	*118*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.33*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*54.76*	*1.0*	*50*	*0*	*110*	*74 - 125*				
Surr: Toluene-d8	*50.69*	*1.0*	*50*	*0*	*101*	*75 - 125*				

MS Sample ID: **HS16100012-09MS** Units: **ug/L** Analysis Date: **05-Oct-2016 02:52**
Client ID: Run ID: **VOA2_282469** SeqNo: **3848305** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	278.5	1.0	50	238.1	80.7	75 - 122				EO
Ethylbenzene	130.8	1.0	50	94.39	72.8	80 - 120				S
Toluene	80.65	1.0	50	43.79	73.7	75 - 121				S
Xylenes, Total	318.4	3.0	150	194.6	82.5	80 - 124				
Surr: 1,2-Dichloroethane-d4	*58.8*	*1.0*	*50*	*0*	*118*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.6*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*50.4*	*1.0*	*50*	*0*	*101*	*74 - 125*				
Surr: Toluene-d8	*50.12*	*1.0*	*50*	*0*	*100*	*75 - 125*				

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100013

QC BATCH REPORT

Batch ID: R282469 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS16100012-09MSD** Units: **ug/L** Analysis Date: **05-Oct-2016 03:16**
Client ID: Run ID: **VOA2_282469** SeqNo: **3848306** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	272	1.0	50	238.1	67.7	75 - 122	278.5	2.37	20	SEO
Ethylbenzene	129.5	1.0	50	94.39	70.2	80 - 120	130.8	1	20	S
Toluene	80.02	1.0	50	43.79	72.5	75 - 121	80.65	0.785	20	S
Xylenes, Total	315.8	3.0	150	194.6	80.9	80 - 124	318.4	0.792	20	
Surr: 1,2-Dichloroethane-d4	*58.6*	*1.0*	*50*	*0*	*117*	*71 - 125*	*58.8*	*0.349*	*20*	
Surr: 4-Bromofluorobenzene	*52.12*	*1.0*	*50*	*0*	*104*	*70 - 125*	*51.6*	*0.995*	*20*	
Surr: Dibromofluoromethane	*52.64*	*1.0*	*50*	*0*	*105*	*74 - 125*	*50.4*	*4.34*	*20*	
Surr: Toluene-d8	*50.52*	*1.0*	*50*	*0*	*101*	*75 - 125*	*50.12*	*0.791*	*20*	

The following samples were analyzed in this batch: HS16100013-09

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: **HS16100013**

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/SDL

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 Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-1	27-Mar-2017
California	2919 2016-2018	31-Jul-2018
Illinois	003872	09-May-2017
Kansas	E-10352 2015-2016	30-Oct-2016
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2016-2017	30-Jun-2017
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2016-122	31-Aug-2017
Texas	TX104704231-16-17	30-Apr-2017

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Work Order: HS16100013

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16100013-01	MW-1	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-02	MW-3	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-03	MW-5	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-04	MW-9	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-05	MW-10	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-06	MW-10D	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-07	MW-11	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-08	DUP-1	Login	10/1/2016 1:56:28 PM	PMG	VW-3
HS16100013-09	Trip Blank - 091516-08	Login	10/1/2016 1:56:28 PM	PMG	VW-3

Sample Receipt Checklist

Client Name: Tasman Geosciences
Work Order: HS16100013
Date/Time Received: **01-Oct-2016 10:30**
Received by: **Jared R. Makan**

Checklist completed by: *Paresh M. Giga* eSignature 1-Oct-2016 Date
Reviewed by: *Bernadette A. Fini* eSignature 4-Oct-2016 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 ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
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):	1.3c/2.0c U/C	IR11	
Cooler(s)/Kit(s):	42630		
Date/Time sample(s) sent to storage:	10/1/16 14:15		
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: Samples not received - MW-4 & MW-7. Received 2 Trip Blanks in cooler. Logged in 2nd one on hold

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental

Cincinnati, OH +1 513 733 5336
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Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
Spring City, PA +1 610 948 4903
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: 149205

ALS Project Manager:		ALS Work Order #:	

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	DCP-Linam Ranch Gas Plant	A	BTEX (8260)
Work Order		Project Number	400128006 RC#F228	B	
Company Name	Tasman Geosciences	Bill To Company		C	
Send Report To	Brian Humphrey	Invoice Attn	Steve Weathers	D	
Address	6899 Pecos St Unit C	Address		E	HS16100013 Tasman Geosciences DCP Linam Ranch Gas Plant
				F	
City/State/Zip	Denver	City/State/Zip		G	
Phone	(303)-48-7-12	Phone		H	
Fax		Fax		I	
e-Mail Address	bhumphrey@tasman-geo.com	e-Mail Address	cecole@dcpmidstream.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	9-28-16	1330	Water	HCL	3	X										
2	~~MW~~-2 MRW	X	X	~~Water~~	~~HCL~~	X 3	~~X~~										
3	MW-3	9-28-16	1235	Water	HCL	3	X										
4	MW-4	↓	1302	Water	HCL	3	X										
5	MW-5	↓	1245	Water	HCL	3	X										
6	~~MW~~-6 MRW	X	X	~~Water~~	~~HCL~~	X 3	~~X~~										
7	MW-7	9-28-16	1400	Water	HCL	3	X										
8	~~MW~~-8 MRW	X	X	~~Water~~	~~HCL~~	X 3	~~X~~										
9	MW-9	9-28-16	1250	Water	HCL	3	X										
10																	

Sampler(s) Please Print & Sign	Shipment Method	Required Turnaround Time: (Check Box)	Results Due Date:
Mitchell Weller	FedEx Overnight	☒ Std 10 WK days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other	

Relinquished by:	Date:	Time:	Received by:	Notes:
Mitchell Weller	9-30-16	0900		
Relinquished by:	Date:	Time:	Received by (Laboratory):	
			JM 10.1.16 10:30	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
4 2630	1.3° C	☒ Level 2 Std QC ☐ TRRP ChkList ☐ Level 3 Std QC/Raw da ☐ TRRP Level 4 ☐ Level 4 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.

ALS Environmental

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Fort Collins, CO +1 970 490 1511
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South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

COC ID: 149204

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	DCP-Linam Ranch Gas Plant	A	BTEX (8260)
Work Order		Project Number	400128006 RC#F228	B	
Company Name	Tasman Geosciences	Bill To Company		C	
Send Report To	Brian Humphrey	Invoice Attn	Steve Weathers	D	
Address	6899 Pecos St Unit C	Address		E	
				F	
City/State/Zip	Denver	City/State/Zip		G	
Phone	(303)-48-7-12	Phone		H	
Fax		Fax		I	
e-Mail Address	bhumphrey@tasman-geo.com	e-Mail Address	cecole@dcpmidstream.com	J	

HS16100013

Tasman Geosciences

DCP Linam Ranch Gas Plant

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-10	9-28-16	1230	Water	~~HCL~~ None		3 X										
2	MW-100		1215	Water	~~HCL~~ None		3 X										
3	MW-11		1420	Water	HCL		3 X										
4	DUP-1		—	Water	~~HCL~~ None		3 X										
5	Trip Blank		—	Water	HCL		2 X										
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Mitchell Weller

Shipment Method: FedEx Overnight

Required Turnaround Time: (Check Box) [X] Std 10 WK days [ ] 5 WK Days [ ] 2 WK Days [ ] 24 Hour [ ] Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Mitchell Weller	9-30-16	0900	
Relinquished by:	Date:	Time:	Received by (Laboratory):
—			JM 10-1-16 10:30
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

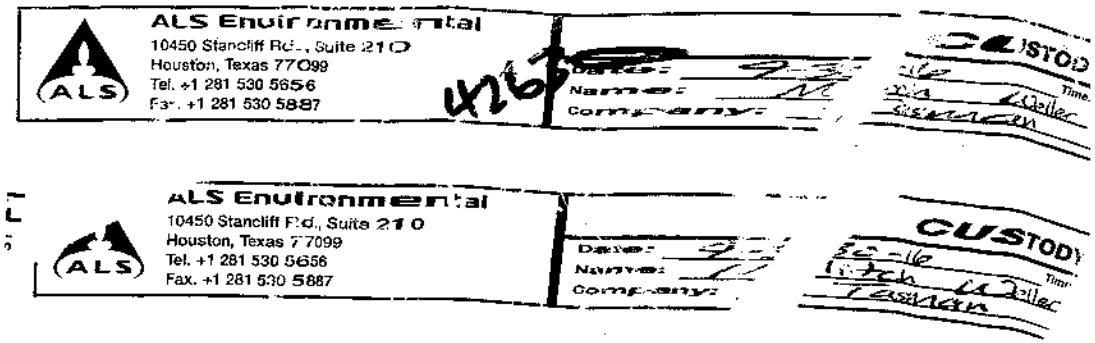
Notes:

Cooler ID	Cooler Temp.
426	

QC Package: (Check One Box Below)
- [X] Level 2 Std QC
- [ ] Level 3 Std QC/Raw da
- [ ] Level 4 SW846/CLP
- [ ] Other/EDD
- [ ] TRRP Checklist
- [ ] TRRP Level 4

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.



10450 Stancliff Rd. Suite 210
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October 18, 2016

Brian Humphrey
Tasman Geosciences
6899 Pecos St
Unit C
Denver, CO 80221

Work Order: **HS16100588**

Laboratory Results for: **DCP Linam Ranch Gas Plant**

Dear Brian,

ALS Environmental received 3 sample(s) on Oct 13, 2016 for the analysis 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.

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

Sincerely,

Sonia West

Generated By: Jumoke.Lawal
Sonia West
Project Manager

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Work Order: HS16100588

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16100588-01	MW-4	Water		12-Oct-2016 11:00	13-Oct-2016 08:30	☐
HS16100588-02	MW-7	Water		12-Oct-2016 12:15	13-Oct-2016 08:30	☐
HS16100588-03	TRIP BLANK 092116-20	Water		12-Oct-2016 00:00	13-Oct-2016 08:30	☐

Client: Tasman Geosciences **CASE NARRATIVE**
Project: DCP Linam Ranch Gas Plant
Work Order: HS16100588

GCMS Volatiles by Method SW8260

Batch ID: R283095

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R283094,R283152

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-4
Collection Date: 12-Oct-2016 11:00

ANALYTICAL REPORT
WorkOrder:HS16100588
Lab ID:HS16100588-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	**5.0**		**0.10**	**mg/L**	100	17-Oct-2016 18:05
Toluene	ND		0.010	mg/L	10	18-Oct-2016 13:03
Ethylbenzene	**0.027**		**0.010**	**mg/L**	10	18-Oct-2016 13:03
Xylenes, Total	**0.053**		**0.030**	**mg/L**	10	18-Oct-2016 13:03
Surr: 1,2-Dichloroethane-d4	*82.2*		*71-125*	*%REC*	*100*	*17-Oct-2016 18:05*
Surr: 1,2-Dichloroethane-d4	*95.4*		*71-125*	*%REC*	*10*	*18-Oct-2016 13:03*
Surr: 4-Bromofluorobenzene	*89.0*		*70-125*	*%REC*	*100*	*17-Oct-2016 18:05*
Surr: 4-Bromofluorobenzene	*93.5*		*70-125*	*%REC*	*10*	*18-Oct-2016 13:03*
Surr: Dibromofluoromethane	*97.8*		*74-125*	*%REC*	*100*	*17-Oct-2016 18:05*
Surr: Dibromofluoromethane	*91.2*		*74-125*	*%REC*	*10*	*18-Oct-2016 13:03*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*100*	*17-Oct-2016 18:05*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*10*	*18-Oct-2016 13:03*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: MW-7
Collection Date: 12-Oct-2016 12:15

ANALYTICAL REPORT
WorkOrder:HS16100588
Lab ID:HS16100588-02
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	ND		0.0010	mg/L	1	17-Oct-2016 17:38
Toluene	ND		0.0010	mg/L	1	17-Oct-2016 17:38
Ethylbenzene	ND		0.0010	mg/L	1	17-Oct-2016 17:38
Xylenes, Total	ND		0.0030	mg/L	1	17-Oct-2016 17:38
Surr: 1,2-Dichloroethane-d4	*85.0*		*71-125*	*%REC*	*1*	*17-Oct-2016 17:38*
Surr: 4-Bromofluorobenzene	*91.7*		*70-125*	*%REC*	*1*	*17-Oct-2016 17:38*
Surr: Dibromofluoromethane	*97.3*		*74-125*	*%REC*	*1*	*17-Oct-2016 17:38*
Surr: Toluene-d8	*102*		*75-125*	*%REC*	*1*	*17-Oct-2016 17:38*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Sample ID: TRIP BLANK 092116-20
Collection Date: 12-Oct-2016 00:00

ANALYTICAL REPORT
WorkOrder:HS16100588
Lab ID:HS16100588-03
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	ND		0.0010	mg/L	1	17-Oct-2016 11:38
Toluene	ND		0.0010	mg/L	1	17-Oct-2016 11:38
Ethylbenzene	ND		0.0010	mg/L	1	17-Oct-2016 11:38
Xylenes, Total	ND		0.0030	mg/L	1	17-Oct-2016 11:38
Surr: 1,2-Dichloroethane-d4	*95.2*		*71-125*	*%REC*	*1*	*17-Oct-2016 11:38*
Surr: 4-Bromofluorobenzene	*86.2*		*70-125*	*%REC*	*1*	*17-Oct-2016 11:38*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*17-Oct-2016 11:38*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*17-Oct-2016 11:38*

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100588

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R283094	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS16100588-01	MW-4	12 Oct 2016 11:00			17 Oct 2016 18:05	100
HS16100588-02	MW-7	12 Oct 2016 12:15			17 Oct 2016 17:38	1
Batch ID R283095	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS16100588-03	TRIP BLANK 092116-20	12 Oct 2016 00:00			17 Oct 2016 11:38	1
Batch ID R283152	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS16100588-01	MW-4	12 Oct 2016 11:00			18 Oct 2016 13:03	10

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100588

QC BATCH REPORT

Batch ID: R283094 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-161015** Units: **ug/L** Analysis Date: **17-Oct-2016 11:36**
Client ID: Run ID: **VOA2_283094** SeqNo: **3859734** PrepDate: 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	*41.44*	*1.0*	*50*	*0*	*82.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*46.22*	*1.0*	*50*	*0*	*92.4*	*70 - 125*				
Surr: Dibromofluoromethane	*48.1*	*1.0*	*50*	*0*	*96.2*	*74 - 125*				
Surr: Toluene-d8	*50.46*	*1.0*	*50*	*0*	*101*	*75 - 125*				

LCS Sample ID: **VLCSW-161015** Units: **ug/L** Analysis Date: **17-Oct-2016 10:47**
Client ID: Run ID: **VOA2_283094** SeqNo: **3859727** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	42.14	1.0	50	0	84.3	75 - 122				
Ethylbenzene	43.27	1.0	50	0	86.5	80 - 120				
Toluene	50.04	1.0	50	0	100	75 - 121				
Xylenes, Total	145.8	3.0	150	0	97.2	79 - 124				
Surr: 1,2-Dichloroethane-d4	*43.06*	*1.0*	*50*	*0*	*86.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*46.53*	*1.0*	*50*	*0*	*93.1*	*70 - 125*				
Surr: Dibromofluoromethane	*47.59*	*1.0*	*50*	*0*	*95.2*	*74 - 125*				
Surr: Toluene-d8	*48.87*	*1.0*	*50*	*0*	*97.7*	*75 - 125*				

MS Sample ID: **HS16100602-06MS** Units: **ug/L** Analysis Date: **17-Oct-2016 14:15**
Client ID: Run ID: **VOA2_283094** SeqNo: **3859740** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.05	1.0	50	4.237	85.6	75 - 122				
Ethylbenzene	46.83	1.0	50	2.632	88.4	80 - 120				
Toluene	50.79	1.0	50	0	102	75 - 121				
Xylenes, Total	148.3	3.0	150	0	98.8	80 - 124				
Surr: 1,2-Dichloroethane-d4	*42.66*	*1.0*	*50*	*0*	*85.3*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.44*	*1.0*	*50*	*0*	*94.9*	*70 - 125*				
Surr: Dibromofluoromethane	*46.78*	*1.0*	*50*	*0*	*93.6*	*74 - 125*				
Surr: Toluene-d8	*48.6*	*1.0*	*50*	*0*	*97.2*	*75 - 125*				

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100588

QC BATCH REPORT

Batch ID: R283094 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS16100602-06MSD** Units: **ug/L** Analysis Date: **17-Oct-2016 14:40**
Client ID: Run ID: **VOA2_283094** SeqNo: **3859741** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	46.99	1.0	50	4.237	85.5	75 - 122	47.05	0.123	20	
Ethylbenzene	46.65	1.0	50	2.632	88.0	80 - 120	46.83	0.365	20	
Toluene	51.74	1.0	50	0	103	75 - 121	50.79	1.86	20	
Xylenes, Total	150.7	3.0	150	0	100	80 - 124	148.3	1.65	20	
Surr: 1,2-Dichloroethane-d4	*43.2*	*1.0*	*50*	*0*	*86.4*	*71 - 125*	*42.66*	*1.26*	*20*	
Surr: 4-Bromofluorobenzene	*47.63*	*1.0*	*50*	*0*	*95.3*	*70 - 125*	*47.44*	*0.408*	*20*	
Surr: Dibromofluoromethane	*47.64*	*1.0*	*50*	*0*	*95.3*	*74 - 125*	*46.78*	*1.82*	*20*	
Surr: Toluene-d8	*49.64*	*1.0*	*50*	*0*	*99.3*	*75 - 125*	*48.6*	*2.1*	*20*	

The following samples were analyzed in this batch: HS16100588-01 HS16100588-02

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100588

QC BATCH REPORT

Batch ID: R283095 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-161015** Units: **ug/L** Analysis Date: **17-Oct-2016 11:13**
Client ID: Run ID: **VOA4_283095** SeqNo: **3859751** PrepDate: 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	*48.52*	*1.0*	*50*	*0*	*97.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*44.52*	*1.0*	*50*	*0*	*89.0*	*70 - 125*				
Surr: Dibromofluoromethane	*50.89*	*1.0*	*50*	*0*	*102*	*74 - 125*				
Surr: Toluene-d8	*51.2*	*1.0*	*50*	*0*	*102*	*75 - 125*				

LCS Sample ID: **VLCSW-161015** Units: **ug/L** Analysis Date: **17-Oct-2016 10:23**
Client ID: Run ID: **VOA4_283095** SeqNo: **3859750** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	53.45	1.0	50	0	107	75 - 122				
Ethylbenzene	52.95	1.0	50	0	106	80 - 120				
Toluene	51.39	1.0	50	0	103	75 - 121				
Xylenes, Total	160.8	3.0	150	0	107	79 - 124				
Surr: 1,2-Dichloroethane-d4	*46.58*	*1.0*	*50*	*0*	*93.2*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.61*	*1.0*	*50*	*0*	*97.2*	*70 - 125*				
Surr: Dibromofluoromethane	*48.89*	*1.0*	*50*	*0*	*97.8*	*74 - 125*				
Surr: Toluene-d8	*50.07*	*1.0*	*50*	*0*	*100*	*75 - 125*				

MS Sample ID: **HS16100695-09MS** Units: **ug/L** Analysis Date: **17-Oct-2016 13:20**
Client ID: Run ID: **VOA4_283095** SeqNo: **3859756** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	5292	100	5000	0	106	75 - 122				
Ethylbenzene	5261	100	5000	0	105	80 - 120				
Toluene	5046	100	5000	0	101	75 - 121				
Xylenes, Total	15830	300	15000	0	106	80 - 124				
Surr: 1,2-Dichloroethane-d4	*4799*	*100*	*5000*	*0*	*96.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*4910*	*100*	*5000*	*0*	*98.2*	*70 - 125*				
Surr: Dibromofluoromethane	*5134*	*100*	*5000*	*0*	*103*	*74 - 125*				
Surr: Toluene-d8	*5009*	*100*	*5000*	*0*	*100*	*75 - 125*				

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100588

QC BATCH REPORT

Batch ID: R283095 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS16100695-09MSD** Units: **ug/L** Analysis Date: **17-Oct-2016 13:45**
Client ID: Run ID: **VOA4_283095** SeqNo: **3859757** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	5381	100	5000	0	108	75 - 122	5292	1.67	20	
Ethylbenzene	5261	100	5000	0	105	80 - 120	5261	0.0145	20	
Toluene	5104	100	5000	0	102	75 - 121	5046	1.15	20	
Xylenes, Total	15760	300	15000	0	105	80 - 124	15830	0.459	20	
Surr: 1,2-Dichloroethane-d4	*4817*	*100*	*5000*	*0*	*96.3*	*71 - 125*	*4799*	*0.385*	*20*	
Surr: 4-Bromofluorobenzene	*4834*	*100*	*5000*	*0*	*96.7*	*70 - 125*	*4910*	*1.56*	*20*	
Surr: Dibromofluoromethane	*5055*	*100*	*5000*	*0*	*101*	*74 - 125*	*5134*	*1.55*	*20*	
Surr: Toluene-d8	*5028*	*100*	*5000*	*0*	*101*	*75 - 125*	*5009*	*0.379*	*20*	

The following samples were analyzed in this batch: HS16100588-03

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100588

QC BATCH REPORT

Batch ID: R283152 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-161018** Units: **ug/L** Analysis Date: **18-Oct-2016 10:30**
Client ID: Run ID: **VOA2_283152** SeqNo: **3860617** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*41.66*	*1.0*	*50*	*0*	*83.3*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*45.94*	*1.0*	*50*	*0*	*91.9*	*70 - 125*				
Surr: Dibromofluoromethane	*49.58*	*1.0*	*50*	*0*	*99.2*	*74 - 125*				
Surr: Toluene-d8	*50.74*	*1.0*	*50*	*0*	*101*	*75 - 125*				

LCS Sample ID: **VLCSW-161018** Units: **ug/L** Analysis Date: **18-Oct-2016 09:40**
Client ID: Run ID: **VOA2_283152** SeqNo: **3860616** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	44.68	1.0	50	0	89.4	80 - 120				
Toluene	52.08	1.0	50	0	104	75 - 121				
Xylenes, Total	151.3	3.0	150	0	101	79 - 124				
Surr: 1,2-Dichloroethane-d4	*43.86*	*1.0*	*50*	*0*	*87.7*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*46.68*	*1.0*	*50*	*0*	*93.4*	*70 - 125*				
Surr: Dibromofluoromethane	*47.79*	*1.0*	*50*	*0*	*95.6*	*74 - 125*				
Surr: Toluene-d8	*49.42*	*1.0*	*50*	*0*	*98.8*	*75 - 125*				

MS Sample ID: **HS16100638-01MS** Units: **ug/L** Analysis Date: **18-Oct-2016 13:28**
Client ID: Run ID: **VOA2_283152** SeqNo: **3860624** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	45.34	1.0	50	0	90.7	80 - 120				
Toluene	52.4	1.0	50	0	105	75 - 121				
Xylenes, Total	151.3	3.0	150	0	101	80 - 124				
Surr: 1,2-Dichloroethane-d4	*42.97*	*1.0*	*50*	*0*	*85.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*46.71*	*1.0*	*50*	*0*	*93.4*	*70 - 125*				
Surr: Dibromofluoromethane	*45.99*	*1.0*	*50*	*0*	*92.0*	*74 - 125*				
Surr: Toluene-d8	*49.15*	*1.0*	*50*	*0*	*98.3*	*75 - 125*				

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: HS16100588

QC BATCH REPORT

Batch ID: R283152 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS16100638-01MSD** Units: **ug/L** Analysis Date: **18-Oct-2016 13:53**
Client ID: Run ID: **VOA2_283152** SeqNo: **3860625** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	43.98	1.0	50	0	88.0	80 - 120	45.34	3.05	20	
Toluene	50.85	1.0	50	0	102	75 - 121	52.4	3	20	
Xylenes, Total	148.2	3.0	150	0	98.8	80 - 124	151.3	2.1	20	
Surr: 1,2-Dichloroethane-d4	*43.99*	*1.0*	*50*	*0*	*88.0*	*71 - 125*	*42.97*	*2.35*	*20*	
Surr: 4-Bromofluorobenzene	*46.92*	*1.0*	*50*	*0*	*93.8*	*70 - 125*	*46.71*	*0.431*	*20*	
Surr: Dibromofluoromethane	*48.48*	*1.0*	*50*	*0*	*97.0*	*74 - 125*	*45.99*	*5.27*	*20*	
Surr: Toluene-d8	*49.17*	*1.0*	*50*	*0*	*98.3*	*75 - 125*	*49.15*	*0.0553*	*20*	

The following samples were analyzed in this batch: HS16100588-01

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

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
WorkOrder: **HS16100588**

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/SDL

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 Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-1	27-Mar-2017
California	2919 2016-2018	31-Jul-2018
Illinois	003872	09-May-2017
Kansas	E-10352 2016-2017	31-Jul-2017
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2016-2017	30-Jun-2017
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2016-122	31-Aug-2017
Texas	TX104704231-16-17	30-Apr-2017

Client: Tasman Geosciences
Project: DCP Linam Ranch Gas Plant
Work Order: HS16100588

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16100588-01	MW-4	Login	10/13/2016 3:45:03 PM	KRM	VW-3
HS16100588-02	MW-7	Login	10/13/2016 3:45:03 PM	KRM	VW-3
HS16100588-03	TRIP BLANK 092116-20	Login	10/13/2016 3:45:03 PM	KRM	VW-3

Sample Receipt Checklist

Client Name: Tasman Geosciences
Work Order: HS16100588
Date/Time Received: **13-Oct-2016 08:30**
Received by: **JRM**

Checklist completed by: *Krysta Mathis* eSignature 13-Oct-2016 Date
Reviewed by: *Corey Grandits* eSignature 14-Oct-2016 Date

Matrices: **WATERS**
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 ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
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):	3.7/4.2 U/C	5	
Cooler(s)/Kit(s):	24021		
Date/Time sample(s) sent to storage:	10/13/2016 17:00		
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:

Corrective Action:

ALS Environmental

Cincinnati, OH +1 513 733 5336 | Fort Collins, CO +1 970 490 1511 | Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Houston, TX +1 281 530 5656 | Spring City, PA +1 610 948 4903 | South Charleston, WV +1 304 356 3168 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

Chain of Custody Form

Page ____ of ____

COC ID: 148482

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	DCP-Linam Ranch Gas Plant	A	BTEX (8260)
Work Order		Project Number	400126006 RC#F228	B	
Company Name	Tasman Geosciences	Bill To Company	DCP Midstream, LP		
Send Report To	Brian Humphrey	Invoice Attn	Stephen Weathers		
Address	6899 Pecos St Unit C	Address	370 17th Street, Suite 2500		
City/State/Zip	Denver	City/State/Zip	Denver Colorado 80102		
Phone	(303)-48-7-12	Phone			
Fax		Fax		I	
e-Mail Address	bhumphrey@tasman-geo.com	e-Mail Address	swweathers@dcpmidstream.com	J	

HS16100588

Tasman Geosciences

DCP Linam Ranch Gas Plant

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-4	10-12-16	11:00	Water	HCL	3	X										
2	MW-7	10-12-16	12:15	Water	HCL	3	X										
3	Trip Blank			Water	HCL	2	X										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Kyle Norman

Shipment Method

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

Results Due Date:

Relinquished by: Kyle Norman	Date: 10-12-16	Time: 2:00	Received by:	Notes:
Relinquished by:	Date:	Time:	Received by (Laboratory): JM 10/13/16 08:30	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.
24021	3.7
	IRS
	CF0.5

QC Package: (Check One Box Below)

☒ Level 2 Std QC ☐ TRRP Checklist

☐ Level 3 Std QC/Raw da ☐ TRRP Level 4

☐ Level 4 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.

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

24021

CUSTODY SEAL

Date: 10-12-16 Time: 1600
Name: Kyle Norman
Company: Tasman Geo

Seal Broken By: SM
Date: 10/13/16

24021 OCT 13 2016

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

24021

CUSTODY SEAL

Date: 10 2-16 Time: 2 1600
Name: Kyle Norman
Company: Tasman Geo

Seal Broken By: SM
Date: 10/13/16

FedEx
TRK# 0221 6786 7201 1809

THU – 13 OCT 10:[illegible]AT
PRIORITY OVERN[illegible]GHT

AB SGRA 24021

77[illegible]
TX-US IAH