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RECEIVED

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May 19, 2014

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

**RE: 1st Quarter 2014 Groundwater Results  
DCP Midstream, LP RR Ext. Pipeline Release (AP #55)  
Unit C, Section 19, Township 20 South, Range 37 East  
Lea County, New Mexico**

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, one copy of the 1st Quarter 2014 Groundwater Results for the DCP RR Ext. Pipeline Release located in Lea County, New Mexico (Unit C, Section 19, Township 20 South, Range 37 East).

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me [swwethers@dcpmidstream.com](mailto:swwethers@dcpmidstream.com).

Sincerely

**DCP Midstream, LP**

Stephen Weathers, PG  
Principal Environmental Specialist

cc: Geoffrey Leking, Hobbs District (Copy on CD)  
Environmental Files

# First Quarter 2014 Groundwater Monitoring and Activities Summary Report

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

Prepared for:



370 17<sup>th</sup> St., Suite 2500  
Denver, CO 80202

*Prepared by:*



6899 Pecos Street, Unit C  
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**May 9, 2014**

## Table of Contents

1. Introduction .....	1
2. Site Location and Background.....	1
3. Groundwater Monitoring.....	2
3.1 Groundwater and LNAPL Elevation Monitoring .....	2
3.2 Groundwater Quality Monitoring .....	2
3.3 Data Quality Assurance / Quality Control.....	3
4. Remediation Activities .....	4
4.1 Vacuum Enhanced LNAPL Recovery .....	4
4.2 LNAPL Collection Bailer .....	4
5. Conclusions .....	5
6. Recommendations .....	5

### Tables

1	First Quarter 2014 Summary of Groundwater Elevation Data
2	First Quarter 2014 Summary of BTEX and Chloride Concentrations in Groundwater

### Figures

1	Site Location
2	Site Map with Monitoring Well Locations
3	Groundwater Elevation Contour Map – February 27, 2014
4	Analytical Results Map – February 27, 2014

### Appendices

A	Historic Analytical Results – BTEX and Chloride Concentrations in Groundwater
B	Laboratory Analytical Results (Electronic Only)
	- Accutest Job #: D55464

## 1. Introduction

This report summarizes the groundwater monitoring and remediation activities conducted during the first quarter 2014 at the RR-Extension pipeline release (Site) in Lea County, New Mexico (Figure 1). Tasman Geosciences, LLC (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 and assessing the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons in the Site subsurface. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period on February 27, 2014.

## 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 historical 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. The historic monitoring data indicate the presence of LNAPL and dissolved-phase impacts in the area of the original release. Progressive installation of monitoring wells has delineated the area in which these impacts are observed.

Boring logs for the Site monitoring wells 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 first quarter 2014 groundwater monitoring event. Quarterly monitoring activities were conducted on February 27, 2014 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 first quarter 2014, groundwater levels were measured at sixteen Site monitoring well locations.

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]).

Groundwater and LNAPL measurements collected during the reporting period as well as historical elevations are presented in Table 1. A first quarter 2014 groundwater elevation contour map, included as Figure 3, indicates that groundwater flow at the Site trends to the southeast. A groundwater elevations range, average elevation change from the previous monitoring event, and the calculated hydraulic gradient at the Site are summarized in the table below.

**Summary of Measured Hydraulic Parameters**

	<b>First Quarter 2014 (2/27/14)</b>
Maximum Elevation (Well ID)	3505.09 (MW-13)
Minimum Elevation (Well ID)	3504.38 (MW-6)
Average Change from Previous Monitoring Event – All Wells	0.15 foot
Hydraulic Gradient (ft/ft) / (Well IDs)	0.0018 (MW-8 to MW-6)

LNAPL was detected at five location with thickness measurements ranging from 0.12-ft to 0.82-ft. The observed LNAPL thickness in these wells exhibited an average decrease of 0.13-ft from the previous monitoring event.

#### 3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well, groundwater samples were collected for each of the eleven monitoring wells that did not contain measurable LNAPL.

A minimum of three well casing volumes of groundwater were purged from each monitoring well prior to collecting groundwater samples. Groundwater samples were collected using dedicated polyethylene bailers, placed in clean laboratory supplied containers for the selected analytical methods, packed in an ice-filled cooler and maintained at approximately four degrees Celsius ( $^{\circ}\text{C}$ ) for transportation to the laboratory. Groundwater samples were then shipped under chain-of-custody procedures to Accutest Laboratories (Accutest) in Wheat Ridge, Colorado, 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 300.

Table 2 summarizes BTEX and chloride concentrations in groundwater samples collected during the reporting period. Historic analytical results up to and including the February 2014 event are included in Appendix A and the laboratory analytical report for the first quarter event 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 MW-1 and MW-2 were in exceedance of the New Mexico Water Quality Control Commission (NMWQCC) Standard.
- The remaining nine sample locations were below laboratory detection limits for BTEX in groundwater.
- LNAPL was detected at five locations as referenced in Section 3.1 above.
- Chloride was detected in all eleven of the sampled wells with concentrations ranging from 358 mg/L in MW-7 to 521 mg/L in MW-8. Chloride values in all of the wells exceeded the NMWQCC suggested guideline of 250 mg/L.

### **3.3 Data Quality Assurance / Quality Control**

A matrix spike / matrix spike duplicate (MS/MSD) and field duplicate sample (MW-1) were collected during the 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 first quarter 2014 include the following:

- A trip blank was not indicated on the laboratory data report or the sample log. Tasman has coordinated with the laboratory to prevent further oversight of trip blanks submitted.
- The field duplicate, collected at MW-1 indicated a Relative Percentage Difference (RPD) of 30% for benzene, which is slightly higher than a typical target maximum of 20%. Given that the

result for the duplicate is uniformly lower, the deviation is most likely a result of sample agitation while decanting sample from the bailer.

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

## 4. Remediation Activities

A vacuum enhanced recovery (VER) 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 LNAPL Recovery

VER was conducted at the Site on March 18, 2014 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 LNAPL/groundwater interface, thereby removing LNAPL, groundwater, and vapors from the subsurface.

The table below summarizes the wells, pre- and post-VER LNAPL thickness, duration, and recovered volume for the VER activities conducted during the first quarter 2014. The recovered LNAPL and groundwater was transported to and disposed of at the Cooper Disposal Facility in Hobbs, New Mexico.

Well ID	LNAPL Thickness [ft] (pre-VER)	Duration (hours)	Fluid Removal Volume (bbl*)	LNAPL Thickness [ft] (post-VER)
MW-3	0.12	1.25	Approx. 5 bbl	0.0
MW-4	0.33	3.25	Approx. 30 bbl	0.0
MW-5	0.76			0.0
MW-9	0.82	2.75	Approx. 25 bbl	0.0
MW-10	0.77			0.0
Total	2.8	7.25	60 bbl	0.0

Note:

bbl = barrel (42 gallons)

### 4.2 LNAPL Collection Bailer

A passive LNAPL collection bailer has been deployed at monitoring well MW-4. During the first quarter 2014 monitoring event, approximately 1 liter of LNAPL was recovered from the bailer. The LNAPL collection bailer was replaced within MW-4 at the level of the LNAPL/groundwater interface.

## 5. Conclusions

Comparison of the first quarter 2014 monitoring data and historic information provides the following general observations:

- The groundwater elevation beneath the Site has remained stable with minor seasonal and annual fluctuations since monitoring was initiated in 2008. There was no significant deviation from this trend during the reporting period.
- LNAPL persists in monitoring wells MW-3, MW-4, MW-5, MW-9 and MW-10, however the measured LNAPL thickness indicated an overall decrease from the previous quarter. Subsequent observations will be required to determine if the decrease is indicative of an overall decreasing trend.
- Benzene concentrations in exceedance of NMWQCC standards persist in MW-1 and MW-2. The remaining 9 sample locations exhibited BTEX concentrations below laboratory detection limits during the first quarter 2014 suggesting the dissolved phase petroleum hydrocarbon plume is stagnant, possibly due to attenuation, low permeability aquifer material, low hydraulic gradient, or a combination of these factors.

## 6. Recommendations

Based on evaluation of data from the first quarter 2014 and historical Site observations and monitoring results, recommendations for future activities include:

- Continue quarterly groundwater monitoring and sampling at the monitoring locations illustrated on Figure 2.
- Continue quarterly vacuum enhanced recovery events at all 5 Site monitoring wells containing measurable LNAPL.
- Continue to monitor and recover LNAPL from the passive collection bailer installed at MW-4.



## Tables

**TABLE 1**  
**FIRST QUARTER 2014**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**  
**RR-EXTENSION PIPELINE RELEASE**  
**LEA COUNTY, NEW MEXICO**

Location	Date	Depth to Groundwater (1) (feet)	Depth to Product (1) (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (2) (feet)	TOC Elevation (feet amsl)	Groundwater Elevation* (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-1	12/4/2012	29.75			39.05	3534.57	3504.82	0.00
MW-1	2/22/2013	29.62			39.05	3534.57	3504.95	0.13
MW-1	6/2/2013	29.60			39.05	3534.57	3504.97	0.02
MW-1	9/10/2013	29.89			39.05	3534.57	3504.68	-0.29
MW-1	12/3/2013	29.81			39.05	3534.57	3504.76	0.08
MW-1	2/27/2014	29.68			NM	3534.57	3504.89	0.13
MW-2	12/4/2012	30.50			39.81	3535.18	3504.68	0.01
MW-2	2/22/2013	30.39			39.81	3535.18	3504.79	0.11
MW-2	6/2/2013	30.35			39.81	3535.18	3504.83	0.04
MW-2	9/10/2013	30.68			39.81	3535.18	3504.50	-0.33
MW-2	12/3/2013	30.57			39.81	3535.18	3504.61	0.11
MW-2	2/27/2014	30.46			NM	3535.18	3504.72	0.11
MW-3*	12/4/2012	32.40	31.50	0.90		3536.57	3504.85	-0.02
MW-3*	2/22/2013	32.03	31.47	0.56		3536.57	3504.96	0.11
MW-3*	6/2/2013	31.83	31.50	0.33		3536.57	3504.99	0.03
MW-3*	9/10/2013	32.02	31.74	0.28		3536.57	3504.76	-0.23
MW-3*	12/3/2013	31.98	31.88	0.10		3537.57	3505.67	0.90
MW-3*	2/27/2014	31.78	31.66	0.12	NM	3537.57	3505.88	0.22
MW-4*	12/4/2012	31.60	30.62	0.98		3535.20	3504.34	0.09
MW-4*	2/22/2013	31.50	30.60	0.90		3535.20	3504.38	0.04
MW-4*	6/2/2013	31.12	30.54	0.58		3535.20	3504.52	0.14
MW-4*	9/10/2013	31.71	30.90	0.81		3535.20	3504.10	-0.42
MW-4*	12/3/2013	31.09	30.97	0.12		3536.20	3505.20	1.10
MW-4*	2/27/2014	31.18	30.85	0.33	NM	3536.20	3505.27	0.07
MW-5*	12/4/2012	32.31	31.18	1.13		3535.92	3504.46	-0.01
MW-5*	2/22/2013	31.98	31.14	0.84		3535.92	3504.57	0.11
MW-5*	6/2/2013	31.78	31.14	0.64		3535.92	3504.62	0.05
MW-5*	9/10/2013	32.35	31.37	0.98		3535.92	3504.31	-0.31
MW-5*	12/3/2013	32.42	31.39	1.03		3536.92	3505.27	0.97
MW-5*	2/27/2014	31.98	31.22	0.76	NM	3536.92	3505.51	0.24
MW-6	12/4/2012	31.81			40.35	3536.16	3504.35	-0.03
MW-6	2/22/2013	31.71			40.35	3536.16	3504.45	0.10
MW-6	6/2/2013	31.66			40.35	3536.16	3504.50	0.05
MW-6	9/10/2013	31.95			40.35	3536.16	3504.21	-0.29
MW-6	12/3/2013	31.91			40.35	3536.16	3504.25	0.04
MW-6	2/27/2014	31.78			NM	3536.16	3504.38	0.13
MW-7	12/4/2012	32.52			40.25	3537.09	3504.57	0.01
MW-7	2/22/2013	32.41			40.25	3537.09	3504.68	0.11
MW-7	6/2/2013	32.37			40.25	3537.09	3504.72	0.04
MW-7	9/10/2013	32.67			40.25	3537.09	3504.42	-0.30
MW-7	12/3/2013	32.62			40.25	3537.09	3504.47	0.05
MW-7	2/27/2014	32.48			NM	3537.09	3504.61	0.14

**TABLE 1**  
**FIRST QUARTER 2014**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**  
**RR-EXTENSION PIPELINE RELEASE**  
**LEA COUNTY, NEW MEXICO**

Location	Date	Depth to Groundwater (1) (feet)	Depth to Product (1) (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (2) (feet)	TOC Elevation (feet amsl)	Groundwater Elevation* (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-8	12/4/2012	31.45			39.42	3536.41	3504.96	0.00
MW-8	2/22/2013	31.33			39.42	3536.41	3505.08	0.12
MW-8	6/2/2013	31.31			39.42	3536.41	3505.10	0.02
MW-8	9/10/2013	31.60			39.42	3536.41	3504.81	-0.29
MW-8	12/3/2013	31.52			39.42	3536.41	3504.89	0.08
MW-8	2/27/2014	31.40			NM	3536.41	3505.01	0.12
MW-9*	12/4/2012	30.03	29.10	0.93		3534.20	3504.87	0.01
MW-9*	2/22/2013	29.83	29.02	0.81		3534.20	3504.98	0.11
MW-9*	6/2/2013	29.76	29.00	0.76		3534.20	3505.01	0.03
MW-9*	9/10/2013	30.28	29.26	1.02		3534.20	3504.69	-0.33
MW-9*	12/3/2013	30.33	29.27	1.06		3535.20	3505.67	0.98
MW-9*	2/27/2014	29.91	29.09	0.82	NM	3535.20	3505.91	0.24
MW-10*	12/4/2012	29.80	29.54	0.26		3534.21	3504.61	0.00
MW-10*	2/22/2013	29.60	29.44	0.16		3534.21	3504.73	0.13
MW-10*	6/2/2013	29.53	29.40	0.13		3534.21	3504.78	0.05
MW-10*	9/10/2013	29.93	29.71	0.22		3534.21	3504.45	-0.33
MW-10*	12/3/2013	30.65	29.52	1.13		3534.21	3504.41	-0.04
MW-10*	2/27/2014	30.13	29.36	0.77	NM	3534.21	3504.66	0.25
MW-11	12/4/2012	31.73			39.69	3536.19	3504.46	-0.02
MW-11	2/22/2013	31.62			39.69	3536.19	3504.57	0.11
MW-11	6/2/2013	31.56			39.69	3536.19	3504.63	0.06
MW-11	9/10/2013	31.91			39.69	3536.19	3504.28	-0.35
MW-11	12/3/2013	31.83			39.69	3536.19	3504.36	0.08
MW-11	2/27/2014	31.71			NM	3536.19	3504.48	0.12
MW-12	12/4/2012	30.00			38.56	3534.47	3504.47	-0.03
MW-12	2/22/2013	29.88			38.56	3534.47	3504.59	0.12
MW-12	6/2/2013	29.82			38.56	3534.47	3504.65	0.06
MW-12	9/10/2013	30.16			38.56	3534.47	3504.31	-0.34
MW-12	12/3/2013	30.09			38.56	3534.47	3504.38	0.07
MW-12	2/27/2014	29.96			NM	3534.47	3504.51	0.13
MW-13	12/4/2012	31.03			39.31	3536.08	3505.05	0.00
MW-13	2/22/2013	29.94			39.31	3536.08	3506.14	1.09
MW-13	6/2/2013	30.90			39.31	3536.08	3505.18	-0.96
MW-13	9/10/2013	31.20			39.31	3536.08	3504.88	-0.30
MW-13	12/3/2013	31.10			39.31	3536.08	3504.98	0.10
MW-13	2/27/2014	30.99			NM	3536.08	3505.09	0.11
MW-14	12/4/2012	30.18			42.05	3534.96	3504.78	-0.01
MW-14	2/22/2013	30.10			42.05	3534.96	3504.86	0.08
MW-14	6/2/2013	30.02			42.05	3534.96	3504.94	0.08
MW-14	9/10/2013	30.35			42.05	3534.96	3504.61	-0.33
MW-14	12/3/2013	30.27			42.05	3534.96	3504.69	0.08
MW-14	2/27/2014	30.14			NM	3534.96	3504.82	0.13

**TABLE 1**  
**FIRST QUARTER 2014**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**  
**RR-EXTENSION PIPELINE RELEASE**  
**LEA COUNTY, NEW MEXICO**

Location	Date	Depth to Groundwater (1) (feet)	Depth to Product (1) (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (2) (feet)	TOC Elevation (feet amsl)	Groundwater Elevation* (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-15	12/4/2012	30.40			36.55	3534.90	3504.50	0.00
MW-15	2/22/2013	30.29			36.55	3534.90	3504.61	0.11
MW-15	6/2/2013	30.23			36.55	3534.90	3504.67	0.06
MW-15	9/10/2013	30.57			36.55	3534.90	3504.33	-0.34
MW-15	12/3/2013	30.51			36.55	3534.90	3504.39	0.06
MW-15	2/27/2014	30.36			NM	3534.90	3504.54	0.15
MW-16	12/4/2012	29.29			42.91	3533.68	3504.39	-0.04
MW-16	2/22/2013	29.15			42.91	3533.68	3504.53	0.14
MW-16	6/2/2013	29.01			42.91	3533.68	3504.67	0.14
MW-16	9/10/2013	29.43			42.91	3533.68	3504.25	-0.42
MW-16	12/3/2013	29.36			42.91	3533.68	3504.32	0.07
MW-16	2/27/2014	29.22			NM	3533.68	3504.46	0.14
Average change in groundwater elevation (12/3/13 to 2/27/14)								0.15

Notes:

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

2- Total depths were collected and recorded during the fourth quarter 2013 monitoring event (with the exception of wells that contained LNAPL).

3- 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.

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

amsl - feet above mean sea level.

TOC - top of casing

\* For wells that contained LNAPL, groundwater elevation was corrected for product thickness using the following calculation:

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

LNAPL relative density was assumed to be approximately 0.75

**TABLE 2**  
**FIRST QUARTER 2014**  
**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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
MW-1	2/27/2014	0.0449	<0.002	0.0044	<0.003	474	Duplicate Sample Collected
MW-1 (duplicate)	2/27/2014	0.0331	<0.002	0.0037	<0.003	489	
MW-2	2/27/2014	4.41 <sup>(3)</sup>	0.599	0.312	0.493	411	
MW-3	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	2/27/2014	<0.001	<0.002	<0.002	<0.003	395	
MW-7	2/27/2014	<0.001	<0.002	<0.002	<0.003	358	
MW-8	2/27/2014	<0.001	<0.002	<0.002	<0.003	521	
MW-9	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-11	2/27/2014	<0.001	<0.002	<0.002	<0.003	433	
MW-12	2/27/2014	<0.001	<0.002	<0.002	0.0024 J	414	
MW-13	2/27/2014	<0.001	<0.002	<0.002	<0.003	344	
MW-14	2/27/2014	<0.001	<0.002	<0.002	<0.003	516	
MW-15	2/27/2014	<0.001	<0.002	<0.002	<0.003	378	
MW-16	2/27/2014	<0.001	<0.002	<0.002	<0.003	424	

Notes:

- 1.) The environmental cleanup standards for water that are applicable to this Site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.
- 2.) Data presented for the current sampling event. Historic groundwater analytical data are located in Appendix A.
- 3.) Benzene concentration was from the second analytical run, as indicated in the laboratory report.

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

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

J = reflects an estimated value

LNAPL = Light Non-Aqueous Phase Liquid

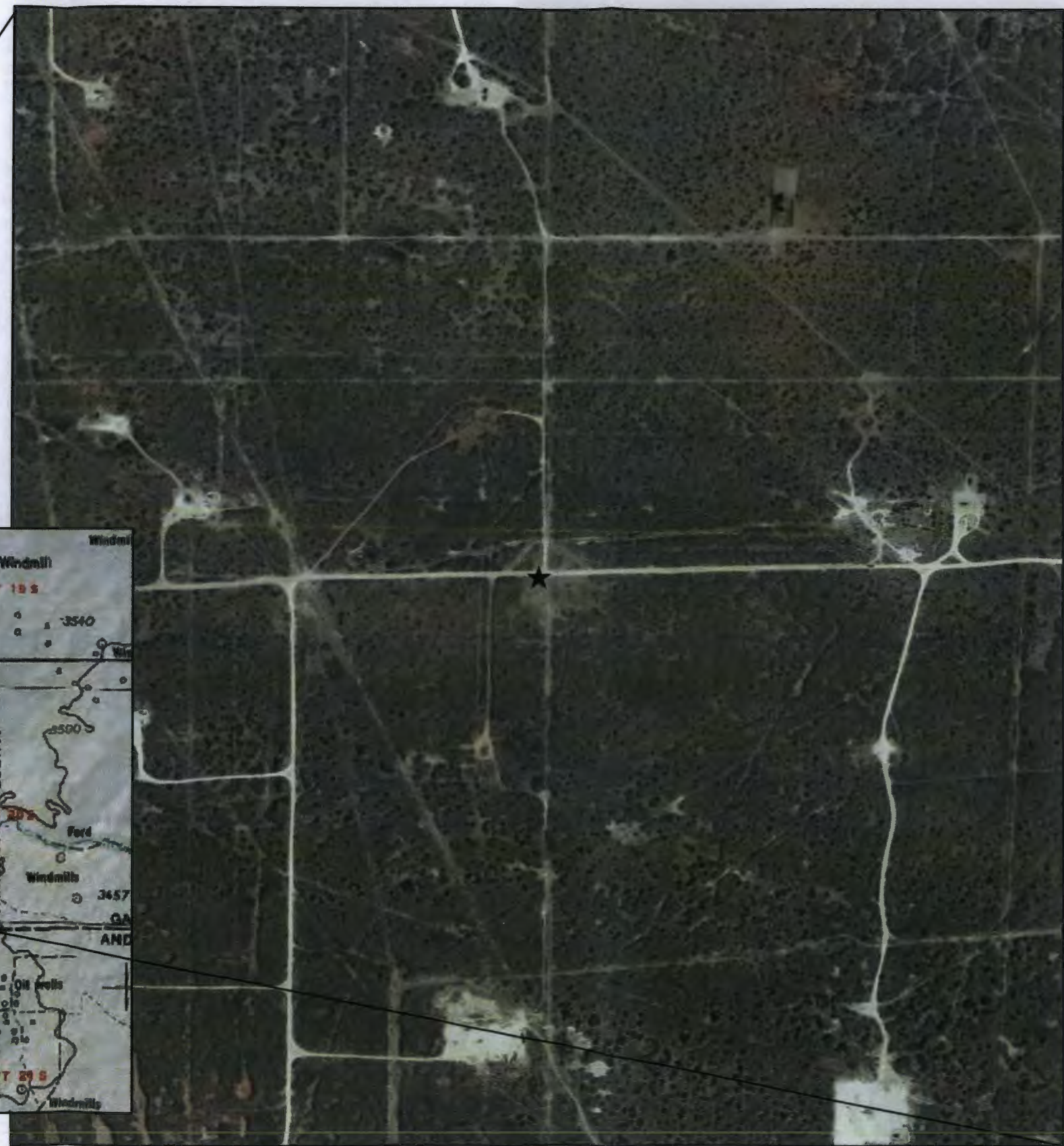
NM = Not measured.

mg/L = milligrams per liter.

\* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceably regulated constituent. The 250 mg/L standard is established only as a guideline to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor.

## Figures





DATE:	April 2014
DESIGNED BY:	T. Johansen
DRAWN BY:	D. Arnold



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

## RR-EXTENSION PIPELINE RELEASE

NE 1/4, NW 1/4, Section 19, Township 20 South, Range 37 East  
Lea County, New Mexico

### Site Location

Figure  
1





DATE: April 2014

DESIGNED BY: T. Johansen

DRAWN BY: D. Arnold



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

# RR-EXTENSION PIPELINE RELEASE First Quarter 2014 Groundwater Monitoring Summary Report

Site Map with Monitoring  
Well Locations

Figure  
2





DATE: April 2014  
 DESIGNED BY: T. Johansen  
 DRAWN BY: D. Arnold



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

# RR-EXTENSION PIPELINE RELEASE First Quarter 2014 Groundwater Monitoring Summary Report

Groundwater Elevation  
 Contour Map  
 (February 27, 2014)

Figure  
 3







**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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
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	3/30/2011	0.0241	<0.001	0.0136	0.0055	457	
MW-1	6/22/2011	0.0735	<0.01	0.0293	<0.02	467	
MW-1	9/17/2011	0.144	0.038	0.0069	0.0087	472	Duplicate sample collected
MW-1	12/8/2011	0.076	0.002	0.0227	0.0024	462	Duplicate sample collected
MW-1	3/10/2012	0.029	<0.002	0.0072	<0.004	497	Duplicate sample collected
MW-1	6/5/2012	0.069	0.0014	0.0112	<0.003	470	Duplicate sample collected
MW-1	9/9/2012	0.0216	<0.002	0.0029	<0.003	465	Duplicate sample collected
MW-1	12/4/2012	0.0194	<0.002	0.0024	<0.003	445	Duplicate sample collected
MW-1	2/22/2013	0.0063	<0.002	0.00066	<0.003	474	Duplicate sample collected
MW-1	6/2/2013	0.0313	<0.002	0.0028	<0.003	451	Duplicate sample collected
MW-1	9/10/2013	0.0092	<0.002	0.0016	<0.003	400	Duplicate sample collected
MW-1	12/3/2013	0.0067	<0.002	0.00075	<0.003	458	Duplicate Sample Collected
MW-1	2/27/2014	0.0449	<0.002	0.0044	<0.003	474	Duplicate Sample Collected
MW-1 (duplicate)	2/27/2014	0.0331	<0.002	0.0037	<0.003	489	
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	3/30/2011	16.6	0.165	0.403	0.116	320	
MW-2	6/22/2011	9.21	0.0231	0.377	<0.4	370	
MW-2	9/17/2011	4.07	0.415	0.329	0.203	375	
MW-2	12/8/2011	1.5	0.0436	0.33	0.0254	392	
MW-2	3/10/2012	1.04	<0.04	0.134	<0.08	444	
MW-2	6/5/2012	1.25	0.106	0.158	0.0885	346	
MW-2	9/9/2012	1.53	0.203	0.138	0.14	393	
MW-2	12/4/2012	1.26	0.115	0.0854	0.116	385	
MW-2	2/22/2013	4.53 <sup>(3)</sup>	0.474	0.298	0.482	386	
MW-2	6/2/2013	1.25	0.0582	0.0644	0.103	406	
MW-2	9/10/2013	4.47	0.374	0.226	0.375	339	
MW-2	12/3/2013	0.9	0.0569	0.0442	0.0671	414	
MW-2	2/27/2014	4.41 <sup>(3)</sup>	0.599	0.312	0.493	411	

**APPENDIX A**  
**HISTORIC ANALYTICAL RESULTS**  
**BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER**  
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**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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
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	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	6/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	9/9/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/4/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	2/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	6/2/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	9/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/3/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
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	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/9/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/4/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/2/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/3/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	

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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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
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	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	6/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	9/9/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/4/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	2/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	6/2/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	9/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/3/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
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	3/30/2011	<0.001	<0.002	<0.002	<0.002	386	
MW-6	6/22/2011	<0.001	<0.002	<0.002	<0.004	376	
MW-6	9/17/2011	<0.001	<0.002	<0.002	<0.004	383	
MW-6	12/8/2011	<0.0005	<0.001	<0.001	<0.001	372	
MW-6	3/10/2012	<0.001	<0.002	<0.002	<0.004	406	
MW-6	6/5/2012	<0.001	<0.002	<0.002	<0.003	381	
MW-6	9/9/2012	<0.001	<0.002	<0.002	<0.003	377	
MW-6	12/4/2012	<0.001	<0.002	<0.002	<0.003	358	
MW-6	2/22/2013	<0.001	<0.002	<0.002	<0.003	385	
MW-6	6/2/2013	<0.001	<0.002	<0.002	<0.003	372	
MW-6	9/10/2013	<0.001	<0.002	<0.002	<0.003	367	
MW-6	12/3/2013	<0.001	<0.002	<0.002	<0.003	373	
MW-6	2/27/2014	<0.001	<0.002	<0.002	<0.003	395	

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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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
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	3/30/2011	<0.001	<0.002	<0.002	<0.002	382	
MW-7	6/22/2011	<0.001	<0.002	<0.002	<0.004	390	
MW-7	9/17/2011	<0.001	<0.002	<0.002	<0.004	374	
MW-7	12/8/2011	<0.0005	<0.001	<0.001	<0.001	376	
MW-7	3/10/2012	<0.001	<0.002	<0.002	<0.004	392	
MW-7	6/5/2012	<0.001	<0.002	<0.002	<0.003	381	
MW-7	9/9/2012	<0.001	<0.002	<0.002	<0.003	362	
MW-7	12/4/2012	<0.001	<0.002	<0.002	<0.003	334	
MW-7	2/22/2013	0.00059	<0.002	<0.002	<0.003	363	
MW-7	6/2/2013	<0.001	<0.002	<0.002	<0.003	361	
MW-7	9/10/2013	<0.001	<0.002	<0.002	<0.003	332	
MW-7	12/3/2013	<0.001	<0.002	<0.002	<0.003	350	
MW-7	2/27/2014	<0.001	<0.002	<0.002	<0.003	358	
MW-8	6/2008	<b>0.0384</b>	0.00049	0.0255	0.0016		
MW-8	9/2008	<b>0.0301</b>	<0.002	0.0161	0.002	512	
MW-8	12/2008	0.00233	<0.002	0.011	<0.006	393	
MW-8	3/2009	<b>0.0218</b>	<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	3/30/2011	<0.001	<0.002	<0.002	<0.002	529	
MW-8	6/22/2011	<0.001	<0.002	<0.002	<0.004	524	
MW-8	9/17/2011	<0.001	<0.002	<0.002	<0.004	507	
MW-8	12/8/2011	<0.0005	<0.001	<0.001	<0.001	521	
MW-8	3/10/2012	<0.001	<0.002	<0.002	<0.004	528	
MW-8	6/5/2012	<0.001	<0.002	<0.002	<0.003	527	
MW-8	9/9/2012	<0.001	<0.002	<0.002	<0.003	509	
MW-8	12/4/2012	<0.001	<0.002	<0.002	<0.003	500	
MW-8	2/22/2013	0.00048	<0.002	<0.002	<0.003	530	
MW-8	6/2/2013	<0.001	<0.002	<0.002	<0.003	524	
MW-8	9/10/2013	<0.001	<0.002	<0.002	<0.003	489	
MW-8	12/3/2013	<0.001	<0.002	<0.002	<0.003	508	
MW-8	2/27/2014	<0.001	<0.002	<0.002	<0.003	521	

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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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
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	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	6/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	9/9/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/4/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	2/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	6/2/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	9/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/3/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
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	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	6/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	9/9/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12/4/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	2/22/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	6/2/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	9/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12/3/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	2/27/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
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	3/30/2011	<0.001	<0.002	<0.002	<0.002	406	
MW-11	6/22/2011	<0.001	<0.002	<0.002	<0.004	405	
MW-11	9/17/2011	<0.001	<0.002	<0.002	<0.004	390	
MW-11	12/8/2011	<0.0005	<0.001	<0.001	<0.001	399	
MW-11	3/10/2012	<0.001	<0.002	<0.002	<0.004	403	
MW-11	6/5/2012	<0.001	<0.002	<0.002	<0.003	417	
MW-11	9/9/2012	<0.001	<0.002	<0.002	<0.003	399	
MW-11	12/4/2012	<0.001	<0.002	<0.002	<0.003	382	
MW-11	2/22/2013	0.0004	<0.002	<0.002	<0.003	419	
MW-11	6/2/2013	<0.001	<0.002	<0.002	<0.003	424	
MW-11	9/10/2013	<0.001	<0.002	<0.002	<0.003	394	
MW-11	12/3/2013	<0.001	<0.002	<0.002	<0.003	416	
MW-11	2/27/2014	<0.001	<0.002	<0.002	<0.003	433	



**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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
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	3/30/2011	<0.001	<0.002	<0.002	<0.002	498	
MW-12	6/22/2011	<0.001	<0.002	<0.002	<0.004	497	
MW-12	9/17/2011	<0.001	<0.002	<0.002	<0.004	493	
MW-12	12/8/2011	<0.0005	<0.001	<0.001	<0.001	493	
MW-12	3/10/2012	<0.001	<0.002	<0.002	<0.004	513	
MW-12	6/5/2012	<0.001	<0.002	<0.002	<0.003	507	
MW-12	9/9/2012	<0.001	<0.002	<0.002	<0.003	487	
MW-12	12/4/2012	<0.001	<0.002	<0.002	<0.003	469	
MW-12	2/22/2013	0.00041	<0.002	<0.002	<0.003	484	
MW-12	6/2/2013	<0.001	<0.002	<0.002	<0.003	461	
MW-12	9/10/2013	<0.001	<0.002	<0.002	<0.003	428	
MW-12	12/3/2013	<0.001	<0.002	<0.002	0.0031	412	
MW-12	2/27/2014	<0.001	<0.002	<0.002	0.0024 J	414	
MW-13	3/30/2011	<0.001	<0.002	<0.002	<0.002	326	
MW-13	6/22/2011	<0.001	<0.002	<0.002	<0.004	340	
MW-13	9/17/2011	<0.001	<0.002	<0.002	<0.004	317	
MW-13	12/8/2011	<0.0005	<0.001	<0.001	<0.001	328	
MW-13	3/10/2012	<0.001	<0.002	<0.002	<0.004	331	
MW-13	6/5/2012	<0.001	<0.002	<0.002	<0.003	335	
MW-13	9/9/2012	<0.001	<0.002	<0.002	<0.003	321	
MW-13	12/4/2012	<0.001	<0.002	<0.002	<0.003	317	
MW-13	2/22/2013	0.00073	<0.002	<0.002	<0.003	337	
MW-13	6/2/2013	<0.001	<0.002	<0.002	<0.003	333	
MW-13	9/10/2013	<0.001	<0.002	<0.002	<0.003	311	
MW-13	12/3/2013	<0.001	<0.002	<0.002	<0.003	330	
MW-13	2/27/2014	<0.001	<0.002	<0.002	<0.003	344	
MW-14	3/30/2011	<0.001	<0.002	<0.002	<0.002	520	
MW-14	6/22/2011	<0.001	<0.002	<0.002	<0.004	494	
MW-14	9/17/2011	<0.001	<0.002	<0.002	<0.004	478	
MW-14	12/8/2011	<0.0005	<0.001	<0.001	<0.001	521	
MW-14	3/10/2012	<0.001	<0.002	<0.002	<0.004	528	
MW-14	6/5/2012	<0.001	<0.002	<0.002	<0.003	513	
MW-14	9/9/2012	<0.001	<0.002	<0.002	<0.003	536	
MW-14	12/4/2012	<0.001	<0.002	<0.002	<0.003	544	
MW-14	2/22/2013	0.00034	<0.002	<0.002	<0.003	553	
MW-14	6/2/2013	<0.001	<0.002	<0.002	<0.003	538	
MW-14	9/10/2013	<0.001	<0.002	<0.002	<0.003	486	
MW-14	12/3/2013	<0.001	<0.002	<0.002	<0.003	519	
MW-14	2/27/2014	<0.001	<0.002	<0.002	<0.003	516	

**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
<b>New Mexico Water Quality Control Commission Groundwater Standards (mg/L)</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>250</b>	
MW-15	3/30/2011	<0.001	<0.002	<0.002	<0.002	303	
MW-15	6/22/2011	<0.001	<0.002	<0.002	<0.004	297	
MW-15	9/17/2011	<0.001	<0.002	<0.002	<0.004	294	
MW-15	12/8/2011	<0.0005	<0.001	<0.001	<0.001	288	
MW-15	3/10/2012	<0.001	<0.002	<0.002	<0.004	308	
MW-15	6/5/2012	<0.001	<0.002	<0.002	<0.003	276	
MW-15	9/9/2012	<0.001	<0.002	<0.002	<0.003	318	
MW-15	12/4/2012	<0.001	<0.002	<0.002	<0.003	313	
MW-15	2/22/2013	0.00034	<0.002	<0.002	<0.003	333	
MW-15	6/2/2013	<0.001	<0.002	<0.002	<0.003	324	
MW-15	9/10/2013	<0.001	<0.002	<0.002	<0.003	331	
MW-15	12/3/2013	<0.001	<0.002	<0.002	<0.003	365	
MW-15	2/27/2014	<0.001	<0.002	<0.002	<0.003	378	
MW-16	3/30/2011	<0.001	<0.002	<0.002	<0.002	295	
MW-16	6/22/2011	<0.001	<0.002	<0.002	<0.004	292	
MW-16	9/17/2011	<0.001	<0.002	<0.002	<0.004	295	
MW-16	12/8/2011	<0.0005	<0.001	<0.001	<0.001	313	
MW-16	3/10/2012	<0.001	<0.002	<0.002	<0.004	322	
MW-16	6/5/2012	<0.001	<0.002	<0.002	<0.003	334	
MW-16	9/9/2012	<0.001	<0.002	<0.002	<0.003	334	
MW-16	12/4/2012	<0.001	<0.002	<0.002	<0.003	339	
MW-16	2/22/2013	<0.001	<0.002	<0.002	<0.003	358	
MW-16	6/2/2013	<0.001	<0.002	<0.002	<0.003	364	
MW-16	9/10/2013	<0.001	<0.002	<0.002	<0.003	359	
MW-16	12/3/2013	<0.001	<0.002	<0.002	<0.003	394	
MW-16	2/27/2014	<0.001	<0.002	<0.002	<0.003	424	

Notes:

1.) The environmental cleanup standards for water that are applicable to this Site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.

2.) Tasman initiated sample collection during the third quarter 2011 monitoring event.

3.) Benzene concentration was from the second analytical run, as indicated in the laboratory report.

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

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

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

J = reflects an estimated value

LNAPL = Light Non-Aqueous Phase Liquid

NM = Not measured.

mg/L = milligrams per liter.

\* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceably regulated constituent. The 250 mg/L standard is established only as a guideline to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor.

## Appendix B

### Laboratory Analytical Report

- Accutest Job #: D55464



03/06/14

## Technical Report for

**DCP Midstream, LP**

**TASMCOA:DCP RR EXT**

**Accutest Job Number: D55464**

**Sampling Date: 02/27/14**

### Report to:

Tasman Geosciencec LLC  
6899 Pecos Street Unit C  
Denver, CO 80221  
swweathers@dcpmidstream.com; cwasko@tasman-geo.com;  
dbaggus@tasman-geo.com  
ATTN: Christine Wasko

**Total number of pages in report: 50**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read 'Scott Heideman'.

**Scott Heideman**  
**Laboratory Director**

**Client Service contact: Renea Jackson 303-425-6021**

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

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Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>5</b>
<b>Section 3: Summary of Hits .....</b>	<b>7</b>
<b>Section 4: Sample Results .....</b>	<b>9</b>
<b>4.1:</b> D55464-1: MW-1 .....	10
<b>4.2:</b> D55464-2: MW-2 .....	12
<b>4.3:</b> D55464-3: MW-6 .....	14
<b>4.4:</b> D55464-4: MW-7 .....	16
<b>4.5:</b> D55464-5: MW-8 .....	18
<b>4.6:</b> D55464-6: MW-11 .....	20
<b>4.7:</b> D55464-7: MW-12 .....	22
<b>4.8:</b> D55464-8: MW-13 .....	24
<b>4.9:</b> D55464-9: MW-14 .....	26
<b>4.10:</b> D55464-10: MW-15 .....	28
<b>4.11:</b> D55464-11: MW-16 .....	30
<b>4.12:</b> D55464-12: DUP .....	32
<b>Section 5: Misc. Forms .....</b>	<b>34</b>
<b>5.1:</b> Chain of Custody .....	35
<b>Section 6: GC/MS Volatiles - QC Data Summaries .....</b>	<b>37</b>
<b>6.1:</b> Method Blank Summary .....	38
<b>6.2:</b> Blank Spike Summary .....	41
<b>6.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	44
<b>Section 7: General Chemistry - QC Data Summaries .....</b>	<b>47</b>
<b>7.1:</b> Method Blank and Spike Results Summary .....	48
<b>7.2:</b> Matrix Spike Results Summary .....	49
<b>7.3:</b> Matrix Spike Duplicate Results Summary .....	50

## Sample Summary

DCP Midstream, LP

Job No: D55464

TASMCOA:DCP RR EXT

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D55464-1	02/27/14	09:20 AF	02/28/14	AQ	Ground Water	MW-1
D55464-2	02/27/14	09:25 AF	02/28/14	AQ	Ground Water	MW-2
D55464-3	02/27/14	08:45 AF	02/28/14	AQ	Ground Water	MW-6
D55464-4	02/27/14	08:55 AF	02/28/14	AQ	Ground Water	MW-7
D55464-5	02/27/14	09:15 AF	02/28/14	AQ	Ground Water	MW-8
D55464-6	02/27/14	08:35 AF	02/28/14	AQ	Ground Water	MW-11
D55464-7	02/27/14	08:30 AF	02/28/14	AQ	Ground Water	MW-12
D55464-8	02/27/14	09:05 AF	02/28/14	AQ	Ground Water	MW-13
D55464-8D	02/27/14	09:05 AF	02/28/14	AQ	Water Dup/MSD	MW-13
D55464-8M	02/27/14	09:05 AF	02/28/14	AQ	Water Matrix Spike	MW-13
D55464-9	02/27/14	08:15 AF	02/28/14	AQ	Ground Water	MW-14
D55464-10	02/27/14	08:10 AF	02/28/14	AQ	Ground Water	MW-15
D55464-11	02/27/14	08:00 AF	02/28/14	AQ	Ground Water	MW-16



**Sample Summary**  
(continued)

DCP Midstream, LP

**Job No:** D55464

TASMCOA:DCP RR EXT

Sample Number	Collected		Time By	Received	Matrix		Client Sample ID
	Date				Code	Type	
D55464-12	02/27/14	00:00	AF	02/28/14	AQ	Ground Water	DUP



## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** DCP Midstream, LP

**Job No** D55464

**Site:** TASMCOA:DCP RR EXT

**Report Date** 3/6/2014 12:14:46 PM

On 02/28/2014, 12 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D55464 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

**Matrix** AQ

**Batch ID:** V3V1709

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D55492-5MS, D55492-5MSD were used as the QC samples indicated.

**Matrix** AQ

**Batch ID:** V3V1712

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D55494-50MS, D55494-50MSD were used as the QC samples indicated.

**Matrix** AQ

**Batch ID:** V6V1332

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D55464-8MS, D55464-8MSD were used as the QC samples indicated.

### Wet Chemistry By Method EPA 300.0/SW846 9056

**Matrix** AQ

**Batch ID:** GP12055

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D55453-1MS, D55453-1MSD were used as the QC samples for the Chloride analysis.

**Matrix** AQ

**Batch ID:** GP12063

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D55464-6MS, D55464-6MSD were used as the QC samples for the Chloride analysis.



AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

## Summary of Hits

**Job Number:** D55464  
**Account:** DCP Midstream, LP  
**Project:** TASMCOA:DCP RR EXT  
**Collected:** 02/27/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>D55464-1</b>	<b>MW-1</b>					
Benzene		0.0449	0.0010	0.00025	mg/l	SW846 8260B
Ethylbenzene		0.0044	0.0020	0.00025	mg/l	SW846 8260B
Chloride		474	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-2</b>	<b>MW-2</b>					
Benzene		4.41	0.050	0.013	mg/l	SW846 8260B
Toluene		0.599	0.010	0.0050	mg/l	SW846 8260B
Ethylbenzene		0.312	0.010	0.0013	mg/l	SW846 8260B
Xylene (total)		0.493	0.015	0.010	mg/l	SW846 8260B
Chloride		411	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-3</b>	<b>MW-6</b>					
Chloride		395	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-4</b>	<b>MW-7</b>					
Chloride		358	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-5</b>	<b>MW-8</b>					
Chloride		521	13		mg/l	EPA 300.0/SW846 9056
<b>D55464-6</b>	<b>MW-11</b>					
Chloride		433	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-7</b>	<b>MW-12</b>					
Xylene (total)		0.0024 J	0.0030	0.0020	mg/l	SW846 8260B
Chloride		414	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-8</b>	<b>MW-13</b>					
Chloride		344	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-9</b>	<b>MW-14</b>					
Chloride		516	13		mg/l	EPA 300.0/SW846 9056

## Summary of Hits

Page 2 of 2

**Job Number:** D55464  
**Account:** DCP Midstream, LP  
**Project:** TASMCOA:DCP RR EXT  
**Collected:** 02/27/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>D55464-10</b>	<b>MW-15</b>					
Chloride		378	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-11</b>	<b>MW-16</b>					
Chloride		424	10		mg/l	EPA 300.0/SW846 9056
<b>D55464-12</b>	<b>DUP</b>					
Benzene		0.0331	0.0010	0.00025	mg/l	SW846 8260B
Ethylbenzene		0.0037	0.0020	0.00025	mg/l	SW846 8260B
Chloride		489	10		mg/l	EPA 300.0/SW846 9056

Sample Results

Report of Analysis

## Report of Analysis

<b>Client Sample ID:</b>	MW-1		
<b>Lab Sample ID:</b>	D55464-1	<b>Date Sampled:</b>	02/27/14
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b>	02/28/14
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMSOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23629.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.0449	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	0.0044	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	98%		62-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	97%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-1	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-1	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	474	10	mg/l	20	02/28/14 19:22	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-2	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-2	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23630.D	5	03/04/14	BR	n/a	n/a	V6V1332
Run #2	3V29256.D	50	03/05/14	BR	n/a	n/a	V3V1712

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	4.41 <sup>a</sup>	0.050	0.013	mg/l	
108-88-3	Toluene	0.599	0.010	0.0050	mg/l	
100-41-4	Ethylbenzene	0.312	0.010	0.0013	mg/l	
1330-20-7	Xylene (total)	0.493	0.015	0.010	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	105%	62-130%
2037-26-5	Toluene-D8	98%	105%	70-130%
460-00-4	4-Bromofluorobenzene	99%	92%	69-130%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-2	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-2	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	411	10	mg/l	20	02/28/14 19:34	SK	EPA 300.0/SW846 9056

RL = Reporting Limit



## Report of Analysis

**Client Sample ID:** MW-6  
**Lab Sample ID:** D55464-3  
**Matrix:** AQ - Ground Water  
**Method:** SW846 8260B  
**Project:** TASMCOA:DCP RR EXT

**Date Sampled:** 02/27/14  
**Date Received:** 02/28/14  
**Percent Solids:** n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23631.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2	3V29255.D	1	03/05/14	BR	n/a	n/a	V3V1712

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND <sup>a</sup>	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	104%	62-130%
2037-26-5	Toluene-D8	87%	105%	70-130%
460-00-4	4-Bromofluorobenzene	97%	91%	69-130%

(a) Result is from Run# 2

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-6	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-3	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	395	10	mg/l	20	02/28/14 19:45	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-7	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-4	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23632.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		62-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	98%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-7	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-4	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	358	10	mg/l	20	02/28/14 19:57	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-8	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-5	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23633.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		62-130%
2037-26-5	Toluene-D8	119%		70-130%
460-00-4	4-Bromofluorobenzene	113%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-8	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-5	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	521	13	mg/l	25	02/28/14 20:09	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-11		
<b>Lab Sample ID:</b>	D55464-6	<b>Date Sampled:</b>	02/27/14
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b>	02/28/14
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23634.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	91%		62-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	87%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-11	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-6	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	433	10	mg/l	20	03/03/14 16:02	SK	EPA 300.0/SW846 9056

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b>	MW-12		
<b>Lab Sample ID:</b>	D55464-7	<b>Date Sampled:</b>	02/27/14
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b>	02/28/14
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMSOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23635.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	0.0024	0.0030	0.0020	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	97%		62-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	95%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-12	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-7	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	414	10	mg/l	20	03/03/14 16:38	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-13	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-8	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23636.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		62-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	95%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-13	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-8	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	344	10	mg/l	20	03/03/14 16:50	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-14	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-9	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23639.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		62-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	96%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-14	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-9	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	516	13	mg/l	25	03/03/14 17:03	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-15	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-10	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V23640.D	1	03/04/14	BR	n/a	n/a	V6V1332
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%		62-130%
2037-26-5	Toluene-D8	107%		70-130%
460-00-4	4-Bromofluorobenzene	102%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-15	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-10	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	378	10	mg/l	20	03/03/14 17:15	SK	EPA 300.0/SW846 9056

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b>	MW-16	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-11	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V29185.D	1	03/03/14	BR	n/a	n/a	V3V1709
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		62-130%
2037-26-5	Toluene-D8	106%		70-130%
460-00-4	4-Bromofluorobenzene	89%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	MW-16	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-11	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	424	10	mg/l	20	03/03/14 17:27	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

4.11  
4

## Report of Analysis

<b>Client Sample ID:</b>	DUP	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-12	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V29186.D	1	03/03/14	BR	n/a	n/a	V3V1709
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.0331	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	0.0037	0.0020	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		62-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	89%		69-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	DUP	<b>Date Sampled:</b>	02/27/14
<b>Lab Sample ID:</b>	D55464-12	<b>Date Received:</b>	02/28/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	489	10	mg/l	20	03/03/14 17:39	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

4.12  
4

## Misc. Forms

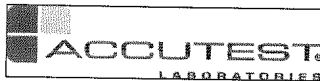
5

### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



## CHAIN OF CUSTODY

PAGE 1 OF 2

4036 Youngfield Street, Wheat Ridge, CO 80033  
TEL: 303-425-6021 FAX: 303-425-6854  
www.accutest.com

FED-EX Tracking #	Batch Order Control #
Accutest Quote #	Accutest Job # <b>D55464</b>

Client / Reporting Information		Project Information		Requested Analysis ( see TEST CODE sheet)										Matrix Codes																																																							
Company Name <b>Tasman Geosciences</b>		Project Name <b>DCP RR Extension Pipeline Release</b>		<b>V8260BTX</b> <b>MS/MSD for V8260BTX</b>										<b>DW - Drinking Water</b> <b>GW - Ground Water</b> <b>WW - Water</b> <b>SW - Surface Water</b> <b>SO - Soil</b> <b>SL - Sludge</b> <b>SED - Sediment</b> <b>OI - Oil</b> <b>LIQ - Other Liquid</b> <b>AIR - Air</b> <b>SOL - Other Solid</b> <b>WP - Wipe</b> <b>FB - Field Blank</b> <b>EB - Equipment Blank</b> <b>RB - Rinse Blank</b> <b>TB - Trip Blank</b>																																																							
Street Address <b>6899 Pecos St - Unit C</b>		Street																																																																			
City <b>Denver, CO 80221</b>		Billing Information ( If different from Report to ) Company Name																																																																			
Project Contact <b>Don Baggus dbaggus@tasman-geo.com</b>		Project #																																																																			
Phone # <b>(720) 635-9675</b>		Client Purchase Order #																																																																			
Sampler(s) Name(s) <b>Christine Ward</b>		Project Manager <b>Renee Jackson</b>		Attention:																																																																	
Collection		MECH/DI Vial #		Date		Time		Sampled by		Matrix		# of bottles		HCl		NO <sub>3</sub>		NO <sub>2</sub>		HSC04		NONE		DI Water		MEOH		ENCODE		LAB USE ONLY																																							
MW-1				2/27/14		920		AF		GW		4		3								1						X		X		01																																					
MW-2						925				GW		4		3								1						X		X		02																																					
MW-6						845				GW		4		3								1						X		X		03																																					
MW-7						855				GW		4		3								1						X		X		04																																					
MW-8						915				GW		4		3								1						X		X		05																																					
MW-11						835				GW		4		3								1						X		X		06																																					
MW-12						830				GW		4		3								1						X		X		07																																					
MW-13						905				GW		4		3								1						X		X		08																																					
MW-13 MS/MSD						905				GW		6		6														X				08MS/MSD																																					
MW-14						815				GW		4		3								1						X		X		09																																					
MW-15						810				GW		4		3								1						X		X		10																																					
MW-16						800				GW		4		3								1						X		X		11																																					
Data Deliverable Information																																																																					
<input type="checkbox"/> Std. 15 Business Days <input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day Emergency <input type="checkbox"/> 2 Day Emergency <input type="checkbox"/> 1 Day Emergency Emergency & Rush T/A data available VIA Lablink										Approved By (Accutest PM): / Date: _____ _____ _____ _____ _____										<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input checked="" type="checkbox"/> COMMBN <input type="checkbox"/> COMMBN+ <input type="checkbox"/> Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial BN = Results/QC/Narrative (= chromatograms) <input type="checkbox"/> State Forms Required <input type="checkbox"/> Send Forms to State <input type="checkbox"/> Report by Fax <input checked="" type="checkbox"/> Report by PDF ONLY <input type="checkbox"/> EDD Format										Comments / Special Instructions _____ _____ _____ _____ _____																																							
Relinquished by: 1 <b>[Signature]</b>										Received By: 1										Relinquished By: 2 <b>VPS</b>										Date Time: 2-28-14																																							
Relinquished by: 3										Received By: 3										Relinquished By: 4										Date Time: 10:15																																							
Relinquished by: 5										Received By: 5										Custody Seal #										<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact										Preserved where applicable <input checked="" type="checkbox"/>										On Ice <input checked="" type="checkbox"/>										Cooler Temp. 2.5									

D55464: Chain of Custody

Page 1 of 2



## GC/MS Volatiles

### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



## Method Blank Summary

Page 1 of 1

**Job Number:** D55464

**Account:** DCPMCOA DCP Midstream, LP

**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1709-MB	3V29173.D	1	03/03/14	BR	n/a	n/a	V3V1709

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-11, D55464-12

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.25	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	100% 62-130%
2037-26-5	Toluene-D8	105% 70-130%
460-00-4	4-Bromofluorobenzene	90% 69-130%

## Method Blank Summary

Page 1 of 1

**Job Number:** D55464  
**Account:** DCPMCOA DCP Midstream, LP  
**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1332-MB	6V23623.D	1	03/03/14	BR	n/a	n/a	V6V1332

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-1, D55464-2, D55464-3, D55464-4, D55464-5, D55464-6, D55464-7, D55464-8, D55464-9, D55464-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.25	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	99% 62-130%
2037-26-5	Toluene-D8	98% 70-130%
460-00-4	4-Bromofluorobenzene	116% 69-130%

## Method Blank Summary

Page 1 of 1

**Job Number:** D55464

**Account:** DCPMCOA DCP Midstream, LP

**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1712-MB	3V29252.D	1	03/05/14	BR	n/a	n/a	V3V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-2, D55464-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	107% 62-130%
2037-26-5	Toluene-D8	105% 70-130%
460-00-4	4-Bromofluorobenzene	92% 69-130%

## Blank Spike Summary

Page 1 of 1

**Job Number:** D55464

**Account:** DCPMCOA DCP Midstream, LP

**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1709-BS	3V29172.D	1	03/03/14	BR	n/a	n/a	V3V1709

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-11, D55464-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	44.1	88	70-130
100-41-4	Ethylbenzene	50	47.3	95	70-130
108-88-3	Toluene	50	46.8	94	70-130
1330-20-7	Xylene (total)	150	143	95	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	62-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	91%	69-130%

\* = Outside of Control Limits.

## Blank Spike Summary

Page 1 of 1

**Job Number:** D55464

**Account:** DCPMCO DN DCP Midstream, LP

**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1332-BS	6V23622.D	1	03/03/14	BR	n/a	n/a	V6V1332

**The QC reported here applies to the following samples:**

**Method:** SW846 8260B

D55464-1, D55464-2, D55464-3, D55464-4, D55464-5, D55464-6, D55464-7, D55464-8, D55464-9, D55464-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	53.1	106	70-130
100-41-4	Ethylbenzene	50	54.2	108	70-130
108-88-3	Toluene	50	52.8	106	70-130
1330-20-7	Xylene (total)	150	150	100	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	62-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	102%	69-130%

\* = Outside of Control Limits.

## Blank Spike Summary

Page 1 of 1

**Job Number:** D55464

**Account:** DCPMCOA DCP Midstream, LP

**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1712-BS	3V29251.D	1	03/05/14	BR	n/a	n/a	V3V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-2, D55464-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	50.2	100	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	102%	62-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	94%	69-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

**Job Number:** D55464  
**Account:** DCPMCOA DCP Midstream, LP  
**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D55492-5MS	3V29179.D	1	03/03/14	BR	n/a	n/a	V3V1709
D55492-5MSD	3V29180.D	1	03/03/14	BR	n/a	n/a	V3V1709
D55492-5	3V29178.D	1	03/03/14	BR	n/a	n/a	V3V1709

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-11, D55464-12

CAS No.	Compound	D55492-5 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	50.7	101	49.2	98	3	62-130/30
100-41-4	Ethylbenzene	ND	50	53.3	107	52.5	105	2	63-130/30
108-88-3	Toluene	ND	50	53.1	106	52.1	104	2	60-130/30
1330-20-7	Xylene (total)	ND	150	161	107	159	106	1	67-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D55492-5	Limits
17060-07-0	1,2-Dichloroethane-D4	98%	98%	102%	62-130%
2037-26-5	Toluene-D8	105%	105%	104%	70-130%
460-00-4	4-Bromofluorobenzene	92%	92%	89%	69-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

**Job Number:** D55464  
**Account:** DCPMCOA DCP Midstream, LP  
**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D55464-8MS	6V23637.D	1	03/04/14	BR	n/a	n/a	V6V1332
D55464-8MSD	6V23638.D	1	03/04/14	BR	n/a	n/a	V6V1332
D55464-8	6V23636.D	1	03/04/14	BR	n/a	n/a	V6V1332

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-1, D55464-2, D55464-3, D55464-4, D55464-5, D55464-6, D55464-7, D55464-8, D55464-9, D55464-10

CAS No.	Compound	D55464-8 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	54.6	109	54.1	108	1	62-130/30
100-41-4	Ethylbenzene	ND	50	53.9	108	53.4	107	1	63-130/30
108-88-3	Toluene	ND	50	53.9	108	53.0	106	2	60-130/30
1330-20-7	Xylene (total)	ND	150	150	100	148	99	1	67-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D55464-8	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	103%	99%	62-130%
2037-26-5	Toluene-D8	98%	98%	100%	70-130%
460-00-4	4-Bromofluorobenzene	101%	101%	95%	69-130%

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

**Job Number:** D55464  
**Account:** DCPMCOA DCP Midstream, LP  
**Project:** TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D55494-50MS	3V29266.D	25	03/05/14	BR	n/a	n/a	V3V1712
D55494-50MSD	3V29267.D	25	03/05/14	BR	n/a	n/a	V3V1712
D55494-50	3V29265.D	25	03/05/14	BR	n/a	n/a	V3V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D55464-2, D55464-3

CAS No.	Compound	D55494-50 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
71-43-2	Benzene	1430		1250	2620	95	2690	101	3	62-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D55494-50	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	101%	106%	62-130%
2037-26-5	Toluene-D8	104%	105%	105%	70-130%
460-00-4	4-Bromofluorobenzene	95%	92%	88%	69-130%

\* = Outside of Control Limits.

## General Chemistry

### QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D55464  
Account: DCPMCOA - DCP Midstream, LP  
Project: TASMCOA:DCP RR EXT

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP12055/GN23802	0.050	0.0	mg/l	0.5	0.531	106.2	90-110%
Bromide	GP12063/GN23819	0.050	0.0	mg/l	0.5	0.531	106.2	90-110%
Chloride	GP12055/GN23802	0.50	0.0	mg/l	5	5.15	103.0	90-110%
Chloride	GP12063/GN23819	0.50	0.0	mg/l	5	5.02	100.4	90-110%
Fluoride	GP12055/GN23802	0.10	0.0	mg/l	1	1.07	107.0	90-110%
Fluoride	GP12063/GN23819	0.10	0.0	mg/l	1	1.05	105.0	90-110%
Nitrogen, Nitrate	GP12055/GN23802	0.010	0.0	mg/l	0.1	0.102	102.0	90-110%
Nitrogen, Nitrite	GP12055/GN23802	0.0040	0.0	mg/l	0.05	0.0509	101.8	90-110%
Sulfate	GP12055/GN23802	0.50	0.0	mg/l	5	5.23	104.6	90-110%
Sulfate	GP12063/GN23819	0.50	0.0	mg/l	5	5.11	102.2	90-110%

Associated Samples:

Batch GP12055: D55464-1, D55464-2, D55464-3, D55464-4, D55464-5

Batch GP12063: D55464-6, D55464-7, D55464-8, D55464-9, D55464-10, D55464-11, D55464-12

(\*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D55464  
Account: DCPMCOA - DCP Midstream, LP  
Project: TASMCOA:DCP RR EXT

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP12055/GN23802	D55453-1	mg/l	0.0	1	1.0	100.0	80-120%
Bromide	GP12063/GN23819	D55464-6	mg/l	3.4	10	13.6	102.0	80-120%
Chloride	GP12055/GN23802	D55453-1	mg/l	15.2	10	25.5	103.0	80-120%
Chloride	GP12063/GN23819	D55464-6	mg/l	433	100	532	99.0	80-120%
Fluoride	GP12055/GN23802	D55453-1	mg/l	0.85	2	2.8	97.5	80-120%
Fluoride	GP12063/GN23819	D55464-6	mg/l	3.4	20	23.8	102.0	80-120%
Nitrogen, Nitrate	GP12055/GN23802	D55453-1	mg/l	0.094	0.2	0.30	103.0	80-120%
Nitrogen, Nitrite	GP12055/GN23802	D55453-1	mg/l	0.0	0.1	0.084	84.0	80-120%
Sulfate	GP12055/GN23802	D55453-1	mg/l	30.3	10	40.3	100.0	80-120%
Sulfate	GP12063/GN23819	D55464-6	mg/l	252	100	353	101.0	80-120%

Associated Samples:

Batch GP12055: D55464-1, D55464-2, D55464-3, D55464-4, D55464-5

Batch GP12063: D55464-6, D55464-7, D55464-8, D55464-9, D55464-10, D55464-11, D55464-12

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D55464  
Account: DCPMCOA - DCP Midstream, LP  
Project: TASMCOA:DCP RR EXT

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP12055/GN23802	D55453-1	mg/l	0.0	1	1.0	0.0	20%
Bromide	GP12063/GN23819	D55464-6	mg/l	3.4	10	13.5	0.7	20%
Chloride	GP12055/GN23802	D55453-1	mg/l	15.2	10	25.4	0.4	20%
Chloride	GP12063/GN23819	D55464-6	mg/l	433	100	533	0.2	20%
Fluoride	GP12055/GN23802	D55453-1	mg/l	0.85	2	2.8	0.0	20%
Fluoride	GP12063/GN23819	D55464-6	mg/l	3.4	20	23.2	2.6	20%
Nitrogen, Nitrate	GP12055/GN23802	D55453-1	mg/l	0.094	0.2	0.29	3.4	20%
Nitrogen, Nitrite	GP12055/GN23802	D55453-1	mg/l	0.0	0.1	0.085	1.2	20%
Sulfate	GP12055/GN23802	D55453-1	mg/l	30.3	10	40.2	0.2	20%
Sulfate	GP12063/GN23819	D55464-6	mg/l	252	100	354	0.3	20%

Associated Samples:

Batch GP12055: D55464-1, D55464-2, D55464-3, D55464-4, D55464-5

Batch GP12063: D55464-6, D55464-7, D55464-8, D55464-9, D55464-10, D55464-11, D55464-12

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.3  
7