

AP-55

**2nd QTR GW Results LP
RR Ext. Pipeline Release**

DATE

September 4, 2014



DCP Midstream
370 17th Street, Suite 2500
Denver, CO 80202
303-595-3331
303-605-2226 FAX

September 4, 2014

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

**RE: 2nd 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 2nd 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 swweathers@dcpmidstream.com.

Sincerely

DCP Midstream, LP

A handwritten signature in black ink, appearing to read "Stephen Weathers", followed by a long horizontal line.

Stephen Weathers, PG
Principal Environmental Specialist

cc: Tomas Oberding, OCD Hobbs District (Via Email)
Environmental Files

Second Quarter 2014 Groundwater Monitoring Summary Report

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

Prepared for:



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

Prepared by:



6899 Pecos Street, Unit C
Denver, Colorado 80221

August 21, 2014

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	- Accutest Job #: D58509

1. Introduction

This report summarizes the groundwater monitoring and remediation activities conducted during the second 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 June 3, 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 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 2014 groundwater monitoring event. Quarterly monitoring activities were conducted on June 3, 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 second quarter 2014, groundwater levels were measured at sixteen monitoring well locations. LNAPL was detected in the following five locations, with the measured thickness indicated in parenthesis:

The observed LNAPL thickness in these wells exhibited an average decrease of 0.22 ft from the previous monitoring event.

- MW-3 (0.02 feet)
- MW-4 (0.10 feet)
- MW-5 (0.46 feet)
- MW-9 (0.61 feet)
- MW-10 (0.52 feet)
- Average decrease from previous monitoring event: 0.22 feet

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

A second quarter 2014 groundwater elevation contour map, included as Figure 3, indicates that groundwater flow at the Site trends to the southeast. The range of groundwater elevations, 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

	Second Quarter 2014 (6/3/14)
Maximum Elevation (Well ID)	3505.05 (MW-13)
Minimum Elevation (Well ID)	3504.35 (MW-6)
Average Change from Previous Monitoring Event – All Wells	-0.04 foot
Hydraulic Gradient (ft/ft) / (Well IDs)	0.0018 (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 eleven monitoring wells that did not contain measurable LNAPL 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 ($^{\circ}\text{C}$) 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 June 2014 event are included in Appendix A and the laboratory analytical report for the second 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 wells MW-1 and MW-2 were in exceedance of the New Mexico Water Quality Control Commission (NMWQCC) Standard.
- BTEX concentrations at the remaining nine sample locations were below laboratory detection limits.
- 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 333 mg/L in MW-16 to 547 mg/L in MW-14. 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, matrix spike / matrix spike duplicate (MS/MSD) was collected at MW-13, and a field duplicate sample was collected from MW-1 during the second quarter 2014 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 2014 include the following:

- Target analytes were not detected in the trip blank; and
- The duplicate sample collected at MW-1 was in compliance with QA/QC standards. MW-1 and the associated duplicate sample both exhibited benzene concentrations of 0.0157 mg/L.

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 LNAPL Recovery

EFR was conducted at the Site on June 24, 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-EFR LNAPL thickness, duration, and recovered volume for the EFR activities conducted during the second 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-EFR)	Duration (hours)	Fluid Removal Volume (bbl*)	LNAPL Thickness [ft] (post-EFR)
MW-3	0.02	1	5	0.0
MW-4	0.10	3.5	20	0.0
MW-5	0.58			0.0
MW-9	0.70	3.5	35	0.0
MW-10	0.61			0.0
Total	2.01	8	60	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 second quarter 2014 monitoring event, approximately 0.5 liters of LNAPL were 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 second 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 a declining 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 second 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 second quarter 2014 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 vacuum enhanced fluid recovery events at all 5 monitoring wells at the Site containing measurable LNAPL.
- Continue to monitor and recover LNAPL from the passive collection bailer installed at MW-4.

Tables

TABLE 1
SECOND 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	06/02/2013	29.60			39.05	3534.57	3504.97	0.02
MW-1	09/10/2013	29.89			39.05	3534.57	3504.68	-0.29
MW-1	12/03/2013	29.81			39.05	3534.57	3504.76	0.08
MW-1	02/27/2014	29.68			NM	3534.57	3504.89	0.13
MW-1	06/03/2014	29.75			38.80	3534.57	3504.82	-0.07
MW-2	06/02/2013	30.35			39.81	3535.18	3504.83	0.04
MW-2	09/10/2013	30.68			39.81	3535.18	3504.50	-0.33
MW-2	12/03/2013	30.57			39.81	3535.18	3504.61	0.11
MW-2	02/27/2014	30.46			NM	3535.18	3504.72	0.11
MW-2	06/03/2014	30.49			39.50	3535.18	3504.69	-0.03
MW-3*	06/02/2013	31.83	31.50	0.33		3536.57	3504.99	0.03
MW-3*	09/10/2013	32.02	31.74	0.28		3536.57	3504.76	-0.23
MW-3*	12/03/2013	31.98	31.88	0.10		3537.57	3505.67	0.90
MW-3*	02/27/2014	31.78	31.66	0.12	NM	3537.57	3505.88	0.22
MW-3*	06/03/2014	31.74	31.72	0.02	NM	3537.57	3505.85	-0.03
MW-4*	06/02/2013	31.12	30.54	0.58		3535.20	3504.52	0.14
MW-4*	09/10/2013	31.71	30.90	0.81		3535.20	3504.10	-0.42
MW-4*	12/03/2013	31.09	30.97	0.12		3536.20	3505.20	1.10
MW-4*	02/27/2014	31.18	30.85	0.33	NM	3536.20	3505.27	0.07
MW-4*	06/24/2014	31.15	31.05	0.10	NM	3536.20	3505.13	-0.14
MW-5*	06/02/2013	31.78	31.14	0.64		3535.92	3504.62	0.05
MW-5*	09/10/2013	32.35	31.37	0.98		3535.92	3504.31	-0.31
MW-5*	12/03/2013	32.42	31.39	1.03		3536.92	3505.27	0.97
MW-5*	02/27/2014	31.98	31.22	0.76	NM	3536.92	3505.51	0.24
MW-5*	06/03/2014	31.80	31.34	0.46	NM	3536.92	3505.47	-0.05
MW-6	06/02/2013	31.66			40.35	3536.16	3504.50	0.05
MW-6	09/10/2013	31.95			40.35	3536.16	3504.21	-0.29
MW-6	12/03/2013	31.91			40.35	3536.16	3504.25	0.04
MW-6	02/27/2014	31.78			NM	3536.16	3504.38	0.13
MW-6	06/03/2014	31.81			40.26	3536.16	3504.35	-0.03
MW-7	06/02/2013	32.37			40.25	3537.09	3504.72	0.04
MW-7	09/10/2013	32.67			40.25	3537.09	3504.42	-0.30
MW-7	12/03/2013	32.62			40.25	3537.09	3504.47	0.05
MW-7	02/27/2014	32.48			NM	3537.09	3504.61	0.14
MW-7	06/03/2014	32.51			39.95	3537.09	3504.58	-0.03
MW-8	06/02/2013	31.31			39.42	3536.41	3505.10	0.02
MW-8	09/10/2013	31.60			39.42	3536.41	3504.81	-0.29
MW-8	12/03/2013	31.52			39.42	3536.41	3504.89	0.08
MW-8	02/27/2014	31.40			NM	3536.41	3505.01	0.12
MW-8	06/03/2014	31.46			38.98	3536.41	3504.95	-0.06
MW-9*	06/02/2013	29.76	29.00	0.76		3534.20	3505.01	0.03
MW-9*	09/10/2013	30.28	29.26	1.02		3534.20	3504.69	-0.33
MW-9*	12/03/2013	30.33	29.27	1.06		3535.20	3505.67	0.98
MW-9*	02/27/2014	29.91	29.09	0.82	NM	3535.20	3505.91	0.24
MW-9*	06/03/2014	29.81	29.20	0.61	NM	3535.20	3505.85	-0.06

TABLE 1
SECOND 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-10*	06/02/2013	29.53	29.40	0.13		3534.21	3504.78	0.05
MW-10*	09/10/2013	29.93	29.71	0.22		3534.21	3504.45	-0.33
MW-10*	12/03/2013	30.65	29.52	1.13		3534.21	3504.41	-0.04
MW-10*	02/27/2014	30.13	29.36	0.77	NM	3534.21	3504.66	0.25
MW-10*	06/03/2014	29.97	29.45	0.52	NM	3534.21	3504.63	-0.03
MW-11	06/02/2013	31.56			39.69	3536.19	3504.63	0.06
MW-11	09/10/2013	31.91			39.69	3536.19	3504.28	-0.35
MW-11	12/03/2013	31.83			39.69	3536.19	3504.36	0.08
MW-11	02/27/2014	31.71			NM	3536.19	3504.48	0.12
MW-11	06/03/2014	31.73			39.25	3536.19	3504.46	-0.02
MW-12	06/02/2013	29.82			38.56	3534.47	3504.65	0.06
MW-12	09/10/2013	30.16			38.56	3534.47	3504.31	-0.34
MW-12	12/03/2013	30.09			38.56	3534.47	3504.38	0.07
MW-12	02/27/2014	29.96			NM	3534.47	3504.51	0.13
MW-12	06/03/2014	29.97			38.17	3534.47	3504.50	-0.01
MW-13	06/02/2013	30.90			39.31	3536.08	3505.18	-0.96
MW-13	09/10/2013	31.20			39.31	3536.08	3504.88	-0.30
MW-13	12/03/2013	31.10			39.31	3536.08	3504.98	0.10
MW-13	02/27/2014	30.99			NM	3536.08	3505.09	0.11
MW-13	06/03/2014	31.03			38.66	3536.08	3505.05	-0.04
MW-14	06/02/2013	30.02			42.05	3534.96	3504.94	0.08
MW-14	09/10/2013	30.35			42.05	3534.96	3504.61	-0.33
MW-14	12/03/2013	30.27			42.05	3534.96	3504.69	0.08
MW-14	02/27/2014	30.14			NM	3534.96	3504.82	0.13
MW-14	06/03/2014	30.17			41.25	3534.96	3504.79	-0.03
MW-15	06/02/2013	30.23			36.55	3534.90	3504.67	0.06
MW-15	09/10/2013	30.57			36.55	3534.90	3504.33	-0.34
MW-15	12/03/2013	30.51			36.55	3534.90	3504.39	0.06
MW-15	02/27/2014	30.36			NM	3534.90	3504.54	0.15
MW-15	06/03/2014	30.39			38.41	3534.90	3504.51	-0.03
MW-16	06/02/2013	29.01			42.91	3533.68	3504.67	0.14
MW-16	09/10/2013	29.43			42.91	3533.68	3504.25	-0.42
MW-16	12/03/2013	29.36			42.91	3533.68	3504.32	0.07
MW-16	02/27/2014	29.22			NM	3533.68	3504.46	0.14
MW-16	06/03/2014	29.25			42.09	3533.68	3504.43	-0.03
Average change in groundwater elevation (02/27/14 to 06/03/14)								-0.04

Notes:

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

2- Total depths were collected and recorded during the second quarter 2014 monitoring event (with the exception of wells that contained LNAPL).

3- Changes in groundwater elevation are 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.

This table includes groundwater elevation data from the previous four monitoring events. Additional historic elevation data are available on request.

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
SECOND 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
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	250	
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-2	06/03/2014	0.842	0.0500	0.0609	0.101	440	
MW-3	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	06/03/2014	<0.001	<0.002	<0.002	<0.003	390	
MW-7	06/03/2014	<0.001	<0.002	<0.002	<0.003	359	
MW-8	06/03/2014	<0.001	<0.002	<0.002	<0.003	521	
MW-9	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	06/03/2014	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-11	06/03/2014	<0.001	<0.002	<0.002	<0.003	434	
MW-12	06/03/2014	<0.001	<0.002	<0.002	<0.003	377	
MW-13	06/03/2014	<0.001	<0.002	<0.002	<0.003	354	MS/MSD Sample Collected
MW-14	06/03/2014	<0.001	<0.002	<0.002	<0.003	547	
MW-15	06/03/2014	<0.001	<0.002	<0.002	<0.003	374	
MW-16	06/03/2014	<0.001	<0.002	<0.002	<0.003	333	
Trip Blank	06/03/2014	<0.001	<0.002	<0.002	<0.003	NA	

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.

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.

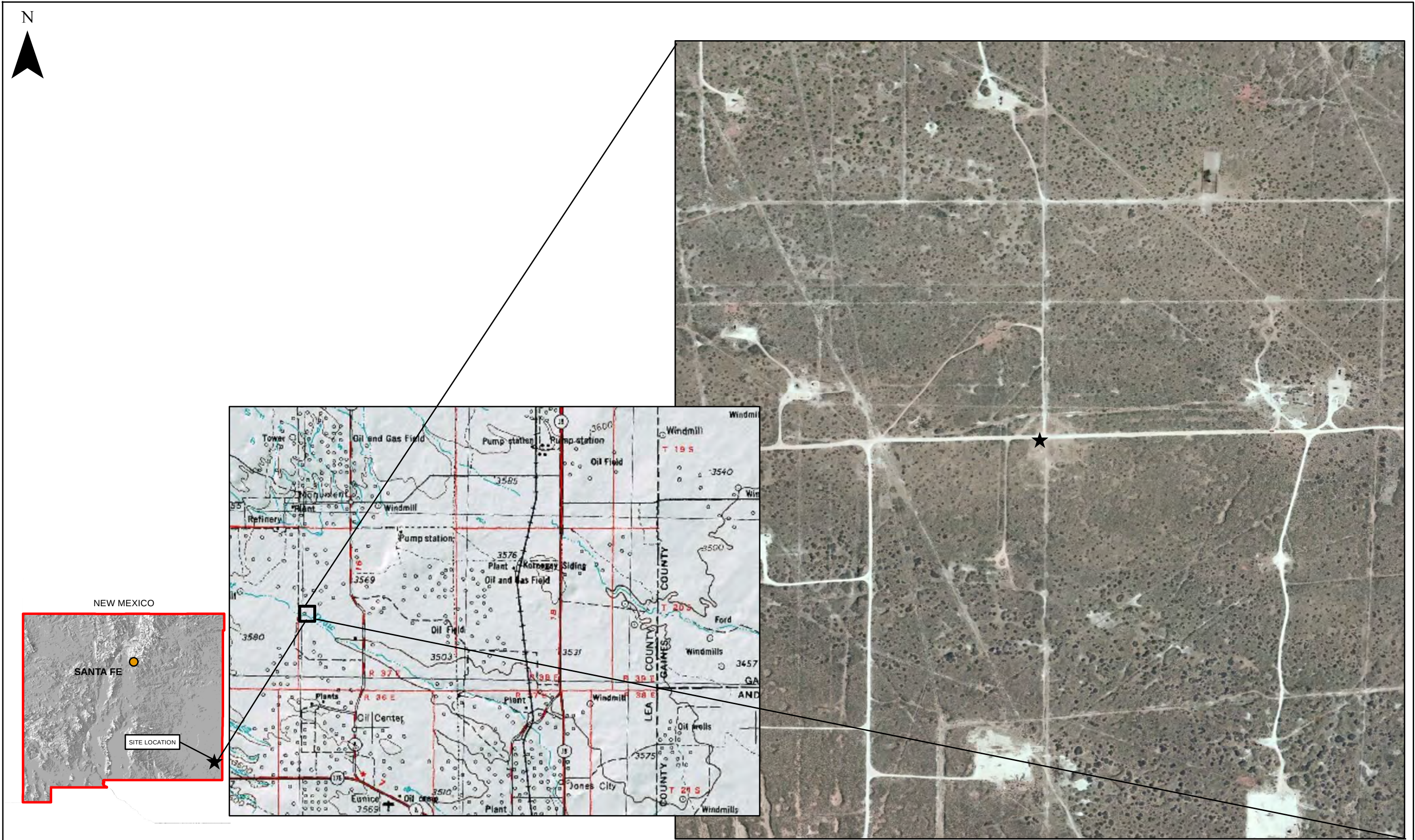
J = reflects an estimated value

LNAPL - Light Non-Aqueous Phase Liquid

mg/L - milligrams per liter.

* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceable 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: June 2014
DESIGNED BY: T. Johansen
DRAWN BY: D. Arnold

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

**DCP Midstream
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:	June 2014
DESIGNED BY:	T. Johansen
DRAWN BY:	D. Arnold

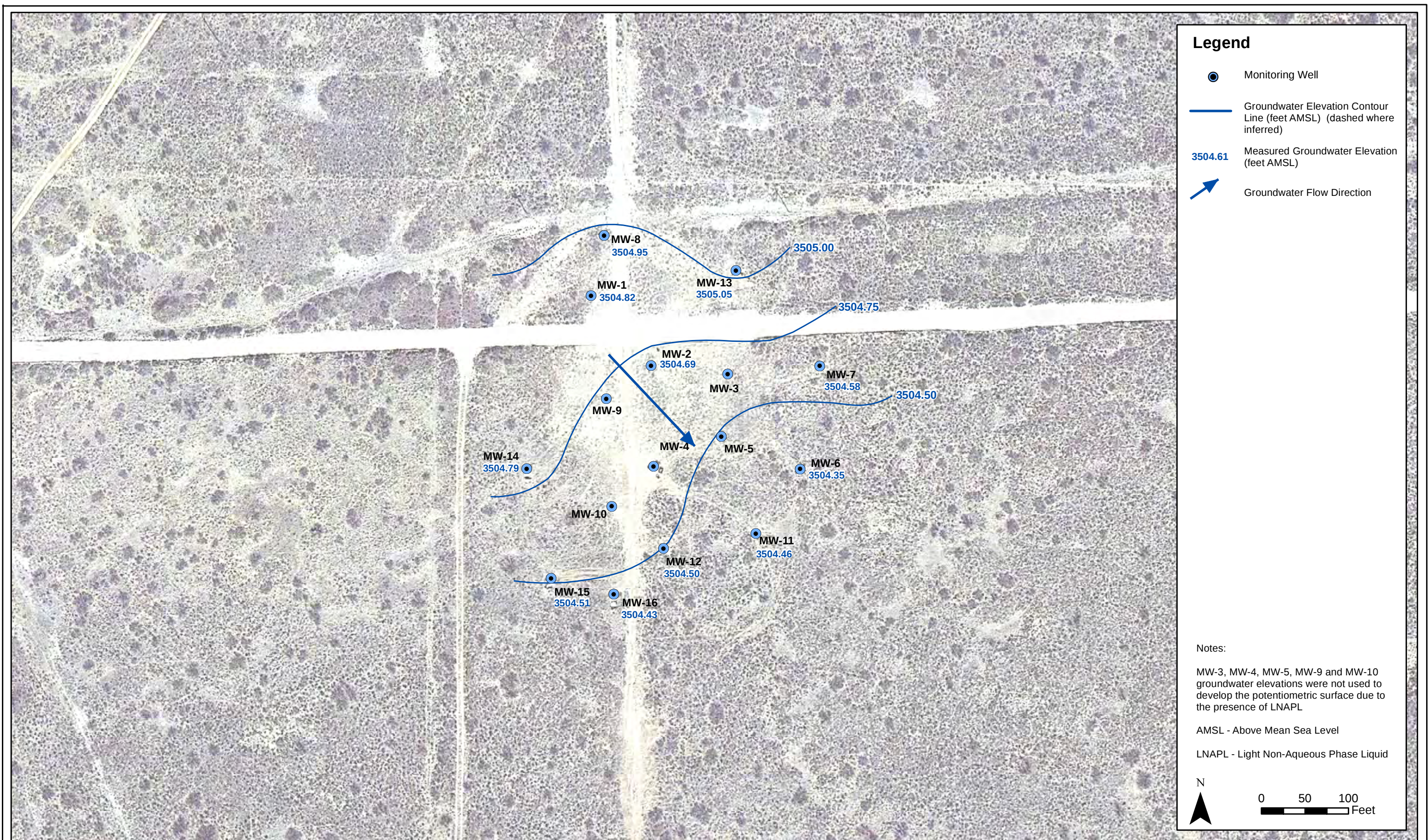


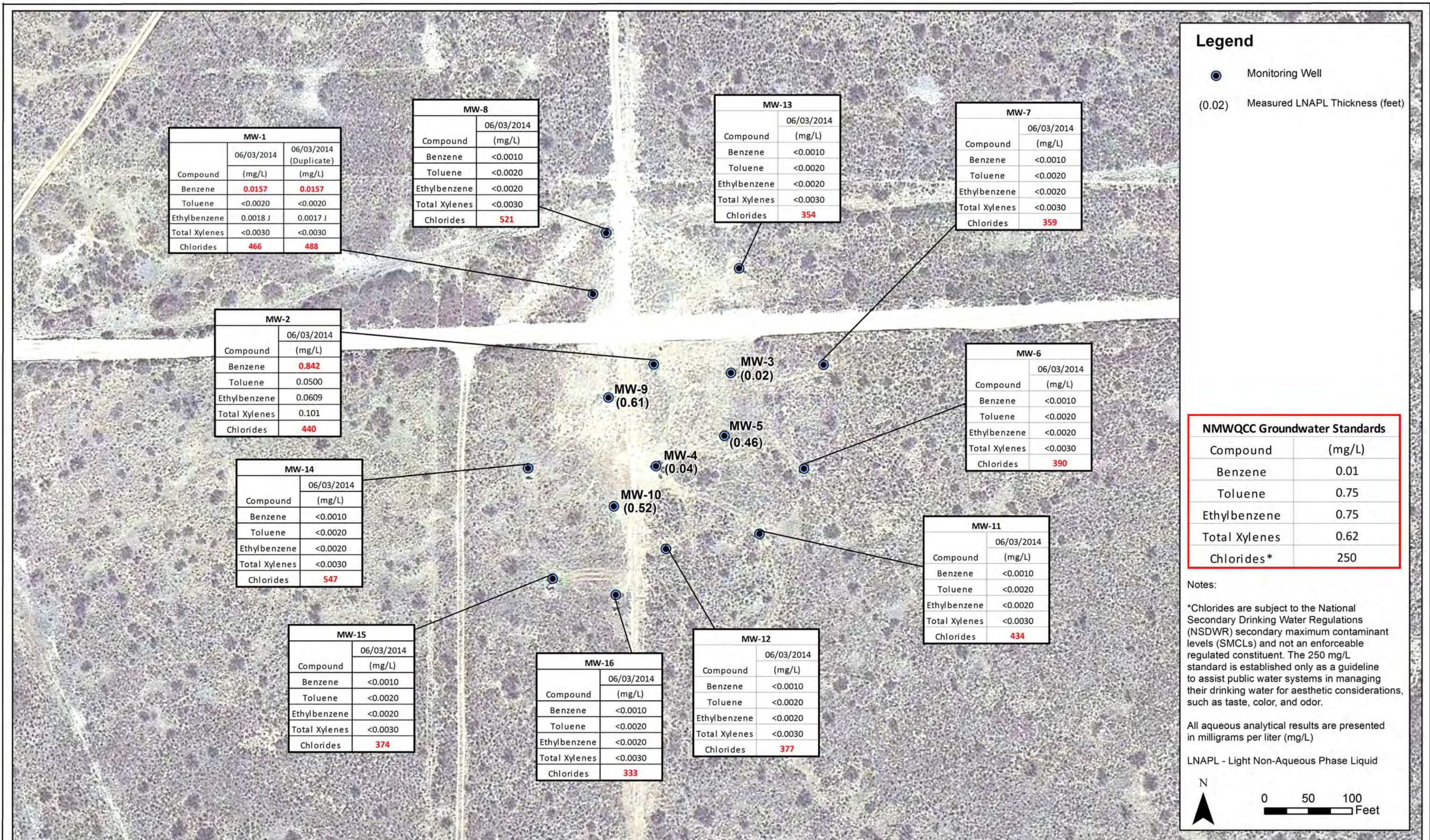
Tasman Geosciences, LLC
6899 Pecos Street - Unit C
Denver, CO 80221

DCP Midstream
RR-Extension Pipeline Release
Second Quarter 2014 Groundwater Monitoring
Summary Report

Site Map with Monitoring
Well Locations

Figure
2





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
New Mexico Water Quality Control Commission 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-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	

APPENDIX A
HISTORIC ANALYTICAL RESULTS
BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
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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
New Mexico Water Quality Control Commission 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-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	

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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
New Mexico Water Quality Control Commission 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-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	

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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
New Mexico Water Quality Control Commission 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-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	

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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
New Mexico Water Quality Control Commission 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-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-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	

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
New Mexico Water Quality Control Commission 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-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-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	

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
New Mexico Water Quality Control Commission 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-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	
Trip Blank	06/03/2014	<0.001	<0.002	<0.002	<0.003	NA	

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

mg/L - milligrams per liter.

* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceable 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 #: D58509



06/12/14

Technical Report for

DCP Midstream, LP

TASMCOA:DCP RR EXT

Accutest Job Number: D58509

Sampling Date: 06/03/14

Report to:

Tasman Geoscience LLC
6899 Pecos Street Unit C
Denver, CO 80221
tjohansen@tasman-geo.com; swweathers@dcpmidstream.com;
cwasko@tasman-geo.com; dbaggus@tasman-geo.com
ATTN: Don Baggus

Total number of pages in report: **58**



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)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

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Sample Summary

DCP Midstream, LP

Job No: D58509

TASMCOA:DCP RR EXT

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D58509-1	06/03/14	09:50 DB	06/06/14	AQ	Ground Water	MW-1-060314
D58509-2	06/03/14	09:20 DB	06/06/14	AQ	Ground Water	MW-2-060314
D58509-3	06/03/14	10:50 DB	06/06/14	AQ	Ground Water	MW-6-060314
D58509-4	06/03/14	10:40 DB	06/06/14	AQ	Ground Water	MW-7-060314
D58509-5	06/03/14	10:10 DB	06/06/14	AQ	Ground Water	MW-8-060314
D58509-6	06/03/14	11:00 DB	06/06/14	AQ	Ground Water	MW-11-060314
D58509-7	06/03/14	11:10 DB	06/06/14	AQ	Ground Water	MW-12-060314
D58509-8	06/03/14	10:20 DB	06/06/14	AQ	Ground Water	MW-13-060314
D58509-8D	06/03/14	10:20 DB	06/06/14	AQ	Water Dup/MSD	MW-13-060314
D58509-8M	06/03/14	10:20 DB	06/06/14	AQ	Water Matrix Spike	MW-13-060314
D58509-9	06/03/14	11:40 DB	06/06/14	AQ	Ground Water	MW-14-060314
D58509-10	06/03/14	11:30 DB	06/06/14	AQ	Ground Water	MW-15-060314
D58509-11	06/03/14	11:20 DB	06/06/14	AQ	Ground Water	MW-16-060314



Sample Summary
(continued)

DCP Midstream, LP

Job No: D58509

TASMCOA:DCP RR EXT

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D58509-12	06/03/14	00:00 DB	06/06/14	AQ	Ground Water	DUP
D58509-13	06/03/14	09:00 DB	06/06/14	AQ	Trip Blank Water	TRIP BLANK



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: DCP Midstream, LP

Job No D58509

Site: TASMCOA:DCP RR EXT

Report Date 6/12/2014 3:40:34 PM

On 06/06/2014, 12 sample(s), 1 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 D58509 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: V3V1814

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D58509-8MS, D58509-8MSD were used as the QC samples indicated.
- D58509-13: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

Matrix AQ

Batch ID: V6V1430

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D58508-3MS, D58508-3MSD were used as the QC samples indicated.

Matrix AQ

Batch ID: V7V1469

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D58410-9MS, D58475-1DUP were used as the QC samples indicated.
- D58475-1DUP: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.
- D58410-9MS: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

Matrix AQ

Batch ID: V7V1473

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D58509-2DUP, D58547-7MS were used as the QC samples indicated.
- D58547-7MS: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

Wet Chemistry By Method EPA 300.0/SW846 9056**Matrix** AQ**Batch ID:** GP12766

- 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) D58509-1MS, D58509-1MSD were used as the QC samples for the Chloride analysis.

Matrix AQ**Batch ID:** GP12771

- 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) D58474-5MS, D58474-5MSD 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: D58509
Account: DCP Midstream, LP
Project: TASMCOA:DCP RR EXT
Collected: 06/03/14



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D58509-1	MW-1-060314					
Benzene		0.0157	0.0010	0.00025	mg/l	SW846 8260B
Ethylbenzene		0.0018 J	0.0020	0.00031	mg/l	SW846 8260B
Chloride		466	13		mg/l	EPA 300.0/SW846 9056
D58509-2	MW-2-060314					
Benzene		0.842	0.020	0.0050	mg/l	SW846 8260B
Toluene		0.0500	0.0020	0.0010	mg/l	SW846 8260B
Ethylbenzene		0.0609	0.0020	0.00031	mg/l	SW846 8260B
Xylene (total)		0.101	0.0030	0.0015	mg/l	SW846 8260B
Chloride		440	10		mg/l	EPA 300.0/SW846 9056
D58509-3	MW-6-060314					
Chloride		390	10		mg/l	EPA 300.0/SW846 9056
D58509-4	MW-7-060314					
Chloride		359	10		mg/l	EPA 300.0/SW846 9056
D58509-5	MW-8-060314					
Chloride		521	10		mg/l	EPA 300.0/SW846 9056
D58509-6	MW-11-060314					
Chloride		434	10		mg/l	EPA 300.0/SW846 9056
D58509-7	MW-12-060314					
Chloride		377	10		mg/l	EPA 300.0/SW846 9056
D58509-8	MW-13-060314					
Chloride		354	10		mg/l	EPA 300.0/SW846 9056
D58509-9	MW-14-060314					
Chloride		547	25		mg/l	EPA 300.0/SW846 9056
D58509-10	MW-15-060314					
Chloride		374	25		mg/l	EPA 300.0/SW846 9056

Summary of Hits

Job Number: D58509
Account: DCP Midstream, LP
Project: TASMCOA:DCP RR EXT
Collected: 06/03/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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D58509-11 MW-16-060314

Chloride	333	10		mg/l	EPA 300.0/SW846 9056
----------	-----	----	--	------	----------------------

D58509-12 DUP

Benzene	0.0157	0.0010	0.00025	mg/l	SW846 8260B
Ethylbenzene	0.0017 J	0.0020	0.00031	mg/l	SW846 8260B
Chloride	488	25		mg/l	EPA 300.0/SW846 9056

D58509-13 TRIP BLANK

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1-060314		
Lab Sample ID:	D58509-1	Date Sampled:	06/03/14
Matrix:	AQ - Ground Water	Date Received:	06/06/14
Method:	SW846 8260B	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V26815.D	1	06/06/14	JL	n/a	n/a	V7V1469
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	0.0157	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	0.0018	0.0020	0.00031	mg/l	J
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	78%		62-130%
2037-26-5	Toluene-D8	97%		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

Client Sample ID:	MW-1-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-1	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	466	13	mg/l	25	06/07/14 12:10	JB	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-2-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-2	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V26816.D	1	06/06/14	JL	n/a	n/a	V7V1469
Run #2	7V26889.D	20	06/11/14	JL	n/a	n/a	V7V1473

	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	0.842 ^a	0.020	0.0050	mg/l	
108-88-3	Toluene	0.0500	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	0.0609	0.0020	0.00031	mg/l	
1330-20-7	Xylene (total)	0.101	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	80%	101%	62-130%
2037-26-5	Toluene-D8	98%	101%	70-130%
460-00-4	4-Bromofluorobenzene	101%	96%	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

Client Sample ID:	MW-2-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-2	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	440	10	mg/l	20	06/07/14 18:57	JB	EPA 300.0/SW846 9056

RL = Reporting Limit

4.2
4

Report of Analysis

Client Sample ID:	MW-6-060314		
Lab Sample ID:	D58509-3	Date Sampled:	06/03/14
Matrix:	AQ - Ground Water	Date Received:	06/06/14
Method:	SW846 8260B	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V25243.D	1	06/07/14	BR	n/a	n/a	V6V1430
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	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	97%		70-130%
460-00-4	4-Bromofluorobenzene	93%		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

Client Sample ID:	MW-6-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-3	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	390	10	mg/l	20	06/07/14 19:11	JB	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-7-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-4	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V25244.D	1	06/07/14	BR	n/a	n/a	V6V1430
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		62-130%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	92%		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

Client Sample ID:	MW-7-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-4	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	359	10	mg/l	20	06/07/14 19:24	JB	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-8-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-5	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V25245.D	1	06/07/14	BR	n/a	n/a	V6V1430
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	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	96%		70-130%
460-00-4	4-Bromofluorobenzene	93%		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

Client Sample ID:	MW-8-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-5	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	521	10	mg/l	20	06/07/14 19:37	JB	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID:	MW-11-060314		
Lab Sample ID:	D58509-6	Date Sampled:	06/03/14
Matrix:	AQ - Ground Water	Date Received:	06/06/14
Method:	SW846 8260B	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V25246.D	1	06/07/14	BR	n/a	n/a	V6V1430
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	94%		62-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	91%		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

Client Sample ID:	MW-11-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-6	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	434	10	mg/l	20	06/07/14 19:50	JB	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-12-060314		
Lab Sample ID:	D58509-7	Date Sampled:	06/03/14
Matrix:	AQ - Ground Water	Date Received:	06/06/14
Method:	SW846 8260B	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V25247.D	1	06/07/14	BR	n/a	n/a	V6V1430
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	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	97%		70-130%
460-00-4	4-Bromofluorobenzene	93%		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

Client Sample ID:	MW-12-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-7	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	377	10	mg/l	20	06/07/14 20:03	JB	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-13-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-8	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V31005.D	1	06/10/14	BR	n/a	n/a	V3V1814
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	93%		62-130%
2037-26-5	Toluene-D8	94%		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

Client Sample ID: MW-13-060314
Lab Sample ID: D58509-8
Matrix: AQ - Ground Water
Project: TASMCOA:DCP RR EXT

Date Sampled: 06/03/14
Date Received: 06/06/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	354	10	mg/l	20	06/09/14 16:53	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

4.8
4

Report of Analysis

Client Sample ID:	MW-14-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-9	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V31008.D	1	06/10/14	BR	n/a	n/a	V3V1814
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		62-130%
2037-26-5	Toluene-D8	95%		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

Client Sample ID:	MW-14-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-9	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	547	25	mg/l	50	06/09/14 17:06	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-15-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-10	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V31009.D	1	06/10/14	BR	n/a	n/a	V3V1814
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	94%		62-130%
2037-26-5	Toluene-D8	95%		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

Client Sample ID: MW-15-060314
Lab Sample ID: D58509-10
Matrix: AQ - Ground Water
Project: TASMCOA:DCP RR EXT

Date Sampled: 06/03/14
Date Received: 06/06/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	374	25	mg/l	50	06/09/14 17:20	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

4.10
4

Report of Analysis

Client Sample ID:	MW-16-060314	Date Sampled:	06/03/14
Lab Sample ID:	D58509-11	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V31010.D	1	06/10/14	BR	n/a	n/a	V3V1814
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	93%		62-130%
2037-26-5	Toluene-D8	94%		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

Client Sample ID: MW-16-060314
Lab Sample ID: D58509-11
Matrix: AQ - Ground Water
Project: TASMCOA:DCP RR EXT

Date Sampled: 06/03/14
Date Received: 06/06/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	333	10	mg/l	20	06/09/14 17:33	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

4.11
4

Report of Analysis

Client Sample ID:	DUP	Date Sampled:	06/03/14
Lab Sample ID:	D58509-12	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V31011.D	1	06/10/14	BR	n/a	n/a	V3V1814
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	0.0157	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	0.0017	0.0020	0.00031	mg/l	J
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		62-130%
2037-26-5	Toluene-D8	95%		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

Client Sample ID:	DUP	Date Sampled:	06/03/14
Lab Sample ID:	D58509-12	Date Received:	06/06/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	TASMCOA:DCP RR EXT		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	488	25	mg/l	50	06/09/14 17:46	SK	EPA 300.0/SW846 9056

RL = Reporting Limit

Report of Analysis

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Client Sample ID:	TRIP BLANK	Date Sampled:	06/03/14
Lab Sample ID:	D58509-13	Date Received:	06/06/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	TASMCOA:DCP RR EXT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3V31012.D	1	06/10/14	BR	n/a	n/a	V3V1814
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	0.00031	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.0015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		62-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	96%		69-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

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

Misc. Forms

5

Custody Documents and Other Forms

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

FEO-EX Tracking #		Bottle Order Control #																	
Accutest Quote #		Accutest Job # D58509																	
Client / Reporting Information		Project Information																	
Company Name Tasman Geosciences		Project Name DCP RR Extension Pipeline Release																	
Street Address 6899 Pecos St - Unit C		Street																	
City Denver, CO 80221		Billing Information (if different from Report to)																	
Project Contact Don Baggus dbaggus@tasman-geo.com		Company Name																	
Phone # (720) 635-9675		Project #																	
Sampler(s) Name(s) Don Baggus		Client Purchase Order #																	
Project Manager Renea Jackson		Street Address																	
Attention:		City																	
Collection		Number of preserved Bottles																	
Accutest Sample #	Field ID / Point of Collection	MECHDI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MECH	ENCODE	V8260BTX	CHL	MS/MSD for V8260BTX	Matrix Codes
	MW-1 - 060314		6/3/14	0950	DB	GW	4	3					1				X	X	DW - Drinking Water
	MW-2 - 060314			0920		GW	4	3					1				X	X	GW - Ground Water
	MW-6 - 060314			1050		GW	4	3					1				X	X	WW - Water
	MW-7 - 060314			1040		GW	4	3					1				X	X	SW - Surface Water
	MW-8 - 060314			1010		GW	4	3					1				X	X	SO - Soil
	MW-11 - 060314			1100		GW	4	3					1				X	X	SL - Sludge
	MW-12 - 060314			1110		GW	4	3					1				X	X	SED - Sediment
	MW-13 - 060314			1020		GW	4	3					1				X	X	AI - Air
	MW-13 MS/MSD			1020		GW	6	6									X		LIQ - Other Liquid
	MW-14 - 060314			1140		GW	4	3					1				X	X	WP - Wipe
	MW-15 - 060314			1130		GW	4	3					1				X	X	FB - Field Blank
	MW-16 - 060314			1120		GW	4	3					1				X	X	RB - Rinse Blank
																			TB - Trip Blank
Data Deliverable Information																		LAB USE ONLY	
☐ Std. 15 Business Days ☒ Std. 10 Business Days ☐ 5 Day RUSH ☐ 3 Day Emergency ☐ 2 Day Emergency ☐ 1 Day Emergency Emergency & Rush T/A data available VIA Lablink.																		Approved By (Accutest PM): / Date:	
☐ Commercial "A" (Level 1) ☒ Commercial "B" (Level 2) ☒ COMMBN ☐ COMMBN+ Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial BN = Results/QC Narrative (+ = chromatograms)																		☐ State Forms Required ☐ Send Forms to State ☐ Report by Fax ☒ Report by PDF ONLY ☐ EDD Format	
Comments / Special Instructions																			
Relinquished by: Don Baggus																		Received By: Renea Jackson	
Relinquished by: Don Baggus																		Received By: Renea Jackson	
Relinquished by: Don Baggus																		Received By: Renea Jackson	
Custody Seal # 4																		Intact ☒ Not Intact ☐	
Preserved where applicable ☒																		On Ice ☒ Cooler Temp. 2.5	

D58509: Chain of Custody

Page 1 of 2



CHAIN OF CUSTODY

PAGE 2 OF 2

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

FED-EX Tracking #		Bottle Order Control #																
Accutest Quote #		Accutest Job # D58509																
Client / Reporting Information		Project Information																
Company Name Tasman Geosciences		Project Name DCP RR Extension Pipeline Release																
Street Address 6899 Pecos St - Unit C		Street																
City Denver, CO 80221		City State																
Project Contact Don Baggus dbaggus@tasman-geo.com		Project #																
Phone # (720) 635-9675		Client Purchase Order #																
Sampler(s) Name(s) DON BAGGUS		Project Manager Renea Jackson																
Billing Information (If different from Report to)		Attention:																
Company Name		Street Address																
City		City																
Client		Attention:																
Collection		Number of preserved Bottles																
Accutest Sample #	Field ID / Point of Collection	MEQ/MDI Vial #	Date	Time	Sampled by	Matrix	# of bottles	ICL	NaOH	HNO3	H2O2	H2SO4	HCl	None	DI Water	MECH	ENCORE	ENCORE
	DUP		6/3/14		DB	GW	4	3						1				
	Trip BLANK		6/3/14	0900	DB	W	2	X										
Matrix Codes																		
DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank																		
LAB USE ONLY																		
12																		
13																		
6/3/14																		
Comments / Special Instructions																		
Data Deliverable Information																		
☐ Std. 15 Business Days ☒ Std. 10 Business Days ☐ 5 Day RUSH ☐ 3 Day Emergency ☐ 2 Day Emergency ☐ 1 Day Emergency Emergency & Rush T/A data available VIA Lablink																		
Approved By (Accutest PM): / Date:																		
☐ Commercial "A" (Level 1) ☐ Commercial "B" (Level 2) ☒ COMMBN ☐ COMMBN+ Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial BN = Results/QC/Narrative (+ = chromatograms)																		
☐ State Forms Required ☐ Send Forms to State ☐ Report by Fax ☒ Report by PDF ONLY ☐ EDD Format																		
Relinquished By: 1 Don Baggus																		
Received By: 1																		
Relinquished By: 2																		
Received By: 2 ML 6-6-14																		
Relinquished By: 3																		
Received By: 3																		
Relinquished By: 4																		
Received By: 4																		
Custody Seal # 108																		
☐ Intact ☒ Not Intact																		
Preserved where applicable																		
On Ice ☒ Cooler Temp. 2.5																		

D58509: Chain of Custody

Page 2 of 2

GC/MS Volatiles

QC Data Summaries

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: D58509

Account: DCPMCO DN DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V1469-MB	7V26795.D	1	06/06/14	JL	n/a	n/a	V7V1469

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-1, D58509-2

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	0.31	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.5	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	72% 62-130%
2037-26-5	Toluene-D8	98% 70-130%
460-00-4	4-Bromofluorobenzene	101% 69-130%

Method Blank Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCO DN DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1430-MB	6V25226.D	1	06/07/14	BR	n/a	n/a	V6V1430

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-3, D58509-4, D58509-5, D58509-6, D58509-7

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	0.31	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.5	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	92% 62-130%
2037-26-5	Toluene-D8	99% 70-130%
460-00-4	4-Bromofluorobenzene	91% 69-130%

Method Blank Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCO DN DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1814-MB	3V30999.D	1	06/10/14	BR	n/a	n/a	V3V1814

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-8, D58509-9, D58509-10, D58509-11, D58509-12, D58509-13

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	0.31	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.5	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	95% 62-130%
2037-26-5	Toluene-D8	94% 70-130%
460-00-4	4-Bromofluorobenzene	97% 69-130%

Method Blank Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCOA DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V1473-MB	7V26882.D	1	06/11/14	JL	n/a	n/a	V7V1473

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-2

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	94% 62-130%
2037-26-5	Toluene-D8	101% 70-130%
460-00-4	4-Bromofluorobenzene	96% 69-130%

Blank Spike Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCO DN DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V1469-BS	7V26796.D	1	06/06/14	JL	n/a	n/a	V7V1469

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-1, D58509-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	51.1	102	70-130
100-41-4	Ethylbenzene	50	51.0	102	70-130
108-88-3	Toluene	50	48.2	96	70-130
1330-20-7	Xylene (total)	150	156	104	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	112%	62-130%
2037-26-5	Toluene-D8	97%	70-130%
460-00-4	4-Bromofluorobenzene	102%	69-130%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCO DN DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1430-BS	6V25227.D	1	06/07/14	BR	n/a	n/a	V6V1430

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-3, D58509-4, D58509-5, D58509-6, D58509-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	47.8	96	70-130
100-41-4	Ethylbenzene	50	51.3	103	70-130
108-88-3	Toluene	50	47.9	96	70-130
1330-20-7	Xylene (total)	150	156	104	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	91%	62-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	101%	69-130%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCOA DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1814-BS	3V31000.D	1	06/10/14	BR	n/a	n/a	V3V1814

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-8, D58509-9, D58509-10, D58509-11, D58509-12, D58509-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	49.9	100	70-130
100-41-4	Ethylbenzene	50	50.3	101	70-130
108-88-3	Toluene	50	48.4	97	70-130
1330-20-7	Xylene (total)	150	141	94	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	94%	62-130%
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	100%	69-130%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCOA DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V1473-BS	7V26883.D	1	06/11/14	JL	n/a	n/a	V7V1473

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	47.5	95	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	108%	62-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	101%	69-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D58509
Account: DCPMCOA DCP Midstream, LP
Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V1473-BS	7V26884.D	1	06/11/14	JL	n/a	n/a	V7V1473

The QC reported here applies to the following samples: Method: SW846 8260B
D58509-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	62-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	99%	69-130%

* = Outside of Control Limits.

Matrix Spike Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCO DN DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D58410-9MS ^a	7V26797.D	5	06/06/14	JL	n/a	n/a	V7V1469
D58410-9 ^a	7V26790.D	1	06/05/14	JL	n/a	n/a	V7V1469
D58410-9 ^a	7V26798.D	5	06/06/14	JL	n/a	n/a	V7V1469

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-1, D58509-2

CAS No.	Compound	D58410-9 ug/l	Spike Q	ug/l	MS ug/l	MS %	Limits
71-43-2	Benzene	ND	250	242	97	62-130	
100-41-4	Ethylbenzene	ND	250	251	100	63-130	
108-88-3	Toluene	ND	250	233	93	60-130	
1330-20-7	Xylene (total)	ND	750	759	101	67-130	

CAS No.	Surrogate Recoveries	MS	D58410-9	D58410-9	Limits
17060-07-0	1,2-Dichloroethane-D4	91%	75%	89%	62-130%
2037-26-5	Toluene-D8	98%	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	102%	94%	98%	69-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

* = Outside of Control Limits.

Matrix Spike Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCO DN DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D58547-7MS ^a	7V26896.D	1	06/11/14	JL	n/a	n/a	V7V1473
D58547-7 ^a	7V26898.D	1	06/11/14	JL	n/a	n/a	V7V1473

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-2

CAS No.	Compound	D58547-7 ug/l	Spike Q	MS ug/l	MS %	Limits
71-43-2	Benzene	ND	50	49.1	98	62-130

CAS No.	Surrogate Recoveries	MS	D58547-7	Limits
17060-07-0	1,2-Dichloroethane-D4	110%	70%	62-130%
2037-26-5	Toluene-D8	99%	102%	70-130%
460-00-4	4-Bromofluorobenzene	100%	95%	69-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

* = Outside of Control Limits.

Matrix Spike Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCOA DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D58547-7MS ^a	7V26897.D	1	06/11/14	JL	n/a	n/a	V7V1473
D58547-7 ^a	7V26898.D	1	06/11/14	JL	n/a	n/a	V7V1473

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-2

CAS No.	Compound	D58547-7 ug/l	Spike Q	MS ug/l	MS %	Limits
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CAS No.	Surrogate Recoveries	MS	D58547-7	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	70%	62-130%
2037-26-5	Toluene-D8	99%	102%	70-130%
460-00-4	4-Bromofluorobenzene	97%	95%	69-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D58509
Account: DCPMCOA DCP Midstream, LP
Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D58508-3MS	6V25231.D	1	06/07/14	BR	n/a	n/a	V6V1430
D58508-3MSD	6V25232.D	1	06/07/14	BR	n/a	n/a	V6V1430
D58508-3	6V25230.D	1	06/07/14	BR	n/a	n/a	V6V1430

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-3, D58509-4, D58509-5, D58509-6, D58509-7

CAS No.	Compound	D58508-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	46.8	94	50	49.3	99	5	62-130/30
100-41-4	Ethylbenzene	ND	50	50.7	101	50	54.2	108	7	63-130/30
108-88-3	Toluene	ND	50	47.5	95	50	49.3	99	4	60-130/30
1330-20-7	Xylene (total)	ND	150	154	103	150	160	107	4	67-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D58508-3	Limits
17060-07-0	1,2-Dichloroethane-D4	91%	93%	93%	62-130%
2037-26-5	Toluene-D8	99%	98%	96%	70-130%
460-00-4	4-Bromofluorobenzene	102%	102%	90%	69-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D58509
Account: DCPMCO DN DCP Midstream, LP
Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D58509-8MS	3V31006.D	1	06/10/14	BR	n/a	n/a	V3V1814
D58509-8MSD	3V31007.D	1	06/10/14	BR	n/a	n/a	V3V1814
D58509-8	3V31005.D	1	06/10/14	BR	n/a	n/a	V3V1814

The QC reported here applies to the following samples: Method: SW846 8260B

D58509-8, D58509-9, D58509-10, D58509-11, D58509-12, D58509-13

CAS No.	Compound	D58509-8 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	50.8	102	50	52.2	104	3	62-130/30
100-41-4	Ethylbenzene	ND	50	51.2	102	50	52.4	105	2	63-130/30
108-88-3	Toluene	ND	50	48.9	98	50	50.0	100	2	60-130/30
1330-20-7	Xylene (total)	ND	150	143	95	150	147	98	3	67-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D58509-8	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	93%	93%	62-130%
2037-26-5	Toluene-D8	96%	95%	94%	70-130%
460-00-4	4-Bromofluorobenzene	101%	101%	97%	69-130%

* = Outside of Control Limits.

Duplicate Summary

Page 1 of 1

Job Number: D58509
Account: DCPMCO DN DCP Midstream, LP
Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D58475-1DUP ^a	7V26800.D	1	06/06/14	JL	n/a	n/a	V7V1469
D58475-1 ^a	7V26799.D	1	06/06/14	JL	n/a	n/a	V7V1469

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-1, D58509-2

CAS No.	Compound	D58475-1 ug/l	DUP Q	ug/l	Q	RPD	Limits
71-43-2	Benzene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
108-88-3	Toluene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	30

CAS No.	Surrogate Recoveries	DUP	D58475-1	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	98%	62-130%
2037-26-5	Toluene-D8	100%	100%	70-130%
460-00-4	4-Bromofluorobenzene	96%	97%	69-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

* = Outside of Control Limits.

Duplicate Summary

Page 1 of 1

Job Number: D58509

Account: DCPMCOA DCP Midstream, LP

Project: TASMCOA:DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D58509-2DUP	7V26890.D	20	06/11/14	JL	n/a	n/a	V7V1473
D58509-2	7V26889.D	20	06/11/14	JL	n/a	n/a	V7V1473

The QC reported here applies to the following samples:

Method: SW846 8260B

D58509-2

CAS No.	Compound	D58509-2 ug/l	DUP Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	842		816		3	30

CAS No.	Surrogate Recoveries	DUP	D58509-2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	101%	62-130%
2037-26-5	Toluene-D8	101%	101%	70-130%
460-00-4	4-Bromofluorobenzene	96%	96%	69-130%

* = Outside of Control Limits.

General Chemistry

QC Data Summaries

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: D58509
Account: DCPMCDN - DCP Midstream, LP
Project: TASMCOA:DCP RR EXT

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP12766/GN25011	0.50	0.0	mg/l	5	4.71	94.2	90-110%
Chloride	GP12771/GN25028	0.50	0.0	mg/l	5	5.07	101.4	90-110%
Sulfate	GP12771/GN25028	0.50	0.0	mg/l	5	5.21	104.2	90-110%

Associated Samples:

Batch GP12766: D58509-1, D58509-2, D58509-3, D58509-4, D58509-5, D58509-6, D58509-7

Batch GP12771: D58509-8, D58509-9, D58509-10, D58509-11, D58509-12

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D58509
Account: DCPMCDN - DCP Midstream, LP
Project: TASMCOA:DCP RR EXT

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP12766/GN25011	D58509-1	mg/l	466	125	589	98.4	80-120%
Chloride	GP12771/GN25028	D58474-5	mg/l	1.7	5	6.9	104.0	80-120%
Sulfate	GP12771/GN25028	D58474-5	mg/l	4.1	5	9.2	102.0	80-120%

Associated Samples:

Batch GP12766: D58509-1, D58509-2, D58509-3, D58509-4, D58509-5, D58509-6, D58509-7

Batch GP12771: D58509-8, D58509-9, D58509-10, D58509-11, D58509-12

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D58509
Account: DCPMCDN - DCP Midstream, LP
Project: TASMCOA:DCP RR EXT

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP12766/GN25011	D58509-1	mg/l	466	125	592	0.5	20%
Chloride	GP12771/GN25028	D58474-5	mg/l	1.7	5	6.8	1.5	20%
Sulfate	GP12771/GN25028	D58474-5	mg/l	4.1	5	9.2	0.0	20%

Associated Samples:

Batch GP12766: D58509-1, D58509-2, D58509-3, D58509-4, D58509-5, D58509-6, D58509-7

Batch GP12771: D58509-8, D58509-9, D58509-10, D58509-11, D58509-12

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits