Second Quarter 2015 Groundwater Monitoring Summary Report

RR Extension Pipeline Release
Lea County, New Mexico
AP #55

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1. Introduction

This report summarizes the groundwater monitoring and remediation activities conducted during the second quarter 2015 at the RR-Extension pipeline release (Site) in Lea County, New Mexico (Figure 1). Tasman Geosciences (Tasman) performed these activities on behalf of DCP Midstream, LP (DCP). The field activities were conducted with the purpose of monitoring groundwater flow and quality conditions as wells as assessing the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons in the Site subsurface and performing groundwater remediation. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period on June 1, 2015.

2. Site Location and Background

The Site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 19, Township 20 South, Range 37 East (approximate coordinates 32.562339 degrees north and 103.291739 degrees west). It is approximately 4.25 miles south of the intersection of US Highway 322 and County Road 41. The area is sparsely populated and land use is primarily associated with livestock grazing and oil and gas production and gathering.

Based on information included in historic Site investigation reports, a natural gas condensate release of approximately 30 barrels (bbl) was reported on December 13, 2006 (Assigned Site Reference #130040). Subsequent to preliminary investigation and characterization activities, an excavation was conducted at the Site (November 10, 2008 to December 7, 2008) whereby approximately 11,356 cubic yards of impacted material were removed. The excavation extended to approximately 20 feet below ground surface over a surface area of approximately 14,800 square feet. Backfill material was placed into the excavation and surface restoration was completed by January 12, 2009. These activities are described within the document *Closure Report – RR Extension Release Site* dated February 2009 prepared by Environmental Plus, Inc.

LNAPL has been identified immediately above the water table at a depth of approximately 30-feet below the ground surface. LNAPL continues to be observed at monitoring well locations to the south and east of the original release and excavation limits. Investigation activities conducted at the Site include installation of groundwater monitoring wells and excavation during the time periods listed below:

- MW-1 through MW-5: Installed March 2008.
- MW-6 through MW-8: Installed June 2008.
- Excavation and Backfill: Initiated – November 10, 2008; Completed – January 12, 2009.
- MW-9 through MW-12: Installed June 2010.
- MW-13 through MW-16: Installed January 2011.

Ongoing monitoring and sampling of the Site wells listed above has been conducted on an approximate quarterly basis following installation.

Boring logs for the monitoring wells at the Site indicate that the subsurface geology is typical of unconsolidated fine-grained sand, silt, and clay sediments.

3. Groundwater Monitoring

This section describes the field and laboratory activities performed during the second quarter 2015 groundwater monitoring event. Quarterly monitoring activities were conducted on June 1, 2015 and 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 fluctuations in groundwater and LNAPL elevations at the Site. During the second quarter 2015, groundwater levels were measured at sixteen (16) monitoring well locations. The wells with historical LNAPL presence were not observed to have measureable LNAPL thickness during this monitoring event. The presence of LNAPL will continue to be monitored in future groundwater sampling events.

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 level data were later converted to elevation (feet above mean sea level [AMSL]). Measured groundwater levels, calculated groundwater elevations, and previous LNAPL thickness data are presented in Table 1.

A second quarter 2015 groundwater elevation contour map, included as Figure 3, indicates that groundwater flow at the Site generally trends to the southeast. The range of groundwater elevations, average elevation change from the previous monitoring event, and the calculated average hydraulic gradient (using elevations from MW-8 and MW-6) at the Site are summarized in the table below.

Summary of Measured Hydraulic Parameters

	Second Quarter 2015 (6/1/15)
Maximum Elevation (Well ID)	3505.99 (MW-15)
Minimum Elevation (Well ID)	3504.84 (MW-6)
Average Change from Previous Monitoring Event – All Wells	0.24 foot
Average Hydraulic Gradient (ft/ft) / (Well IDs)	0.0019 (MW-8 to MW-6)

3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well, groundwater samples were collected for each of the 16 monitoring using dedicated polyethylene bailers.

A minimum of three well casing volumes of groundwater were purged from each monitoring well prior to collecting groundwater samples. Groundwater samples were placed in clean laboratory supplied containers for the selected analytical methods, packed in an ice-filled cooler and maintained at approximately four degrees Celsius (^{0}C) for transportation to the laboratory. Groundwater samples

were then shipped under chain-of-custody procedures to ALS Laboratories (ALS) 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 and chloride by USEPA Method 9056A.

Table 2 summarizes BTEX and chloride concentrations in groundwater samples collected during the reporting period. Historic analytical results up to and including the June 1, 2015 event are included in Appendix A and the laboratory analytical report for the second quarter 2015 is included in Appendix B. Analytical results are also displayed on Figure 4.

Analytical results/observations are summarized below:

- Benzene concentrations in groundwater samples from wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-9, and MW-10 were in exceedance of the New Mexico Water Quality Control Commission (NMWQCC) Standard.
- Toluene concentrations in groundwater samples from wells MW-3, MW-4, MW-5, MW-9, and MW-10 were in exceedance of the NMWQCC Standard.
- Ethylbenzene concentrations in groundwater samples from wells MW-5, MW-9, and MW-10 were in exceedance of the NMWQCC Standard.
- Total Xylenes concentrations in groundwater samples from wells MW3, MW-4, MW-5, MW-9, and MW-10 were in exceedance of the NMWQCC Standard.
- BTEX concentrations at the remaining nine (9) sample locations were below laboratory detection limits.
- Chloride was detected in the 16 sampled wells with concentrations ranging from 289 milligrams per liter (mg/L) in MW-4 to 563 mg/L in MW-10. Chloride values in all of the wells exceeded the NMWQCC suggested guideline of 250 mg/L.

3.3 Data Quality Assurance / Quality Control

A trip blank and field duplicate sample (MW-1) were collected during the second quarter 2015 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 quarter 2015 include the following:

- Target analytes were not detected in the trip blank; and

- MW-1 and the associated duplicate sample exhibited benzene concentrations of 0.015 mg/l and 0.015 mg/l, respectively, yielding a RPD of 0. This result indicates excellent correlation between the primary and duplicate samples.

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

4. Remediation Activities

A vacuum enhanced fluid recovery (EFR) event was conducted during the reporting period along with continued deployment of a passive LNAPL collection bailer. These efforts are described in the subsequent sections.

4.1 Vacuum Enhanced Fluid Recovery

EFR was conducted at the Site on June 3, 2015 and included application of high vacuum (using a vacuum truck) to individual well points through a stinger pipe assembly. The stinger was placed slightly below the groundwater level, thereby removing impacted groundwater and vapors from the subsurface.

Prior to conducting EFR activities, depth to product and depth to water measurements were collected at monitoring wells MW-3, MW-4, MW-5, MW-9, and MW-10 to detect if any measurable amount of LNAPL was present within the wells. LNAPL was not detected in any of the monitoring wells that were gauged for LNAPL thickness. However, due to historic LNAPL levels within monitoring wells MW-4, MW-9, and MW-10, EFR was conducted at those wells.

The table below summarizes the wells, pre- and post-EFR LNAPL thickness, duration, and recovered volume for the EFR activities conducted during the second quarter 2015. The recovered groundwater was transported to and disposed of at the Cooper Disposal Facility in Hobbs, New Mexico.

Well ID	LNAPL Thickness [ft] (pre-EFR)	Duration (hours)	Fluid Removal Volume (bbl*)	LNAPL Thickness [ft] (post-EFR)
MW-4	0.0	3	15	0.0
MW-9	0.0	3	15	0.0
MW-10	0.0			0.0
	Total	6	30	

Notes:

bbl = barrel (42 gallons)

EFR was applied concurrently at locations where duration and volumes are combined

4.2 LNAPL Collection Bailer

A passive LNAPL collection bailer is deployed at monitoring well MW-10. During the second quarter 2015 monitoring event, a measurable amount of LNAPL was not observed within the collection bailer. The LNAPL collection bailer was replaced within MW-10 at the level of the groundwater table.

5. Conclusions

Comparison of the second quarter 2015 monitoring data and historic information provides the following general observations:

- The groundwater elevation beneath the Site has remained relatively stable with minor seasonal and annual fluctuations since monitoring was initiated in 2008. During the second quarter 2015, groundwater elevations exhibited a slight increase from the previous monitoring event which is likely attributable to seasonal variations.
- A measurable amount of LNAPL was not observed in any of the Site monitoring wells during the second quarter 2015. This is the first time that LNAPL has not been present in monitoring wells MW-9 and MW-10 since they were installed in June 2010. Up to the second quarter 2015, LNAPL has consistently been detected in Monitoring wells MW-4 and MW-5 since September 2009 and March 2010, respectively. LNAPL has fluctuated in MW-3 since June 2010.
- Benzene concentrations in exceedance of the NMWQCC persist in MW-1 and MW-2. Benzene, toluene, and total xylenes were above the NMWQCC standards at monitoring wells MW3 and MW4. BTEX concentrations were above NMWQCC standards at monitoring wells MW-5, MW-9 and MW-10. The remaining 9 sample locations exhibited BTEX concentrations below laboratory detection limits during the second quarter 2015.
- Chloride concentrations in Site monitoring wells have remained relatively stable at levels above the standard of 250 mg/L. Chloride concentrations will continue to be monitored during subsequent sampling events.

6. Recommendations

Based on evaluation of data from the second quarter 2015 and historic Site observations and monitoring results, recommendations for future activities include:

- Continue quarterly groundwater monitoring and sampling at the monitoring well locations illustrated on Figure 2.
- Continue quarterly EFR events at monitoring wells with measurable amounts of LNAPL and/or those wells that have historically had larger LNAPL thicknesses (MW-4, MW-9, and MW-10).
- Continue to monitor and recover LNAPL from the passive collection bailer installed at MW-10.

Tables

TABLE 1
SECOND QUARTER 2015
SUMMARY OF GROUNDWATER ELEVATION DATA
RR-EXTENSION PIPELINE RELEASE
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	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-1	12/01/2014	29.56			38.80	3534.57	3505.01	0.19
MW-1	02/25/2015	29.36			39.03	3534.57	3505.21	0.20
MW-1	06/01/2015	29.19			38.92	3534.57	3505.38	0.17
MW-2	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-2	12/01/2014	30.35			39.28	3535.18	3504.83	0.14
MW-2	02/25/2015	30.13			39.28	3535.18	3505.05	0.22
MW-2	06/01/2015	29.96			39.30	3535.18	3505.22	0.17
MW-3	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-3	12/01/2014	31.62			39.78	3536.57	3504.95	0.11
MW-3	02/24/2015	31.40	31.39	0.01	NM	3536.57	3505.17	0.22
MW-3	06/01/2015	31.21			39.80	3536.57	3505.36	0.19
MW-4	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-4	12/01/2014	30.77	30.62	0.15	NM	3535.20	3504.54	0.42
MW-4	02/24/2015	30.42	30.40	0.02	NM	3535.20	3504.80	0.25
MW-4	06/01/2015	30.23			40.15	3535.20	3504.97	0.18
MW-5	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-5	12/01/2014	31.61	31.26	0.35	NM	3535.92	3504.57	0.11
MW-5	02/24/2015	31.13	31.11	0.02	NM	3535.92	3504.81	0.23
MW-5	06/01/2015	30.93			40.28	3535.92	3504.99	0.19
MW-6	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-6	12/01/2014	31.76			40.19	3536.16	3504.40	0.05
MW-6	02/25/2015	31.52			NM	3536.16	3504.64	0.24
MW-6	06/01/2015	31.32			40.11	3536.16	3504.84	0.20
MW-7	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-7	12/01/2014	32.45			39.84	3537.09	3504.64	0.06
MW-7	02/25/2015	32.23			NM	3537.09	3504.86	0.22
MW-7	06/01/2015	32.05			39.83	3537.09	3505.04	0.18
MW-8	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-8	12/01/2014	31.30			38.93	3536.41	3505.11	0.16
MW-8	02/25/2015	31.10			NM	3536.41	3505.31	0.20
MW-8	06/01/2015	30.92			38.90	3536.41	3505.49	0.18
MW-9	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-9	12/01/2014	29.54	29.07	0.47	NM	3534.20	3505.01	0.16
MW-9	02/24/2015	29.00	28.96	0.04	NM	3534.20	3505.23	0.22
MW-9	06/01/2015	28.80			39.24	3534.20	3505.40	0.17

TABLE 1
SECOND QUARTER 2015
SUMMARY OF GROUNDWATER ELEVATION DATA
RR-EXTENSION PIPELINE RELEASE
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-10	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-10	12/01/2014	30.07	29.27	0.80	NM	3534.21	3504.74	0.11
MW-10	02/24/2015	29.37	29.20	0.17	NM	3534.21	3504.97	0.23
MW-10	06/01/2015	29.04			37.64	3534.21	3505.17	0.20
MW-11	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-11	12/01/2014	31.66			39.25	3536.19	3504.53	0.07
MW-11	02/25/2015	31.41			NM	3536.19	3504.78	0.25
MW-11	06/01/2015	31.20			39.10	3536.19	3504.99	0.21
MW-12	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-12	12/01/2014	29.87			38.19	3534.47	3504.60	0.10
MW-12	02/25/2015	29.62			NM	3534.47	3504.85	0.25
MW-12	06/01/2015	29.42			38.21	3534.47	3505.05	0.20
MW-13	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-13	12/01/2014	30.94			38.61	3536.08	3505.14	0.09
MW-13	02/25/2015	30.72			NM	3536.08	3505.36	0.22
MW-13	06/01/2015	30.55			38.61	3536.08	3505.53	0.17
MW-14	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-14	12/01/2014	30.01			41.43	3534.96	3504.95	0.16
MW-14	02/25/2015	29.78			NM	3534.96	3505.18	0.23
MW-14	06/01/2015	29.60			41.20	3534.96	3505.36	0.18
MW-15	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-15	12/01/2014	30.25			36.30	3534.90	3504.65	0.14
MW-15	02/25/2015	30.00			NM	3534.90	3504.90	0.25
MW-15	06/01/2015	28.91			36.31	3534.90	3505.99	1.09
MW-16	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility							
MW-16	12/01/2014	29.13			42.36	3533.68	3504.55	0.12
MW-16	02/25/2015	28.87			NM	3533.68	3504.81	0.26
MW-16	06/01/2015	28.65			42.42	3533.68	3505.03	0.22
							Average change in groundwater elevation (2/25/15 to 6/1/15)	0.24

Notes:

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

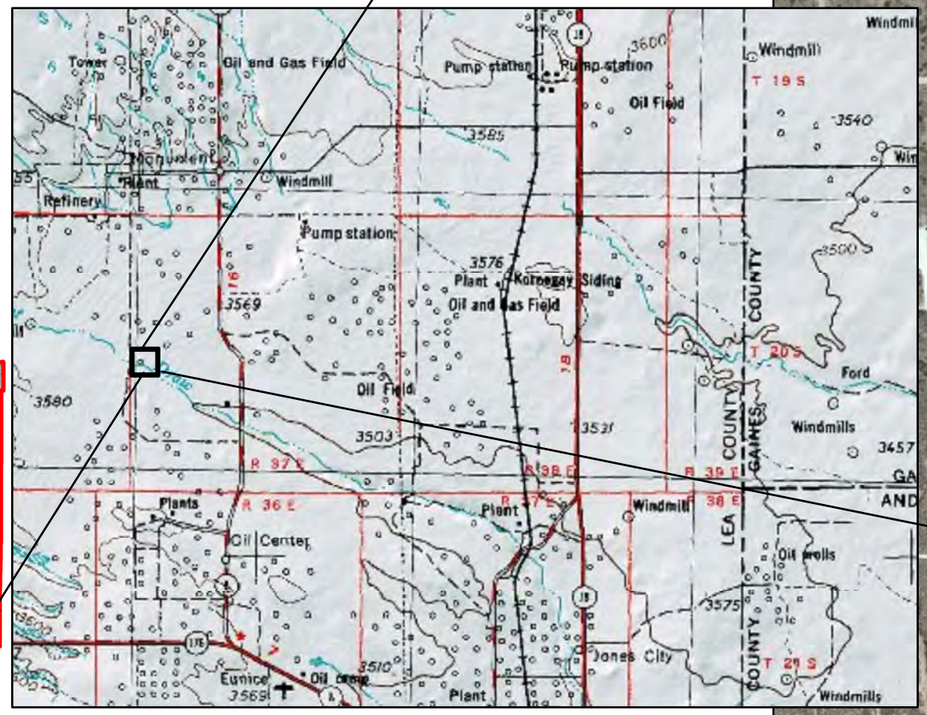
TABLE 2
SECOND QUARTER 2015
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

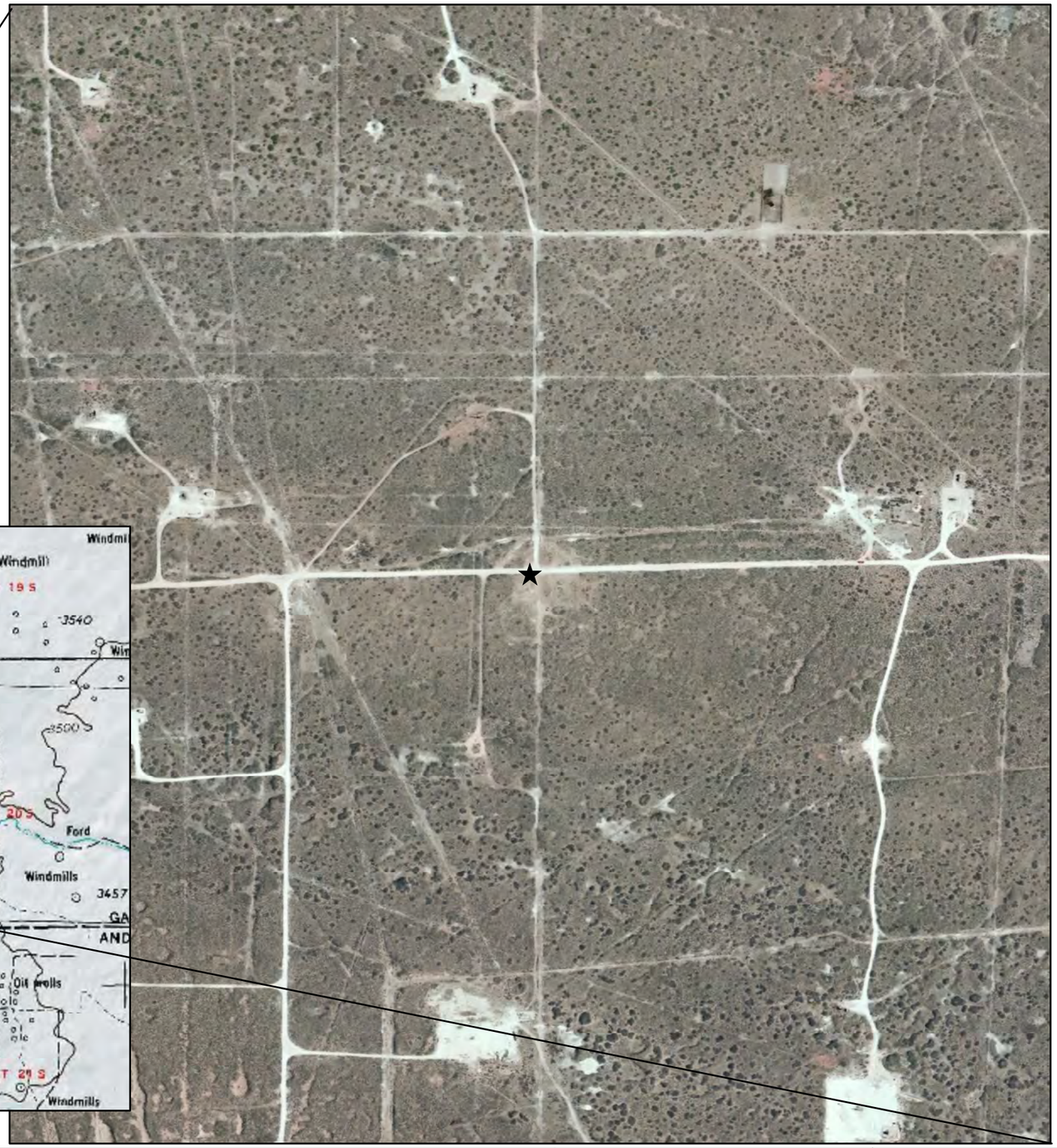
Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-1	06/01/2015	**0.015**	<0.001	0.0067	<0.003	**488**	Duplicate sample collected
MW-1 (duplicate)	06/01/2015	**0.015**	0.0096	0.012	0.022	**502**	
MW-2	06/01/2015	**3.4**	0.48	0.28	0.37	**364**	
MW-3	06/01/2015	**3.2**	**0.95**	0.72	**2.9**	**391**	
MW-4	06/01/2015	**0.59**	**1.3**	0.71	**2.2**	**289**	
MW-5	06/01/2015	**0.50**	**1.9**	**1.4**	**4.0**	**424**	
MW-6	06/01/2015	<0.001	<0.001	<0.001	<0.003	**417**	
MW-7	06/01/2015	<0.001	<0.001	<0.001	<0.003	**371**	
MW-8	06/01/2015	<0.001	<0.001	<0.001	<0.003	**539**	
MW-9	06/01/2015	**3.9**	**5.6**	**1.8**	**5.2**	**408**	
MW-10	06/01/2015	**0.75**	**1.7**	**1.6**	**3.0**	**563**	
MW-11	06/01/2015	<0.001	<0.001	<0.001	<0.003	**468**	
MW-12	06/01/2015	<0.001	<0.001	<0.001	<0.003	**351**	
MW-13	06/01/2015	<0.001	<0.001	<0.001	<0.003	**362**	
MW-14	06/01/2015	<0.001	<0.001	<0.001	<0.003	**502**	
MW-15	06/01/2015	<0.001	<0.001	<0.001	<0.003	**407**	
MW-16	06/01/2015	<0.001	<0.001	<0.001	<0.003	**458**	
Trip Blank	06/01/2015	<0.001	<0.001	<0.001	<0.003	NA	

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
NA = Not Analyzed
mg/L = milligrams per liter

Figures

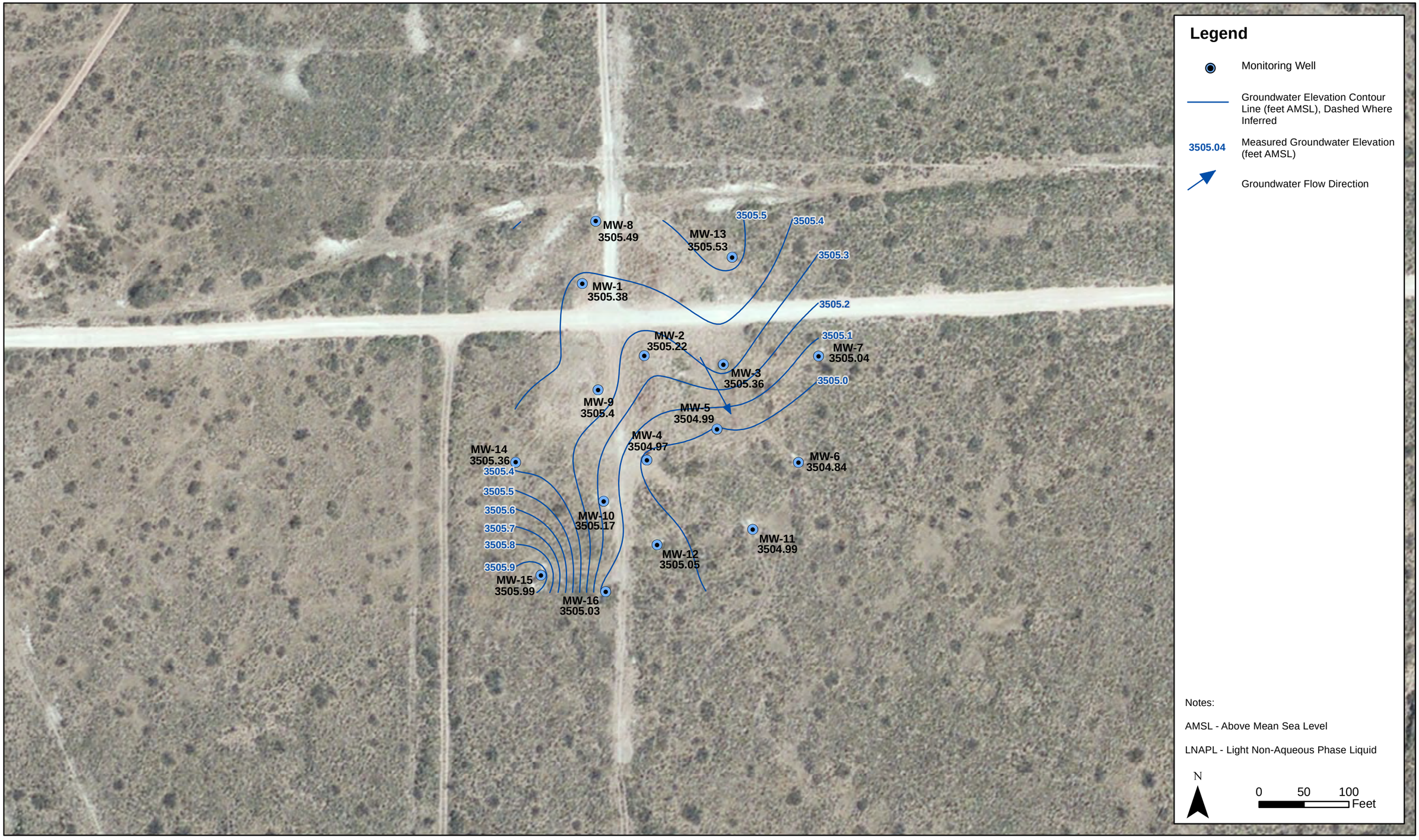
N





DATE: July 2015 DESIGNED BY: T. Johansen DRAWN BY: D. Arnold	TASMAN GEOSCIENCES **Tasman Geosciences, Inc.** **6899 Pecos Street - Unit C** **Denver, CO 80221**	**DCP Midstream** **RR-Extension Pipeline Release** NE 1/4, NW 1/4, Section 19, Township 20 South, Range 37 East Lea County, New Mexico	Site Location Map	Figure 1

DATE: July 2015 DESIGNED BY: T. Johansen DRAWN BY: D. Arnold	TASMAN GEOSCIENCES **Tasman Geosciences, Inc.** **6899 Pecos Street - Unit C** **Denver, CO 80221**	**DCP Midstream** **RR-Extension Pipeline Release** Second Quarter 2015 Groundwater Monitoring Summary Report	Site Map with Monitoring Well Locations	Figure 2



Legend

- Monitoring Well
- Groundwater Elevation Contour Line (feet AMSL), Dashed Where Inferred
- 3505.04 — Measured Groundwater Elevation (feet AMSL)
- Groundwater Flow Direction

Notes:

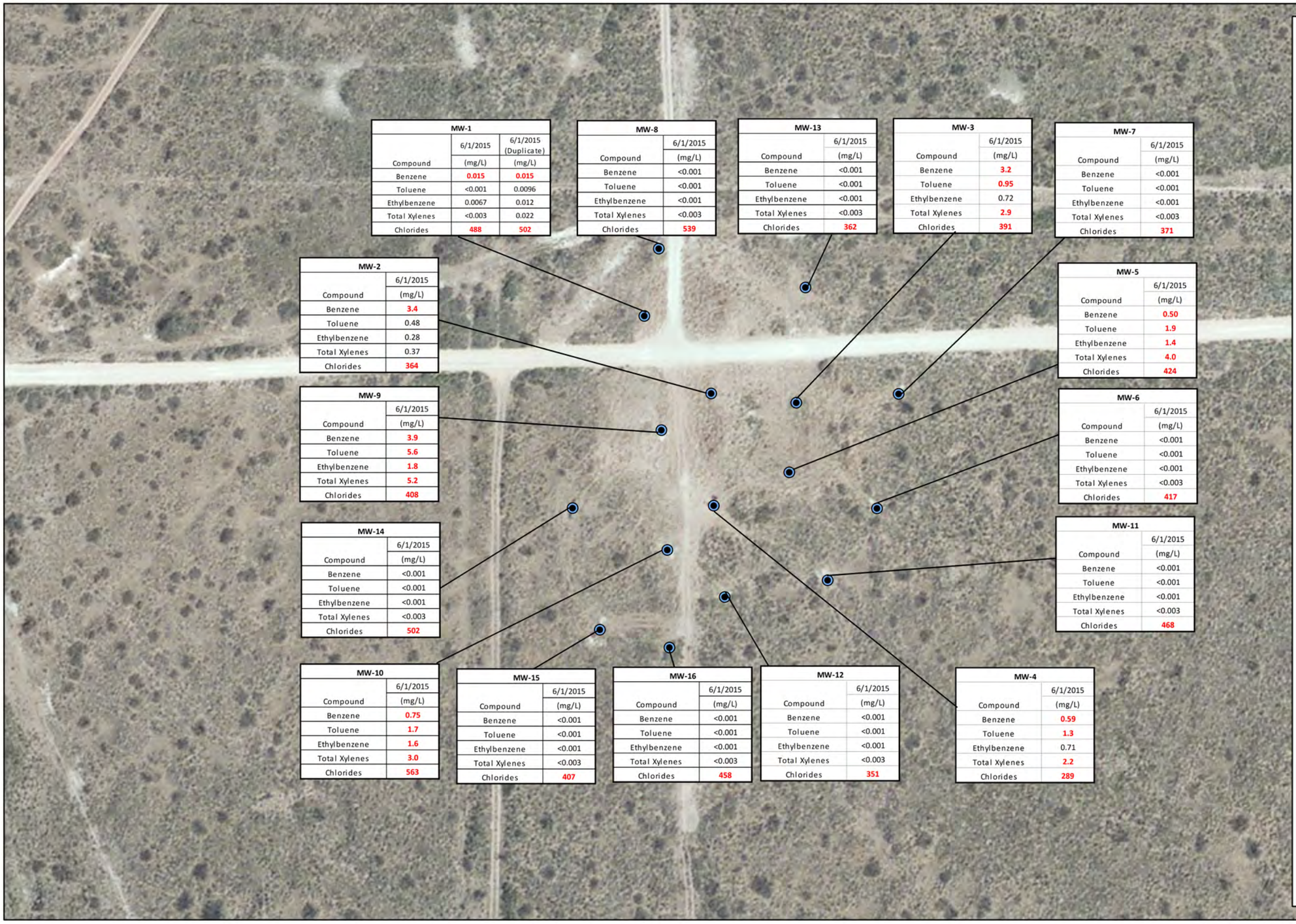
AMSL - Above Mean Sea Level

LNAPL - Light Non-Aqueous Phase Liquid

N

0 50 100 Feet

DATE: July 2015 DESIGNED BY: T. Johansen DRAWN BY: D. Arnold	Tasman Geosciences, LLC 6899 Pecos Street - Unit C Denver, CO 80221	**DCP Midstream** **RR-Extension Pipeline Release** Second Quarter 2015 Groundwater Monitoring Summary Report	Groundwater Elevation Contour Map (June 1, 2015)	Figure 3



MW-1

Compound	6/1/2015 (mg/L)	6/1/2015 (Duplicate) (mg/L)
Benzene	0.015	0.015
Toluene	<0.001	0.0096
Ethylbenzene	0.0067	0.012
Total Xylenes	<0.003	0.022
Chlorides	488	502

MW-8

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	539

MW-13

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	362

MW-3

Compound	6/1/2015 (mg/L)
Benzene	3.2
Toluene	0.95
Ethylbenzene	0.72
Total Xylenes	2.9
Chlorides	391

MW-7

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	371

MW-2

Compound	6/1/2015 (mg/L)
Benzene	3.4
Toluene	0.48
Ethylbenzene	0.28
Total Xylenes	0.37
Chlorides	364

MW-5

Compound	6/1/2015 (mg/L)
Benzene	0.50
Toluene	1.9
Ethylbenzene	1.4
Total Xylenes	4.0
Chlorides	424

MW-9

Compound	6/1/2015 (mg/L)
Benzene	3.9
Toluene	5.6
Ethylbenzene	1.8
Total Xylenes	5.2
Chlorides	408

MW-6

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	417

MW-14

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	502

MW-11

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	468

MW-10

Compound	6/1/2015 (mg/L)
Benzene	0.75
Toluene	1.7
Ethylbenzene	1.6
Total Xylenes	3.0
Chlorides	563

MW-15

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	407

MW-16

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	458

MW-12

Compound	6/1/2015 (mg/L)
Benzene	<0.001
Toluene	<0.001
Ethylbenzene	<0.001
Total Xylenes	<0.003
Chlorides	351

MW-4

Compound	6/1/2015 (mg/L)
Benzene	0.59
Toluene	1.3
Ethylbenzene	0.71
Total Xylenes	2.2
Chlorides	289

Legend

Monitoring Well

New Mexico Water Quality Control Commission Groundwater Standards (mg/L)

Compound	mg/L
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Total Xylenes	0.62
Chlorides	250

Notes:

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

LNAPL - Light Non-Aqueous Phase Liquid

N

0 50 100 Feet

DATE: July, 2015

DESIGNED BY: T. Johansen

DRAWN BY: D. Arnold

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

DCP Midstream
RR-Extension Pipeline Release
Second Quarter 2015 Groundwater Monitoring Summary Report

Analytical Results Map (June 1, 2015)

Figure 4

Appendix A

Historic Analytical Results

APPENDIX A
HISTORIC ANALYTICAL RESULTS
BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-1	3/2008	**1.4**	0.0395	**0.948**	0.128		
MW-1	6/2008	**2.75**	0.054	**2.17**	0.232		
MW-1	9/2008	**1.1**	0.0375	**0.845**	0.131	**507**	
MW-1	12/2008	**0.869**	0.0385	0.581	0.0709	**447**	
MW-1	3/2009	**0.288**	0.0149	0.107	0.0395	**432**	
MW-1	5/2009	**1.38**	0.0705	0.175	0.065	**462**	
MW-1	9/2009	**0.267**	0.024	0.0332	0.0078	**422**	
MW-1	12/2009	**0.819**	0.088	0.0267	0.012	**363**	
MW-1	3/2010	**0.726**	0.0879	0.107	0.0278	**800**	
MW-1	6/2010	**0.339**	0.0539	0.0329	0.0079	**510**	
MW-1	9/2010	**1.99**	0.0951	0.084	0.0219	**442**	
MW-1	12/2010	**0.708**	0.0796	0.0099	0.0047	**448**	
MW-1	03/30/2011	**0.0241**	<0.001	0.0136	0.0055	**457**	
MW-1	06/22/2011	**0.0735**	<0.01	0.0293	<0.02	**467**	
MW-1	09/17/2011	**0.144**	0.038	0.0069	0.0087	**472**	Duplicate sample collected
MW-1	12/08/2011	**0.076**	0.002	0.0227	0.0024	**462**	Duplicate sample collected
MW-1	03/10/2012	**0.029**	<0.002	0.0072	<0.004	**497**	Duplicate sample collected
MW-1	06/05/2012	**0.069**	0.0014	0.0112	<0.003	**470**	Duplicate sample collected
MW-1	09/09/2012	**0.0216**	<0.002	0.0029	<0.003	**465**	Duplicate sample collected
MW-1	12/04/2012	**0.0194**	<0.002	0.0024	<0.003	**445**	Duplicate sample collected
MW-1	02/22/2013	0.0063	<0.002	0.00066	<0.003	**474**	Duplicate sample collected
MW-1	06/02/2013	**0.0313**	<0.002	0.0028	<0.003	**451**	Duplicate sample collected
MW-1	09/10/2013	0.0092	<0.002	0.0016	<0.003	**400**	Duplicate sample collected
MW-1	12/03/2013	0.0067	<0.002	0.00075	<0.003	**458**	Duplicate Sample Collected
MW-1	02/27/2014	**0.0449**	<0.002	0.0044	<0.003	**474**	Duplicate Sample Collected
MW-1 (duplicate)	02/27/2014	**0.0331**	<0.002	0.0037	<0.003	**489**	
MW-1	06/03/2014	**0.0157**	<0.002	0.0018 J	<0.003	**466**	Duplicate Sample Collected
MW-1 (duplicate)	06/03/2014	**0.0157**	<0.002	0.0017 J	<0.003	**488**	
MW-1	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-1	12/01/2014	**4.94**	0.330	0.332	0.2710	**361**	Duplicate Sample Collected
MW-1 (duplicate)	12/01/2014	**5.58**	0.455	0.384	0.3435	**350**	
MW-1	02/25/2015	**0.68**	0.0013	0.065	0.0048	**458**	Duplicate Sample Collected
MW-1 (duplicate)	02/25/2015	**0.56**	0.0013	0.062	0.0043	**452**	
MW-1	06/01/2015	**0.015**	<0.001	0.0067	<0.003	**488**	Duplicate sample collected
MW-1 (duplicate)	06/01/2015	**0.015**	0.0096	0.012	0.022	**502**	
MW-2	3/2008	**8.98**	0.135	**6.58**	**0.765**		
MW-2	6/2008	**24.3**	0.319	**18.5**	**2.58**		
MW-2	9/2008	**21.7**	0.443	**9.79**	**4.25**	109	
MW-2	12/2008	Not Sampled: Remediation Activities					
MW-2	3/2009	**23.7**	0.538	**2.34**	**1.25**	114	
MW-2	5/2009	**32.7**	**0.791**	**1.31**	**1.69**	109	
MW-2	9/2009	**29.3**	0.491	**0.771**	0.371	139	
MW-2	12/2009	**28.5**	0.57	0.347	0.177	199	
MW-2	3/2010	**23.8**	0.529	0.71	<1.2	**700**	
MW-2	6/2010	**22.9**	0.485	0.39	0.128	233	
MW-2	9/2010	**17**	0.329	0.257	<0.8	**263**	
MW-2	12/2010	**16.9**	0.458	0.399	0.0926	**278**	
MW-2	03/30/2011	**16.6**	0.165	0.403	0.116	**320**	
MW-2	06/22/2011	**9.21**	0.0231	0.377	<0.4	**370**	
MW-2	09/17/2011	**4.07**	0.415	0.329	0.203	**375**	
MW-2	12/08/2011	**1.5**	0.0436	0.33	0.0254	**392**	
MW-2	03/10/2012	**1.04**	<0.04	0.134	<0.08	**444**	
MW-2	06/05/2012	**1.25**	0.106	0.158	0.0885	**346**	
MW-2	09/09/2012	**1.53**	0.203	0.138	0.14	**393**	
MW-2	12/04/2012	**1.26**	0.115	0.0854	0.116	**385**	
MW-2	02/22/2013	**4.53** [3]	0.474	0.298	0.482	**386**	
MW-2	06/02/2013	**1.25**	0.0582	0.0644	0.103	**406**	
MW-2	09/10/2013	**4.47**	0.374	0.226	0.375	**339**	
MW-2	12/03/2013	**0.9**	0.0569	0.0442	0.0671	**414**	
MW-2	02/27/2014	**4.41** [3]	0.599	0.312	0.493	**411**	
MW-2	06/03/2014	**0.842** [3]	0.0500	0.0609	0.101	**440**	
MW-2	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-2	12/01/2014	**0.164**	0.0132	0.007	0.0106	**440**	
MW-2	02/25/2015	**4.3**	0.64	0.28	0.55	**370**	
MW-2	06/01/2015	**3.4**	0.48	0.28	0.37	**364**	

APPENDIX A
HISTORIC ANALYTICAL RESULTS
BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-3	3/2008	**0.759**	0.0355	**0.849**	0.0786		
MW-3	6/2008	**6.18**	0.287	**9.46**	**1.23**		
MW-3	9/2008	**2.45**	0.145	**3.62**	**114**	**363**	
MW-3	12/2008	**0.761**	0.0492	**0.938**	0.158	**301**	
MW-3	3/2009	**4.03**	0.18	**2.83**	0.61	**273**	
MW-3	5/2009	**14.7**	**0.808**	**12.6**	**1.64**	**313**	
MW-3	9/2009	**5.5**	0.271	**1.09**	<0.006	**363**	
MW-3	12/2009	**13.1**	**1.2**	**9.08**	**2.87**	**398**	
MW-3	3/2010	**8.43**	**1.01**	**9.14**	**2.71**	**440**	
MW-3	6/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	9/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	03/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	06/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	09/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/08/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	03/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	06/05/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	09/09/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/04/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	02/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	06/02/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	09/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/03/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	02/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-3	12/01/2014	**4.47**	**0.844**	0.529	**1.308**	NS	
MW-3	02/25/2015	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	06/01/2015	**3.2**	**0.95**	0.72	**2.9**	**391**	
MW-4	3/2008	**0.0102**	<0.002	0.0093	0.0023		
MW-4	6/2008	**0.0439**	0.0068	0.0256	0.0147		
MW-4	9/2008	**0.514**	0.0203	0.443	0.125	**318**	
MW-4	12/2008	**1.32**	0.0812	**1.35**	0.239	**281**	
MW-4	3/2009	**3.61**	0.164	**3.4**	**0.831**	**229**	
MW-4	5/2009	**4.7**	0.428	**2.94**	**1.03**	**226**	
MW-4	9/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	03/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	06/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	09/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/08/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	03/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	06/05/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	09/09/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/04/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	02/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	06/02/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	09/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/03/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	02/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-4	12/01/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	02/25/2015	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	06/01/2015	**0.59**	**1.3**	0.71	**2.2**	**289**	

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Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-5	3/2008	0.0019	<0.002	0.0012	<0.006		
MW-5	6/2008	0.0037	<0.002	0.0037	<0.006		
MW-5	9/2008	0.0038	<0.002	0.0037	<0.006	**373**	
MW-5	12/2008	0.0031	<0.002	0.004	<0.006	**318**	
MW-5	3/2009	0.0067	<0.002	0.0074	<0.006	**288**	
MW-5	5/2009	0.0064	<0.002	0.0089	<0.006	**363**	
MW-5	9/2009	0.0082	0.00066	0.0132	<0.006	**358**	
MW-5	12/2009	0.0096	0.0013	0.0155	0.0021	**313**	
MW-5	3/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	6/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	9/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	03/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	06/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	09/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/08/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	03/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	06/05/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	09/09/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/04/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	02/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	06/02/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	09/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/03/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	02/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-5	12/01/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	02/25/2015	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	06/01/2015	**0.50**	**1.9**	**1.4**	**4.0**	**424**	
MW-6	6/2008	<0.002	<0.002	<0.002	<0.006		
MW-6	9/2008	<0.002	<0.002	<0.002	<0.006	**363**	
MW-6	12/2008	<0.002	<0.002	<0.002	<0.006	**325**	
MW-6	3/2009	<0.002	<0.002	<0.002	<0.006	**298**	
MW-6	5/2009	<0.002	<0.002	<0.002	<0.006	**308**	
MW-6	9/2009	<0.002	<0.002	<0.002	<0.006	**296**	
MW-6	12/2009	<0.002	<0.002	<0.002	<0.006	**393**	
MW-6	3/2010	<0.002	<0.002	<0.002	<0.006	**700**	
MW-6	6/2010	<0.001	<0.002	<0.002	<0.002	**402**	
MW-6	9/2010	<0.001	<0.002	<0.002	<0.004	**337**	
MW-6	12/2010	<0.001	<0.002	<0.002	<0.004	**359**	
MW-6	03/30/2011	<0.001	<0.002	<0.002	<0.002	**386**	
MW-6	06/22/2011	<0.001	<0.002	<0.002	<0.004	**376**	
MW-6	09/17/2011	<0.001	<0.002	<0.002	<0.004	**383**	
MW-6	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**372**	
MW-6	03/10/2012	<0.001	<0.002	<0.002	<0.004	**406**	
MW-6	06/05/2012	<0.001	<0.002	<0.002	<0.003	**381**	
MW-6	09/09/2012	<0.001	<0.002	<0.002	<0.003	**377**	
MW-6	12/04/2012	<0.001	<0.002	<0.002	<0.003	**358**	
MW-6	02/22/2013	<0.001	<0.002	<0.002	<0.003	**385**	
MW-6	06/02/2013	<0.001	<0.002	<0.002	<0.003	**372**	
MW-6	09/10/2013	<0.001	<0.002	<0.002	<0.003	**367**	
MW-6	12/03/2013	<0.001	<0.002	<0.002	<0.003	**373**	
MW-6	02/27/2014	<0.001	<0.002	<0.002	<0.003	**395**	
MW-6	06/03/2014	<0.001	<0.002	<0.002	<0.003	**390**	
MW-6	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-6	12/01/2014	<0.001	<0.001	<0.001	<0.003	**358**	
MW-6	02/25/2015	<0.001	<0.001	<0.001	<0.003	**389**	
MW-6	06/01/2015	<0.001	<0.001	<0.001	<0.003	**417**	

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Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-7	6/2008	<0.002	<0.002	<0.002	<0.006		
MW-7	9/2008	<0.002	<0.002	<0.002	<0.006	**378**	
MW-7	12/2008	<0.002	<0.002	<0.002	<0.006	**348**	
MW-7	3/2009	<0.002	<0.002	<0.002	<0.006	**283**	
MW-7	5/2009	<0.002	<0.002	<0.002	<0.006	**298**	
MW-7	9/2009	<0.002	<0.002	<0.002	<0.006	**273**	
MW-7	12/2009	<0.002	<0.002	<0.002	<0.006	**328**	
MW-7	3/2010	<0.002	<0.002	<0.002	<0.006	**750**	
MW-7	6/2010	0.0005	<0.002	<0.002	<0.006	**385**	
MW-7	9/2010	0.00042	<0.002	<0.002	<0.004	**326**	
MW-7	12/2010	<0.002	<0.002	<0.002	<0.006	**345**	
MW-7	03/30/2011	<0.001	<0.002	<0.002	<0.002	**382**	
MW-7	06/22/2011	<0.001	<0.002	<0.002	<0.004	**390**	
MW-7	09/17/2011	<0.001	<0.002	<0.002	<0.004	**374**	
MW-7	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**376**	
MW-7	03/10/2012	<0.001	<0.002	<0.002	<0.004	**392**	
MW-7	06/05/2012	<0.001	<0.002	<0.002	<0.003	**381**	
MW-7	09/09/2012	<0.001	<0.002	<0.002	<0.003	**362**	
MW-7	12/04/2012	<0.001	<0.002	<0.002	<0.003	**334**	
MW-7	02/22/2013	0.00059	<0.002	<0.002	<0.003	**363**	
MW-7	06/02/2013	<0.001	<0.002	<0.002	<0.003	**361**	
MW-7	09/10/2013	<0.001	<0.002	<0.002	<0.003	**332**	
MW-7	12/03/2013	<0.001	<0.002	<0.002	<0.003	**350**	
MW-7	02/27/2014	<0.001	<0.002	<0.002	<0.003	**358**	
MW-7	06/03/2014	<0.001	<0.002	<0.002	<0.003	**359**	
MW-7	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-7	12/01/2014	<0.001	<0.001	<0.001	<0.003	**332**	
MW-7	02/25/2015	<0.001	<0.001	<0.001	<0.003	**393**	
MW-7	06/01/2015	<0.001	<0.001	<0.001	<0.003	**371**	
MW-8	6/2008	**0.0384**	0.00049	0.0255	0.0016		
MW-8	9/2008	**0.0301**	<0.002	0.0161	0.002	**512**	
MW-8	12/2008	0.00233	<0.002	0.011	<0.006	**393**	
MW-8	3/2009	**0.0218**	<0.002	0.0066	<0.006	**472**	
MW-8	5/2009	0.0098	<0.002	0.0049	<0.006	**450**	
MW-8	9/2009	<0.002	<0.002	<0.002	<0.006	**477**	
MW-8	12/2009	<0.002	<0.002	<0.002	<0.006	**472**	
MW-8	3/2010	<0.002	<0.002	<0.002	<0.006	**800**	
MW-8	6/2010	<0.001	<0.002	<0.002	<0.002	**553**	
MW-8	9/2010	<0.001	<0.002	<0.002	<0.004	**486**	
MW-8	12/2010	<0.001	<0.002	<0.002	<0.004	**533**	
MW-8	03/30/2011	<0.001	<0.002	<0.002	<0.002	**529**	
MW-8	06/22/2011	<0.001	<0.002	<0.002	<0.004	**524**	
MW-8	09/17/2011	<0.001	<0.002	<0.002	<0.004	**507**	
MW-8	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**521**	
MW-8	03/10/2012	<0.001	<0.002	<0.002	<0.004	**528**	
MW-8	06/05/2012	<0.001	<0.002	<0.002	<0.003	**527**	
MW-8	09/09/2012	<0.001	<0.002	<0.002	<0.003	**509**	
MW-8	12/04/2012	<0.001	<0.002	<0.002	<0.003	**500**	
MW-8	02/22/2013	0.00048	<0.002	<0.002	<0.003	**530**	
MW-8	06/02/2013	<0.001	<0.002	<0.002	<0.003	**524**	
MW-8	09/10/2013	<0.001	<0.002	<0.002	<0.003	**489**	
MW-8	12/03/2013	<0.001	<0.002	<0.002	<0.003	**508**	
MW-8	02/27/2014	<0.001	<0.002	<0.002	<0.003	**521**	
MW-8	06/03/2014	<0.001	<0.002	<0.002	<0.003	**521**	
MW-8	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-8	12/01/2014	<0.001	<0.001	<0.001	<0.003	**498**	
MW-8	02/25/2015	<0.001	<0.001	<0.001	<0.003	**523**	
MW-8	06/01/2015	<0.001	<0.001	<0.001	<0.003	**539**	

APPENDIX A
HISTORIC ANALYTICAL RESULTS
BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-9	6/2010	LNAPL	LNAPL	LNAPL	LNAPL	**532**	
MW-9	9/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	03/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	06/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	09/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/08/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	03/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	06/05/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	09/09/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/04/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	02/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	06/02/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	09/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/03/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	02/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-9	12/01/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	02/25/2015	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	06/01/2015	**3.9**	**5.6**	**1.8**	**5.2**	**408**	
MW-10	6-2010	LNAPL	LNAPL	LNAPL	LNAPL	**656**	
MW-10	9-2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12-2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	03/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	06/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	09/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12/08/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	03/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	06/05/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	09/09/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12/04/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	02/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	06/02/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	09/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12/03/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	02/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-10	12/01/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	02/25/2015	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	06/01/2015	**0.75**	**1.7**	**1.6**	**3.0**	**563**	
MW-11	6-2010	<0.001	<0.002	<0.002	<0.004	**407**	
MW-11	9-2010	<0.001	<0.002	<0.002	<0.004	**365**	
MW-11	12-2010	<0.001	<0.002	<0.002	<0.004	**383**	
MW-11	03/30/2011	<0.001	<0.002	<0.002	<0.002	**406**	
MW-11	06/22/2011	<0.001	<0.002	<0.002	<0.004	**405**	
MW-11	09/17/2011	<0.001	<0.002	<0.002	<0.004	**390**	
MW-11	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**399**	
MW-11	03/10/2012	<0.001	<0.002	<0.002	<0.004	**403**	
MW-11	06/05/2012	<0.001	<0.002	<0.002	<0.003	**417**	
MW-11	09/09/2012	<0.001	<0.002	<0.002	<0.003	**399**	
MW-11	12/04/2012	<0.001	<0.002	<0.002	<0.003	**382**	
MW-11	02/22/2013	0.0004	<0.002	<0.002	<0.003	**419**	
MW-11	06/02/2013	<0.001	<0.002	<0.002	<0.003	**424**	
MW-11	09/10/2013	<0.001	<0.002	<0.002	<0.003	**394**	
MW-11	12/03/2013	<0.001	<0.002	<0.002	<0.003	**416**	
MW-11	02/27/2014	<0.001	<0.002	<0.002	<0.003	**433**	
MW-11	06/03/2014	<0.001	<0.002	<0.002	<0.003	**434**	
MW-11	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-11	12/01/2014	<0.001	<0.001	<0.001	<0.003	**391**	
MW-11	02/25/2015	<0.001	<0.001	<0.001	<0.003	**414**	
MW-11	06/01/2015	<0.001	<0.001	<0.001	<0.003	**468**	

APPENDIX A
HISTORIC ANALYTICAL RESULTS
BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-12	6-2010	<0.001	<0.002	<0.002	<0.004	**514**	
MW-12	9-2010	<0.001	<0.002	<0.002	<0.004	**464**	
MW-12	12-2010	<0.001	<0.002	<0.002	<0.004	**501**	
MW-12	03/30/2011	<0.001	<0.002	<0.002	<0.002	**498**	
MW-12	06/22/2011	<0.001	<0.002	<0.002	<0.004	**497**	
MW-12	09/17/2011	<0.001	<0.002	<0.002	<0.004	**493**	
MW-12	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**493**	
MW-12	03/10/2012	<0.001	<0.002	<0.002	<0.004	**513**	
MW-12	06/05/2012	<0.001	<0.002	<0.002	<0.003	**507**	
MW-12	09/09/2012	<0.001	<0.002	<0.002	<0.003	**487**	
MW-12	12/04/2012	<0.001	<0.002	<0.002	<0.003	**469**	
MW-12	02/22/2013	0.00041	<0.002	<0.002	<0.003	**484**	
MW-12	06/02/2013	<0.001	<0.002	<0.002	<0.003	**461**	
MW-12	09/10/2013	<0.001	<0.002	<0.002	<0.003	**428**	
MW-12	12/03/2013	<0.001	<0.002	<0.002	0.0031	**412**	
MW-12	02/27/2014	<0.001	<0.002	<0.002	0.0024 J	**414**	
MW-12	06/03/2014	<0.001	<0.002	<0.002	<0.003	**377**	
MW-12	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-12	12/01/2014	<0.001	<0.001	<0.001	<0.003	**300**	
MW-12	02/25/2015	<0.001	<0.001	<0.001	<0.003	**322**	
MW-12	06/01/2015	<0.001	<0.001	<0.001	<0.003	**351**	
MW-13	03/30/2011	<0.001	<0.002	<0.002	<0.002	**326**	
MW-13	06/22/2011	<0.001	<0.002	<0.002	<0.004	**340**	
MW-13	09/17/2011	<0.001	<0.002	<0.002	<0.004	**317**	
MW-13	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**328**	
MW-13	03/10/2012	<0.001	<0.002	<0.002	<0.004	**331**	
MW-13	06/05/2012	<0.001	<0.002	<0.002	<0.003	**335**	
MW-13	09/09/2012	<0.001	<0.002	<0.002	<0.003	**321**	
MW-13	12/04/2012	<0.001	<0.002	<0.002	<0.003	**317**	
MW-13	02/22/2013	0.00073	<0.002	<0.002	<0.003	**337**	
MW-13	06/02/2013	<0.001	<0.002	<0.002	<0.003	**333**	
MW-13	09/10/2013	<0.001	<0.002	<0.002	<0.003	**311**	
MW-13	12/03/2013	<0.001	<0.002	<0.002	<0.003	**330**	
MW-13	02/27/2014	<0.001	<0.002	<0.002	<0.003	**344**	
MW-13	06/03/2014	<0.0010	<0.0020	<0.0020	<0.0030	**354**	MS/MSD Sample Collected
MW-13	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-13	12/01/2014	<0.001	<0.001	<0.001	<0.003	**310**	
MW-13	02/25/2015	<0.001	<0.001	<0.001	<0.003	**326**	
MW-13	06/01/2015	<0.001	<0.001	<0.001	<0.003	**362**	
MW-14	03/30/2011	<0.001	<0.002	<0.002	<0.002	**520**	
MW-14	06/22/2011	<0.001	<0.002	<0.002	<0.004	**494**	
MW-14	09/17/2011	<0.001	<0.002	<0.002	<0.004	**478**	
MW-14	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**521**	
MW-14	03/10/2012	<0.001	<0.002	<0.002	<0.004	**528**	
MW-14	06/05/2012	<0.001	<0.002	<0.002	<0.003	**513**	
MW-14	09/09/2012	<0.001	<0.002	<0.002	<0.003	**536**	
MW-14	12/04/2012	<0.001	<0.002	<0.002	<0.003	**544**	
MW-14	02/22/2013	0.00034	<0.002	<0.002	<0.003	**553**	
MW-14	06/02/2013	<0.001	<0.002	<0.002	<0.003	**538**	
MW-14	09/10/2013	<0.001	<0.002	<0.002	<0.003	**486**	
MW-14	12/03/2013	<0.001	<0.002	<0.002	<0.003	**519**	
MW-14	02/27/2014	<0.001	<0.002	<0.002	<0.003	**516**	
MW-14	06/03/2014	<0.001	<0.002	<0.002	<0.003	**547**	
MW-14	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-14	12/01/2014	<0.001	<0.001	<0.001	<0.003	**482**	
MW-14	02/25/2015	<0.001	<0.001	<0.001	<0.003	**477**	
MW-14	06/01/2015	<0.001	<0.001	<0.001	<0.003	**502**	

APPENDIX A
HISTORIC ANALYTICAL RESULTS
BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
NMWQCC Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-15	03/30/2011	<0.001	<0.002	<0.002	<0.002	**303**	
MW-15	06/22/2011	<0.001	<0.002	<0.002	<0.004	**297**	
MW-15	09/17/2011	<0.001	<0.002	<0.002	<0.004	**294**	
MW-15	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**288**	
MW-15	03/10/2012	<0.001	<0.002	<0.002	<0.004	**308**	
MW-15	06/05/2012	<0.001	<0.002	<0.002	<0.003	**276**	
MW-15	09/09/2012	<0.001	<0.002	<0.002	<0.003	**318**	
MW-15	12/04/2012	<0.001	<0.002	<0.002	<0.003	**313**	
MW-15	02/22/2013	0.00034	<0.002	<0.002	<0.003	**333**	
MW-15	06/02/2013	<0.001	<0.002	<0.002	<0.003	**324**	
MW-15	09/10/2013	<0.001	<0.002	<0.002	<0.003	**331**	
MW-15	12/03/2013	<0.001	<0.002	<0.002	<0.003	**365**	
MW-15	02/27/2014	<0.001	<0.002	<0.002	<0.003	**378**	
MW-15	06/03/2014	<0.001	<0.002	<0.002	<0.003	**374**	
MW-15	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-15	12/01/2014	<0.001	<0.001	<0.001	<0.003	**334**	
MW-15	02/25/2015	<0.001	<0.001	<0.001	<0.003	**362**	
MW-15	06/01/2015	<0.001	<0.001	<0.001	<0.003	**407**	
MW-16	03/30/2011	<0.001	<0.002	<0.002	<0.002	**295**	
MW-16	06/22/2011	<0.001	<0.002	<0.002	<0.004	**292**	
MW-16	09/17/2011	<0.001	<0.002	<0.002	<0.004	**295**	
MW-16	12/08/2011	<0.0005	<0.001	<0.001	<0.001	**313**	
MW-16	03/10/2012	<0.001	<0.002	<0.002	<0.004	**322**	
MW-16	06/05/2012	<0.001	<0.002	<0.002	<0.003	**334**	
MW-16	09/09/2012	<0.001	<0.002	<0.002	<0.003	**334**	
MW-16	12/04/2012	<0.001	<0.002	<0.002	<0.003	**339**	
MW-16	02/22/2013	<0.001	<0.002	<0.002	<0.003	**358**	
MW-16	06/02/2013	<0.001	<0.002	<0.002	<0.003	**364**	
MW-16	09/10/2013	<0.001	<0.002	<0.002	<0.003	**359**	
MW-16	12/03/2013	<0.001	<0.002	<0.002	<0.003	**394**	
MW-16	02/27/2014	<0.001	<0.002	<0.002	<0.003	**424**	
MW-16	06/03/2014	<0.001	<0.002	<0.002	<0.003	**333**	
MW-16	Third Quarter 2014 Sampling Suspended Due to Site Inaccessibility						
MW-16	12/01/2014	<0.001	<0.001	<0.001	<0.003	**418**	
MW-16	02/25/2015	<0.001	<0.001	<0.001	<0.003	**435**	
MW-16	06/01/2015	<0.001	<0.001	<0.001	<0.003	**458**	
Trip Blank	06/03/2014	<0.001	<0.002	<0.002	<0.003	NA	
Trip Blank	12/01/2014	<0.001	<0.001	<0.001	<0.003	NA	
Trip Blank	02/25/2015	<0.001	<0.001	<0.001	<0.003	NA	
Trip Blank	06/01/2015	<0.001	<0.001	<0.001	<0.003	NA	

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
NA = Not Analyzed
mg/L = milligrams per liter

Appendix B

Laboratory Analytical Report

- ALS Job #: HS15060324

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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www.alsglobal.com

July 01, 2015

Don Baggus
Tasman Geosciences
5690 Webster Street
Arvada, CO 80002

Work Order: **HS15060324**

Revision: **1**

Laboratory Results for: **RR Extension Pipeline Release**

Dear Don,

ALS Environmental received 18 sample(s) on Jun 06, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Generated By: Jumoke.Lawal
Sonia West
Project Manager

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Work Order: HS15060324

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15060324-01	TB-052215-34	Water		01-Jun-2015 14:00	06-Jun-2015 09:17	☐
HS15060324-02	MW-1-060115	Groundwater		01-Jun-2015 15:45	06-Jun-2015 09:17	☐
HS15060324-03	MW-2-060115	Groundwater		01-Jun-2015 16:15	06-Jun-2015 09:17	☐
HS15060324-04	MW-3-060115	Groundwater		01-Jun-2015 16:36	06-Jun-2015 09:17	☐
HS15060324-05	MW-4-060115	Groundwater		01-Jun-2015 17:18	06-Jun-2015 09:17	☐
HS15060324-06	MW-5-060115	Groundwater		01-Jun-2015 16:46	06-Jun-2015 09:17	☐
HS15060324-07	MW-6-060115	Groundwater		01-Jun-2015 15:22	06-Jun-2015 09:17	☐
HS15060324-08	MW-7-060115	Groundwater		01-Jun-2015 15:35	06-Jun-2015 09:17	☐
HS15060324-09	MW-8-060115	Groundwater		01-Jun-2015 13:22	06-Jun-2015 09:17	☐
HS15060324-10	MW-9-060115	Groundwater		01-Jun-2015 17:26	06-Jun-2015 09:17	☐
HS15060324-11	MW-10-060115	Groundwater		01-Jun-2015 17:00	06-Jun-2015 09:17	☐
HS15060324-12	MW-11-060115	Groundwater		01-Jun-2015 15:10	06-Jun-2015 09:17	☐
HS15060324-13	MW-12-060115	Groundwater		01-Jun-2015 15:00	06-Jun-2015 09:17	☐
HS15060324-14	MW-13-060115	Groundwater		01-Jun-2015 13:42	06-Jun-2015 09:17	☐
HS15060324-15	MW-14-060115	Groundwater		01-Jun-2015 14:10	06-Jun-2015 09:17	☐
HS15060324-16	MW-15-060115	Groundwater		01-Jun-2015 14:21	06-Jun-2015 09:17	☐
HS15060324-17	MW-16-060115	Groundwater		01-Jun-2015 14:37	06-Jun-2015 09:17	☐
HS15060324-18	Duplicate-060115	Groundwater		01-Jun-2015 00:00	06-Jun-2015 09:17	☐

Client: Tasman Geosciences **CASE NARRATIVE**
Project: RR Extension Pipeline Release
Work Order: HS15060324

Work Order Comments

• Revision I:
This report has been revised to report the Trip Blank sample outside of the method holding time.

GCMS Volatiles by Method SW8260

Batch ID: R256012

Sample ID: **Duplicate-060115 (HS15060324-18)**
• Lowest practical dilution due to matrix.

Batch ID: R255891,R255978, R256061

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

Batch ID: R257227

Sample ID: **TB-052215-34 (HS15060324-01)**
• Sample was analyzed outside of the holding time at the request of the client. Results should be considered estimated.

WetChemistry by Method SW9056

Batch ID: R256022

Sample ID: **HS15060445-01MS**
• MS and MSD are for an unrelated sample

Batch ID: R256058

Sample ID: **HS15060490-02MS**
• MS and MSD are for an unrelated sample

ALS Group USA, Corp Date: 01-Jul-15

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: TB-052215-34
Collection Date: 01-Jun-2015 14:00

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**					Analyst: AKP
Benzene	ND	H	0.0010	mg/L	1	01-Jul-2015 11:55
Toluene	ND	H	0.0010	mg/L	1	01-Jul-2015 11:55
Ethylbenzene	ND	H	0.0010	mg/L	1	01-Jul-2015 11:55
Xylenes, Total	ND	H	0.0030	mg/L	1	01-Jul-2015 11:55
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*01-Jul-2015 11:55*
Surr: 4-Bromofluorobenzene	*98.5*		*70-125*	*%REC*	*1*	*01-Jul-2015 11:55*
Surr: Dibromofluoromethane	*110*		*74-125*	*%REC*	*1*	*01-Jul-2015 11:55*
Surr: Toluene-d8	*99.9*		*75-125*	*%REC*	*1*	*01-Jul-2015 11:55*

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

Revision:1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-1-060115
Collection Date: 01-Jun-2015 15:45

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**488**		**20.0**	**mg/L**	40	11-Jun-2015 00:50
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**0.015**		**0.0010**	**mg/L**	1	11-Jun-2015 03:19
Toluene	ND		0.0010	mg/L	1	11-Jun-2015 03:19
Ethylbenzene	**0.0067**		**0.0010**	**mg/L**	1	11-Jun-2015 03:19
Xylenes, Total	ND		0.0030	mg/L	1	11-Jun-2015 03:19
Surr: 1,2-Dichloroethane-d4	*87.8*		*71-125*	*%REC*	*1*	*11-Jun-2015 03:19*
Surr: 4-Bromofluorobenzene	*95.0*		*70-125*	*%REC*	*1*	*11-Jun-2015 03:19*
Surr: Dibromofluoromethane	*98.5*		*74-125*	*%REC*	*1*	*11-Jun-2015 03:19*
Surr: Toluene-d8	*95.7*		*75-125*	*%REC*	*1*	*11-Jun-2015 03:19*

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

Revision:1

ALS Group USA, Corp Date: 01-Jul-15

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-2-060115
Collection Date: 01-Jun-2015 16:15

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**364**		**20.0**	**mg/L**	40	11-Jun-2015 01:11
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**3.4**		**0.025**	**mg/L**	25	11-Jun-2015 04:41
Toluene	**0.48**		**0.025**	**mg/L**	25	11-Jun-2015 04:41
Ethylbenzene	**0.28**		**0.025**	**mg/L**	25	11-Jun-2015 04:41
Xylenes, Total	**0.37**		**0.0030**	**mg/L**	1	11-Jun-2015 04:13
Surr: 1,2-Dichloroethane-d4	*91.2*		*71-125*	*%REC*	*25*	*11-Jun-2015 04:41*
Surr: 1,2-Dichloroethane-d4	*75.1*		*71-125*	*%REC*	*1*	*11-Jun-2015 04:13*
Surr: 4-Bromofluorobenzene	*98.8*		*70-125*	*%REC*	*1*	*11-Jun-2015 04:13*
Surr: 4-Bromofluorobenzene	*94.6*		*70-125*	*%REC*	*25*	*11-Jun-2015 04:41*
Surr: Dibromofluoromethane	*93.1*		*74-125*	*%REC*	*1*	*11-Jun-2015 04:13*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*25*	*11-Jun-2015 04:41*
Surr: Toluene-d8	*95.5*		*75-125*	*%REC*	*1*	*11-Jun-2015 04:13*
Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	*25*	*11-Jun-2015 04:41*

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

Revision:1

ALS Group USA, Corp Date: 01-Jul-15

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-3-060115
Collection Date: 01-Jun-2015 16:36

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**391**		**20.0**	**mg/L**	40	11-Jun-2015 01:33
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**3.2**		**0.050**	**mg/L**	50	11-Jun-2015 05:37
Toluene	**0.95**		**0.0050**	**mg/L**	5	11-Jun-2015 05:09
Ethylbenzene	**0.72**		**0.0050**	**mg/L**	5	11-Jun-2015 05:09
Xylenes, Total	**2.9**		**0.015**	**mg/L**	5	11-Jun-2015 05:09
Surr: 1,2-Dichloroethane-d4	*90.4*		*71-125*	*%REC*	*50*	*11-Jun-2015 05:37*
Surr: 1,2-Dichloroethane-d4	*83.9*		*71-125*	*%REC*	*5*	*11-Jun-2015 05:09*
Surr: 4-Bromofluorobenzene	*93.8*		*70-125*	*%REC*	*5*	*11-Jun-2015 05:09*
Surr: 4-Bromofluorobenzene	*93.7*		*70-125*	*%REC*	*50*	*11-Jun-2015 05:37*
Surr: Dibromofluoromethane	*97.8*		*74-125*	*%REC*	*50*	*11-Jun-2015 05:37*
Surr: Dibromofluoromethane	*96.7*		*74-125*	*%REC*	*5*	*11-Jun-2015 05:09*
Surr: Toluene-d8	*94.7*		*75-125*	*%REC*	*5*	*11-Jun-2015 05:09*
Surr: Toluene-d8	*94.8*		*75-125*	*%REC*	*50*	*11-Jun-2015 05:37*

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

Revision:1

ALS Group USA, Corp Date: 01-Jul-15

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-4-060115
Collection Date: 01-Jun-2015 17:18

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**289**		**20.0**	**mg/L**	40	11-Jun-2015 01:55
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**0.59**		**0.0050**	**mg/L**	5	11-Jun-2015 06:04
Toluene	**1.3**		**0.050**	**mg/L**	50	11-Jun-2015 06:32
Ethylbenzene	**0.71**		**0.0050**	**mg/L**	5	11-Jun-2015 06:04
Xylenes, Total	**2.2**		**0.015**	**mg/L**	5	11-Jun-2015 06:04
Surr: 1,2-Dichloroethane-d4	*87.2*		*71-125*	*%REC*	*50*	*11-Jun-2015 06:32*
Surr: 1,2-Dichloroethane-d4	*83.5*		*71-125*	*%REC*	*5*	*11-Jun-2015 06:04*
Surr: 4-Bromofluorobenzene	*96.4*		*70-125*	*%REC*	*5*	*11-Jun-2015 06:04*
Surr: 4-Bromofluorobenzene	*91.0*		*70-125*	*%REC*	*50*	*11-Jun-2015 06:32*
Surr: Dibromofluoromethane	*98.3*		*74-125*	*%REC*	*50*	*11-Jun-2015 06:32*
Surr: Dibromofluoromethane	*92.5*		*74-125*	*%REC*	*5*	*11-Jun-2015 06:04*
Surr: Toluene-d8	*95.2*		*75-125*	*%REC*	*50*	*11-Jun-2015 06:32*
Surr: Toluene-d8	*97.9*		*75-125*	*%REC*	*5*	*11-Jun-2015 06:04*

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

Revision:1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-5-060115
Collection Date: 01-Jun-2015 16:46

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**424**		**20.0**	**mg/L**	40	11-Jun-2015 02:17
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**0.50**		**0.0050**	**mg/L**	5	11-Jun-2015 07:00
Toluene	**1.9**		**0.050**	**mg/L**	50	11-Jun-2015 07:28
Ethylbenzene	**1.4**		**0.050**	**mg/L**	50	11-Jun-2015 07:28
Xylenes, Total	**4.0**		**0.15**	**mg/L**	50	11-Jun-2015 07:28
Surr: 1,2-Dichloroethane-d4	*91.1*		*71-125*	*%REC*	*5*	*11-Jun-2015 07:00*
Surr: 1,2-Dichloroethane-d4	*89.2*		*71-125*	*%REC*	*50*	*11-Jun-2015 07:28*
Surr: 4-Bromofluorobenzene	*93.5*		*70-125*	*%REC*	*50*	*11-Jun-2015 07:28*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*5*	*11-Jun-2015 07:00*
Surr: Dibromofluoromethane	*92.0*		*74-125*	*%REC*	*5*	*11-Jun-2015 07:00*
Surr: Dibromofluoromethane	*98.9*		*74-125*	*%REC*	*50*	*11-Jun-2015 07:28*
Surr: Toluene-d8	*96.0*		*75-125*	*%REC*	*50*	*11-Jun-2015 07:28*
Surr: Toluene-d8	*96.5*		*75-125*	*%REC*	*5*	*11-Jun-2015 07:00*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-6-060115
Collection Date: 01-Jun-2015 15:22

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**417**		**20.0**	**mg/L**	40	11-Jun-2015 02:38
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	09-Jun-2015 20:04
Toluene	ND		0.0010	mg/L	1	09-Jun-2015 20:04
Ethylbenzene	ND		0.0010	mg/L	1	09-Jun-2015 20:04
Xylenes, Total	ND		0.0030	mg/L	1	09-Jun-2015 20:04
Surr: 1,2-Dichloroethane-d4	*120*		*71-125*	*%REC*	*1*	*09-Jun-2015 20:04*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*09-Jun-2015 20:04*
Surr: Dibromofluoromethane	*117*		*74-125*	*%REC*	*1*	*09-Jun-2015 20:04*
Surr: Toluene-d8	*121*		*75-125*	*%REC*	*1*	*09-Jun-2015 20:04*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-7-060115
Collection Date: 01-Jun-2015 15:35

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**371**		**20.0**	**mg/L**	40	11-Jun-2015 03:00
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	09-Jun-2015 20:33
Toluene	ND		0.0010	mg/L	1	09-Jun-2015 20:33
Ethylbenzene	ND		0.0010	mg/L	1	09-Jun-2015 20:33
Xylenes, Total	ND		0.0030	mg/L	1	09-Jun-2015 20:33
Surr: 1,2-Dichloroethane-d4	*122*		*71-125*	*%REC*	*1*	*09-Jun-2015 20:33*
Surr: 4-Bromofluorobenzene	*115*		*70-125*	*%REC*	*1*	*09-Jun-2015 20:33*
Surr: Dibromofluoromethane	*120*		*74-125*	*%REC*	*1*	*09-Jun-2015 20:33*
Surr: Toluene-d8	*118*		*75-125*	*%REC*	*1*	*09-Jun-2015 20:33*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-8-060115
Collection Date: 01-Jun-2015 13:22

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**539**		**20.0**	**mg/L**	40	11-Jun-2015 03:22
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	12-Jun-2015 00:28
Toluene	ND		0.0010	mg/L	1	12-Jun-2015 00:28
Ethylbenzene	ND		0.0010	mg/L	1	12-Jun-2015 00:28
Xylenes, Total	ND		0.0030	mg/L	1	12-Jun-2015 00:28
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*12-Jun-2015 00:28*
Surr: 4-Bromofluorobenzene	*105*		*70-125*	*%REC*	*1*	*12-Jun-2015 00:28*
Surr: Dibromofluoromethane	*108*		*74-125*	*%REC*	*1*	*12-Jun-2015 00:28*
Surr: Toluene-d8	*116*		*75-125*	*%REC*	*1*	*12-Jun-2015 00:28*

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

Revision:1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-9-060115
Collection Date: 01-Jun-2015 17:26

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**408**		**20.0**	**mg/L**	40	11-Jun-2015 03:43
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**3.9**		**0.050**	**mg/L**	50	11-Jun-2015 08:24
Toluene	**5.6**		**0.050**	**mg/L**	50	11-Jun-2015 08:24
Ethylbenzene	**1.8**		**0.050**	**mg/L**	50	11-Jun-2015 08:24
Xylenes, Total	**5.2**		**0.15**	**mg/L**	50	11-Jun-2015 08:24
Surr: 1,2-Dichloroethane-d4	*88.2*		*71-125*	*%REC*	*50*	*11-Jun-2015 08:24*
Surr: 4-Bromofluorobenzene	*94.2*		*70-125*	*%REC*	*50*	*11-Jun-2015 08:24*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*50*	*11-Jun-2015 08:24*
Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	*50*	*11-Jun-2015 08:24*

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

Revision:1

ALS Group USA, Corp Date: 01-Jul-15

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-10-060115
Collection Date: 01-Jun-2015 17:00

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-11
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**563**		**20.0**	**mg/L**	40	11-Jun-2015 04:05
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**0.75**		**0.0050**	**mg/L**	5	11-Jun-2015 08:52
Toluene	**1.7**		**0.050**	**mg/L**	50	11-Jun-2015 09:20
Ethylbenzene	**1.6**		**0.050**	**mg/L**	50	11-Jun-2015 09:20
Xylenes, Total	**3.0**		**0.015**	**mg/L**	5	11-Jun-2015 08:52
Surr: 1,2-Dichloroethane-d4	*89.7*		*71-125*	*%REC*	*50*	*11-Jun-2015 09:20*
Surr: 1,2-Dichloroethane-d4	*86.7*		*71-125*	*%REC*	*5*	*11-Jun-2015 08:52*
Surr: 4-Bromofluorobenzene	*96.2*		*70-125*	*%REC*	*5*	*11-Jun-2015 08:52*
Surr: 4-Bromofluorobenzene	*94.0*		*70-125*	*%REC*	*50*	*11-Jun-2015 09:20*
Surr: Dibromofluoromethane	*91.4*		*74-125*	*%REC*	*5*	*11-Jun-2015 08:52*
Surr: Dibromofluoromethane	*99.5*		*74-125*	*%REC*	*50*	*11-Jun-2015 09:20*
Surr: Toluene-d8	*96.2*		*75-125*	*%REC*	*50*	*11-Jun-2015 09:20*
Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	*5*	*11-Jun-2015 08:52*

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

Revision:1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-11-060115
Collection Date: 01-Jun-2015 15:10

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-12
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**468**		**20.0**	**mg/L**	40	11-Jun-2015 18:52
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	09-Jun-2015 21:28
Toluene	ND		0.0010	mg/L	1	09-Jun-2015 21:28
Ethylbenzene	ND		0.0010	mg/L	1	09-Jun-2015 21:28
Xylenes, Total	ND		0.0030	mg/L	1	09-Jun-2015 21:28
Surr: 1,2-Dichloroethane-d4	*119*		*71-125*	*%REC*	*1*	*09-Jun-2015 21:28*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*09-Jun-2015 21:28*
Surr: Dibromofluoromethane	*116*		*74-125*	*%REC*	*1*	*09-Jun-2015 21:28*
Surr: Toluene-d8	*118*		*75-125*	*%REC*	*1*	*09-Jun-2015 21:28*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-12-060115
Collection Date: 01-Jun-2015 15:00

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-13
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**351**		**20.0**	**mg/L**	40	11-Jun-2015 19:13
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	09-Jun-2015 21:55
Toluene	ND		0.0010	mg/L	1	09-Jun-2015 21:55
Ethylbenzene	ND		0.0010	mg/L	1	09-Jun-2015 21:55
Xylenes, Total	ND		0.0030	mg/L	1	09-Jun-2015 21:55
Surr: 1,2-Dichloroethane-d4	*123*		*71-125*	*%REC*	*1*	*09-Jun-2015 21:55*
Surr: 4-Bromofluorobenzene	*106*		*70-125*	*%REC*	*1*	*09-Jun-2015 21:55*
Surr: Dibromofluoromethane	*118*		*74-125*	*%REC*	*1*	*09-Jun-2015 21:55*
Surr: Toluene-d8	*122*		*75-125*	*%REC*	*1*	*09-Jun-2015 21:55*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-13-060115
Collection Date: 01-Jun-2015 13:42

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-14
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**362**		**20.0**	**mg/L**	40	11-Jun-2015 19:35
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	09-Jun-2015 22:23
Toluene	ND		0.0010	mg/L	1	09-Jun-2015 22:23
Ethylbenzene	ND		0.0010	mg/L	1	09-Jun-2015 22:23
Xylenes, Total	ND		0.0030	mg/L	1	09-Jun-2015 22:23
Surr: 1,2-Dichloroethane-d4	*123*		*71-125*	*%REC*	*1*	*09-Jun-2015 22:23*
Surr: 4-Bromofluorobenzene	*118*		*70-125*	*%REC*	*1*	*09-Jun-2015 22:23*
Surr: Dibromofluoromethane	*120*		*74-125*	*%REC*	*1*	*09-Jun-2015 22:23*
Surr: Toluene-d8	*122*		*75-125*	*%REC*	*1*	*09-Jun-2015 22:23*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-14-060115
Collection Date: 01-Jun-2015 14:10

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-15
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**502**		**20.0**	**mg/L**	40	11-Jun-2015 07:20
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	09-Jun-2015 15:16
Toluene	ND		0.0010	mg/L	1	09-Jun-2015 15:16
Ethylbenzene	ND		0.0010	mg/L	1	09-Jun-2015 15:16
Xylenes, Total	ND		0.0030	mg/L	1	09-Jun-2015 15:16
Surr: 1,2-Dichloroethane-d4	*120*		*71-125*	*%REC*	*1*	*09-Jun-2015 15:16*
Surr: 4-Bromofluorobenzene	*109*		*70-125*	*%REC*	*1*	*09-Jun-2015 15:16*
Surr: Dibromofluoromethane	*117*		*74-125*	*%REC*	*1*	*09-Jun-2015 15:16*
Surr: Toluene-d8	*120*		*75-125*	*%REC*	*1*	*09-Jun-2015 15:16*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-15-060115
Collection Date: 01-Jun-2015 14:21

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-16
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**407**		**20.0**	**mg/L**	40	11-Jun-2015 07:42
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	09-Jun-2015 19:36
Toluene	ND		0.0010	mg/L	1	09-Jun-2015 19:36
Ethylbenzene	ND		0.0010	mg/L	1	09-Jun-2015 19:36
Xylenes, Total	ND		0.0030	mg/L	1	09-Jun-2015 19:36
Surr: 1,2-Dichloroethane-d4	*120*		*71-125*	*%REC*	*1*	*09-Jun-2015 19:36*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*09-Jun-2015 19:36*
Surr: Dibromofluoromethane	*121*		*74-125*	*%REC*	*1*	*09-Jun-2015 19:36*
Surr: Toluene-d8	*120*		*75-125*	*%REC*	*1*	*09-Jun-2015 19:36*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: MW-16-060115
Collection Date: 01-Jun-2015 14:37

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-17
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**458**		**20.0**	**mg/L**	40	11-Jun-2015 08:47
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	ND		0.0010	mg/L	1	11-Jun-2015 11:30
Toluene	ND		0.0010	mg/L	1	11-Jun-2015 11:30
Ethylbenzene	ND		0.0010	mg/L	1	11-Jun-2015 11:30
Xylenes, Total	ND		0.0030	mg/L	1	11-Jun-2015 11:30
Surr: 1,2-Dichloroethane-d4	*112*		*71-125*	*%REC*	*1*	*11-Jun-2015 11:30*
Surr: 4-Bromofluorobenzene	*105*		*70-125*	*%REC*	*1*	*11-Jun-2015 11:30*
Surr: Dibromofluoromethane	*112*		*74-125*	*%REC*	*1*	*11-Jun-2015 11:30*
Surr: Toluene-d8	*120*		*75-125*	*%REC*	*1*	*11-Jun-2015 11:30*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Sample ID: Duplicate-060115
Collection Date: 01-Jun-2015 00:00

ANALYTICAL REPORT
WorkOrder:HS15060324
Lab ID:HS15060324-18
Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**				Analyst: KHT
Chloride	**502**		**20.0**	**mg/L**	40	11-Jun-2015 09:09
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
Benzene	**0.015**		**0.0050**	**mg/L**	5	11-Jun-2015 09:48
Toluene	**0.0096**		**0.0050**	**mg/L**	5	11-Jun-2015 09:48
Ethylbenzene	**0.012**		**0.0050**	**mg/L**	5	11-Jun-2015 09:48
Xylenes, Total	**0.022**		**0.015**	**mg/L**	5	11-Jun-2015 09:48
Surr: 1,2-Dichloroethane-d4	*89.3*		*71-125*	*%REC*	*5*	*11-Jun-2015 09:48*
Surr: 4-Bromofluorobenzene	*93.7*		*70-125*	*%REC*	*5*	*11-Jun-2015 09:48*
Surr: Dibromofluoromethane	*97.1*		*74-125*	*%REC*	*5*	*11-Jun-2015 09:48*
Surr: Toluene-d8	*97.3*		*75-125*	*%REC*	*5*	*11-Jun-2015 09:48*

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R255891	**Test Name :** LOW LEVEL VOLATILES BY SW8260C				**Matrix:** Groundwater	
HS15060324-07	MW-6-060115	01 Jun 2015 15:22			09 Jun 2015 20:04	1
HS15060324-08	MW-7-060115	01 Jun 2015 15:35			09 Jun 2015 20:33	1
HS15060324-12	MW-11-060115	01 Jun 2015 15:10			09 Jun 2015 21:28	1
HS15060324-13	MW-12-060115	01 Jun 2015 15:00			09 Jun 2015 21:55	1
HS15060324-14	MW-13-060115	01 Jun 2015 13:42			09 Jun 2015 22:23	1
HS15060324-15	MW-14-060115	01 Jun 2015 14:10			09 Jun 2015 15:16	1
HS15060324-16	MW-15-060115	01 Jun 2015 14:21			09 Jun 2015 19:36	1
Batch ID R255978	**Test Name :** LOW LEVEL VOLATILES BY SW8260C				**Matrix:** Groundwater	
HS15060324-17	MW-16-060115	01 Jun 2015 14:37			11 Jun 2015 11:30	1
Batch ID R256012	**Test Name :** LOW LEVEL VOLATILES BY SW8260C				**Matrix:** Groundwater	
HS15060324-02	MW-1-060115	01 Jun 2015 15:45			11 Jun 2015 03:19	1
HS15060324-03	MW-2-060115	01 Jun 2015 16:15			11 Jun 2015 04:41	25
HS15060324-03	MW-2-060115	01 Jun 2015 16:15			11 Jun 2015 04:13	1
HS15060324-04	MW-3-060115	01 Jun 2015 16:36			11 Jun 2015 05:37	50
HS15060324-04	MW-3-060115	01 Jun 2015 16:36			11 Jun 2015 05:09	5
HS15060324-05	MW-4-060115	01 Jun 2015 17:18			11 Jun 2015 06:32	50
HS15060324-05	MW-4-060115	01 Jun 2015 17:18			11 Jun 2015 06:04	5
HS15060324-06	MW-5-060115	01 Jun 2015 16:46			11 Jun 2015 07:28	50
HS15060324-06	MW-5-060115	01 Jun 2015 16:46			11 Jun 2015 07:00	5
HS15060324-10	MW-9-060115	01 Jun 2015 17:26			11 Jun 2015 08:24	50
HS15060324-11	MW-10-060115	01 Jun 2015 17:00			11 Jun 2015 09:20	50
HS15060324-11	MW-10-060115	01 Jun 2015 17:00			11 Jun 2015 08:52	5
HS15060324-18	Duplicate-060115	01 Jun 2015 00:00			11 Jun 2015 09:48	5
Batch ID R256022	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS15060324-02	MW-1-060115	01 Jun 2015 15:45			11 Jun 2015 00:50	40
HS15060324-03	MW-2-060115	01 Jun 2015 16:15			11 Jun 2015 01:11	40
HS15060324-04	MW-3-060115	01 Jun 2015 16:36			11 Jun 2015 01:33	40
HS15060324-05	MW-4-060115	01 Jun 2015 17:18			11 Jun 2015 01:55	40
HS15060324-06	MW-5-060115	01 Jun 2015 16:46			11 Jun 2015 02:17	40
HS15060324-07	MW-6-060115	01 Jun 2015 15:22			11 Jun 2015 02:38	40
HS15060324-08	MW-7-060115	01 Jun 2015 15:35			11 Jun 2015 03:00	40
HS15060324-09	MW-8-060115	01 Jun 2015 13:22			11 Jun 2015 03:22	40
HS15060324-10	MW-9-060115	01 Jun 2015 17:26			11 Jun 2015 03:43	40
HS15060324-11	MW-10-060115	01 Jun 2015 17:00			11 Jun 2015 04:05	40

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R256058	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS15060324-12	MW-11-060115	01 Jun 2015 15:10			11 Jun 2015 18:52	40
HS15060324-13	MW-12-060115	01 Jun 2015 15:00			11 Jun 2015 19:13	40
HS15060324-14	MW-13-060115	01 Jun 2015 13:42			11 Jun 2015 19:35	40
HS15060324-15	MW-14-060115	01 Jun 2015 14:10			11 Jun 2015 07:20	40
HS15060324-16	MW-15-060115	01 Jun 2015 14:21			11 Jun 2015 07:42	40
HS15060324-17	MW-16-060115	01 Jun 2015 14:37			11 Jun 2015 08:47	40
HS15060324-18	Duplicate-060115	01 Jun 2015 00:00			11 Jun 2015 09:09	40
Batch ID R256061	**Test Name :** LOW LEVEL VOLATILES BY SW8260C				**Matrix:** Groundwater	
HS15060324-09	MW-8-060115	01 Jun 2015 13:22			12 Jun 2015 00:28	1
Batch ID R257227	**Test Name :** LOW LEVEL VOLATILES BY SW8260C				**Matrix:** Water	
HS15060324-01	TB-052215-34	01 Jun 2015 14:00			01 Jul 2015 11:55	1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R255891 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150609** Units: **ug/L** Analysis Date: **09-Jun-2015 12:27**
Client ID: Run ID: **VOA4_255891** SeqNo: **3313851** 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	*59.39*	*1.0*	*50*	*0*	*119*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*57.77*	*1.0*	*50*	*0*	*116*	*70 - 125*				
Surr: Dibromofluoromethane	*58.92*	*1.0*	*50*	*0*	*118*	*74 - 125*				
Surr: Toluene-d8	*58.45*	*1.0*	*50*	*0*	*117*	*75 - 125*				

LCS Sample ID: **VLCSW-150609** Units: **ug/L** Analysis Date: **09-Jun-2015 11:32**
Client ID: Run ID: **VOA4_255891** SeqNo: **3313850** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.35	1.0	50	0	92.7	80 - 120				
Ethylbenzene	46.16	1.0	50	0	92.3	80 - 120				
Toluene	45.01	1.0	50	0	90.0	75 - 121				
Xylenes, Total	136.9	3.0	150	0	91.3	79 - 124				
Surr: 1,2-Dichloroethane-d4	*55.34*	*1.0*	*50*	*0*	*111*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.69*	*1.0*	*50*	*0*	*97.4*	*70 - 125*				
Surr: Dibromofluoromethane	*56.8*	*1.0*	*50*	*0*	*114*	*74 - 125*				
Surr: Toluene-d8	*52.15*	*1.0*	*50*	*0*	*104*	*75 - 125*				

MS Sample ID: **HS15060309-04MS** Units: **ug/L** Analysis Date: **09-Jun-2015 14:19**
Client ID: Run ID: **VOA4_255891** SeqNo: **3313855** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.09	1.0	50	0	98.2	80 - 120				
Ethylbenzene	47.93	1.0	50	0	95.9	80 - 120				
Toluene	47.82	1.0	50	0	95.6	75 - 121				
Xylenes, Total	143.9	3.0	150	0	96.0	80 - 124				
Surr: 1,2-Dichloroethane-d4	*58.89*	*1.0*	*50*	*0*	*118*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*53.43*	*1.0*	*50*	*0*	*107*	*70 - 125*				
Surr: Dibromofluoromethane	*59.89*	*1.0*	*50*	*0*	*120*	*74 - 125*				
Surr: Toluene-d8	*54.66*	*1.0*	*50*	*0*	*109*	*75 - 125*				

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

Revision: 1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R255891 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060309-04MSD** Units: **ug/L** Analysis Date: **09-Jun-2015 14:47**
Client ID: Run ID: **VOA4_255891** SeqNo: **3313856** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	50.33	1.0	50	0	101	80 - 120	49.09	2.49	20	
Ethylbenzene	50.01	1.0	50	0	100	80 - 120	47.93	4.25	20	
Toluene	51.84	1.0	50	0	104	75 - 121	47.82	8.06	20	
Xylenes, Total	148.1	3.0	150	0	98.7	80 - 124	143.9	2.84	20	
Surr: 1,2-Dichloroethane-d4	*57.26*	*1.0*	*50*	*0*	*115*	*71 - 125*	*58.89*	*2.8*	*20*	
Surr: 4-Bromofluorobenzene	*55.52*	*1.0*	*50*	*0*	*111*	*70 - 125*	*53.43*	*3.83*	*20*	
Surr: Dibromofluoromethane	*58.04*	*1.0*	*50*	*0*	*116*	*74 - 125*	*59.89*	*3.14*	*20*	
Surr: Toluene-d8	*59.68*	*1.0*	*50*	*0*	*119*	*75 - 125*	*54.66*	*8.78*	*20*	

The following samples were anayzed in this batch: HS15060324-07 HS15060324-08 HS15060324-12 HS15060324-13 HS15060324-14 HS15060324-15 HS15060324-16

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R255978 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150610** Units: **ug/L** Analysis Date: **11-Jun-2015 03:24**
Client ID: Run ID: **VOA4_255978** SeqNo: **3315748** 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	*56.9*	*1.0*	*50*	*0*	*114*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*54.29*	*1.0*	*50*	*0*	*109*	*70 - 125*				
Surr: Dibromofluoromethane	*54.15*	*1.0*	*50*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*62*	*1.0*	*50*	*0*	*124*	*75 - 125*				

LCS Sample ID: **VLCSW-150610** Units: **ug/L** Analysis Date: **11-Jun-2015 02:31**
Client ID: Run ID: **VOA4_255978** SeqNo: **3315764** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.91	1.0	50	0	97.8	80 - 120				
Ethylbenzene	49.15	1.0	50	0	98.3	80 - 120				
Toluene	51.29	1.0	50	0	103	75 - 121				
Xylenes, Total	150.3	3.0	150	0	100	79 - 124				
Surr: 1,2-Dichloroethane-d4	*55.4*	*1.0*	*50*	*0*	*111*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*56.71*	*1.0*	*50*	*0*	*113*	*70 - 125*				
Surr: Dibromofluoromethane	*56.61*	*1.0*	*50*	*0*	*113*	*74 - 125*				
Surr: Toluene-d8	*60.05*	*1.0*	*50*	*0*	*120*	*75 - 125*				

MS Sample ID: **HS15060282-01MS** Units: **ug/L** Analysis Date: **11-Jun-2015 04:44**
Client ID: Run ID: **VOA4_255978** SeqNo: **3315751** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	53.4	1.0	50	7.843	91.1	80 - 120				
Ethylbenzene	47.24	1.0	50	0	94.5	80 - 120				
Toluene	48.14	1.0	50	0	96.3	75 - 121				
Xylenes, Total	141.8	3.0	150	0	94.5	80 - 124				
Surr: 1,2-Dichloroethane-d4	*57.99*	*1.0*	*50*	*0*	*116*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*53.21*	*1.0*	*50*	*0*	*106*	*70 - 125*				
Surr: Dibromofluoromethane	*56.97*	*1.0*	*50*	*0*	*114*	*74 - 125*				
Surr: Toluene-d8	*59.53*	*1.0*	*50*	*0*	*119*	*75 - 125*				

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R255978 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060282-01MSD** Units: **ug/L** Analysis Date: **11-Jun-2015 05:11**
Client ID: Run ID: **VOA4_255978** SeqNo: **3315752** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	57.29	1.0	50	7.843	98.9	80 - 120	53.4	7.03	20	
Ethylbenzene	50.76	1.0	50	0	102	80 - 120	47.24	7.19	20	
Toluene	51.76	1.0	50	0	104	75 - 121	48.14	7.24	20	
Xylenes, Total	155.9	3.0	150	0	104	80 - 124	141.8	9.46	20	
Surr: 1,2-Dichloroethane-d4	*56.8*	*1.0*	*50*	*0*	*114*	*71 - 125*	*57.99*	*2.07*	*20*	
Surr: 4-Bromofluorobenzene	*52.97*	*1.0*	*50*	*0*	*106*	*70 - 125*	*53.21*	*0.469*	*20*	
Surr: Dibromofluoromethane	*58*	*1.0*	*50*	*0*	*116*	*74 - 125*	*56.97*	*1.79*	*20*	
Surr: Toluene-d8	*59.11*	*1.0*	*50*	*0*	*118*	*75 - 125*	*59.53*	*0.724*	*20*	

The following samples were anayzed in this batch: HS15060324-17

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

Revision: 1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R256012 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150610** Units: **ug/L** Analysis Date: **11-Jun-2015 00:19**
Client ID: Run ID: **VOA2_256012** SeqNo: **3316286** 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	*46.47*	*1.0*	*50*	*0*	*92.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.7*	*1.0*	*50*	*0*	*95.4*	*70 - 125*				
Surr: Dibromofluoromethane	*51.69*	*1.0*	*50*	*0*	*103*	*74 - 125*				
Surr: Toluene-d8	*48.01*	*1.0*	*50*	*0*	*96.0*	*75 - 125*				

LCS Sample ID: **VLCSW-150610** Units: **ug/L** Analysis Date: **10-Jun-2015 23:27**
Client ID: Run ID: **VOA2_256012** SeqNo: **3316285** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.11	1.0	50	0	92.2	80 - 120				
Ethylbenzene	48.43	1.0	50	0	96.9	80 - 120				
Toluene	45.32	1.0	50	0	90.6	75 - 121				
Xylenes, Total	142.5	3.0	150	0	95.0	79 - 124				
Surr: 1,2-Dichloroethane-d4	*43.98*	*1.0*	*50*	*0*	*88.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.34*	*1.0*	*50*	*0*	*94.7*	*70 - 125*				
Surr: Dibromofluoromethane	*50.31*	*1.0*	*50*	*0*	*101*	*74 - 125*				
Surr: Toluene-d8	*46.93*	*1.0*	*50*	*0*	*93.9*	*75 - 125*				

MS Sample ID: **HS15060162-01MS** Units: **ug/L** Analysis Date: **11-Jun-2015 01:11**
Client ID: Run ID: **VOA2_256012** SeqNo: **3316288** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.29	1.0	50	0	92.6	80 - 120				
Ethylbenzene	49	1.0	50	0	98.0	80 - 120				
Toluene	45.42	1.0	50	0	90.8	75 - 121				
Xylenes, Total	142.2	3.0	150	0	94.8	80 - 124				
Surr: 1,2-Dichloroethane-d4	*45.43*	*1.0*	*50*	*0*	*90.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.77*	*1.0*	*50*	*0*	*95.5*	*70 - 125*				
Surr: Dibromofluoromethane	*49.31*	*1.0*	*50*	*0*	*98.6*	*74 - 125*				
Surr: Toluene-d8	*47.23*	*1.0*	*50*	*0*	*94.5*	*75 - 125*				

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R256012 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15060162-01MSD** Units: **ug/L** Analysis Date: **11-Jun-2015 01:36**
Client ID: Run ID: **VOA2_256012** SeqNo: **3316289** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	45.04	1.0	50	0	90.1	80 - 120	46.29	2.74	20	
Ethylbenzene	48.12	1.0	50	0	96.2	80 - 120	49	1.81	20	
Toluene	43.67	1.0	50	0	87.3	75 - 121	45.42	3.93	20	
Xylenes, Total	136.7	3.0	150	0	91.1	80 - 124	142.2	3.94	20	
Surr: 1,2-Dichloroethane-d4	*44.45*	*1.0*	*50*	*0*	*88.9*	*71 - 125*	*45.43*	*2.17*	*20*	
Surr: 4-Bromofluorobenzene	*48.97*	*1.0*	*50*	*0*	*97.9*	*70 - 125*	*47.77*	*2.48*	*20*	
Surr: Dibromofluoromethane	*49.37*	*1.0*	*50*	*0*	*98.7*	*74 - 125*	*49.31*	*0.127*	*20*	
Surr: Toluene-d8	*47.22*	*1.0*	*50*	*0*	*94.4*	*75 - 125*	*47.23*	*0.00761*	*20*	

The following samples were anayzed in this batch:

HS15060324-02	HS15060324-03	HS15060324-04	HS15060324-05
HS15060324-06	HS15060324-10	HS15060324-11	HS15060324-18

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

Revision: 1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R256061 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150611** Units: **ug/L** Analysis Date: **11-Jun-2015 14:54**
Client ID: Run ID: **VOA4_256061** SeqNo: **3317331** 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	*53.45*	*1.0*	*50*	*0*	*107*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*52.61*	*1.0*	*50*	*0*	*105*	*70 - 125*				
Surr: Dibromofluoromethane	*54.27*	*1.0*	*50*	*0*	*109*	*74 - 125*				
Surr: Toluene-d8	*60.2*	*1.0*	*50*	*0*	*120*	*75 - 125*				

LCS Sample ID: **VLCSW-150611** Units: **ug/L** Analysis Date: **11-Jun-2015 13:58**
Client ID: Run ID: **VOA4_256061** SeqNo: **3317330** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	51.49	1.0	50	0	103	80 - 120				
Ethylbenzene	51.12	1.0	50	0	102	80 - 120				
Toluene	51.77	1.0	50	0	104	75 - 121				
Xylenes, Total	153.7	3.0	150	0	102	79 - 124				
Surr: 1,2-Dichloroethane-d4	*52.92*	*1.0*	*50*	*0*	*106*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*54.65*	*1.0*	*50*	*0*	*109*	*70 - 125*				
Surr: Dibromofluoromethane	*54.37*	*1.0*	*50*	*0*	*109*	*74 - 125*				
Surr: Toluene-d8	*60.05*	*1.0*	*50*	*0*	*120*	*75 - 125*				

MS Sample ID: **HS15060317-06MS** Units: **ug/L** Analysis Date: **11-Jun-2015 18:18**
Client ID: Run ID: **VOA4_256061** SeqNo: **3317338** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.25	1.0	50	0.4982	95.5	80 - 120				
Ethylbenzene	49.41	1.0	50	0.532	97.8	80 - 120				
Toluene	49.17	1.0	50	0	98.3	75 - 121				
Xylenes, Total	144.5	3.0	150	0	96.3	80 - 124				
Surr: 1,2-Dichloroethane-d4	*53.21*	*1.0*	*50*	*0*	*106*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*55.54*	*1.0*	*50*	*0*	*111*	*70 - 125*				
Surr: Dibromofluoromethane	*54.68*	*1.0*	*50*	*0*	*109*	*74 - 125*				
Surr: Toluene-d8	*59.02*	*1.0*	*50*	*0*	*118*	*75 - 125*				

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R256061 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060317-06MSD** Units: **ug/L** Analysis Date: **11-Jun-2015 18:48**
Client ID: Run ID: **VOA4_256061** SeqNo: **3317339** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	48.12	1.0	50	0.4982	95.2	80 - 120	48.25	0.273	20	
Ethylbenzene	49.88	1.0	50	0.532	98.7	80 - 120	49.41	0.935	20	
Toluene	50.84	1.0	50	0	102	75 - 121	49.17	3.33	20	
Xylenes, Total	148.1	3.0	150	0	98.8	80 - 124	144.5	2.49	20	
Surr: 1,2-Dichloroethane-d4	*52.89*	*1.0*	*50*	*0*	*106*	*71 - 125*	*53.21*	*0.609*	*20*	
Surr: 4-Bromofluorobenzene	*55.96*	*1.0*	*50*	*0*	*112*	*70 - 125*	*55.54*	*0.752*	*20*	
Surr: Dibromofluoromethane	*55.66*	*1.0*	*50*	*0*	*111*	*74 - 125*	*54.68*	*1.78*	*20*	
Surr: Toluene-d8	*60.03*	*1.0*	*50*	*0*	*120*	*75 - 125*	*59.02*	*1.7*	*20*	

The following samples were anayzed in this batch: HS15060324-09

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

Revision: 1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R257227 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150701** Units: **ug/L** Analysis Date: **01-Jul-2015 11:30**
Client ID: Run ID: **VOA2_257227** SeqNo: **3341109** 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	*53.63*	*1.0*	*50*	*0*	*107*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.19*	*1.0*	*50*	*0*	*98.4*	*70 - 125*				
Surr: Dibromofluoromethane	*54.97*	*1.0*	*50*	*0*	*110*	*74 - 125*				
Surr: Toluene-d8	*50.11*	*1.0*	*50*	*0*	*100*	*75 - 125*				

LCS Sample ID: **VLCSW-150701** Units: **ug/L** Analysis Date: **01-Jul-2015 10:14**
Client ID: Run ID: **VOA2_257227** SeqNo: **3341108** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.9	1.0	50	0	93.8	80 - 120				
Ethylbenzene	46.33	1.0	50	0	92.7	80 - 120				
Toluene	45.93	1.0	50	0	91.9	75 - 121				
Xylenes, Total	140.3	3.0	150	0	93.5	79 - 124				
Surr: 1,2-Dichloroethane-d4	*52.25*	*1.0*	*50*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.88*	*1.0*	*50*	*0*	*99.8*	*70 - 125*				
Surr: Dibromofluoromethane	*53.11*	*1.0*	*50*	*0*	*106*	*74 - 125*				
Surr: Toluene-d8	*50.1*	*1.0*	*50*	*0*	*100*	*75 - 125*				

MS Sample ID: **HS15061272-02MS** Units: **ug/L** Analysis Date: **01-Jul-2015 12:46**
Client ID: Run ID: **VOA2_257227** SeqNo: **3341112** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	489.6	10	500	0	97.9	80 - 120				
Ethylbenzene	488.2	10	500	0	97.6	80 - 120				
Toluene	484.3	10	500	0	96.9	75 - 121				
Xylenes, Total	1449	30	1500	0	96.6	80 - 124				
Surr: 1,2-Dichloroethane-d4	*525.9*	*10*	*500*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*505.2*	*10*	*500*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*539.6*	*10*	*500*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*506.8*	*10*	*500*	*0*	*101*	*75 - 125*				

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R257227 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15061272-02MSD** Units: **ug/L** Analysis Date: **01-Jul-2015 13:11**
Client ID: Run ID: **VOA2_257227** SeqNo: **3341113** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	471	10	500	0	94.2	80 - 120	489.6	3.88	20	
Ethylbenzene	471.9	10	500	0	94.4	80 - 120	488.2	3.39	20	
Toluene	467.8	10	500	0	93.6	75 - 121	484.3	3.47	20	
Xylenes, Total	1407	30	1500	0	93.8	80 - 124	1449	2.9	20	
Surr: 1,2-Dichloroethane-d4	*516.9*	*10*	*500*	*0*	*103*	*71 - 125*	*525.9*	*1.73*	*20*	
Surr: 4-Bromofluorobenzene	*501.4*	*10*	*500*	*0*	*100*	*70 - 125*	*505.2*	*0.766*	*20*	
Surr: Dibromofluoromethane	*532.6*	*10*	*500*	*0*	*107*	*74 - 125*	*539.6*	*1.3*	*20*	
Surr: Toluene-d8	*500.9*	*10*	*500*	*0*	*100*	*75 - 125*	*506.8*	*1.16*	*20*	

The following samples were anayzed in this batch: HS15060324-01

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

Revision: 1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R256022 **Instrument: ICS3K2** **Method: SW9056**

MBLK Sample ID: **WBLKW1-061015** Units: **mg/L** Analysis Date: **10-Jun-2015 14:57**
Client ID: Run ID: **ICS3K2_256022** SeqNo: **3316451** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								

LCS Sample ID: **WLCSW1-061015** Units: **mg/L** Analysis Date: **10-Jun-2015 15:18**
Client ID: Run ID: **ICS3K2_256022** SeqNo: **3316452** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.47	0.500	20	0	102	80 - 120				

LCSD Sample ID: **WLCSDW1-061015** Units: **mg/L** Analysis Date: **10-Jun-2015 15:40**
Client ID: Run ID: **ICS3K2_256022** SeqNo: **3316453** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.46	0.500	20	0	102	80 - 120	20.47	0.0244	20	

MS Sample ID: **HS15060445-01MS** Units: **mg/L** Analysis Date: **10-Jun-2015 17:57**
Client ID: Run ID: **ICS3K2_256022** SeqNo: **3316455** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	239.6	0.500	10	237	26.5	80 - 120				SEO

MS Sample ID: **HS15060224-01MS** Units: **mg/L** Analysis Date: **10-Jun-2015 23:01**
Client ID: Run ID: **ICS3K2_256022** SeqNo: **3316469** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1328	50.0	1000	309.4	102	80 - 120				

MSD Sample ID: **HS15060445-01MSD** Units: **mg/L** Analysis Date: **10-Jun-2015 18:19**
Client ID: Run ID: **ICS3K2_256022** SeqNo: **3316456** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	240.2	0.500	10	237	32.4	80 - 120	239.6	0.244	20	SEO

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

Revision: 1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R256022 **Instrument: ICS3K2** **Method: SW9056**

MSD Sample ID: **HS15060224-01MSD** Units: **mg/L** Analysis Date: **10-Jun-2015 23:23**
Client ID: Run ID: **ICS3K2_256022** SeqNo: **3316470** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1331	50.0	1000	309.4	102	80 - 120	1328	0.214	20	

The following samples were anayzed in this batch:

HS15060324-02	HS15060324-03	HS15060324-04	HS15060324-05
HS15060324-06	HS15060324-07	HS15060324-08	HS15060324-09
HS15060324-10	HS15060324-11		

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: R256058 **Instrument: ICS3K2** **Method: SW9056**

MBLK Sample ID: **WBLKW2-061015** Units: **mg/L** Analysis Date: **11-Jun-2015 06:15**
Client ID: Run ID: **ICS3K2_256058** SeqNo: **3317195** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								

LCS Sample ID: **WLCSW2-061015** Units: **mg/L** Analysis Date: **11-Jun-2015 06:37**
Client ID: Run ID: **ICS3K2_256058** SeqNo: **3317196** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.74	0.500	20	0	109	80 - 120				

LCSD Sample ID: **WLCSDW2-061015** Units: **mg/L** Analysis Date: **11-Jun-2015 06:59**
Client ID: Run ID: **ICS3K2_256058** SeqNo: **3317197** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.73	0.500	20	0	109	80 - 120	21.74	0.0874	20	

MS Sample ID: **HS15060490-02MS** Units: **mg/L** Analysis Date: **11-Jun-2015 15:36**
Client ID: Run ID: **ICS3K2_256058** SeqNo: **3317213** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	270.4	0.500	10	265.6	48.1	80 - 120				SEO

MS Sample ID: **HS15060324-16MS** Units: **mg/L** Analysis Date: **11-Jun-2015 08:04**
Client ID: **MW-15-060115** Run ID: **ICS3K2_256058** SeqNo: **3317200** PrepDate: DF: **40**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	818.7	20.0	400	407	103	80 - 120				

MSD Sample ID: **HS15060490-02MSD** Units: **mg/L** Analysis Date: **11-Jun-2015 15:58**
Client ID: Run ID: **ICS3K2_256058** SeqNo: **3317214** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	270.5	0.500	10	265.6	48.8	80 - 120	270.4	0.0277	20	SEO

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

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: HS15060324

QC BATCH REPORT

Batch ID: **R256058** **Instrument:** **ICS3K2** **Method:** **SW9056**

MSD Sample ID: **HS15060324-16MSD** Units: **mg/L** Analysis Date: **11-Jun-2015 08:25**
Client ID: **MW-15-060115** Run ID: **ICS3K2_256058** SeqNo: **3317201** PrepDate: DF: **40**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	816.1	20.0	400	407	102	80 - 120	818.7	0.322	20	

The following samples were anayzed in this batch: HS15060324-12 HS15060324-13 HS15060324-14 HS15060324-15 HS15060324-16 HS15060324-17 HS15060324-18

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

Revision: 1

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
WorkOrder: **HS15060324**

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	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	31-Jul-2015
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-15-15	30-Apr-2016

Client: Tasman Geosciences
Project: RR Extension Pipeline Release
Work Order: HS15060324

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15060324-01	TB-052215-34	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-02	MW-1-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-02	MW-1-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-03	MW-2-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-03	MW-2-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-04	MW-3-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-04	MW-3-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-05	MW-4-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-05	MW-4-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-06	MW-5-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-06	MW-5-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-07	MW-6-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-07	MW-6-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-08	MW-7-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-08	MW-7-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-09	MW-8-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-09	MW-8-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-10	MW-9-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-10	MW-9-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-11	MW-10-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-11	MW-10-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-12	MW-11-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-12	MW-11-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-13	MW-12-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-13	MW-12-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-14	MW-13-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-14	MW-13-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-15	MW-14-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-15	MW-14-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-16	MW-15-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-16	MW-15-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-17	MW-16-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-17	MW-16-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3
HS15060324-18	Duplicate-060115	Login	6/6/2015 4:02:30 PM	CGG	7E
HS15060324-18	Duplicate-060115	Login	6/6/2015 4:02:30 PM	CGG	VW-3

ALS Group USA, Corp Date: 01-Jul-15

Sample Receipt Checklist

Client Name: Tasman Geosciences Date/Time Received: **06-Jun-2015 09:17**

Work Order: HS15060324 Received by: **CGG**

Checklist completed by: *Corey Grandits* eSignature 6-Jun-2015 Date Reviewed by: *Sonia West* eSignature 10-Jun-2015 Date

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.2C/3.7C c/uc	5	
Cooler(s)/Kit(s):	24347		
Date/Time sample(s) sent to storage:	06/06/2015 16:20		
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: 0 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

Chain of Custody Form

Page 1 of 2

COC ID: 104546

HS15060324

WV

Tasman Geosciences

RR Extension Pipeline Release

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	RR-Extension Pipeline Release
Work Order		Project Number	
Company Name	Tasman Geosciences	Bill To Company	DCP Midstream
Send Report To	Brian Humphrey	Invoice Attn	Steve Weathers
Address		Address	
City/State/Zip		City/State/Zip	
Phone	720-633-5143	Phone	
Fax		Fax	
e-Mail Address	bhumphrey@tasman-geo.com	e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Trip blank	06-01-15	14:00	DI	HCl/ICE	2	2										
2	MW-1-060115	"	15:45	GW	HCl/ICE	4	3	1									
3	MW-2-060115	"	16:15	GW	"	4	3	1									
4	MW-3-060115	"	16:36	GW	"	4	3	1									
5	MW-4-060115	"	17:18	GW	"	4	3	1									
6	MW-5-060115	"	16:46	GW	"	4	3	1									
7	MW-6-060115	"	15:22	GW	"	4	3	1									
8	MW-7-060115	"	15:35	GW	"	4	3	1									
9	MW-8-060115	"	13:22	GW	"	4	3	1									
10	MW-9-060115	"	17:26	GW	"	4	3	1									

BTEX (8260)
chloride (9056)

Sampler(s) Please Print & Sign

Shipment Method

Required Turnaround Time: (Check Box)

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
	06-03-15	13:00	FED EX	
Relinquished by:	Date:	Time:	Received by (Laboratory):	
				6/6/15 0917
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
347	UC	
2442469	3.2	
IRS		
UC=0.5		

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

ALS Environmental

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

Chain of Custody Form

Page 2 of 2

COC ID: 104545

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

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	R-R Extension Pipeline Release	A	BTEX (8260)
Work Order		Project Number		B	Chloride (9056)
Company Name	Tasman Geosciences	Bill To Company	DCP Midstream	C	
Send Report To		Invoice Attn	Steve Weathers	D	
Address		Address		E	
				F	
City/State/Zip		City/State/Zip		G	
Phone	720 [illegible] 633-5143	Phone		H	
Fax		Fax		I	
e-Mail Address	bhumphrey@tasman-geo.com	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-10-060115	06-01-15	17:00	GW	HCl/ICE	4	3	1									
2	MW-11-060115	06-01-15	15:10	GW	HCl/ICE	4	3	1									
3	MW-12-060115	06-01-15	15:00	"	"	4	3	1									
4	MW-13-060115	06-01-15	13:42	"	"	4	3	1									
5	MW-14-060115	06-01-15	14:10	"	"	4	3	1									
6	MW-15-060115	06-01-15	14:21	"	"	4	3	1									
7	MW-16-060115	06-01-15	14:37	"	"	4	3	1									
8	Duplicate-060115	06-01-15		"	"	4	3	1									
9																	
10																	

Sampler(s) Please Print & Sign | Shipment Method | Required Turnaround Time: (Check Box) | Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
[signature]	06-03-15	18:00	FedEx	
Relinquished by:	Date:	Time:	Received by (Laboratory): [signature] CC 6/6/15 0917	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
343	UC	
2424cg	3.2	
IR5		
CF=0.5		

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

CUSTODY SEAL

Date: 6/5/15 Time: 1748
Name: Elliot Dillon-Herzog
Company: Tasman

Seal Broken By: CG
Date: 6/6

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

CUSTODY SEAL

Date: 6/5/15 Time: 1748
Name: Elliot Dillon-Herzog
Company: Tasman

Seal Broken By: CG
Date: 6/6

TRK# 0215 8071 0710 5774

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO SGRA 24347 77099
TX-US IAH