

**AP-55**

**3<sup>rd</sup> QTR 2010 GW Results**

**DATE:**  
**December 17, 2010**



**DCP Midstream**  
370 17<sup>th</sup> Street, Suite 2500  
Denver, CO 80202  
**303-595-3331**  
303-605-2226 FAX

December 17, 2010

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

**RE: 3rd Quarter 2010 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 3rd Quarter 2010 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](mailto:swweathers@dcpmidstream.com).

Sincerely

**DCP Midstream, LP**

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

Stephen Weathers, PG  
Principal Environmental Specialist

cc: Larry Johnson, OCD Hobbs District Office (Copy on CD)  
Environmental Files

November 22, 2010

Mr. Stephen Weathers  
DCP Midstream, LP  
370 17<sup>th</sup> Street, Suite 2500  
Denver, CO 80202

Re: Summary of Third Quarter 2010 Groundwater Monitoring Activities at the DCP  
Midstream RR Ext Pipeline Release  
**Unit C, Section 19 Township 20 South, Range 37 East (AP #55)**

Dear Mr. Weathers:

This letter report summarizes the third quarter 2010 groundwater monitoring activities that were completed at the DCP Midstream (DCP) RR Ext Site (Figure 1). The approximate site coordinates are 32.5624 north, 103.2923 west.

The monitoring activities were completed on September 28, 2010. The 12 well locations are shown on Figure 2. The well construction information is summarized in Table 1. The fluid levels were measured at each well prior to pugging to check for free phase hydrocarbons (FPH) and to calculate the casing volumes. Wells MW-3, MW-4, MW-5, MW-9 and MW-10 contained FPH so they were not purged and sampled.

The remaining seven wells were purged to equilibration using dedicated bailers based on the field parameters of temperature, pH and conductivity. They were then sampled for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method SW846 8260B and for chlorides using Method SM 4500 CL C. A field duplicate from MW-2 and a matrix spike/matrix spike duplicate (MS/MSD) from MW-6 were also collected to evaluate quality control. All affected purge water was disposed of at the DCP Linam Ranch facility.

The water gauging data are summarized in Table 2. The water-table elevations for the wells containing FPH were adjusted using the following formula:

$$GWE_{\text{corr}} = MGWE + (PT * PD); \text{ where}$$

- MGWE is the actual measured groundwater elevation;
- PT is the measured free-phase hydrocarbon thickness; and
- PD is the free phase hydrocarbon density (assumed 0.75)

A summary of all of the corrected water-table elevations is attached. Well hydrographs are plotted on Figure 3 for MW-1 to MW-8. Figure 3 indicates that the water table elevation generally rose across the site at a relatively consistent rate for a third consecutive quarter.

The measured water table elevations from MW-1 to MW-8 were used to generate a groundwater contour map using the Surfer program with a kriging option. This map is included as Figure 4. Groundwater appears to flow southerly down gradient of well MW-5. The generally-southward groundwater flow pattern is similar to that exhibited in the past. Wells MW-9 through MW-12 will be surveyed and integrated into the water table evaluation as discussed in the proposal for the additional monitoring wells.

A summary of FPH thickness in all of the wells is included as Table 3. There was no FPH measured in the wells between March 2008 and September 2009. FPH was first measured in MW-4 in September 2009, and it has been present since then. FPH was then measured in MW-4 and MW-5 beginning in March 2010. Figure 5 graphs the FPH thickness in these wells over time. The only potential trend is the decrease in thickness in MW-4 over time.

The sampling data are summarized in Table 4. The quality control evaluation data can be summarized as follows:

- The samples were all analyzed within the required holding times;
- The method blanks were all within their control limits;
- The blank spikes were all within their control limits;
- The individual sample surrogates results were within the method ranges;
- The matrix spike/matrix spike duplicates for MW-6 and for the laboratory-selected samples were within their control ranges; and
- The differences between the MW-1 primary and duplicate samples were all less than 10 percent.

The above results indicate that the data are suitable for evaluation for groundwater monitoring purposes.

The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are included at the top of Table 4. The constituents that exceeded those standards are highlighted in bold text. Examination of Table 4 shows that there were no BTEX detections in wells MW-6, MW-8, MW-11 and MW-12. MW-1 and MW-2 exceeded the NMWQCC groundwater standard for benzene.

Figure 6 shows the benzene concentrations and locations of the wells that contained FPH for the sampling event. The extent of dissolved phase BTEX is delineated to the south, southeast and east by MW-6, MW-7, MW-11 and MW-12. Additional characterization is necessary to delineate the extent of hydrocarbon impacts to the north, southwest and west. AEC has submitted a work plan in the recommendations of the second quarter groundwater monitoring report to install the additional characterization wells to the New Mexico State Land Office (SLO) and the New Mexico Oil Conservation Division. The wells will be installed when SLO issues a water easement.

All of the historical BTEX data collected for this project are attached. The measured field parameters and a copy of the laboratory report are also attached. Figure 7 graphs the benzene concentration verses time for affected wells MW-1 and MW-2. The concentration in MW-1 rebounded as it has done two other times in the past. The concentration in MW-2 declined slightly for the third consecutive monitoring event.

The BTEX concentrations in MW-8 have remained undetected since May 2009. This fact establishes that the dissolved-phase plume is defined on its up-gradient boundary.

The historical chloride data are summarized in Table 5. The laboratory measured concentrations between 263 and 486 excluding the wells that contain FPH.

The chloride concentrations verses time for the wells that have not contained FPH over the duration of the project are plotted on Figure 8 minus the anomalously-high values that were measured in March 2010. The graphs indicate that the chloride values decreased in a uniform fashion in all of the wells except MW-2. The chloride concentration in MW-2 continues to increase toward the values in the other wells.

## **CONCLUSIONS AND RECOMMENDATIONS**

AEC concludes the following based upon the data collected to date:

1. The water table generally behaves uniformly across the site in response to external factors indicating that the natural groundwater regime has returned to an equilibrated state following the soils remediation activities.
2. The general southward groundwater flow reflects the regional conditions present in this area. Additional definition will be provided when the water-table information from the remaining existing wells is incorporated into the data set.
3. The recent FPH behavior does not match the spill or remediation history. The FPH did not begin to appear until after the soil excavation was backfilled. Also, the FPH first appeared in MW-4, and this well is approximately 150 feet south of the actual spill area. The FPH next appeared in wells MW-5 and MW-3, and both of these wells are also outside of the original spill area. Finally, FPH is present in wells MW-9 and MW-10 that are both southwest of the original spill area. The sandy native materials in this area respond rapidly to surface events as evidenced by the water-table response to the recent precipitation so it is doubtful that the appearance of the FPH over 18 months after the spill results from a delayed response.
4. The FPH thickness in MW-4 has declined by over a foot since its maximum in December 2009. It has also declined in MW-3 and MW-5 to a lesser degree. The record should not be relied on for long-term trend evaluation but it does indicate that the source of the FPH is not ongoing.

Mr. Stephen Weathers

November 22, 2010

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5. The dissolved-phase hydrocarbon plume has not been defined to the south and west. Also, the appearance of benzene at trace concentrations in eastern well MW-7 may indicate additional plume expansion in that direction. These trace concentrations remain approximately 20 times lower than the NMWQCC groundwater standards so any plume expansion in this direction would have to be substantial before exceedance issues would arise.

AEC recommends that the installation of the proposed four new monitoring wells (pending State Land Office approval) be completed before proposing any additional investigative activities. Installation of these wells will hopefully coincide with the fourth quarter of 2010 monitoring event. Quarterly fluid-level measurement and sampling for BTEX and chlorides will continue for the foreseeable future.

Respectfully Submitted,

**AMERICAN ENVIRONMENTAL CONSULTING, LLC**

*Michael H. Stewart*

Michael H. Stewart, P.E., C.P.G.

Principal Engineer

attachments

TABLES

Table 1 – Summary of Well Construction at the DCP RR Ext Location

Well	Date Installed	Total Depth (ground)	Screen Interval (ground)	Sand Interval
MW-1	3/08	37.5	17.5-37.5	16-37.5
MW-2	3/08	37.5	17.5-37.5	16-37.5
MW-3	3/08	37.5	17.5-37.5	16-37.5
MW-4	3/08	37.5	17.5-37.5	16-37.5
MW-5	3/08	37.5	17.5-37.5	16-37.5
MW-6	6/08	37.5	17.5-37.5	16-37.5
MW-7	6/08	37.5	17.5-37.5	16-37.5
MW-8	6/08	37.5	17.5-37.5	16-37.5
MW-9	6/10	38	18-38	16-38
MW-10	6/10	38	18-38	16-38
MW-11	6/10	38	18-38	16-38
MW-12	6/10	38	18-38	16-38

Units are feet

All wells are 2-inch diameter

Wells were grouted to the surface with hydrated bentonite pellets and completed with above-ground well protectors



Table 2 - Summary of Third Quarter 2010 Fluids Measurement Data

Well	Depth to Water	Depth to Product	FPH Thickness	Water Table Elevation
MW-1	29.50			3,505.07
MW-2	30.30			3,504.88
MW-3	32.21	31.30	0.91	3,505.04
MW-4	31.38	30.28	1.10	3,504.65
MW-5	32.20	30.92	1.28	3,504.68
MW-6	31.61			3,504.55
MW-7	32.35			3,504.74
MW-8	31.25			3,505.16
MW-9	30.00	28.80	1.20	NE
MW-10	30.50	28.90	1.60	NE
MW-11	31.58			NE
MW-12	29.73			NE

Units are Feet

NE: not established: Casing elevation not yet measured

Table 3 - Free Phase Hydrocarbon Thickness Summary

Well	MW-3	MW-4	MW-5	MW-9	MW-10
03/19/08	0.00	0.00	0.00		
06/29/08	0.00	0.00	0.00		
09/17/08	0.00	0.00	0.00		
12/03/08	0.00	0.00	0.00		
05/19/09	0.00	0.00	0.00		
09/23/09	0.00	1.00	0.00		
12/20/09	0.00	1.88	0.00		
03/22/10	0.00	1.71	0.27		
06/30/10	0.94	1.56	1.62	1.33	1.10
09/28/10	0.91	0.58	1.28	1.20	1.60

Units are Feet

Blank cell: Well not installed

Table 4 - RR Ext Third Quarter 2010 Groundwater Sampling Results

Well	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chlorides
NMWQCC Standards	0.010	0.75	0.75	0.62	250*
MW-1	<b>1.99</b>	0.084	0.0951	0.0219J	<b>442</b>
MW-2	<b>17</b>	0.257J	0.329J	<0.8	<b>251</b>
MM-2 DUP	<b>17.7</b>	0.284J	0.353J	<0.8	<b>274</b>
MW-3	Not sampled because free phase hydrocarbons were present				
MW-4	Not sampled because free phase hydrocarbons were present				
MW-5	Not sampled because free phase hydrocarbons were present				
MW-6	<0.001	<0.002	<0.002	<0.004	<b>337</b>
MW-7	0.00042J	<0.002	<0.002	<0.004	<b>326</b>
MW-8	<0.001	<0.002	<0.002	<0.004	<b>486</b>
MW-9	Not sampled because free phase hydrocarbons were present				
MW-10	Not sampled because free phase hydrocarbons were present				
MW-11	<0.001	<0.002	<0.002	<0.004	<b>345</b>
MW-12	<0.001	<0.002	<0.002	<0.004	<b>464</b>
Trip Blank	<0.001	<0.002	<0.002	<0.004	

Units mg/l

NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards  
 Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards

Table 5 - RR Ext Chlorides Groundwater Monitoring Results Summary

Well	9/08	12/08	3/09	5/09	9/09	12/09	3/10
MW-1	507	447	432	462	422	363	800
MW-2	109	NS	114	109	139	199	700
MW-3	363	301	273	313	363	398	440
MW-4	318	281	229	226	FPH	FPH	FPH
MW-5	373	318	288	363	358	313	FPH
MW-6	363	325	298	308	296	393	700
MW-7	378	348	283	298	273	328	750
MW-8	512	393	472	450	477	472	800

Well	6/10	9/10
MW-1	510	442
MW-2	233	263
MW-3	FPH	FPH
MW-4	FPH	FPH
MW-5	FPH	FPH
MW-6	402	337
MW-7	385	326
MW-8	553	486
MW-9	532*	FPH
MW-10	656*	FPH
MW-11	407	365
MW-12	514	464

Units are mg/l

Duplicate values averaged together

FPH free phase hydrocarbons present

\* Collected with FPH in the well but believed to be representative



## FIGURES

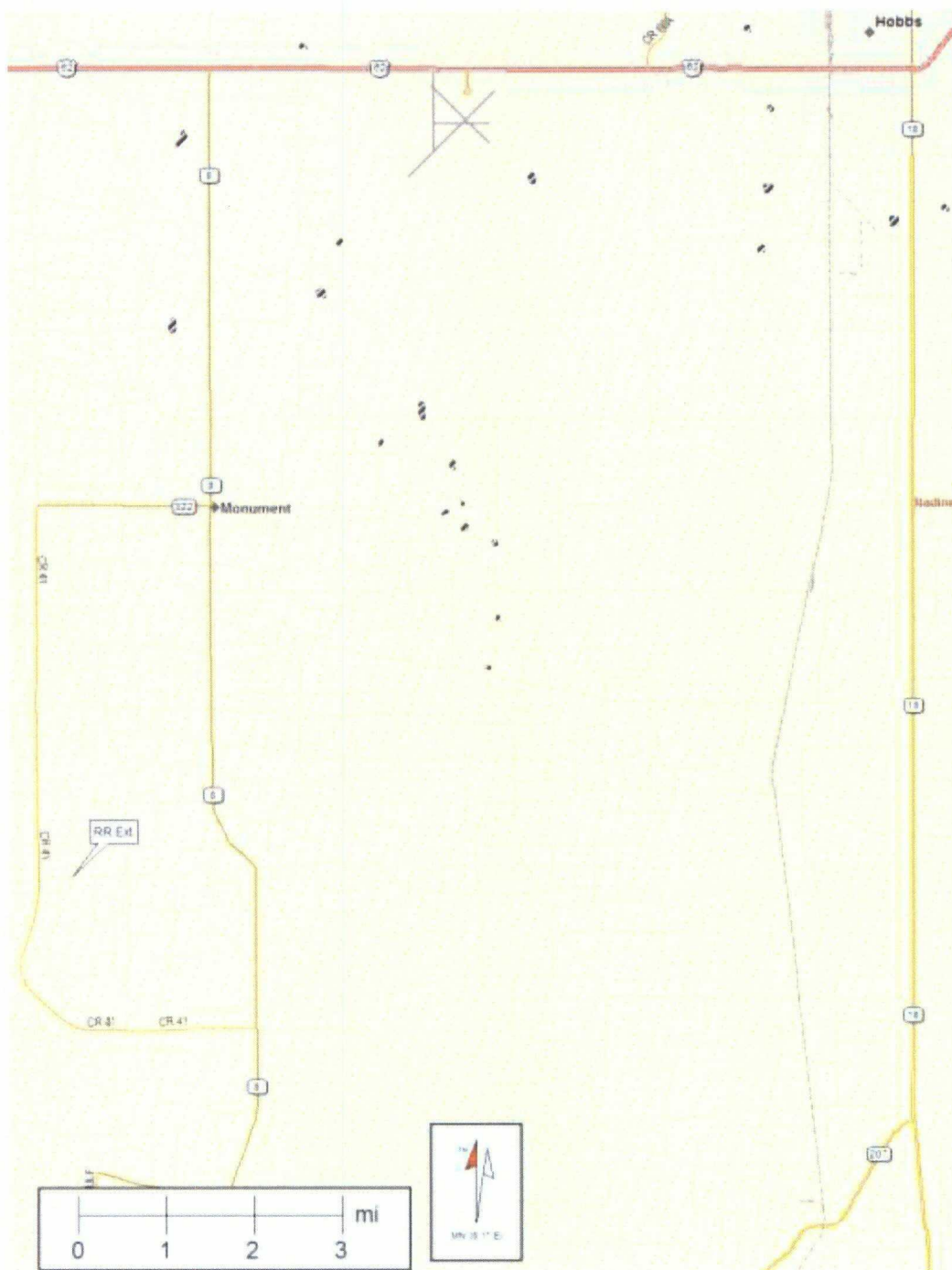


Figure 1 – Site Location  
RR Ext - Groundwater Monitoring



DRAWN BY: MHS

REVISED:

DATE: 5/06

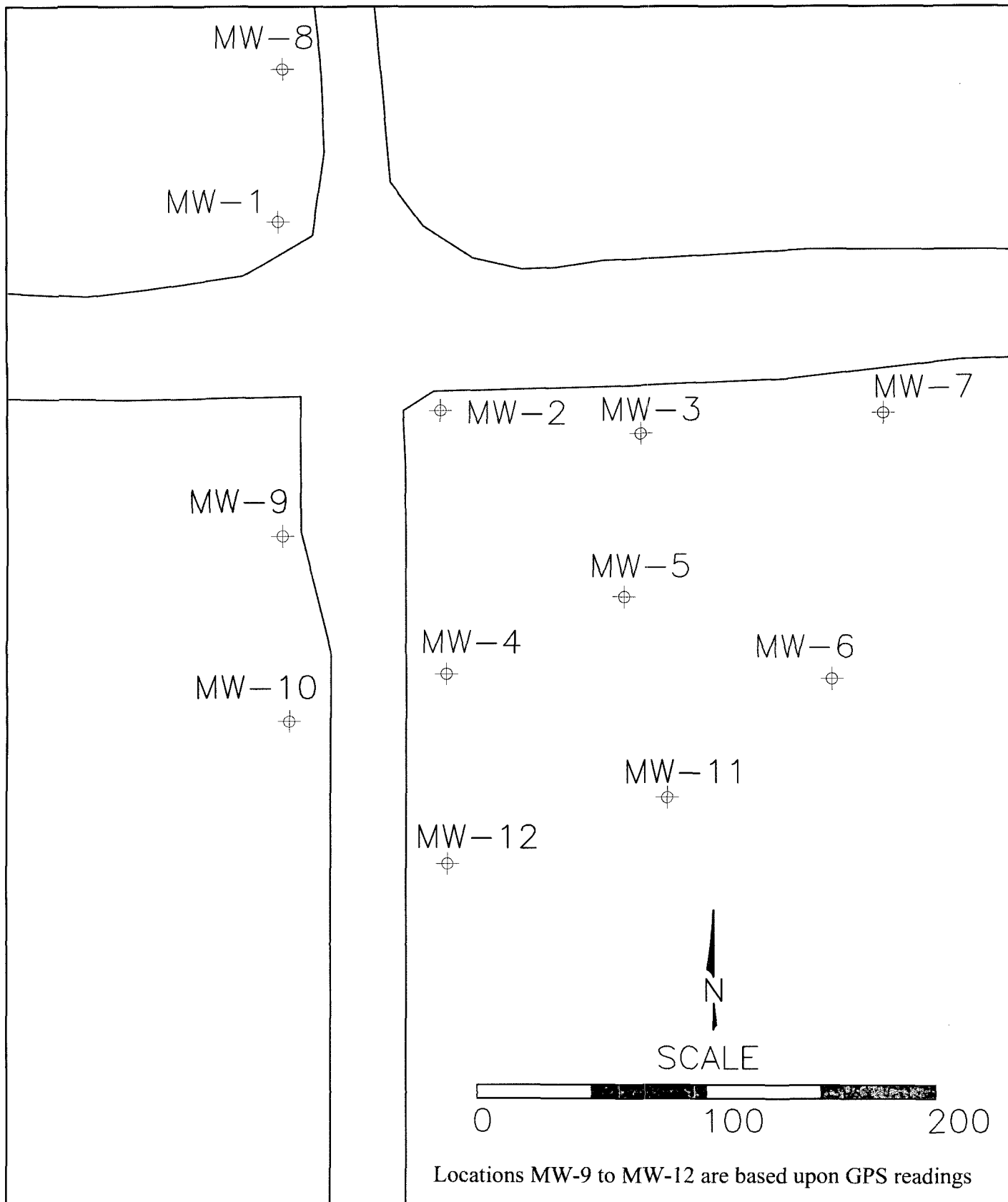


Figure 2 - Monitoring Well Locations

RR Ext - Groundwater Monitoring



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REVISED:

DATE: 8/10

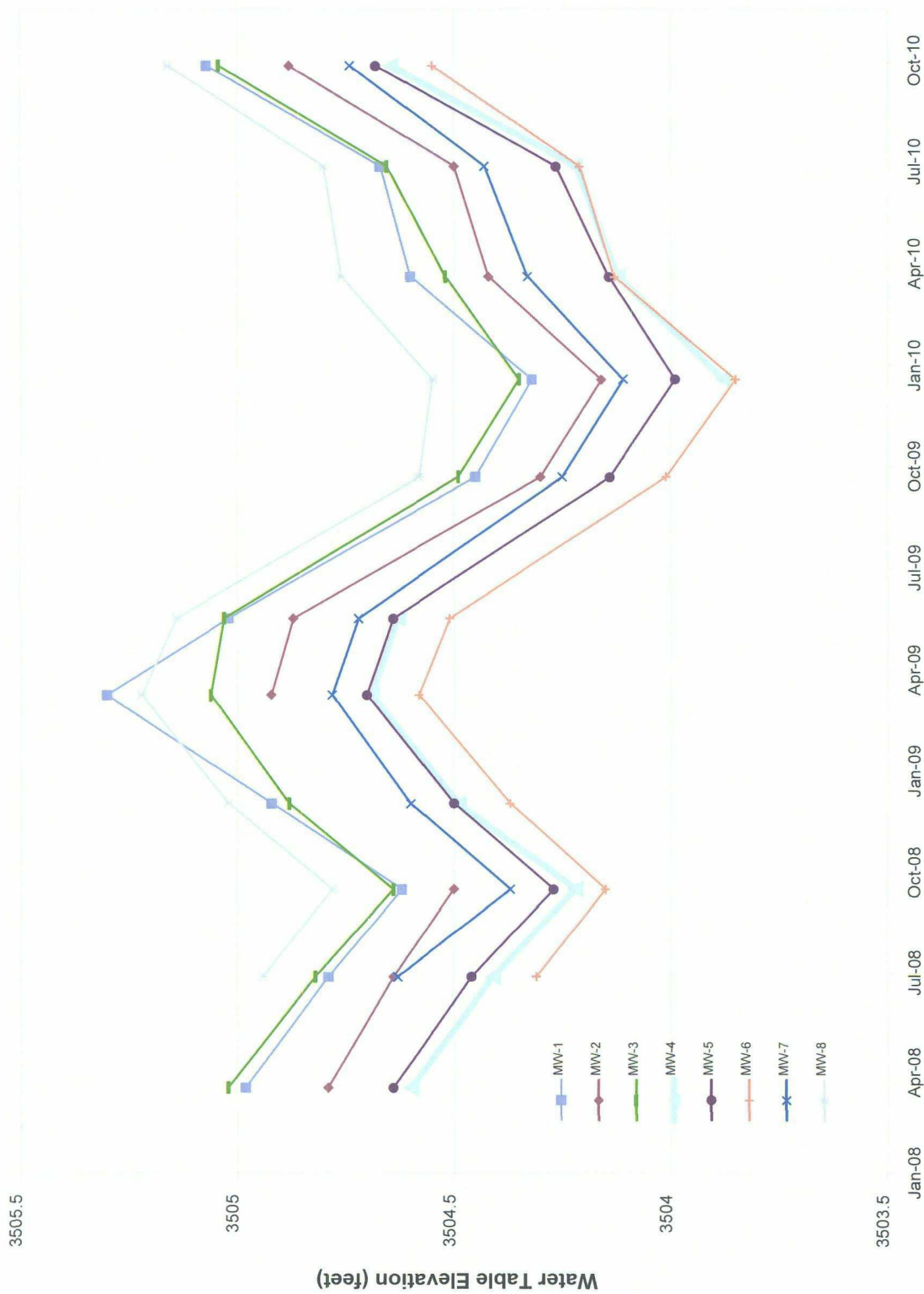


Figure 3 – Monitoring Well Hydrographs

RR Ext - Groundwater Monitoring

**dcp**  
Midstream

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DATE: 11/10



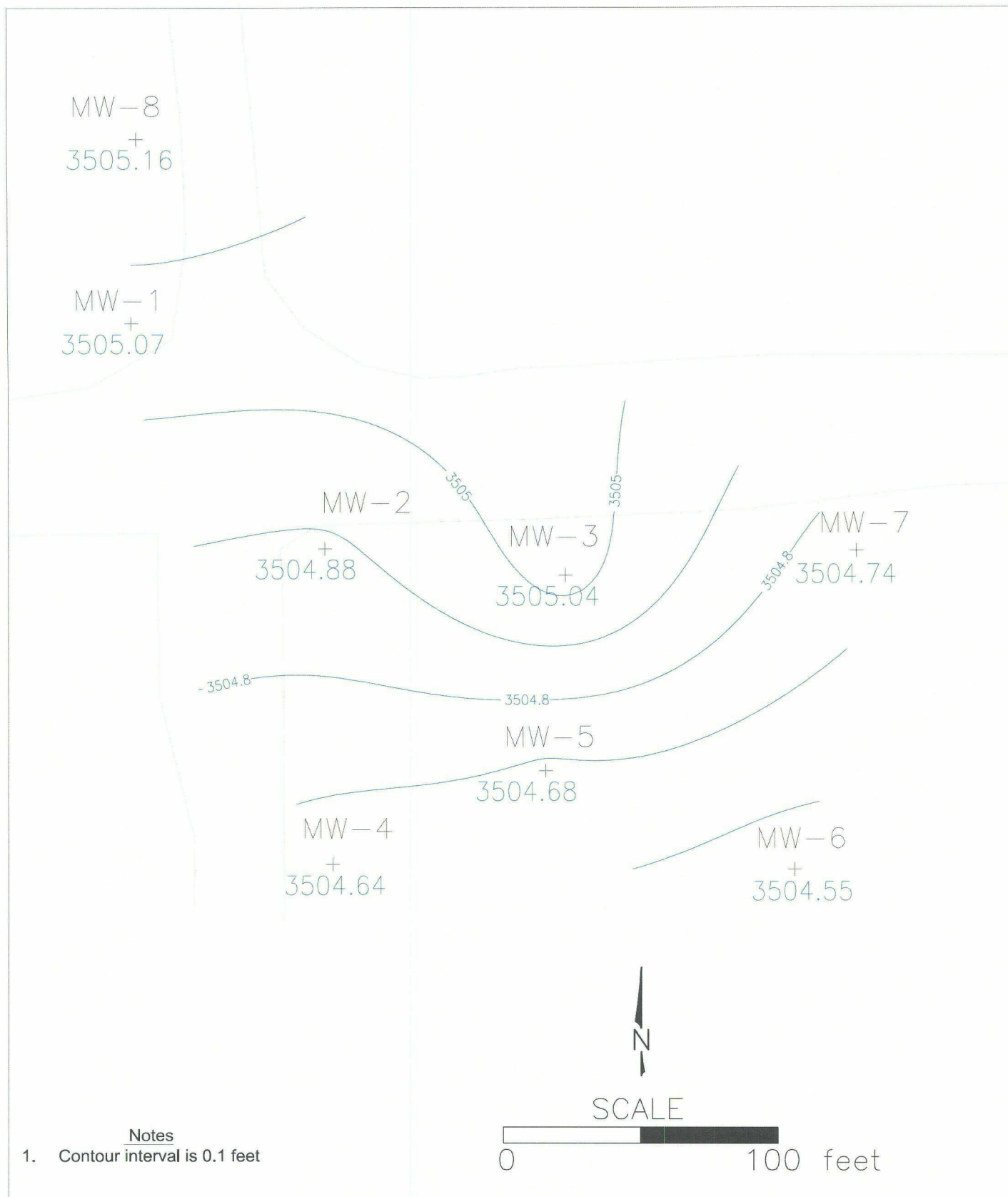


Figure 4 - September 2010 Water Table Elevations

RR Ext - Groundwater Monitoring



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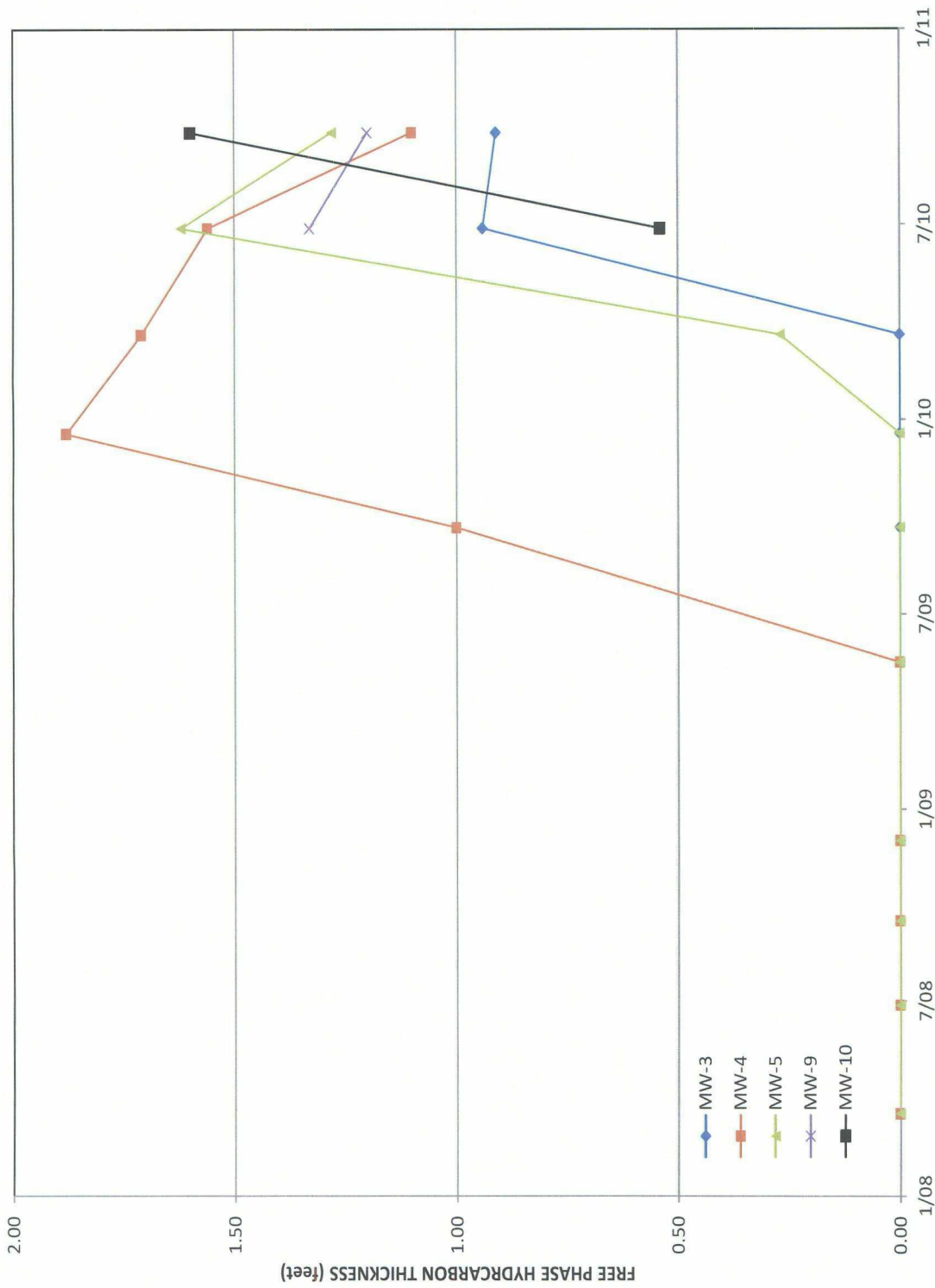


Figure 5 – Free Phase Hydrocarbon Thickness

RR Ext - Groundwater Monitoring

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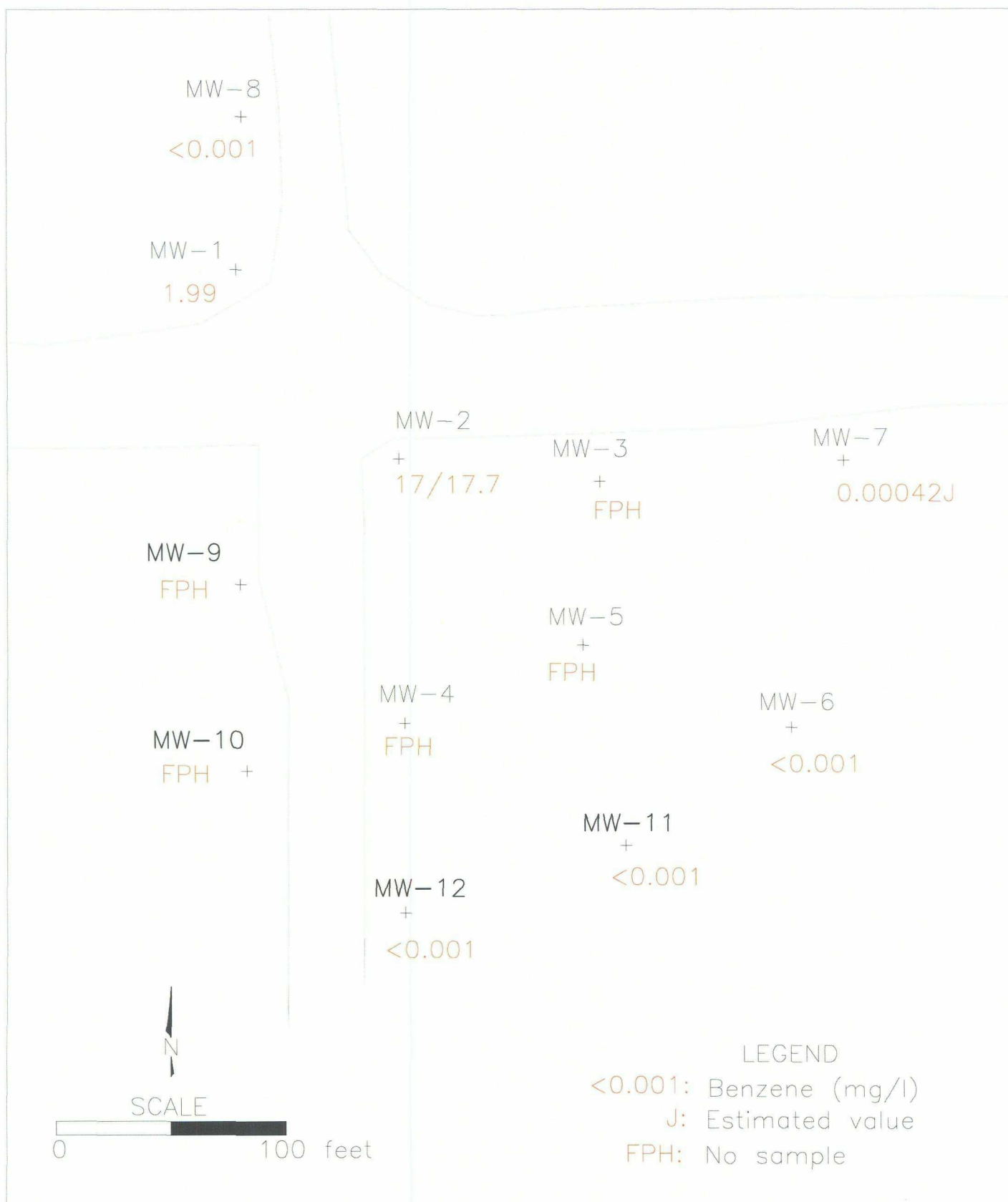


Figure 6 - September 2010 Benzene Concentrations

RR Ext - Groundwater Monitoring



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DATE: 11/10

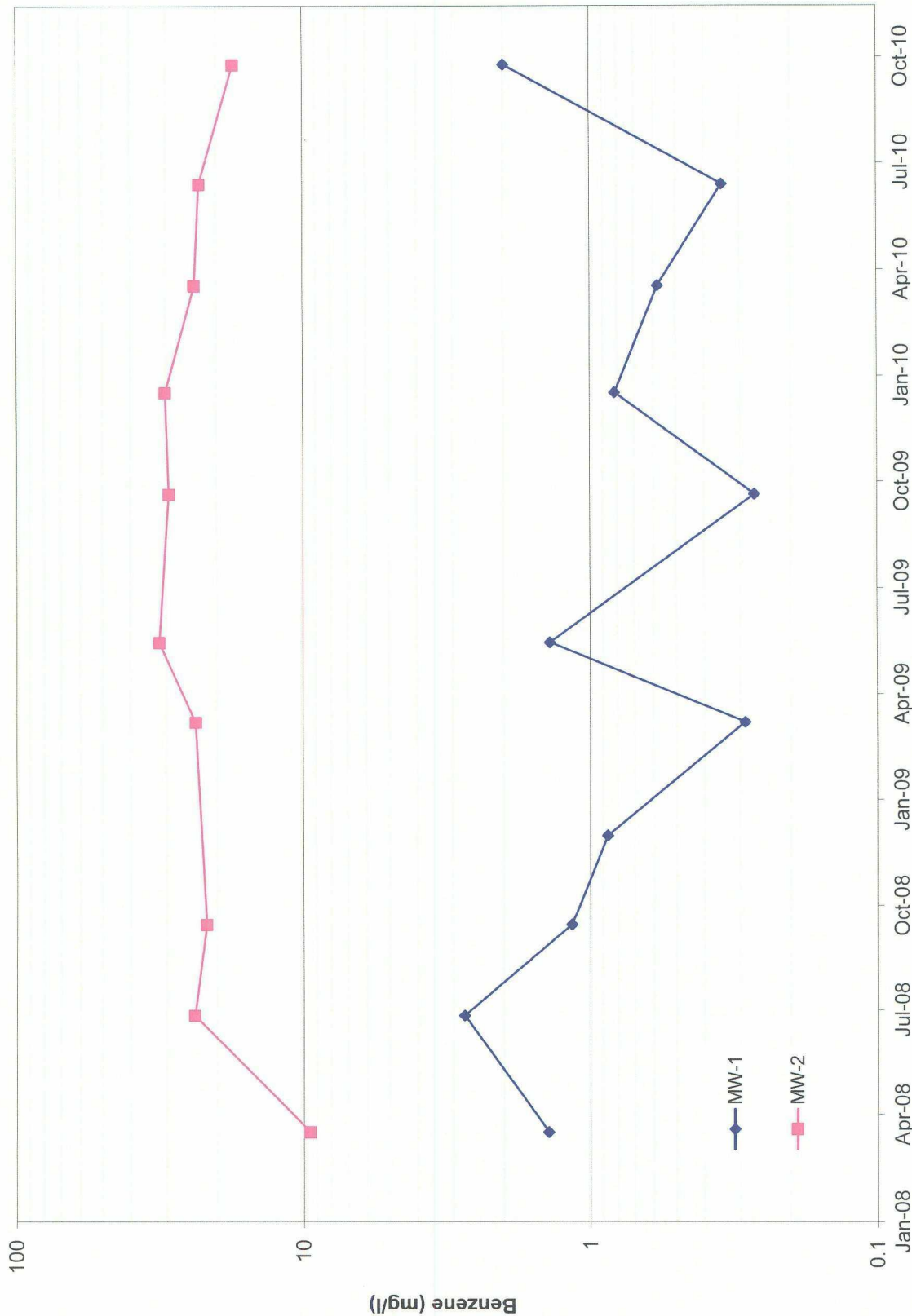


Figure 7 – Benzene Concentrations Verses Time

RR Ext - Groundwater Monitoring

**dcp**  
Midstream

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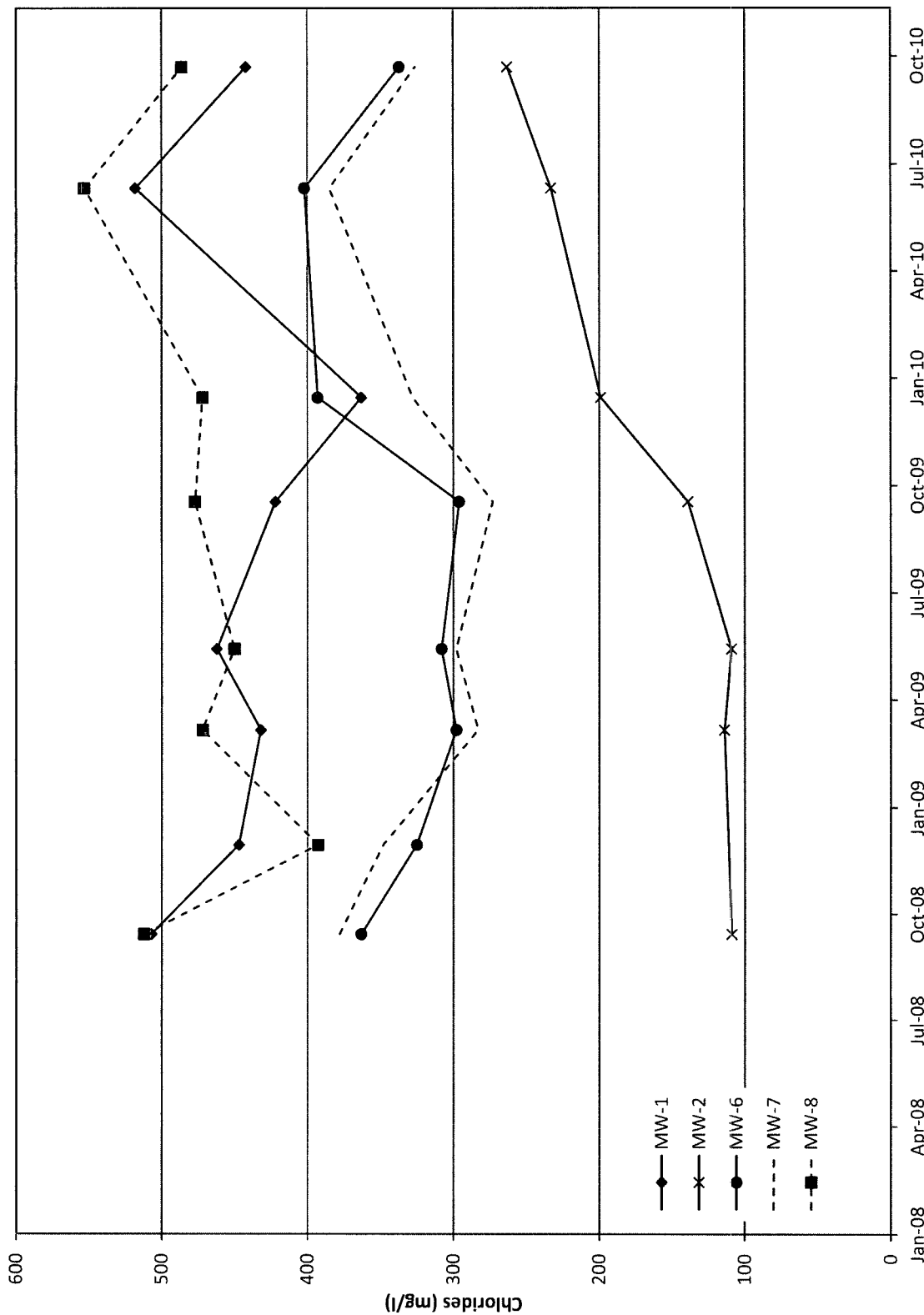


Figure 8 -- Chloride Concentrations Verses Time Minus Anomalous Values

RR Ext - Groundwater Monitoring

**dwp**  
Midstream.

DRAWN BY: MHS

DATE: 11/10

**SUMMARY OF CORRECTED WATER TABLE ELEVATIONS**

# DCP RREXT - SUMMARY OF CORRECTED WATER TABLE ELEVATIONS

Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8
03/19/08	3,504.98	3,504.79	3,505.02	3,504.60	3,504.64			
06/29/08	3,504.79	3,504.64	3,504.82	3,504.41	3,504.46	3,504.31	3,504.63	3,504.94
09/17/08	3,504.62	3,504.50	3,504.64	3,504.22	3,504.27	3,504.15	3,504.37	3,504.78
12/03/08	3,504.92		3,504.88	3,504.49	3,504.50	3,504.37	3,504.60	3,505.02
03/11/09	3,505.30	3,504.92	3,505.06	3,504.69	3,504.70	3,504.58	3,504.78	3,505.22
05/19/09	3,505.02	3,504.87	3,505.03	3,504.63	3,504.64	3,504.51	3,504.72	3,505.14
09/23/09	3,504.45	3,504.30	3,504.49		3,504.14	3,504.01	3,504.25	3,504.58
12/20/09	3,504.32	3,504.16	3,504.35	3,503.88	3,503.99	3,503.85	3,504.11	3,504.55
03/22/10	3,504.60	3,504.42	3,504.52	3,504.12	3,504.14	3,504.13	3,504.33	3,504.76
06/29/10	3,504.67	3,504.50	3,504.66	3,504.22	3,504.27	3,504.21	3,504.43	3,504.80
09/28/10	3,505.07	3,504.88	3,505.04	3,504.26	3,504.68	3,504.55	3,504.74	3,505.16

## SUMMARY OF GROUNDWATER MONITORING DATA



# RR EXT BTEX GROUNDWATER MONITORING DATA SUMMARY

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standards		.010	0.75	0.75	0.62
MW-1	3/08	<b>1.4</b>	<b>0.948</b>	0.0395	0.128
	6/08	<b>2.75</b>	<b>2.17</b>	0.054	0.232
	9/08	<b>1.1</b>	<b>0.845</b>	0.0375	0.131
Duplicate	9/08	<b>1.22</b>	<b>0.883</b>	0.0506	0.197
	12/08	<b>0.869</b>	0.581	0.0385	0.0709
	3/09	<b>0.288</b>	0.107	0.0149	0.0395
	5/09	<b>1.38</b>	0.175	0.0705	0.065
	9/09	0.267	0.0332	0.024	0.0078
	12/09	<b>0.819</b>	0.0267	0.088	0.012
	3/10	<b>0.726</b>	0.107	0.0879	0.0278J
Duplicate	3/10	<b>0.431</b>	0.714	0.64	0.201
	6/10	0.339	0.0329	0.0539	0.0079
Duplicate	6/10	0.353	0.0395	0.0632	0.0088
	9-10	<b>1.99</b>	0.084	0.0951	0.0219J
MW-2	3/08	<b>8.98</b>	<b>6.58</b>	0.135J	<b>0.765</b>
Duplicate	3/08	<b>10</b>	<b>7</b>	0.156J	<b>0.93</b>
	6/08	<b>24.3</b>	<b>18.5</b>	0.319	<b>2.58</b>
Duplicate	6/08	<b>23.5</b>	<b>19.2</b>	0.309	<b>2.36</b>
	9/08	<b>21.7</b>	<b>9.79</b>	0.443	<b>4.25</b>
	12/08	Not sampled: Remediation activities			
	3/09	<b>23.7</b>	<b>2.34</b>	0.583	<b>1.25</b>
Duplicate	3/09	<b>4.07</b>	<b>1.91</b>	0.268 J	0.49 J
	5/09	<b>32.7</b>	<b>1.31</b>	<b>0.791</b>	<b>1.69</b>
Duplicate	5/09	<b>30.7</b>	<b>1.43</b>	<b>0.907</b>	<b>2.14</b>
	9/09	29.3	0.771	0.491	0.371J
	12/09	<b>28.5</b>	0.347	0.57	0.177J
Duplicate	12/09	<b>31.8</b>	0.397J	<b>0.829</b>	0.193
	3/10	<b>23.8</b>	0.71	0.529	< <b>1.2</b>
	6/10	22.9	0.39J	0.485	0.128
	9-10	<b>17</b>	0.257J	0.329J	<0.8
	9-10	<b>17.7</b>	0.284J	0.353J	<0.8
MW-3	3/08	<b>0.759</b>	<b>0.849</b>	0.0355	0.0786
	6/08	<b>6.18</b>	<b>9.46</b>	0.287	<b>1.23</b>
	9/08	<b>2.45</b>	<b>3.62</b>	0.145	<b>1.14</b>
	12/08	<b>0.761</b>	<b>0.938</b>	0.0492	0.158
	3/09	<b>4.03</b>	<b>2.83</b>	0.18 J	0.61
	5/09	<b>14.7</b>	<b>12.6</b>	<b>0.808</b>	<b>1.64</b>
	9/09	5.5	1.09	0.271	<0.006
	12/09	<b>13.1</b>	<b>9.08</b>	<b>1.2</b>	<b>2.87</b>
	3/10	<b>8.43</b>	<b>9.14</b>	<b>1.01</b>	<b>2.71</b>
	6/10	<b>Free Phase Hydrocarbons Since Second Quarter 2010</b>			

Notes: Units mg/l

NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards

J qualifiers indicate an estimated concentration between the method detection and method reporting limits.

Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards

## RR EXT BTEX GROUNDWATER MONITORING DATA SUMMARY (continued)

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standards		.010	0.75	0.75	0.62
MW-4	3/08	0.0102	0.0093	<0.002	0.0023J
	6/08	0.0439	0.0256	0.0068	0.0147
	9/08	0.514	0.443	0.0203	0.125
	12/08	1.32	1.35	0.0812	0.239J
	3/09	3.61	3.4	0.164 J	0.831
	5/09	4.7	2.94	0.428	1.03
<b>Free Phase Hydrocarbons Since Third Quarter 2009</b>					
MW-5	3/08	0.0019J	0.0012J	<0.002	<0.006
	6/08	0.0037	0.0037	<0.002	<0.006
	9/08	0.0038	0.0037	<0.002	<0.006
	12/08	0.0031	0.004	<0.002	<0.006
	3/09	0.0067	0.0074	<0.002	<0.006
	5/09	0.0064	0.0089	0.0025	0.0045 J
	9/09	0.0082	0.0132	0.00066J	<0.006
	12/09	0.0096	0.0155	0.0013J	0.0021J
<b>Free Phase Hydrocarbons Since First Quarter 2010</b>					
MW-6	6/08	<0.002	<0.002	<0.002	<0.006
	9/08	<0.002	<0.002	<0.002	<0.006
	12/08	<0.002	<0.002	<0.002	<0.006
	3/09	<0.002	<0.002	<0.002	<0.006
	5/09	<0.002	<0.002	<0.002	<0.006
	9/09	<0.002	<0.002	<0.002	<0.006
	12/09	<0.002	<0.002	<0.002	<0.006
	3/10	<0.002	<0.002	<0.002	<0.006
	6/10	<0.001	<0.002	<0.002	<0.002
	9-10	<0.001	<0.002	<0.002	<0.004

Notes: Units mg/l  
 NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards  
 J qualifiers indicate an estimated concentration between the method detection and method reporting limits.  
 Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards

## RR EXT BTEX GROUNDWATER MONITORING DATA SUMMARY (continued)

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standards		.010	0.75	0.75	0.62
MW-7	6/08	<0.002	<0.002	<0.002	<0.006
	9/08	<0.002	<0.002	<0.002	<0.006
	12/08	<0.002	<0.002	<0.002	<0.006
	3/09	<0.002	<0.002	<0.002	<0.006
	5/09	<0.002	<0.002	<0.002	<0.006
	9/09	<0.002	<0.002	<0.002	<0.006
	12/09	<0.002	<0.002	<0.002	<0.006
	3/10	<0.002	<0.002	<0.002	<0.006
	6/10	0.0005J	<0.002	<0.002	<0.006
	9/10	0.00042J	<0.002	<0.002	<0.004
MW-8	6/08	<b>0.0384</b>	0.0255	0.00049J	0.0016J
	9/08	<b>0.0301</b>	0.0161	<0.002	0.002 J
	12/08	<b>0.0233</b>	0.011	<0.002	<0.006
Dup	12/08	<b>0.0122</b>	0.006	<0.002	<0.006
	3/09	<b>0.0218</b>	0.0066	<0.002	<0.006
	5/09	0.0098	0.0049	<0.002	<0.006
	9/09	<0.002	<0.002	<0.002	<0.006
Dup	9/09	<0.4	<0.4	<0.4	<1.2
	12/09	<0.002	<0.002	<0.002	<0.006
	3/10	<0.002	<0.002	<0.002	<0.006
	6/10	<0.001	<0.002	<0.002	<0.002
	9/10	<0.001	<0.002	<0.002	<0.004
MW-9	Free Phase Hydrocarbons since June 2010 Installation				
MW-10	Free Phase Hydrocarbons since June 2010 Installation				
MW-11	6/10	<0.001	<0.002	<0.002	<0.004
	9/10	<0.001	<0.002	<0.002	<0.004
MW-12	6/10	<0.001	<0.002	<0.002	<0.004
	9/10	<0.001	<0.002	<0.002	<0.004

Notes: Units mg/l

NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards

J qualifiers indicate an estimated concentration between the method detection and method reporting limits.

Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards

**WELL SAMPLING DATA AND  
ANALYTICAL LABORATORY REPORT**

COMMENTS:

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream

WELL ID: MW-2

SITE NAME: RR-EXT

DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_

SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 39.91 Feet

DEPTH TO WATER: 30.30 Feet

HEIGHT OF WATER COLUMN: 9.61 Feet

WELL DIAMETER: 2.0 Inch

**4.8** Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

[illegible]

SAMPLE NO.: Collected Sample No.: MW-2

ANALYSES: BTEX (8260)

COMMENTS: Duplicate sample collected

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-3

SITE NAME: RR-EXT DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_ SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 40.03 Feet

DEPTH TO WATER: 32.21 Feet

HEIGHT OF WATER COLUMN: 7.82 Feet

WELL DIAMETER: 2.0 Inch

3.9 Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

TIME	VOLUME PURGED	TEMP. °F	COND. <i>mS/cm</i>	pH	DO mg/L	Turb	PHYSICAL APPEARANCE AND REMARKS

0.0      Volume: (gallons)

SAMPLE NO.: Collected Sample No.: No sample because of FPH

ANALYSES: BTEX (8260)

COMMENTS:

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-4

SITE NAME: RR-EXT DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_ SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:  
☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 40.66 Feet

DEPTH TO WATER: 31.38 Feet

HEIGHT OF WATER COLUMN: 9.28 Feet

WELL DIAMETER: 2.0 Inch

4.6 Minimum Gallons to  
purge 3 well volumes

[illegible]

SAMPLE NO.: Collected Sample No.: No sample because of FPH

ANALYSES:

COMMENTS:



## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-5

SITE NAME: RR-EXT DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_ SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 42.15 Feet

DEPTH TO WATER: 32.20 Feet

HEIGHT OF WATER COLUMN: 9.95 Feet

WELL DIAMETER: 2.0 Inch

5.0 Minimum Gallons to  
purge 3 well volumes

[illegible]

SAMPLE NO.:	Collected Sample No.: No sample because of FPH
ANALYSES:	BTEX (8260)
COMMENTS:	

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream

WELL ID: MW-6

SITE NAME: RR-EXT

DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_

SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 39.68 Feet

DEPTH TO WATER: 31.61 Feet

HEIGHT OF WATER COLUMN: 8.07 Feet

WELL DIAMETER: 2.0 Inch

**4.0** Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

[illegible]

SAMPLE NO.: Collected Sample No.: MW-6

ANALYSES: BTEX (8260)

COMMENTS: Collected samples for MS and MSD analyses

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-7

SITE NAME: RR-EXT DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_ SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL:	39.86	Feet
DEPTH TO WATER:	32.35	Feet
HEIGHT OF WATER COLUMN:	7.51	Feet
WELL DIAMETER:	2.0	Inch

3.8 Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

TIME	VOLUME PURGED	TEMP. °F	COND. mS/cm	pH	DO mg/L	Turb	PHYSICAL APPEARANCE AND REMARKS
	1.3	66.3	1.97	7.25			
	2.6	65.7	1.87	7.11			
	3.9	65.8	1.82	7.13			
3.9      Volume: (gallons)							

SAMPLE NO.: Collected Sample No.: MW-7

ANALYSES: BTEX (8260)

COMMENTS:

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream

WELL ID: MW-8

SITE NAME: RR-EXT

DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_

SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 40.26 Feet

DEPTH TO WATER: 31.25 Feet

HEIGHT OF WATER COLUMN: 9.01 Feet

WELL DIAMETER: 2.0 Inch

**4.5** Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

[illegible]

SAMPLE NO.: Collected Sample No.: MW-8

ANALYSES: BTEX (8260)

COMMENTS: \_\_\_\_\_

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-9

SITE NAME: RR-EXT DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_ SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL: \_\_\_\_\_

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 40.00 Feet

DEPTH TO WATER: 28.80 Feet

HEIGHT OF WATER COLUMN: 11.20 Feet

WELL DIAMETER: 2.0 Inch

5.6 Minimum Gallons to  
purge 3 well volumes

[illegible]

SAMPLE NO.:	Collected Sample No.: No sample because of FPH
ANALYSES:	BTEX (8260)
COMMENTS:	

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream

WELL ID: MW-10

SITE NAME: RR-EXT

DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_

SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves    ☐ Alconox    ☐ Distilled Water Rinse    ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 40.00 Feet

DEPTH TO WATER: 30.50 Feet

HEIGHT OF WATER COLUMN: 9.50 Feet

WELL DIAMETER: 2.0 Inch

**4.8** Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

TIME	VOLUME PURGED	TEMP. °F	COND. <i>mS/cm</i>	pH	DO mg/L	Turb	PHYSICAL APPEARANCE AND REMARKS
0.0      Volume: (gallons)							

SAMPLE NO.: Collected Sample No.: No sample because of FPH

ANALYSES: BTEX (8260)

COMMENTS:

## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-11

SITE NAME: RR-EXT DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_ SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:  
☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 40.00 Feet

DEPTH TO WATER: 31.58 Feet

HEIGHT OF WATER COLUMN: 8.42 Feet

WELL DIAMETER: 2.0 Inch

4.2 Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

[illegible]

SAMPLE NO.:	Collected Sample No.: MW-11
ANALYSES:	BTEX (8260)
COMMENTS:	

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream

WELL ID: MW-12

SITE NAME: RR-EXT

DATE: 9/28/2010

PROJECT NO. \_\_\_\_\_

SAMPLER: N. Quevedo

PURGING METHOD: ☒ Hand Bailed ☐ Pump If Pump, Type: \_\_\_\_\_

SAMPLING METHOD: ☒ Dedicated Bailer — ☐ Direct from Discharge Hose ☐ Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☒ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other:

TOTAL DEPTH OF WELL: 40.00 Feet

DEPTH TO WATER: 29.73 Feet

HEIGHT OF WATER COLUMN: 10.27 Feet

WELL DIAMETER: 2.0 Inch

**5.1** Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 0.49)

[illegible]

SAMPLE NO.: Collected Sample No.: MW-12

ANALYSES: BTEX (8260)

COMMENTS: \_\_\_\_\_





10/11/10

## Technical Report for

DCP Midstream, LP

AECCOL: DCP RR EXT

GN00/ Proj# 390761103

Accutest Job Number: D17878

Sampling Date: 09/28/10

Report to:


AECOM

mhstewart@gmail.com  
SWWeathers@dcpmidstream.com  
ATTN: Michael Stewart

Total number of pages in report: 39



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

  
John Hamilton  
Laboratory Director

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.

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## Sample Summary

DCP Midstream, LP

Job No: D17878

AECCOL: DCP RR EXT

Project No: GN00/ Proj# 390761103

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
D17878-1	09/28/10	10:55	10/01/10	AQ Ground Water	MW-1
D17878-2	09/28/10	10:35	10/01/10	AQ Ground Water	MW-2
D17878-3	09/28/10	08:40	10/01/10	AQ Ground Water	MW-6
D17878-3D	09/28/10	08:40	10/01/10	AQ Water Dup/MSD	MW-6
D17878-3M	09/28/10	08:40	10/01/10	AQ Water Matrix Spike	MW-6
D17878-4	09/28/10	08:05	10/01/10	AQ Ground Water	MW-7
D17878-5	09/28/10	11:10	10/01/10	AQ Ground Water	MW-8
D17878-6	09/28/10	09:10	10/01/10	AQ Ground Water	MW-11
D17878-7	09/28/10	09:35	10/01/10	AQ Ground Water	MW-12
D17878-8	09/28/10	00:00	10/01/10	AQ Water Dup/MSD	DUP
D17878-9	09/28/10	00:00	10/01/10	AQ Trip Blank Water	TRIP BLANK



## CASE NARRATIVE / CONFORMANCE SUMMARY

Client: DCP Midstream, LP

Job No D17878

Site: AECCOL: DCP RR EXT

Report Dat 10/11/2010 1:37:29 PM

On 10/01/2010, eight (8) samples, 1 Trip Blank, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 4.0°C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D17878 was assigned to the project. The lab sample IDs, client sample IDs, and dates 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: V5V598

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D17878-3MS and D17878-3MSD were used as the QC samples indicated.

Matrix AQ

Batch ID: V5V602

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D17907-1MS and D17907-1MSD were used as the QC samples indicated.

Matrix AQ

Batch ID: V5V607

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D17401-18RMS and D17401-18RMSD were used as the QC samples indicated.

### Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ

Batch ID: GP2911

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D17904-1MSD and D17904-1MS were used as the QC samples for the Chloride analysis.
- The matrix spike (MS) recovery of Chloride is outside control limits. The spike amount low relative to the sample amount. Refer to the lab control or spike blank for recovery information.

Matrix AQ

Batch ID: GP2923

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D17878-6MS and D17878-6MSD were used as the QC samples for the Chloride analysis.

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

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

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



Sample Results

---

Report of Analysis

---

## Report of Analysis

Page 1 of 1

Client Sample ID: MW-1  
 Lab Sample ID: D17878-1  
 Matrix: AQ - Ground Water  
 Method: SW846 8260B  
 Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
 Date Received: 10/01/10  
 Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10840.D	20	10/03/10	DC	n/a	n/a	V5V598
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	1.99	0.020	0.0060	mg/l	
108-88-3	Toluene	0.0837	0.040	0.020	mg/l	
100-41-4	Ethylbenzene	0.0951	0.040	0.0060	mg/l	
	m,p-Xylene	0.0219	0.080	0.012	mg/l	J
95-47-6	o-Xylene	ND	0.040	0.012	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		63-130%
2037-26-5	Toluene-D8	74%		68-130%
460-00-4	4-Bromofluorobenzene	76%		61-130%

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

Page 1 of 1

3.1

Client Sample ID: MW-1  
Lab Sample ID: D17878-1  
Matrix: AQ - Ground Water  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a



## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	442	25	mg/l	50	10/06/10 13:17	GH	EPA 300/SW846 9056

---

RL = Reporting Limit



## Report of Analysis

Page 1 of 1

Client Sample ID: MW-2  
Lab Sample ID: D17878-2  
Matrix: AQ - Ground Water  
Method: SW846 8260B  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10996.D	200	10/08/10	DC	n/a	n/a	V5V607
Run #2							

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

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	17.0	0.20	0.060	mg/l	
108-88-3	Toluene	0.257	0.40	0.20	mg/l	J
100-41-4	Ethylbenzene	0.329	0.40	0.060	mg/l	J
	m,p-Xylene	ND	0.80	0.12	mg/l	
95-47-6	o-Xylene	ND	0.40	0.12	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		63-130%
2037-26-5	Toluene-D8	94%		68-130%
460-00-4	4-Bromofluorobenzene	89%		61-130%

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

Page 1 of 1

Client Sample ID: MW-2  
Lab Sample ID: D17878-2  
Matrix: AQ - Ground Water  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	251	25	mg/l	50	10/06/10 13:31	GH	EPA 300/SW846 9056

---

RL = Reporting Limit

## Report of Analysis

Page 1 of 1

Client Sample ID:	MW-6	Date Sampled:	09/28/10
Lab Sample ID:	D17878-3	Date Received:	10/01/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AECCOL: DCP RR EXT		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10837.D	1	10/03/10	DC	n/a	n/a	V5V598
Run #2							

Run #	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	0.00030	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00030	mg/l	
	m,p-Xylene	ND	0.0040	0.00060	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		63-130%
2037-26-5	Toluene-D8	73%		68-130%
460-00-4	4-Bromofluorobenzene	75%		61-130%

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  
Lab Sample ID: D17878-3  
Matrix: AQ - Ground Water  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	337	25	mg/l	50	10/06/10 13:44	GH	EPA 300/SW846 9056

---

RL = Reporting Limit

## Report of Analysis

Page 1 of 1

Client Sample ID:	MW-7	Date Sampled:	09/28/10
Lab Sample ID:	D17878-4	Date Received:	10/01/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AECCOL: DCP RR EXT		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10842.D	1	10/03/10	DC	n/a	n/a	V5V598
Run #2							

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

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.00042	0.0010	0.00030	mg/l	J
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00030	mg/l	
	m,p-Xylene	ND	0.0040	0.00060	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		63-130%
2037-26-5	Toluene-D8	75%		68-130%
460-00-4	4-Bromofluorobenzene	76%		61-130%

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

Page 1 of 1

Client Sample ID: MW-7  
Lab Sample ID: D17878-4  
Matrix: AQ - Ground Water  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	326	25	mg/l	50	10/06/10 13:58	GH	EPA 300/SW846 9056

---

RL = Reporting Limit

## Report of Analysis

Page 1 of 1

Client Sample ID:	MW-8	Date Sampled:	09/28/10
Lab Sample ID:	D17878-5	Date Received:	10/01/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AECCOL: DCP RR EXT		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10934.D	1	10/06/10	DC	n/a	n/a	V5V602
Run #2							

Run #	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	0.00030	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00030	mg/l	
	m,p-Xylene	ND	0.0040	0.00060	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%		63-130%
2037-26-5	Toluene-D8	94%		68-130%
460-00-4	4-Bromofluorobenzene	86%		61-130%

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

Page 1 of 1

Client Sample ID: MW-8  
Lab Sample ID: D17878-5  
Matrix: AQ - Ground Water  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	486	25	mg/l	50	10/06/10 14:12	GH	EPA 300/SW846 9056

---

RL = Reporting Limit



## Report of Analysis

Page 1 of 1

Client Sample ID:	MW-11	Date Sampled:	09/28/10
Lab Sample ID:	D17878-6	Date Received:	10/01/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AECCOL: DCP RR EXT		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10844.D	1	10/03/10	DC	n/a	n/a	V5V598
Run #2							

Run #	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	0.00030	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00030	mg/l	
	m,p-Xylene	ND	0.0040	0.00060	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		63-130%
2037-26-5	Toluene-D8	74%		68-130%
460-00-4	4-Bromofluorobenzene	76%		61-130%

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

Page 1 of 1

Client Sample ID: MW-11  
Lab Sample ID: D17878-6  
Matrix: AQ - Ground Water  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	345	25	mg/l	50	10/07/10 12:20	GH	EPA 300/SW846 9056

---

RL = Reporting Limit

## Report of Analysis

Page 1 of 1

Client Sample ID:	MW-12	Date Sampled:	09/28/10
Lab Sample ID:	D17878-7	Date Received:	10/01/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AEECOL: DCP RR EXT		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10845.D	1	10/03/10	DC	n/a	n/a	V5V598
Run #2							

Run #	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	0.00030	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00030	mg/l	
	m,p-Xylene	ND	0.0040	0.00060	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		63-130%
2037-26-5	Toluene-D8	73%		68-130%
460-00-4	4-Bromofluorobenzene	74%		61-130%

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  
Lab Sample ID: D17878-7  
Matrix: AQ - Ground Water  
Project: AECCOL: DCP RR EXT

Date Sampled: 09/28/10  
Date Received: 10/01/10  
Percent Solids: n/a

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	464	25	mg/l	50	10/06/10 14:39	GH	EPA 300/SW846 9056

---

RL = Reporting Limit

## Report of Analysis

Page 1 of 1

Client Sample ID:	DUP	Date Sampled:	09/28/10
Lab Sample ID:	D17878-8	Date Received:	10/01/10
Matrix:	AQ - Water Dup/MSD	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AECCOL: DCP RR EXT		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10997.D	200	10/08/10	DC	n/a	n/a	V5V607
Run #2							

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

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	17.7	0.20	0.060	mg/l	
108-88-3	Toluene	0.284	0.40	0.20	mg/l	J
100-41-4	Ethylbenzene	0.353	0.40	0.060	mg/l	J
	m,p-Xylene	ND	0.80	0.12	mg/l	
95-47-6	o-Xylene	ND	0.40	0.12	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		63-130%
2037-26-5	Toluene-D8	93%		68-130%
460-00-4	4-Bromofluorobenzene	89%		61-130%

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

Page 1 of 1

Client Sample ID:	DUP	Date Sampled:	09/28/10
Lab Sample ID:	D17878-8	Date Received:	10/01/10
Matrix:	AQ - Water Dup/MSD	Percent Solids:	n/a
Project:	AECCOL: DCP RR EXT		

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	274	25	mg/l	50	10/06/10 14:52	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

Page 1 of 1

Client Sample ID:	TRIP BLANK	Date Sampled:	09/28/10
Lab Sample ID:	D17878-9	Date Received:	10/01/10
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AECCOL: DCP RR EXT		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V10848.D	1	10/03/10	DC	n/a	n/a	V5V598
Run #2							

Run #	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	0.00030	mg/l	
108-88-3	Toluene	ND	0.0020	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00030	mg/l	
	m,p-Xylene	ND	0.0040	0.00060	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		63-130%
2037-26-5	Toluene-D8	74%		68-130%
460-00-4	4-Bromofluorobenzene	75%		61-130%

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



Mountain States

ACCUTEST

LABORATORIES

4

Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



D17878

Accutest Job #: 390761103

**D17878: Chain of Custody**  
**Page 1 of 1**



Mountain States

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## GC/MS Volatiles

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## QC Data Summaries

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Includes the following where applicable:

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



## Method Blank Summary

Page 1 of 1

Job Number: D17878

Account: DCPM CODN DCP Midstream, LP

Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V598-MB	5V10831.D	1	10/03/10	DC	n/a	n/a	V5V598

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-1, D17878-3, D17878-4, D17878-6, D17878-7, D17878-9

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.30	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
	m,p-Xylene	ND	4.0	0.60	ug/l	
95-47-6	o-Xylene	ND	2.0	0.60	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	98% 63-130%
2037-26-5	Toluene-D8	75% 68-130%
460-00-4	4-Bromofluorobenzene	76% 61-130%

## Method Blank Summary

Page 1 of 1

Job Number: D17878

Account: DCPM CODN DCP Midstream, LP

Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V602-MB	5V10924.D	1	10/06/10	DC	n/a	n/a	V5V602

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.30	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
	m,p-Xylene	ND	4.0	0.60	ug/l	
95-47-6	o-Xylene	ND	2.0	0.60	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	90%	63-130%
2037-26-5	Toluene-D8	88%	68-130%
460-00-4	4-Bromofluorobenzene	83%	61-130%

5.1.2



## Method Blank Summary

Page 1 of 1

Job Number: D17878

Account: DCPM CODN DCP Midstream, LP

Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V607-MB1	5V10979.D	1	10/08/10	DC	n/a	n/a	V5V607

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-2, D17878-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.30	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
	m,p-Xylene	ND	4.0	0.60	ug/l	
95-47-6	o-Xylene	ND	2.0	0.60	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	97% 63-130%
2037-26-5	Toluene-D8	92% 68-130%
460-00-4	4-Bromofluorobenzene	89% 61-130%

## Blank Spike Summary

Page 1 of 1

Job Number: D17878

Account: DCPM CODN DCP Midstream, LP

Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V598-BS	5V10832.D	1	10/03/10	DC	n/a	n/a	V5V598

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-1, D17878-3, D17878-4, D17878-6, D17878-7, D17878-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	49.5	99	70-130
100-41-4	Ethylbenzene	50	49.2	98	70-130
108-88-3	Toluene	50	48.4	97	70-140
	m,p-Xylene	50	45.8	92	55-134
95-47-6	o-Xylene	50	45.2	90	55-134

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	95%	63-130%
2037-26-5	Toluene-D8	74%	68-130%
460-00-4	4-Bromofluorobenzene	85%	61-130%

## Blank Spike Summary

Page 1 of 1

Job Number: D17878

Account: DCPM CODN DCP Midstream, LP

Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V602-BS	5V10925.D	1	10/06/10	DC	n/a	n/a	V5V602

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	52.9	106	70-130
100-41-4	Ethylbenzene	50	56.8	114	70-130
108-88-3	Toluene	50	55.2	110	70-140
	m,p-Xylene	50	51.8	104	55-134
95-47-6	o-Xylene	50	51.3	103	55-134

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	93%	63-130%
2037-26-5	Toluene-D8	95%	68-130%
460-00-4	4-Bromofluorobenzene	101%	61-130%

## Blank Spike Summary

Page 1 of 1

Job Number: D17878

Account: DCPM CODN DCP Midstream, LP

Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V607-BS1	5V10980.D	1	10/08/10	DC	n/a	n/a	V5V607

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-2, D17878-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	50.5	101	70-130
100-41-4	Ethylbenzene	50	52.3	105	70-130
108-88-3	Toluene	50	50.9	102	70-140
	m,p-Xylene	50	48.2	96	55-134
95-47-6	o-Xylene	50	48.0	96	55-134

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	95%	63-130%
2037-26-5	Toluene-D8	92%	68-130%
460-00-4	4-Bromofluorobenzene	100%	61-130%



# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D17878  
Account: DCPM CODN DCP Midstream, LP  
Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D17878-3MS	5V10838.D	1	10/03/10	DC	n/a	n/a	V5V598
D17878-3MSD	5V10839.D	1	10/03/10	DC	n/a	n/a	V5V598
D17878-3	5V10837.D	1	10/03/10	DC	n/a	n/a	V5V598

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-1, D17878-3, D17878-4, D17878-6, D17878-7, D17878-9

CAS No.	Compound	D17878-3 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	48.9	98	52.2	104	7	59-132/30
100-41-4	Ethylbenzene	ND	50	46.9	94	49.8	100	6	68-130/30
108-88-3	Toluene	ND	50	47.2	94	50.0	100	6	56-142/30
	m,p-Xylene	ND	50	44.0	88	46.6	93	6	36-146/30
95-47-6	o-Xylene	ND	50	43.6	87	46.1	92	6	36-146/30

CAS No.	Surrogate Recoveries	MS	MSD	D17878-3	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	101%	101%	63-130%
2037-26-5	Toluene-D8	74%	74%	73%	68-130%
460-00-4	4-Bromofluorobenzene	85%	85%	75%	61-130%

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D17878

Account: DCPMCDN DCP Midstream, LP

Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D17907-1MS	5V10927.D	1	10/06/10	DC	n/a	n/a	V5V602
D17907-1MSD	5V10928.D	1	10/06/10	DC	n/a	n/a	V5V602
D17907-1	5V10926.D	1	10/06/10	DC	n/a	n/a	V5V602

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-5

CAS No.	Compound	D17907-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		50	51.0	102	48.7	97	5	59-132/30
100-41-4	Ethylbenzene	ND		50	55.3	111	52.7	105	5	68-130/30
108-88-3	Toluene	ND		50	54.0	108	51.0	102	6	56-142/30
	m,p-Xylene	ND		50	51.3	103	48.1	96	6	36-146/30
95-47-6	o-Xylene	ND		50	50.4	101	48.0	96	5	36-146/30

CAS No.	Surrogate Recoveries	MS	MSD	D17907-1	Limits
17060-07-0	1,2-Dichloroethane-D4	91%	84%	99%	63-130%
2037-26-5	Toluene-D8	97%	89%	96%	68-130%
460-00-4	4-Bromofluorobenzene	102%	94%	90%	61-130%

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D17878  
Account: DCPMCO DN DCP Midstream, LP  
Project: AECCOL: DCP RR EXT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D17401-18RMS	5V10982.D	1	10/08/10	DC	n/a	n/a	V5V607
D17401-18RMSD	5V10983.D	1	10/08/10	DC	n/a	n/a	V5V607
D17401-18R	5V10981.D	1	10/08/10	DC	n/a	n/a	V5V607

The QC reported here applies to the following samples:

Method: SW846 8260B

D17878-2, D17878-8

CAS No.	Compound	D17401-18R		MS	MS	MSD	MSD	RPD	Limits
		ug/l	Spike Q	ug/l	ug/l	%	ug/l		%
71-43-2	Benzene	ND	50	44.8	90	49.9	100	11	59-132/30
100-41-4	Ethylbenzene	ND	50	46.2	92	51.4	103	11	68-130/30
108-88-3	Toluene	ND	50	45.0	90	50.5	101	12	56-142/30
95-47-6	m,p-Xylene	ND	50	42.4	85	47.6	95	12	36-146/30
	o-Xylene	ND	50	42.6	85	47.2	94	10	36-146/30

CAS No.	Surrogate Recoveries	MS	MSD	D17401-18R	Limits
17060-07-0	1,2-Dichloroethane-D4	90%	94%	101%	63-130%
2037-26-5	Toluene-D8	87%	96%	96%	68-130%
460-00-4	4-Bromofluorobenzene	93%	102%	93%	61-130%



## General Chemistry

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## QC Data Summaries

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Includes the following where applicable:

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



METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D17878  
Account: DCPMCDN - DCP Midstream, LP  
Project: AECCOL: DCP RR EXT

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP2923/GN6707	0.20	0.0	mg/l	20	20.0	100.0	90-110%
Chloride	GP2911/GN6689	0.50	0.0	mg/l	20	19.1	95.5	90-110%
Chloride	GP2923/GN6707	0.50	0.0	mg/l	20	21.8	109.0	90-110%
Fluoride	GP2911/GN6689	0.20	0.0	mg/l	10	9.16	91.6	90-110%
Nitrogen, Nitrate	GP2923/GN6707	0.045	0.0	mg/l	4.52	4.24	93.8	90-110%
Nitrogen, Nitrite	GP2923/GN6707	0.061	0.0	mg/l	6.09	5.98	98.2	90-110%
Phosphate, Ortho	GP2923/GN6707	0.065	0.0	mg/l	9.78	9.33	95.4	90-110%
Sulfate	GP2923/GN6707	0.50	0.0	mg/l	30	30.0	100.0	90-110%

Associated Samples:

Batch GP2911: D17878-1, D17878-2, D17878-3, D17878-4, D17878-5, D17878-7, D17878-8

Batch GP2923: D17878-6

(') Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D17878  
Account: DCPMCOBN - DCP Midstream, LP  
Project: AECCOL: DCP RR EXT

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	Rec	QC Limits
Bromide	GP2923/GN6707	D17878-6	mg/l	4.1	125	123	95.1	80-120%
Chloride	GP2911/GN6689	D17904-1	mg/l	281	50	342	122.0(a)	80-120%
Chloride	GP2923/GN6707	D17878-6	mg/l	345	500	843	99.6	80-120%
Fluoride	GP2911/GN6689	D17904-1	mg/l	3.8	12.5	15.4	92.8	80-120%
Nitrogen, Nitrate	GP2923/GN6707	D17878-6	mg/l	0.0	28.3	26.8	94.9	80-120%
Nitrogen, Nitrite	GP2923/GN6707	D17878-6	mg/l	0.0	15.2	14.4	94.6	80-120%
Phosphate, Ortho	GP2923/GN6707	D17878-6	mg/l	0.0	40.8	44.2	108.5	80-120%
Sulfate	GP2923/GN6707	D17878-6	mg/l	242	500	701	91.8	80-120%

Associated Samples:

Batch GP2911: D17878-1, D17878-2, D17878-3, D17878-4, D17878-5, D17878-7, D17878-8

Batch GP2923: D17878-6

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.2



MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D17878  
Account: DCPMCOBN - DCP Midstream, LP  
Project: AECCOL: DCP RR EXT

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP2923/GN6707	D17878-6	mg/l	4.1	125	124	0.8	20%
Chloride	GP2911/GN6689	D17904-1	mg/l	281	50	336	1.8	20%
Chloride	GP2923/GN6707	D17878-6	mg/l	345	500	843	0.0	20%
Fluoride	GP2911/GN6689	D17904-1	mg/l	3.8	12.5	15.2	1.3	20%
Nitrogen, Nitrate	GP2923/GN6707	D17878-6	mg/l	0.0	28.3	26.6	0.7	20%
Nitrogen, Nitrite	GP2923/GN6707	D17878-6	mg/l	0.0	15.2	14.4	0.0	20%
Phosphate, Ortho	GP2923/GN6707	D17878-6	mg/l	0.0	40.8	42.8	3.2	20%
Sulfate	GP2923/GN6707	D17878-6	mg/l	242	500	701	0.0	20%

Associated Samples:

Batch GP2911: D17878-1, D17878-2, D17878-3, D17878-4, D17878-5, D17878-7, D17878-8

Batch GP2923: D17878-6

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits