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

### RE: 1st Quarter 2014 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release (1RP-1728) Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 1<sup>st</sup> Quarter 2014 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East).

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me <u>swweathers@dcpmidstream.com</u>.

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

# J-4-2 Pipeline Release Lea County, New Mexico 1RP-1728

Prepared for:



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

Prepared by:



6899 Pecos Street, Unit C Denver, Colorado 80221

April 30, 2014



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# 1. Introduction

This report summarizes groundwater monitoring and remediation activities conducted during the first quarter of 2014 at the J-4-2 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 described herein were conducted on February 26, 2014 with the purpose of monitoring groundwater flow and quality beneath the Site. The data collected during the reporting period were used to develop a groundwater elevation figure and analytical results figure to assist with evaluating current conditions at the Site.

## 2. Site Location and Background

The Site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the intersection of US Highway 82 and State Highway 483. The area is sparsely populated and land use is primarily associated with livestock grazing and oil and gas production and gathering.

Based on findings from previous Site investigations, a natural gas condensate release was reported at the Site on August 3, 2005. Environmental Plus Incorporated (EPI) of Eunice, New Mexico, performed initial Site investigation activities. EPI reported that the spill was limited to an approximate area of 2,800 square feet and it did not migrate to any surface water features. EPI installed monitoring wells MW-1, MW-2, and MW-3 as a part of the initial soil and groundwater characterization effort in February 2006. Monitoring wells MW-4, MW-6, MW-7, and MW-8 were installed in September 2006 as part of a Site investigation completed by American Environmental Consulting. Installation of monitoring well MW-5 was not completed during this event due to refusal while advancing the borehole. Groundwater samples collected in 2006 from the newly installed wells indicated that dissolved phase petroleum hydrocarbons and chloride had impacted groundwater at the Site in the vicinity of monitoring wells MW-1 and MW-2. MW-1 and MW-2 have also historically exhibited the presence of Light non-aqueous phase liquid (LNAPL).

## 3. Groundwater Monitoring

This section describes the groundwater monitoring activities as well as laboratory analyses performed during the first quarter 2014 groundwater monitoring event. Monitoring activities included Site-wide groundwater gauging and groundwater sampling. Figure 2 illustrates the groundwater monitoring network utilized to perform these activities at the Site.

### 3.1 Groundwater Elevation Monitoring

Groundwater levels were measured in order to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations of groundwater elevation at the Site. During the first quarter 2014, groundwater levels were measured at seven 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 elevation measurements collected during the reporting period as well as historic 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**

	First Quarter 2014 (2/26/14)
Maximum Elevation (Well ID)	3707.54 (MW-4)
Minimum Elevation (Well ID)	3703.61 (MW-8)
Average Change from Previous Monitoring Event – All Wells	-0.03 foot
Hydraulic Gradient (ft/ft) / (Well IDs)	0.0052 (MW-4 to MW-8)

### 3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements, groundwater samples were collected at each of the seven Site monitoring wells.. A minimum of three well casing volumes of groundwater were purged from the subject well prior to the collection of groundwater samples. Groundwater samples were collected using dedicated polyethylene bailers, placed in clean laboratory supplied containers, packed in an ice-filled cooler, and maintained at approximately four degrees Celsius (°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 collected from seven wells and were submitted for analysis of benzene, toluene, ethylbenzene, and total xylenes (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 contained 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.

During the first quarter 2014, BTEX concentrations were below laboratory detection limits at the seven Site sample locations. Chloride was detected in all of the monitoring wells with concentrations ranging from 319 milligrams per liter (mg/L) in MW-8 to 2,100 mg/L in MW-2.



### 3.3 Data Quality Assurance / Quality Control

A matrix spike / matrix spike duplicate (MS/MSD) and field duplicate (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. Due to historic lack of BTEX detections for the Site, a trip blank was not submitted for this event.

The duplicate sample collected at MW-1 was in compliance with the QA/QC standard. MW-1 and duplicate samples both returned BTEX concentrations below laboratory detection limits.

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

## 4. Remediation Activities

Remediation efforts, including periodic enhanced fluid recovery (EFR) events and installation of passive LNAPL recovery bailers have been historically implemented at the Site. However due to the lack of observed LNAPL and dissolved phase detections during the previous monitoring event (fourth quarter 2013), these efforts were discontinued for the first quarter 2014.



# 5. Conclusions

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

- Groundwater elevations exhibit a declining trend at the Site and the first quarter monitoring event did not deviate from that observation.
- Dissolved phase hydrocarbon concentrations did not exceed laboratory detection limits in the 7 sampled locations during the reporting period.
- The last observed presence of LNAPL at the Site was at MW-2 during the third quarter 2013. The continued lack of LNAPL observations, coupled with the ongoing lack of dissolved phase detections, represents a positive trend. Ongoing quarterly groundwater sampling will provide for continued monitoring of Site conditions, BTEX concentrations, and LNAPL measurements.

## 6. Recommendations

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

- Continue quarterly groundwater elevation collection and groundwater sampling at the monitoring locations illustrated on Figure 2.
- Cease active/passive remediation efforts indefinitely unless Site conditions indicate that specific efforts should be implemented.

Tables

#### TABLE 1 FIRST QUARTER 2014 SUMMARY OF GROUNDWATER ELEVATION DATA J-4-2 PIPELINE RELEASE LEA COUNTY, NEW MEXICO

Location	Date	Depth to Groundwater (feet)	Depth to Product <sup>1</sup> (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth <sup>2</sup> (feet)	TOC Elevation <sup>3</sup> (feet amsl)	Groundwater Elevation (feet amsl)	Change in Groundwater Elevation Since Previous Event <sup>4</sup> (feet)
MW-1	12/4/2012	32.15			43.05	3740.45	3708.30	-0.28
MW-1	2/22/2013	32.26			43.05	3740.45	3708.19	-0.11
MW-1	6/2/2013	32.53			43.05	3740.45	3707.92	-0.27
MW-1	9/10/2013	33.04			43.05	3740.45	3707.41	-0.51
MW-1	12/3/2013	33.00			43.05	3740.45	3707.45	0.04
MW-1	2/26/2014	33.03			NM	3740.45	3707.42	-0.03
MW-2	12/4/2012	33.11			43.30	3740.62	3707.51	-0.41
MW-2	2/22/2013	33.30			43.30	3740.62	3707.32	-0.19
MW-2	6/2/2013	33.21			43.30	3740.62	3707.41	0.09
MW-2	9/10/2013	33.73	33.69	0.04	43.30	3740.62	3706.92	-0.49
MW-2	12/3/2013	33.64			43.30	3740.62	3706.98	0.06
MW-2	2/26/2014	33.68			NM	3740.62	3706.94	-0.04
MW-3	12/4/2012	31.44			35.20	3739.39	3707.95	-0.28
MW-3	2/22/2013	31.54			35.20	3739.39	3707.85	-0.10
MW-3	6/2/2013	31.80			35.20	3739.39	3707.59	-0.26
MW-3	9/10/2013	32.30			35.20	3739.39	3707.09	-0.50
MW-3	12/3/2013	32.26			35.20	3739.39	3707.13	0.04
MW-3	2/26/2014	32.30 **			NM	3739.39	3707.09	-0.04
MW-4	12/4/2012	31.83			37.95	3740.24	3708.41	-0.27
MW-4	2/22/2013	31.95			37.95	3740.24	3708.29	-0.12
MW-4	6/2/2013	32.20			37.95	3740.24	3708.04	-0.25
MW-4	9/10/2013	32.69			37.95	3740.24	3707.55	-0.49
MW-4	12/3/2013	32.70			37.95	3740.24	3707.54	-0.01
MW-4	2/26/2014	32.70			NM	3740.24	3707.54	0.00
MW-6	12/7/2012	32.16			34.31	3739.96	3707.80	-0.75
MW-6	2/22/2013	32.28			34.31	3739.96	3707.68	-0.12
MW-6	6/2/2013	32.51			34.31	3739.96	3707.45	-0.23
MW-6	9/10/2013	33.07			34.31	3739.96	3706.89	-0.56
MW-6	12/3/2013	33.07			34.31	3739.96	3706.89	0.00
MW-6	2/26/2014	33.13			NM	3739.96	3706.83	-0.06
MW-7	12/4/2012	35.20			40.41	3740.73	3705.53	-0.25
MW-7	2/22/2013	35.35			40.41	3740.73	3705.38	-0.15
MW-7	6/2/2013	35.57			40.41	3740.73	3705.16	-0.22
MW-7 MW-7	9/10/2013 12/3/2013	36.07 36.09			40.41	3740.73 3740.73	3704.66 3704.64	-0.50
 	2/26/2013	36.09			40.41 NM	3740.73	3704.64	-0.02
MW-8	12/4/2012	32.89			38.58	3737.32	3704.43	-0.28
MW-8	2/22/2012	32.89			38.58	3737.32	3704.43	-0.28
MW-8	6/2/2013	33.28			38.58	3737.32	3704.04	-0.25
MW-8	9/10/2013	33.70			38.58	3737.32	3703.62	-0.42
MW-8	12/3/2013	33.68			38.58	3737.32	3703.64	0.02
MW-8	2/26/2014	33.71			NM	3737.32	3703.61	-0.03
				Average c	hange in groundy	water elevation (1)	2/3/13 to 2/26/14)	-0.03

Notes:

Depths measured from the north edge of the well casing

Total depths were collected and recorded during the fourth quarter 2013 monitoring event

TOC elevations for monitoring wells MW-4, MW-6, MW-7, & MW-8 were calculated by adding the PVC stick-up length (in feet) to the surveyed ground surface elevations (in feet amsl). Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring even from the measurement collected during the most recent monitoring event.

Monitoring well location MW-5 was not installed due to geologic refusal that was encountered during drilling activities.

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

\* 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

\*\* Depth measured from top of well monument. Casing too low inside surface completion to allow measurement from TOC.

#### TABLE 2 FIRST QUARTER 2014 SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER J-4-2 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	2/26/2014	< 0.001	< 0.002	<0.002	< 0.003	1850	Duplicate sample collected
MW-1 (duplicate)	2/26/2014	< 0.001	<0.002	<0.002	< 0.003	1920	
MW-2	2/26/2014	< 0.001	< 0.002	<0.002	< 0.003	2100	
MW-3	2/26/2014	< 0.001	<0.002	<0.002	<0.003	1570	
MW-4	2/26/2014	< 0.001	< 0.002	<0.002	< 0.003	2000	
MW-6	2/26/2014	< 0.001	< 0.002	<0.002	<0.003	595	
MW-7	2/26/2014	<0.001	< 0.002	<0.002	< 0.003	1030	
MW-8	2/26/2014	<0.001	< 0.002	<0.002	< 0.003	319	

Notes:

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

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.

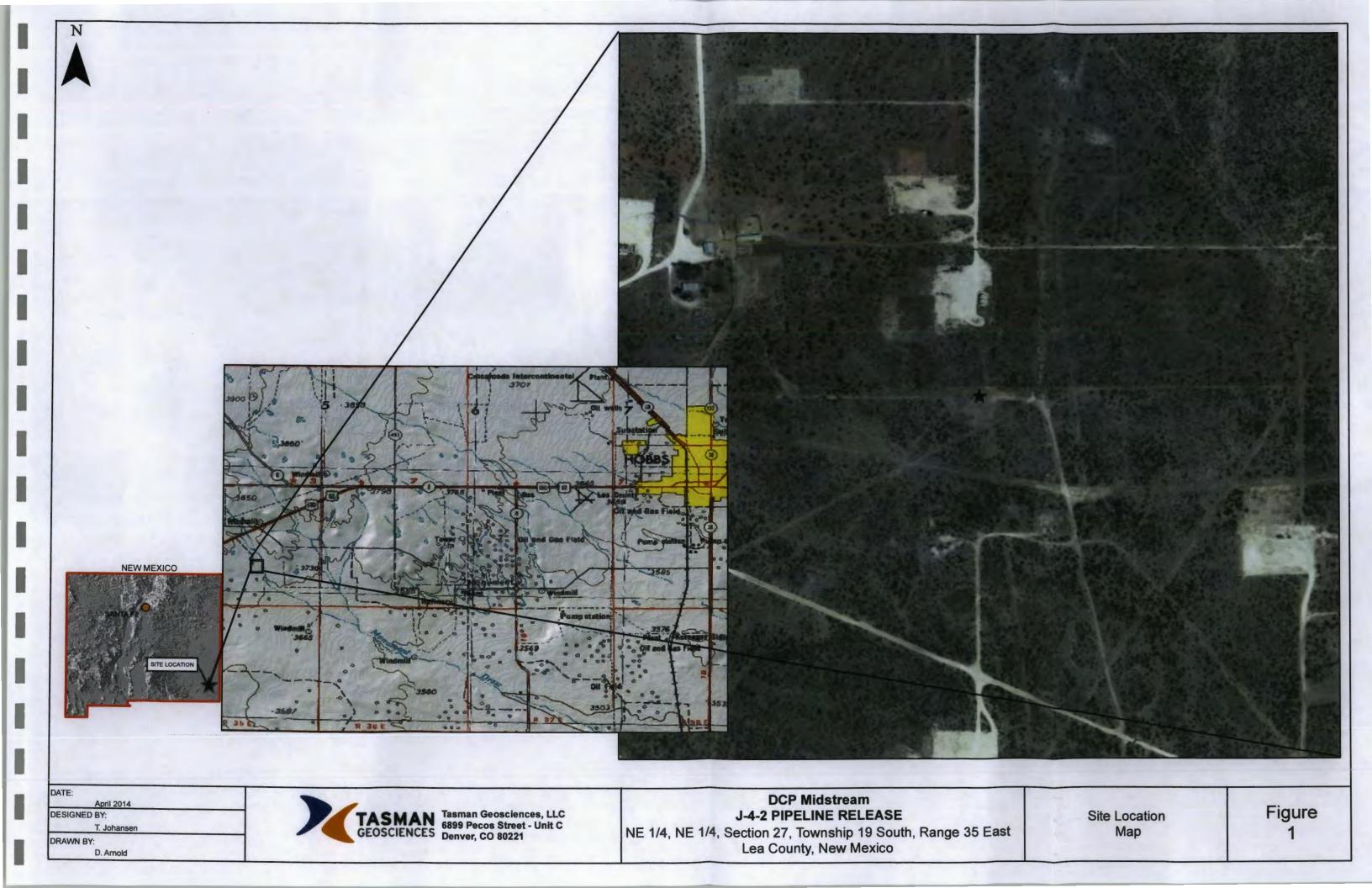
Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

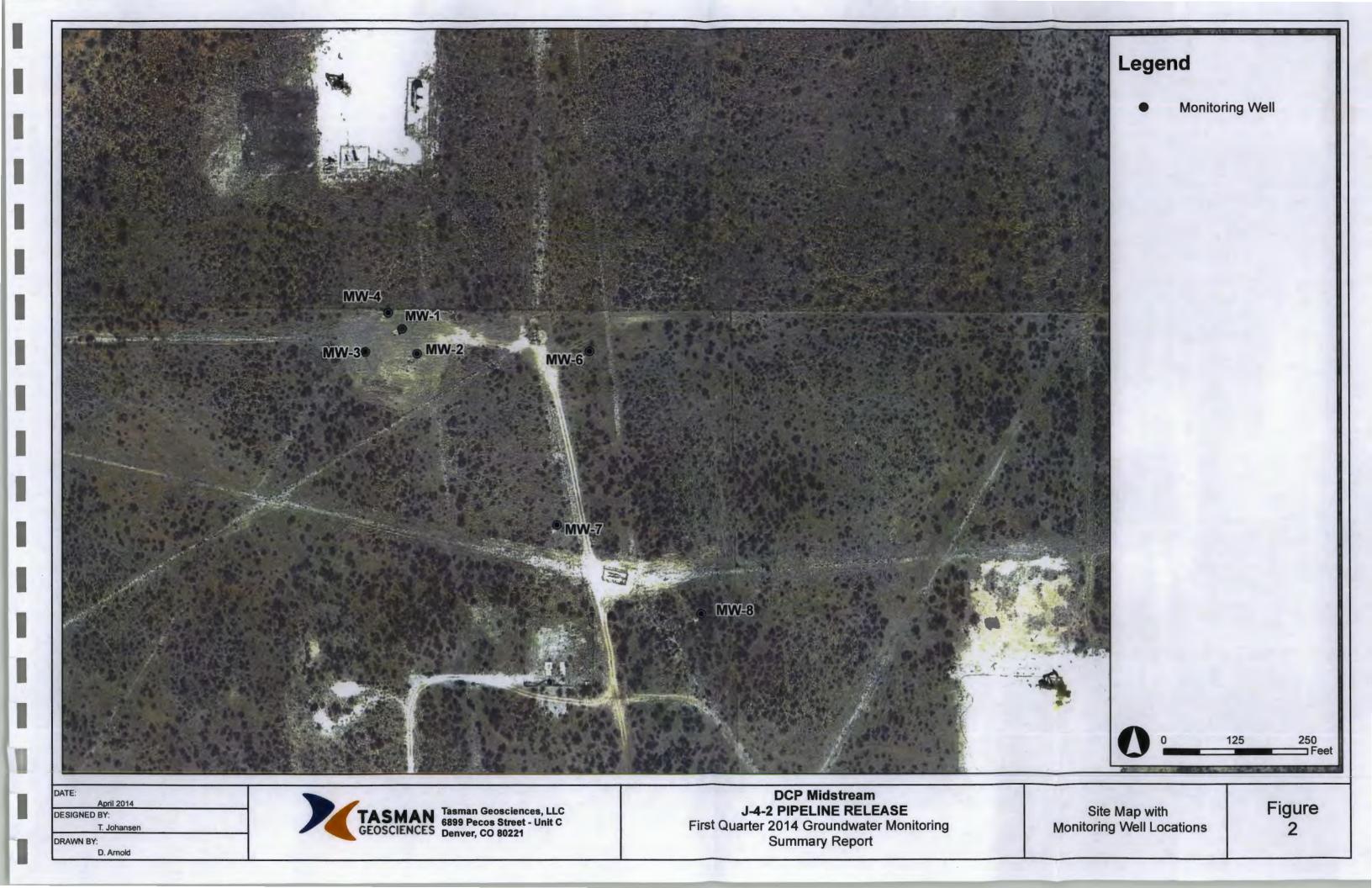
\* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceably regulated constituent. The 250 mg/L standard is established only as a guideline to assist public water systems in managing their drinking water for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

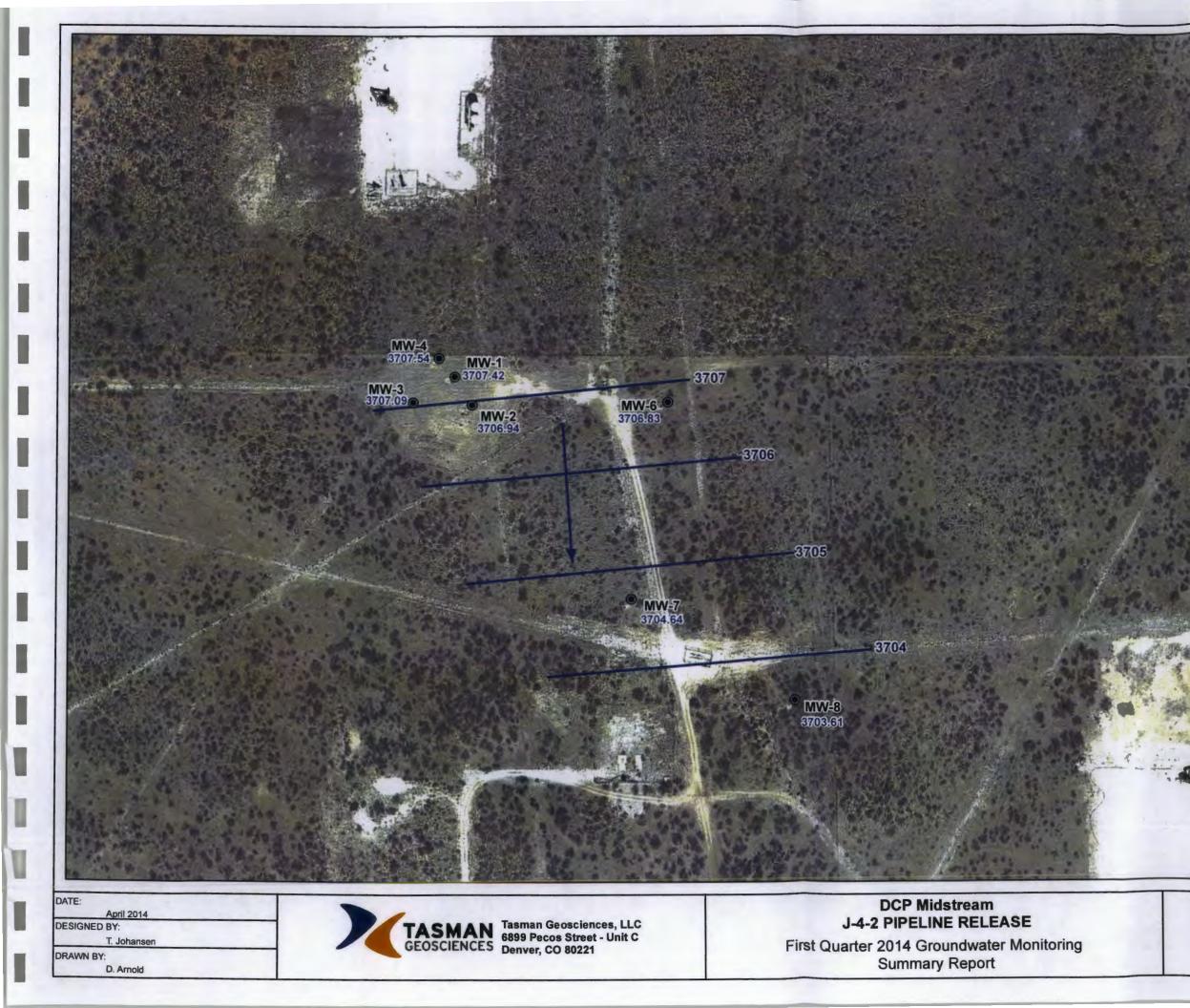
LNAPL = Light Non-Aqueous Phase Liquid

mg/L = milligrams per liter.

Figures











Monitoring Well

3707.54

Measured Groundwater Elevation (feet AMSL)



Groundwater Flow Direction

Notes: AMSL - Above Mean Sea Level

250

Figure

3

Fee

Groundwater Elevation Contour Map (February 26, 2014)

	MW-4				
		2/26/2014			
	Compound	(mg/L)	£.,		
100	Benzene	< 0.001			
	Toluene	< 0.002	6		
	Ethylbenzene	< 0.002	矗		
and the second	Total Xylenes	< 0.003	100		
1	Chlorides	2000			



	MW-1		
	2/26/2014	2/26/14 (Duplicate)	
Compound	(mg/L)	(mg/L)	
Benzene	< 0.001	< 0.001	
Toluene	<0.002	< 0.002	
Ethylbenzene	< 0.002	< 0.002	
Total Xylenes	< 0.003	< 0.003	
Chlorides	1850	1920	

	and a second				
MW-6					
	2/26/2014				
Compound	(mg/L)				
Benzene	< 0.001				
Toluene	< 0.002				
thylbenzene	< 0.002				
otal Xylenes	< 0.003				
Chlorides	595				
	Compound Benzene Toluene thylbenzene otal Xylenes				

MW-3		
	2/26/2014	
Compound	(mg/L)	
Benzene	< 0.001	
Toluene	< 0.002	
Ethylbenzene	< 0.002	100
Total Xylenes	< 0.003	
Chlorides	1570	ALC: NO

MW-7				
	2/26/2014			
Compound	(mg/L)			
Benzene	< 0.001			
Toluene	< 0.002			
Ethylbenzene	< 0.002			
Total Xylenes	< 0.003			
Chlorides	1030			
A REAL PROPERTY AND INCOME.				

MW-2			
	2/26/2014	- 100	
Compound	(mg/L)	The second	
Benzene	< 0.001		
Toluene	< 0.002		
Ethylbenzene	< 0.002	ŝ	
Total Xylenes	< 0.003		
Chlorides	2100	1	
A CONTRACTOR OF THE OWNER	States and states and states		

MW-8						
	2/26/2014	÷.,				
Compound	(mg/L)	1				
Benzene	<0.001	10				
Toluene	<0.002					
Ethylbenzene	<0.002					
Total Xylenes	<0.003					
Chlorides	319	L				

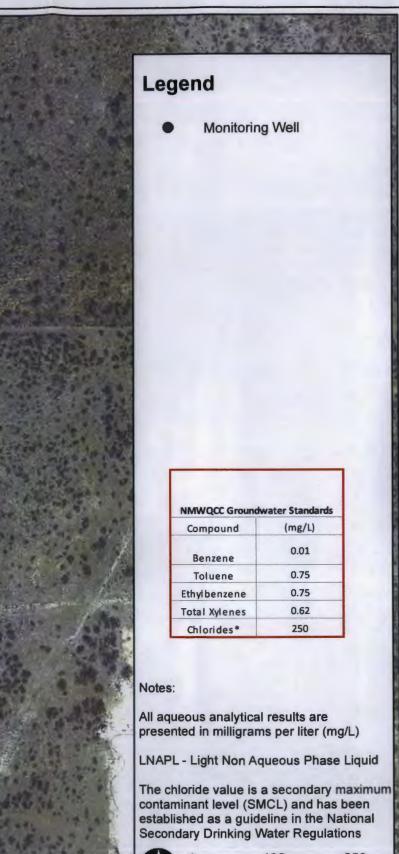
DATE:	
	April 2014
DESIGNED	BY:
	T. Johansen
DRAWN BY	1:
	D Arnold



TASMAN<br/>GEOSCIENCESTasman Geosciences, LLC<br/>6899 Pecos Street - Unit C<br/>Denver, CO 80221

**DCP Midstream** J-4-2 PIPELINE RELEASE First Quarter 2014 Groundwater Monitoring Summary Report

No.



Analytical Results Map (February 26, 2014)



250

Feet

(mg/L)

0.01

0.75

0.75

0.62

250

125

Appendix A

Historic Analytical Results

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	2/1/2006	0.139	0.326	0.34	0.31		
MW-1	9/1/2006	0.0487	0.0058	0.0284	0.0694		
MW-1	9/25/2006	0.042	0.025	0.0048	0.061		
MW-1	9/25/2006	0.056	0.032	0.0068	0.078		
MW-1	12/1/2006	LNAPL	LNAPL	LNAPL	LNAPL		
MW-1	3/1/2007	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	6/1/2007	LNAPL	LNAPL	0.004	LNAPL	LNAPL	
MW-1	9/1/2007	0.011	0.003	0.04	0.098		
MW-1	1/1/2007	0.107	0.024	0.014	0.39		
MW-1	11/30/2007	0.107	0.0243	0.0401	0.39		
MW-1	3/1/2008	0.037	0.0155	LNAPL	0.215		
MW-1	3/20/2008	0.0416	0.0186	0.0177	0.26		· · · · · · · · · · · · · · · · · · ·
MW-1	6/1/2008	LNAPL	LNAPL	LNAPL	LNAPL		<b>1</b>
MW-1	9/1/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	12/1/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	3/11/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	3/11/2009	< 0.00046	< 0.00048	< 0.00045	< 0.0014		
MW-1	5/18/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	9/24/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	12/20/2009	< 0.002	< 0.002	.0014J	0.0418	2680	
MW-1	12/20/2009	< 0.00050	< 0.00043	0.0014	0.0418		
	3/10/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	6/13/2010	0.0016	< 0.001	< 0.0003	0.0095	1800	
MW-1	6/14/2010	0.0016	<1.0	< 0.30	-		
MW-1	9/29/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	12/8/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	9/16/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	12/7/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	3/11/2012	< 0.001	< 0.002	< 0.002	< 0.004	2970	
MW-1	6/5/2012	< 0.001	< 0.002	< 0.002	< 0.003	2480	
	9/7/2012	< 0.001	<0.002	< 0.002	< 0.003	2060	
MW-1	12/4/2012	< 0.001	<0.002	< 0.002	< 0.003	2240	Duplicate sample collected
MW-1	2/22/2103	0.00027	< 0.002	<0.002	< 0.003	2110	concercu
MW-1	6/2/2013	< 0.001	< 0.002	< 0.002	< 0.003	2010	Duplicate sample collected
MW-1	9/10/2013	< 0.001	< 0.002	< 0.002	< 0.003	1900	Duplicate sample collected
MW-1	12/3/2013	< 0.001	< 0.002	< 0.002	< 0.003	1960	Duplicate sample collected
MW-1	2/26/2014	< 0.001	< 0.002	<0.002	< 0.003	1850	Duplicate sample collected
MW-1 (duplicate)	2/26/2014	<0.001	< 0.002	< 0.002	< 0.003	1920	••••••••••••••••••

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-2	2/1/2006	0.026	0.038	0.04	0.335		
MW-2	9/1/2006	0.0045	<0.001	0.0027	0.0471		
MW-2	12/1/2006	0.006	0.003	0.003	0.0613		
MW-2	3/1/2007	0.188	0.006	0.026	0.125		
MW-2	6/1/2007	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	9/1/2007	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	11/1/2007	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	11/30/2007	0.006	0.0033	0.0025	0.0613		
MW-2	3/1/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	3/20/2008	0.188	0.0062	0.0262	0.125		
MW-2	6/1/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	9/1/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	12/1/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	3/11/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	5/18/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	9/24/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	12/20/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	3/10/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	6/13/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	9/29/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	12/8/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	9/16/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	12/7/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	3/11/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	6/5/2012	0.00043	< 0.002	0.0024	0.0069	2450	
MW-2	9/7/2012	< 0.001	< 0.002	<0.002	< 0.003	2280	
MW-2	12/4/2012	< 0.001	<0.002	0.0008	0.0028	2440	
MW-2	2/22/2103	< 0.001	<0.002	<0.002	< 0.003	2390	Duplicate sample collected
MW-2	6/2/2013	NS	NS	NS	NS	NS	
MW-2	9/10/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-2	12/3/2013	< 0.001	< 0.002	< 0.002	< 0.003	2370	
MW-2	2/26/2014	< 0.001	< 0.002	< 0.002	< 0.003	2100	

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	2/1/2006	< 0.001	< 0.001	< 0.001	< 0.002		
MW-3	9/1/2006	< 0.002	< 0.002	< 0.002	< 0.006		
MW-3	9/25/2006	<0.23	<0.54	<0.48	<1.1		
MW-3	3/14/2007	< 0.00023	< 0.00054	< 0.00048	< 0.0011		
MW-3	11/30/2007	0.0011	< 0.00048	< 0.00045	< 0.0060		
MW-3	12/1/2006	< 0.002	< 0.002	< 0.002	< 0.006		
MW-3	3/1/2007	< 0.002	< 0.002	<0.002	<0.006	7800	
MW-3	6/1/2007	0.003	0.005	0.002	0.01	10800	
MW-3	9/1/2007	< 0.001	< 0.001	< 0.001	< 0.001		
MW-3	11/1/2007	0.0011J	< 0.002	< 0.002	<0.006		
MW-3	3/1/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-3	3/20/2008	< 0.00046	< 0.00048	< 0.00045	< 0.0014		
MW-3	6/1/2008	< 0.002	< 0.002	< 0.002	0.007		
MW-3	9/1/2008	< 0.002	< 0.002	< 0.002	< 0.006	4070	
MW-3	12/1/2008	< 0.002	<0.002	< 0.002	< 0.006	2625	
MW-3	12/3/2008	< 0.00046	<0.00048	< 0.00045	< 0.0014	2020	
MW-3	3/11/2009	< 0.002	< 0.002	<0.002	< 0.002	2860	
MW-3	3/11/2009	< 0.0002	<0.0002	< 0.00045	< 0.0012	2000	
MW-3	5/18/2009	< 0.002	<0.002	< 0.002	< 0.002	3270	
MW-3	5/18/2009	< 0.00046	<0.0002	< 0.00045	< 0.0014	5270	
MW-3	9/24/2009	<0.002	< 0.002	< 0.002	<0.006	3195	
MW-3	9/24/2009	< 0.00050	< 0.0002	< 0.00055	<0.0017	5175	
MW-3	12/20/2009	< 0.002	< 0.002	< 0.002	<0.006	3605	
MW-3	12/20/2009	< 0.0002	<0.0002	<0.0002	< 0.0017		
MW-3	3/10/2010	<0.00030	<0.002	<0.002	<0.0017	3030	
MW-3	3/10/2010	<0.001	<1.0	<1.0	<0.004		
MW-3	6/13/2010	<0.0003	<0.001	<0.0003	<0.0006	2130	
	6/13/2010	< 0.30	<1.0	<0.30	<0.0000	2150	
MW-3	9/29/2010	<0.001	<0.002	<0.002	<0.004	2220	
MW-3	9/29/2010	<0.0001	<0.002	<0.0002	<0.004	2220	
MW-3	12/8/2010	<0.00030	<0.0010	<0.0030	<0.004	2530	
MW-3	12/8/2010	<0.0001	<0.002	<0.0002	<0.004	2550	
MW-3	3/30/2011	<0.00030	<0.0010	<0.00030	<0.002	2230	
MW-3	3/30/2011	<0.00030	<0.002	<0.002	<0.002		
MW-3	6/11/2011	<0.00030	<0.0010	<0.0030	< 0.00080	2210	
MW-3	6/20/2011	<0.00025	<0.002	<0.002	<0.004	2210	
MW-3	9/16/2011	<0.001	<0.0010	<0.00030	<0.0020	2190	Duplicate sample collected
MW-3	12/7/2011	<0.001	<0.002	<0.002	<0.004	2130	Duplicate sample collected
MW-3	3/11/2012	< 0.001	<0.002	<0.002	<0.004	2230	
MW-3	6/5/2012	< 0.001	<0.002	<0.002	<0.004	2080	
MW-3	9/7/2012	< 0.001	<0.002	<0.002	<0.003	2080	
MW-3	12/4/2012	<0.001	<0.002	<0.002	<0.003	2180	
MW-3	2/22/2103	< 0.001	<0.002	<0.002	<0.003	2050	
MW-3	6/2/2013	< 0.001	<0.002	<0.002	< 0.003	1910	L
MW-3	9/10/2013	< 0.001	<0.002	<0.002	<0.003	1730	l
	12/3/2013	<0.001	<0.002	<0.002	<0.003	1730	
MW-3	2/26/2014	< 0.001	<0.002	<0.002	<0.003	1570	I

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-4	6/1/2006	0.0086	.00093J	0.0092	0.0061	, , , , , , , , , , , , , , , , , , ,	
MW-4	9/27/2006	0.0086	0.0092	0.00093	0.0061		
MW-4	12/1/2006	0.025	0.005	< 0.002	0.0065		· · · · ·
MW-4	3/1/2007	0.004	0.0006	< 0.002	0.003	1300	
MW-4	3/14/2007	0.0044	0.0006	< 0.00048	0.0032		
MW-4	6/1/2007	< 0.001	< 0.001	< 0.001	< 0.001	1380	
MW-4	9/1/2007	< 0.001	< 0.001	< 0.001	< 0.001		
MW-4	11/1/2007	< 0.002	< 0.002	< 0.002	< 0.006		
MW-4	11/30/2007	<0.00046	<0.00048	< 0.00045	< 0.0060		
MW-4	3/1/2008	<0.002	< 0.002	< 0.002	< 0.006		
MW-4	3/20/2008	< 0.00046	<0.00048	< 0.00045	< 0.0014		
MW-4	6/1/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-4	9/1/2008	< 0.002	< 0.002	< 0.002	.0041J	1440	
MW-4	12/1/2008	< 0.002	< 0.002	< 0.002	< 0.006	70	
MW-4	12/3/2008	< 0.00046	< 0.00048	< 0.00045	< 0.0014		
MW-4	3/11/2009	< 0.002	<0.002	< 0.002	<0.002	1390	
MW-4	5/18/2009	< 0.002	<0.002	< 0.002	<0.002	1440	· · · · · · · · · · · · · · · · · · ·
	5/18/2009	< 0.0002	< 0.00048	< 0.0002	< 0.0014	1440	
	9/24/2009	<0.002	<0.002	<0.002	<0.006	1490	
MW-4	9/24/2009	< 0.0002	<0.0002	< 0.0002	< 0.0017	1470	
	12/20/2009	< 0.002	<0.002	<0.002	<0.0017	1740	
MW-4	12/20/2009	<0.0002	<0.002	<0.0002	<0.000	1740	
MW-4	3/10/2010	<0.00030	<0.00043	<0.0033	<0.0017	1950	
	3/10/2010	<0.001	<1.0	<1.0	<0.004	1930	·
	6/13/2010	< 0.0003	<0.001	<0.0003	<0.0006	2150	
	6/13/2010	< 0.30	<1.0	<0.30	<0.0000	2150	
MW-4	9/29/2010	<0.30	<0.002	<0.002	<0.004	2130	
	9/29/2010	<0.00030	<0.002	<0.0002	~0.004	2150	
	12/8/2010	<0.00030	<0.0010	<0.0030	<0.004	2740	
MW-4	12/8/2010	<0.001	<0.002	<0.002	<0.004	2740	
MW-4	3/30/2011	<0.00030	<0.0010	<0.0030	<0.002	2300	
MW-4	3/30/2011	<0.00030	<0.002	<0.0002	<0.002	2300	
MW-4	6/11/2011	<0.00030	<0.0010	<0.00030	<0.0000	2230	+
	6/20/2011	< 0.0001	<0.002	<0.002	<0.004	2230	
	9/16/2011	<0.00023	<0.0010	<0.00030	<0.0020	1980	
MW-4		< 0.001	<0.002	<0.002	<0.004	2010	
Mw-4	12/7/2001 3/11/2012	< 0.001	<0.002	<0.002	<0.004	1960	Duplicate sample collected
MW-4	6/5/2012	<0.001	<0.002	<0.002	<0.004	1900	
MW-4	9/7/2012	< 0.001	<0.002	<0.002	< 0.003	1910	Duplicate sample collected Duplicate sample collected
MW-4	12/4/2012	< 0.001	<0.002	<0.002	< 0.003	1910	Exuplicate sample contected
 MW-4	2/22/2103	< 0.001	<0.002	<0.002	< 0.003	1940	·····
	6/2/2013	< 0.001	<0.002	<0.002	< 0.003	1900	
MW-4	9/10/2013	< 0.001	<0.002	<0.002	< 0.003	1950	
MW-4	12/3/2013	< 0.001	<0.002	<0.002	<0.003	2250	
MW-4	2/26/2014	<0.001	<0.002	<0.002	<0.003	2000	L.,

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-6	9/1/2006	< 0.002	<0.002	< 0.002	<0.006		
MW-6	9/27/2006	<0.23	<0.54	<0.48	<1.1		
MW-6	12/1/2006	< 0.002	< 0.002	< 0.002	< 0.006		
MW-6	3/1/2007	< 0.002	< 0.002	< 0.002	< 0.006	669	
MW-6	3/14/2007	< 0.00023	< 0.00054	< 0.00048	< 0.0011		
MW-6	6/1/2007	< 0.001	< 0.001	< 0.001	< 0.001	544	
MW-6	9/1/2007	< 0.001	< 0.001	< 0.001	< 0.001		
MW-6	11/1/2007	< 0.002	< 0.002	< 0.002	< 0.006		
MW-6	11/30/2007	< 0.00023	< 0.00054	< 0.00048	< 0.0011		
MW-6	3/1/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-6	3/20/2008	< 0.00046	< 0.00048	< 0.00045	< 0.0014		
MW-6	6/1/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-6	9/1/2008	< 0.002	< 0.002	< 0.002	< 0.006	537	
MW-6	12/1/2008	< 0.002	< 0.002	< 0.002	< 0.002	391	
MW-6	12/3/2008	< 0.00046	<0.00048	< 0.00045	< 0.0014		
MW-6	3/11/2009	< 0.002	< 0.002	< 0.002	< 0.002	363	
MW-6	3/11/2009	< 0.00046	<0.00048	< 0.00045	< 0.0012		
MW-6	5/18/2009	< 0.002	< 0.002	< 0.002	< 0.006	383	
MW-6	5/18/2009	< 0.00046	<0.00048	< 0.00045	< 0.0014	505	
MW-6	9/24/2009	< 0.002	< 0.002	<0.002	< 0.006	373	
MW-6	9/24/2009	< 0.0002	< 0.0002	<0.0002	< 0.000	515	
MW-6	12/20/2009	< 0.002	< 0.002	<0.0035	<0.0017	1090	
	12/20/2009	<0.002	< 0.0002	< 0.0002	<0.000	1050	
MW-6	3/10/2010	<0.00050	<0.0004J	<0.00055	<0.0017		
	6/13/2010	< 0.0003	< 0.001	<0.0003	< 0.006	533	-
	6/13/2010	< 0.30	<1.0	< 0.30	-0.000		
	9/29/2010	< 0.001	<0.002	<0.002	< 0.004	445	
MW-6	9/29/2010	< 0.00030	<0.0010	<0.0002	~0.004	-++5	
MW-6	12/8/2010	< 0.001	<0.0010	<0.00030	< 0.004	513	
MW-6	12/8/2010	< 0.00030	<0.002	<0.0002	<0.004	515	
MW-6	3/30/2011	<0.00030	< 0.0010	<0.00030	<0.002	491	
MW-6	3/30/2011	<0.00030	<0.002	<0.0002	<0.0002	491	
MW-0	6/11/2011	< 0.00030	< 0.0010	<0.0030	< 0.0000	503	
MW-6	6/20/2011	<0.00025	<0.002	<0.002	<0.004	505	
Mw-6	9/16/2011	<0.00023	<0.0010	<0.00030	<0.0020	476	
	12/7/2011	<0.001	< 0.002	<0.002	<0.004	526	
MW-6	3/11/2012	< 0.001	< 0.002	<0.002	< 0.004	520	
MW-6	6/5/2012	< 0.001	<0.002	<0.002	< 0.004	532	
MW-6	9/7/2012	<0.001 NS	NS	<0.002 NS	NS	NS	
MW-6	12/4/2012	<0.001	<0.002	<0.002	<0.003	578	
MW-6	2/22/2103	<0.001	<0.002	<0.002	< 0.003	536	
MW-6	6/2/2013	< 0.001	<0.002	<0.002	< 0.003	603	
MW-6	9/10/2013	< 0.001	< 0.002	<0.002	< 0.003	619	
MW-6	12/3/2013	< 0.001	<0.002	<0.002	< 0.003	674	
MW-6	2/26/2014	< 0.001	<0.002	<0.002	<0.003	595	I

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	6/1/2006	< 0.002	< 0.002	< 0.002	< 0.006	isan'i waxaalindaalin a shadee	
MW-7	9/27/2006	< 0.23	< 0.54	< 0.48	<1.1		
MW-7	12/1/2006	< 0.002	< 0.002	< 0.002	< 0.006		
MW-7	3/1/2007	< 0.002	< 0.002	< 0.002	< 0.006	1230	
MW-7	3/14/2007	< 0.00023	< 0.00054	< 0.00048	< 0.0011		
MW-7	6/1/2007	< 0.001	< 0.001	< 0.001	0.003	1150	
MW-7	9/1/2007	< 0.001	< 0.001	< 0.001	< 0.001		
MW-7	11/1/2007	< 0.002	< 0.002	< 0.002	< 0.006		
MW-7	11/30/2007	< 0.00023	< 0.00054	< 0.00048	< 0.0011		
MW-7	3/1/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-7	3/20/2008	< 0.00046	< 0.00048	< 0.00045	< 0.0014		· · · · · · · · · · · · · · · · · · ·
MW-7	6/1/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-7	9/1/2008	< 0.002	< 0.002	< 0.002	< 0.006	1180	
MW-7	12/1/2008	< 0.002	< 0.002	< 0.002	< 0.002	1050	
MW-7	12/3/2008	< 0.00046	< 0.00048	< 0.00045	< 0.0014	1050	
MW-7	3/11/2009	< 0.002	< 0.002	< 0.002	< 0.002	944	
MW-7	3/11/2009	< 0.00046	<0.00048	< 0.00045	< 0.0014		
MW-7	5/18/2009	< 0.002	<0.002	< 0.002	< 0.006	1090	
MW-7	5/18/2009	< 0.002	<0.0002	< 0.0002	< 0.000	1090	······································
MW-7	9/24/2009	< 0.00040	< 0.002	<0.002	<0.0014	1140	
MW-7	9/24/2009	< 0.0002	<0.002	<0.0002	< 0.000	1140	
MW-7	12/20/2009	< 0.002	< 0.002	<0.0033	< 0.0017	1440	
MW-7	12/20/2009	< 0.0002	<0.002	<0.002	< 0.008	1440	·····
MW-7	3/10/2010	< 0.00030	< 0.002	<0.00033	< 0.0017	1230	
MW-7	3/10/2010	< 0.40	<1.0	<1.0	<0.004	1230	
MW-7	6/13/2010	<0.0003	<0.001	<0.0003	<0.006	1280	
MW-7	6/13/2010	< 0.30	<1.0	<0.0003	<0.000	1200	
MW-7	9/29/2010	< 0.001	<0.002	<0.002	<0.004	1210	
	9/29/2010	< 0.0001	<0.002	<0.0002	<0.004	1210	
MW-7	12/8/2010	< 0.001	< 0.0010	<0.0030	< 0.004	1180	
MW-7	12/8/2010	< 0.00030	<0.002	<0.002	<0.004	1180	
MW-7 MW-7	3/30/2011	< 0.00030	<0.0010	<0.00030	< 0.002	1210	
MW-7	3/30/2011	< 0.0001	<0.002	<0.002	< 0.002	1210	
Mw-7	6/11/2011	< 0.00030	<0.0010	<0.00030	< 0.00060	1210	····
MW-7	6/20/2011	< 0.0001	<0.002	<0.002	<0.004	1210	
	9/16/2011	< 0.00023	< 0.0010	<0.00030	<0.0020	1170	
MW-7	12/7/2011	< 0.001	<0.002	<0.002	< 0.004	1200	
MW-7	3/11/2012	<0.001	<0.002	<0.002	< 0.004	1200	
	6/5/2012	< 0.001	<0.002	<0.002	<0.004	1220	
MW-7 MW-7	9/7/2012	< 0.001	<0.002	<0.002	< 0.003	1120	
	12/4/2012	< 0.001	<0.002	<0.002	< 0.003	1140	
MW-7 MW-7	2/22/2103	< 0.001	<0.002	<0.002	<0.003	1090	
MW-7	6/2/2013	< 0.001	<0.002	<0.002			
	9/10/2013	< 0.001	<0.002	<0.002	<0.003	1040	
MW-7	12/3/2013	< 0.001	<0.002	<0.002	<0.003 <0.003	1050	
MW-7	2/26/2014	< 0.001	<0.002	<0.002	< 0.003	1030	

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-8	9/1/2006	< 0.002	<0.002	< 0.002	<0.006		
MW-8	9/27/2006	< 0.23	<0.54	<0.48	<1.1		
MW-8	12/1/2006	< 0.002	< 0.002	< 0.002	<0.006		
MW-8	3/1/2007	< 0.002	< 0.002	< 0.002	<0.006	609	
MW-8	3/14/2007	< 0.00023	< 0.00054	< 0.00048	< 0.0011		
MW-8	6/1/2007	< 0.001	< 0.001	< 0.001	< 0.001	617	
MW-8	9/1/2007	< 0.001	< 0.001	< 0.001	< 0.001		
MW-8	11/1/2007	< 0.002	< 0.002	< 0.002	< 0.006		
MW-8	11/30/2007	< 0.00046	< 0.00048	< 0.00045	<0.0060		
MW-8	3/1/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-8	3/20/2008	< 0.00046	<0.0002	< 0.0002	< 0.0014		
MW-8	6/1/2008	< 0.002	< 0.002	<0.002	<0.0014		
	9/1/2008	<0.002	<0.002	<0.002	<0.006	735	
MW-8	12/1/2008	<0.002	<0.002	<0.002	<0.000	480	
	12/3/2008	<0.0002	<0.0002	<0.0002	< 0.002	400	
MW-8	3/11/2009	<0.00040	<0.00048	<0.002	< 0.0014	417	
MW-8	3/11/2009	<0.002	<0.002	<0.002	< 0.002	417	
MW-8	5/18/2009	<0.00040	<0.00048	<0.002	< 0.0014	378	
MW-8 MW-8	5/18/2009					3/8	
Mw-8		<0.00046	<0.00048	< 0.00045	< 0.0014	402	
	9/24/2009	<0.002	< 0.002	<0.002	< 0.006	403	
MW-8	9/24/2009	<0.00050	<0.00043	< 0.00055	< 0.0017	200	
MW-8	12/20/2009	< 0.002	<0.002	<0.002	< 0.006	308	
MW-8	12/20/2009	< 0.00050	< 0.00043	< 0.00055	< 0.0017		
MW-8	3/10/2010	< 0.001	<0.002	< 0.002	<0.004	414	
MW-8	3/10/2010	< 0.40	<1.0	<1.0	-		
MW-8	6/13/2010	< 0.0003	< 0.001	< 0.0003	<0.006	415	······
MW-8	6/13/2010	<0.30	<1.0	< 0.30	-		
MW-8	9/29/2010	< 0.001	< 0.002	< 0.002	<0.004	347	
MW-8	9/29/2010	< 0.00030	< 0.0010	< 0.00030	-		
MW-8	12/8/2010	<0.001	< 0.002	<0.002	<0.004	336	
MW-8	12/8/2010	<0.00030	<0.0010	<0.00030	-		
MW-8	3/30/2011	< 0.001	< 0.002	<0.002	< 0.002	383	
MW-8	3/30/2011	<0.00030	<0.0010	<0.00030	<0.00060		
MW-8	6/11/2011	<0.001	< 0.002	<0.002	< 0.004	454	
MW-8	6/20/2011	<0.00025	< 0.0010	<0.00050	< 0.0020		
MW-8	9/16/2011	<0.001	<0.002	<0.002	< 0.004	368	
MW-8	12/7/2011	< 0.001	< 0.002	<0.002	< 0.004	348	
MW-8	3/11/2012	<0.001	< 0.002	< 0.002	< 0.004	345	
MW-8	6/5/2012	<0.001	< 0.002	<0.002	< 0.003	316	
MW-8	9/7/2012	<0.001	< 0.002	<0.002	< 0.003	308	
MW-8	12/4/2012	< 0.001	< 0.002	< 0.002	< 0.003	304	
MW-8	2/22/2013	< 0.001	< 0.002	<0.002	< 0.003	290	
MW-8	6/2/2013	< 0.001	< 0.002	<0.002	< 0.003	291	
MW-8	9/10/2013	< 0.001	<0.002	< 0.002	< 0.003	297	
MW-8	12/3/2013	< 0.001	< 0.002	< 0.002	< 0.003	345	
MW-8	2/26/2014	< 0.001	< 0.002	< 0.002	< 0.003	319	

Notes:

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

Monitoring well location MW-5 was not installed due geologic refusal that was encountered during drilling activities.

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

\* Chlorides are subject to the tiol Secondary Drinking Water Regulations (NSDWR) secondary maximum contamint levels (SMCLs) and not an enforceably regulated constituent. The 250 mg/L standard is LNAPL = Light Non-Aqueous Phase Liquid

mg/L = milligrams per liter.

Appendix B

Laboratory Analytical Report
- Accutest Job #: D55435



03/06/14

### **Technical Report for**

DCP Midstream, LP

**TASMCOA:DCP J-4-2** 

**Pipeline Release** 

Accutest Job Number: D55435



Sampling Date: 02/26/14

**Report to:** 

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

Total number of pages in report: 35



Scool with

Scott Heideman Laboratory Director

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.

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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## Sample Summary

DCP Midstream, LP

**Job No:** D55435

TASMCOA:DCP J-4-2 Project No: Pipeline Release

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
D55435-1	02/26/14	15:00 CW	02/27/14	AQ	Ground Water	MW-1
D55435-2	02/26/14	15:20 CW	02/27/14	AQ	Ground Water	MW-2
D55435-3	02/26/14	14:40 CW	02/27/14	AQ	Ground Water	MW-3
D55435-4	02/26/14	14:50 CW	02/27/14	AQ	Ground Water	MW-4
D55435-5	02/26/14	14:25 CW	02/27/14	AQ	Ground Water	MW-6
D55435-6	02/26/14	14:20 CW	02/27/14	AQ	Ground Water	MW-7
D55435-7	02/26/14	14:00 CW	02/27/14	AQ	Ground Water	MW-8
D55435-7D	02/26/14	14:00 CW	02/27/14	AQ	Water Dup/MSD	MW-8
D55435-7M	02/26/14	14:00 CW	02/27/14	AQ	Water Matrix Spike	MW-8
D55435-8	02/26/14	00:00 CW	02/27/14	AQ	Ground Water	DUP





### CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	DCP Midstream, LP	Job No	D55435
Site:	TASMCOA:DCP J-4-2	Report Date	3/6/2014 12:10:32 PM

On 02/27/2014, 8 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.9 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D55435 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:	V6V1327
-	All samples were analyzed within	the recommended method	holding time.

- All method blanks for this batch meet method specific criteria.
- Sample(s) D55394-6MS, D55394-6MSD were used as the QC samples indicated.
- D55435-5: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

Matrix	AQ	Batch ID: V6V1328

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D55435-7MS, D55435-7MSD 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 mee	t method specific criter	ria.
-	Sample(s) D55453-1MS, D55453-1M	ASD were used as the	QC samples for the Chloride analysis.
	Matrix AQ	Batch ID:	GP12057
	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 mee	t method specific criter	ria.

Sample(s) D55332-1MS, D55332-1MSD 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:	D55435
Account:	DCP Midstream, LP
Project:	TASMCOA:DCP J-4-2
Collected:	02/26/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D55435-1	MW-1					
Chloride		1850	50		mg/l	EPA 300.0/SW846 9056
D55435-2	MW-2					
Chloride		2100	50		mg/l	EPA 300.0/SW846 9056
D55435-3	MW-3					
Chloride		1570	50		mg/l	EPA 300.0/SW846 9056
D55435-4	MW-4					
Chloride		2000	50		mg/l	EPA 300.0/SW846 9056
D55435-5	MW-6					
Chloride		595	13		mg/l	EPA 300.0/SW846 9056
D55435-6	MW-7					
Chloride		1030	25		mg/l	EPA 300.0/SW846 9056
D55435-7	MW-8					
Chloride		319	10		mg/l	EPA 300.0/SW846 9056
D55435-8	DUP					
Chloride		1920	50		mg/l	EPA 300.0/SW846 9056



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**Section 4** 

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Sample Results

Report of Analysis



**Report of Analysis** 

Client Sar Lab Samj Matrix: Method: Project:	ple ID: D5543 AQ - 0 SW84				Da	te Sampled: 02 te Received: 02 rcent Solids: n/	
Run #1 Run #2	<b>File ID</b> 6V23561.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch V6V1327
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml	<u>,</u>					

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	$\begin{array}{c} 0.0010 \\ 0.0020 \\ 0.0020 \\ 0.0030 \end{array}$	0.00025 0.0010 0.00025 0.0020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	96% 101% 97%		62-13 70-13 69-13	30%	

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



Page 1 of 1

4.1 **4**  Accutest Laboratories

Client Sample ID: MW-1 Lab Sample ID: D55435-1 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 1850 50 100 02/28/14 19:40 SK mg/l EPA 300.0/SW846 9056

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4.1 **4** 



**Report of Analysis** 

Client Sar Lab Samj Matrix: Method: Project:	ple ID: D5543 AQ - Q SW84					Date Sampled:02/26/14Date Received:02/27/14Percent Solids:n/a			
Run #1 Run #2	<b>File ID</b> 6V23562.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	<b>Analytical Batch</b> V6V1327		
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml	2							

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	$\begin{array}{c} 0.0010 \\ 0.0020 \\ 0.0020 \\ 0.0030 \end{array}$	0.00025 0.0010 0.00025 0.0020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	97% 102% 97%		62-13 70-13 69-13	30%	

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



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Accutest Laboratories

Client Sample ID: MW-2 Lab Sample ID: D55435-2 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 2100 50 100 02/28/14 19:52 SK mg/l EPA 300.0/SW846 9056

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**Report of Analysis** 

Client Sar Lab Samı Matrix: Method: Project:	ple ID: D5543 AQ - 0 SW84					Date Sampled:02/26/14Date Received:02/27/14Percent Solids:n/a			
Run #1 Run #2	<b>File ID</b> 6V23563.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch V6V1327		
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml	9							

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	$\begin{array}{c} 0.0010 \\ 0.0020 \\ 0.0020 \\ 0.0030 \end{array}$	0.00025 0.0010 0.00025 0.0020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2 Limits			
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	96% 101% 96%	62-130% 70-130% 69-130%			

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



Page 1 of 1

Accutest Laboratories

Client Sample ID: MW-3 Lab Sample ID: D55435-3 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 1570 50 100 02/28/14 20:05 SK mg/l EPA 300.0/SW846 9056

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4.3 4

**Report of Analysis** 

Client San Lab Sam Matrix: Method: Project:	ple ID: D5543 AQ - 0 SW84					Date Sampled:02/26/14Date Received:02/27/14Percent Solids:n/a			
Run #1 Run #2	<b>File ID</b> 6V23564.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	<b>Analytical Batch</b> V6V1327		
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml	2							

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	$\begin{array}{c} 0.0010 \\ 0.0020 \\ 0.0020 \\ 0.0030 \end{array}$	0.00025 0.0010 0.00025 0.0020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	98% 102% 97%		62-13 70-13 69-13	30%	

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





Client Sample ID: MW-4 Lab Sample ID: D55435-4 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 2000 50 100 02/28/14 20:17 SK mg/l EPA 300.0/SW846 9056





**Report of Analysis** 

Client Sar Lab Samp Matrix: Method: Project:	ple ID: D5543 AQ - Q SW84				Da	1	2/26/14 2/27/14 a
Run #1 <sup>a</sup> Run #2	<b>File ID</b> 6V23565.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch V6V1327
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml						
Purgeable CAS No.	e Aromatics Compound		Result	RL	MDL Unit	s Q	

	F				
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	
CAS No. 17060-07-0	Surrogate Recoveries	<b>Run# 1</b> 98%	Run# 2	<b>Limits</b> 62-130%	
	8		Run# 2		
17060-07-0	1,2-Dichloroethane-D4	98%	Run# 2	62-130%	

(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



Client Sample ID: MW-6 Lab Sample ID: D55435-5 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 595 13 25 02/28/14 20:29 SK mg/l EPA 300.0/SW846 9056



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**Report of Analysis** 

Lab Samj Matrix: Method: Project:	ple ID: D5543 AQ - 0 SW84	e ID: MW-7 D: D55435-6 AQ - Ground Water SW846 8260B TASMCOA:DCP J-4-2				Date Sampled:02/26/14Date Received:02/27/14Percent Solids:n/a			
Run #1 Run #2	<b>File ID</b> 6V23566.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch V6V1327		
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml	•							

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	0.0010 0.0020 0.0020 0.0030	0.00025 0.0010 0.00025 0.0020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	98% 103% 97%		62-13 70-13 69-13	30%	

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





Client Sample ID: MW-7 Lab Sample ID: D55435-6 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 1030 25 50 02/28/14 21:05 SK mg/l EPA 300.0/SW846 9056

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4.6 **4**  **Report of Analysis** 

Lab Samj Matrix: Method: Project:	ole ID: D5543 AQ - 0 SW84	ID:         MW-8           ID:         D55435-7           AQ - Ground Water           SW846 8260B           TASMCOA:DCP J-4-2				Date Sampled:02/26/14Date Received:02/27/14Percent Solids:n/a			
Run #1 Run #2	<b>File ID</b> 6V23571.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch V6V1328		
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml	<u>,</u>							

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	$\begin{array}{c} 0.0010 \\ 0.0020 \\ 0.0020 \\ 0.0030 \end{array}$	0.00025 0.0010 0.00025 0.0020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	95% 101% 97%		62-13 70-13 69-13	80%	

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





Client Sample ID: MW-8 Lab Sample ID: D55435-7 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 10 319 20 02/28/14 21:17 SK mg/l EPA 300.0/SW846 9056

4.7 4



**Report of Analysis** 

Lab Samj Matrix: Method: Project:	AQ - 0 SW84	35-8 Ground Wa 6 8260B ICOA:DC			Date Sampled:02/26/14Date Received:02/27/14Percent Solids:n/a					
Run #1 Run #2	<b>File ID</b> 6V23567.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	<b>Analytical Batch</b> V6V1327			
Run #1 Run #2 Purgeable	Purge Volume 5.0 ml	2								

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	$\begin{array}{c} 0.0010 \\ 0.0020 \\ 0.0020 \\ 0.0030 \end{array}$	0.00025 0.0010 0.00025 0.0020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	96% 101% 96%		62-13 70-13 69-13	80%	

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



Client Sample ID: DUP Lab Sample ID: D55435-8 **Date Sampled:** 02/26/14 **Date Received:** 02/27/14 Matrix: AQ - Ground Water Percent Solids: n/a **Project:** TASMCOA:DCP J-4-2 **General Chemistry** Analyte Result RL Units DF Analyzed By Method Chloride 1920 50 100 02/28/14 18:47 SK mg/l EPA 300.0/SW846 9056

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4.8 **4** 



**Section 5** 

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Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



ACCUTEST				1	OF (	03		נענ	Ĺ											PA	GE	1	OF	4
LABORATORIES			4036 Youn TEL, 30	igfield 5 3-425-6	Street, Whea 6021 FAX	t Ridge, 0	CO 800	033						Trackin					Battle Order Control #					
Client / Reporting Information			ia.	WW	ww.accutest.e			Volivitiisisi	10000000	NOTOTO	George		Recutes	. 40069					Accutes	st Job #	D	55	43	,5.7
Company Name Project Name			Project	Infor	mation									Reg	ueste	d Anal	ysis (	see 1	ESTO	ODE	sheet)			Matrix Codes
Tasman Geosciences DCP J-4-2															ļ			ľ		1				W - Drinking Water
Street Address Street	-ipeline i	Release		1000			00000					1000									ľ		Ğ	3W - Ground Water WW - Water
6899 Pecos St - Unit C				Billir	ng Informati	lon ( if di	fferent	from R	eport t	D)													s	W - Surface Water SO - Soil
City City City Denver, CO 80221			State	Comp	oany Name																			SL- Sludge
Project Contact Project #				Stree	t Address							_			Ê									SED-Sediment OI - Oil
Don Baggus dbaggus@tasman-geo.com															В В			i						LIQ - Other Liquid AIR - Áir
Phone # Client Purcha	ie Order #			City								_			82									SOL - Other Solid WP - Wipe
(720) 635-9675 Sampler(s) Name(s) Project Mana	er			Attent	tion										~								E	FB-Field Blank B-Equipment Blank
Christine Wasks Renea Jac													μ		19								-	RB- Rinse Blank TB-Trip Blank
			Collection			T		Numb	er of pres	served l	Bottles		V8260BTX		MS/MSD for V8260BTX									Diana Charles
Accurat Sample # Field ID / Point of Collection MECHOIVIA				Sampl				NaOH HNO3	HZSOM	Vater	E BRO		826	CHL	NS.								-1	
		Date	Time	by		# of both	es ₽	NaOH HNO3	H2SOM	Di Wat	MEOH	$\square$	-		Σ									LAB USE ONLY
MW-1 MW-2	2/2	6/14	1500	Cu	GW	4	3		1				X	Х										01
			1520	1	GW	4	3		1				X	Х										02
MW-3		Į	1440		GW	4	3		1				X	Х										03
MW-4			1450		GW	4	3		1			IT	Х	Х										04
MW-6		}	1425		GW	4	3		1				X	X						_			- +-	05
MW-7		1	1420		GW	4	3		1				X	X									-+-	06
MW-8			1400		GW	4	3		1	Ħ			x	X		-	-							07
MW-8 MS/MSD			1400	1	GW	6	6	Ť	-		-		^	~	x									07
DUP				J	GW	4	3		1	+		$\square$	x	x						—				08
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Std. 15 Business Days Approved By (A	cutest PM): /	Date:	0203702033402020000	288aaaa	Commerc						Form	is Rea	uired					Com	nents /	Specia	l Instruc	tions		
X Std. 10 Business Days					] Commerc		Level	2)		Send	l Form	is to Si												
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2 Day Emergency					-	•					Forma		NLT	ł		···· ·								
Day Emergency						Commer							•											
Emergency & Rush T/A data available VIA Lablink						Commer Commerc						natogra	ns)											
Relinquish@EPSampler	Received	Byr	-																		<u> </u>	<u> și al a</u>		
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Rolinquished by: 5	Received 5	By:	_				Custo	ody Seat	*	71					Preserve	i where	applical	ole	<u> </u>		On Ice	~	Cooler Ter	np. 3, 9

D55435: Chain of Custody Page 1 of 1



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**Section 6** 

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## 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 Job Number: D55435

Account: Project:	DCPMCODN D TASMCOA:DC		ream, LP						
Sample V6V1327-MB	<b>File ID</b> 6V23560.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch V6V1327		
The QC repor	ted here applies to	o the follo	owing samples:		<b>Method:</b> SW846 8260B				

D55435-1, D55435-2, D55435-3, D55435-4, D55435-5, D55435-6, D55435-8

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
2037-26-5	1,2-Dichloroethane-D4	96%	62-130%
	Toluene-D8	102%	70-130%
	4-Bromofluorobenzene	96%	69-130%



# Method Blank Summary

Job Numbe Account: Project:	er: D55435 DCPMCODN DC TASMCOA:DCP		tream, LP						
<b>Sample</b> V6V1328-N	<b>File ID</b> 6V23560A.D	<b>DF</b> 1	<b>Analy</b> 02/27/		<b>By</b> BR	<b>Pre</b> n/a	p Date	<b>Prep Batch</b> n/a	Analytical Batch V6V1328
<b>The QC re</b> D55435-7	ported here applies to	the foll	owing samj	ples:				Method: SW84	46 8260B
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 1330-20-7	Toluene Xylene (total)		ND ND	2.0 3.0		1.0 2.0	ug/l ug/l		
CAS No.	Surrogate Recoveries	5		Lir	nits				
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D Toluene-D8 4-Bromofluorobenzen		96% 102% 96%	70-	-1309 -1309 -1309	%			

## **Blank Spike Summary**

Job Number Account: Project:	r: D55435 DCPMCODN DCI TASMCOA:DCP J		ream, LF	)				C
Sample V6V1328-BS		<b>DF</b> 1		<b>lyzed</b> 27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch V6V1328
<b>The QC rep</b> D55435-7	ported here applies to t	he follo	owing sar	nples:			Method: SW840	5 8260B
CAS No.	Compound		Spike ug/l	BSP ug/l	BSP %	Limits		
71-43-2	Benzene		50	48.5	97	70-130		
	Ethylbenzene		50	50.9	102	70-130		
	Toluene Xylene (total)		50 150	50.2 142	100 95	70-130 70-130		
CAS No.	Surrogate Recoveries		BSP	Ι	Limits			
	1,2-Dichloroethane-D4 Toluene-D8		97% 99%		52-130% 70-130%			

69-130%

100%

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460-00-4

4-Bromofluorobenzene

## Blank Spike Summary Job Number: D55435

Project:	TASMCOA:DC	P J-4-2								
<b>Sample</b> V6V1327-BS	<b>File ID</b> 6V23559.D	<b>DF</b> 1	<b>Analyzed</b> 02/27/14	<b>By</b> BR	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	<b>Analytical Batch</b> V6V1327			
The QC repor	ted here applies to	) the follo	wing samples:		Method: SW846 8260B					

D55435-1, D55435-2, D55435-3, D55435-4, D55435-5, D55435-6, D55435-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	48.5	97	70-130
100-41-4	Ethylbenzene	50	50.9	102	70-130
108-88-3	Toluene	50	50.2	100	70-130
1330-20-7	Xylene (total)	150	142	95	70-130
CAS No.	Surrogate Recoveries	BSP	Liı	nits	

17060-07-0	1,2-Dichloroethane-D4	97%	62-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	69-130%

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	D55435
Account:	DCPMCODN DCP Midstream, LP
Project:	TASMCOA:DCP J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D55394-6MS	6V23569.D	1	02/27/14	BR	n/a	n/a	V6V1327
D55394-6MSD	6V23570.D	1	02/27/14	BR	n/a	n/a	V6V1327
D55394-6	6V23568.D	1	02/27/14	BR	n/a	n/a	V6V1327

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

D55435-1, D55435-2, D55435-3, D55435-4, D55435-5, D55435-6, D55435-8

CAS No.	Compound	D55394-6 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)	ND ND ND ND	50 50 50 150	51.8 52.4 52.5 148	104 105 105 99	50.2 51.4 51.2 144	100 103 102 96	3 2 3 3	62-130/30 63-130/30 60-130/30 67-130/30
CAS No.	Surrogate Recoveries	MS	MSD	D5	5394-6	Limits			
17060-07-0 2037-26-5 460-00-4	1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	100% 98% 99%	100% 98% 99%	100 102 939	2%	62-130% 70-130% 69-130%	, 0		

Method: SW846 8260B

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6.3.1

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## Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	D55435
Account:	DCPMCODN DCP Midstream, LP
Project:	TASMCOA:DCP J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D55435-7MS	6V23572.D	1	02/27/14	BR	n/a	n/a	V6V1328
D55435-7MSD	6V23573.D	1	02/27/14	BR	n/a	n/a	V6V1328
D55435-7	6V23571.D	1	02/27/14	BR	n/a	n/a	V6V1328

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

Method: SW846 8260B

D55435-7

CAS No.	Compound	D55435-7 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)	ND ND ND ND	50 50 50 150	52.4 53.8 53.5 149	105 108 107 99	53.7 54.3 54.1 153	107 109 108 102	2 1 1 3	62-130/30 63-130/30 60-130/30 67-130/30
CAS No.	Surrogate Recoveries	MS	MSD	D5:	5435-7	Limits			
17060-07-0 2037-26-5 460-00-4	) 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	99% 100% 102%	96% 98% 101%	95% 101 97%	%	62-130% 70-130% 69-130%	, 0		

6.3.2

Section 7



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: D55435 Account: DCPMCODN - DCP Midstream, LP Project: TASMCOA:DCP J-4-2

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%
Chloride	GP12055/GN23802	0.50	0.0	mg/l	5	5.15	103.0	90-110%
Chloride	GP12057/GN23806	0.50	0.0	mg/l	5	4.99	99.8	90-110%
Fluoride	GP12055/GN23802	0.10	0.0	mg/l	1	1.07	107.0	90-110%
Nitrogen, Nitrate	GP12055/GN23802	0.010	0.0	mg/l	0.1	0.102	102.0	90-110%
Nitrogen, Nitrate	GP12057/GN23806	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%
Phosphate, Ortho	GP12057/GN23806	0.050	0.0	mg/l	0.5	0.528	105.6	90-110%
Sulfate	GP12055/GN23802	0.50	0.0	mg/l	5	5.23	104.6	90-110%
Sulfate	GP12057/GN23806	0.50	0.0	mg/l	5	5.15	103.0	90-110%

Associated Samples:

Batch GP12055: D55435-8 Batch GP12057: D55435-8 Batch GP12057: D55435-1, D55435-2, D55435-3, D55435-4, D55435-5, D55435-6, D55435-7 (\*) Outside of QC limits



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#### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: D55435 Account: DCPMCODN - DCP Midstream, LP Project: TASMCOA:DCP J-4-2

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%
Chloride	GP12055/GN23802	D55453-1	mg/l	15.2	10	25.5	103.0	80-120%
Chloride	GP12057/GN23806	D55332-1	mg/l	89.0	100	191	102.0	80-120%
Fluoride	GP12055/GN23802	D55453-1	mg/l	0.85	2	2.8	97.5	80-120%
Nitrogen, Nitrate	GP12055/GN23802	D55453-1	mg/l	0.094	0.2	0.30	103.0	80-120%
Jitrogen, Nitrate	GP12057/GN23806	D55332-1	mg/l	4.3	2	6.4	105.0	80-120%
itrogen, Nitrite	GP12055/GN23802	D55453-1	mg/l	0.0	0.1	0.084	84.0	80-120%
hosphate, Ortho	GP12057/GN23806	D55332-1	mg/l	0.0	10	14.5	139.0N(a)	80-120%
Sulfate	GP12055/GN23802	D55453-1	mg/l	30.3	10	40.3	100.0	80-120%
Sulfate	GP12057/GN23806	D55332-1	mg/l	156	100	259	103.0	80-120%

Associated Samples:

Batch GP12055: D55435-8

Batch GP12057: D55435-1, D55435-2, D55435-3, D55435-4, D55435-5, D55435-6, D55435-7 (\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.



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### MATRIX SPIKE DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: D55435 Account: DCPMCODN - DCP Midstream, LP Project: TASMCOA:DCP J-4-2

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%
Chloride	GP12055/GN23802	D55453-1	mg/l	15.2	10	25.4	0.4	20%
Chloride	GP12057/GN23806	D55332-1	mg/l	89.0	100	190	0.5	20%
Fluoride	GP12055/GN23802	D55453-1	mg/l	0.85	2	2.8	0.0	20%
Nitrogen, Nitrate	GP12055/GN23802	D55453-1	mg/l	0.094	0.2	0.29	3.4	20%
Nitrogen, Nitrate	GP12057/GN23806	D55332-1	mg/l	4.3	2	6.3	1.6	20%
Nitrogen, Nitrite	GP12055/GN23802	D55453-1	mg/l	0.0	0.1	0.085	1.2	20%
Phosphate, Ortho	GP12057/GN23806	D55332-1	mg/l	0.0	10	14.0	3.5	20%
Sulfate	GP12055/GN23802	D55453-1	mg/l	30.3	10	40.2	0.2	20%
Sulfate	GP12057/GN23806	D55332-1	mg/l	156	100	259	0.0	20%

Associated Samples:

Batch GP12055: D55435-8

Batch GP12057: D55435-1, D55435-2, D55435-3, D55435-4, D55435-5, D55435-6, D55435-7 (\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



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