



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

June 21, 2011

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

**RE: 1st Quarter 2011 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**

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Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 1st Quarter 2011 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 [swweathers@dcpmidstream.com](mailto:swweathers@dcpmidstream.com).

Sincerely

**DCP Midstream, LP**

Stephen Weathers, PG  
Principal Environmental Specialist

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

June 2, 2011

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

Re: Summary of the First Quarter 2011 Groundwater Monitoring Results for the  
DCP J-4-2 Pipeline Release, Lea County New Mexico (**IRP-1728**)  
**Unit C, Section 27 Township 19 South, Range 35 East**

Dear Mr. Weathers:

This report summarizes the first quarter 2011 groundwater monitoring activities that were completed at the J-4-2 release location on March 30, 2011 for DCP Midstream, LP. 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 of intersection of US Highway 82 and State Highway 483 in Lea County New Mexico (Figure 1). The approximate coordinates are 32.6386 degrees north and 103.4469 degrees west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Monitoring well MW-5 was not installed because of drilling refusal. Five wells were sampled. Wells MW-1 and MW-2 were not sampled because they contained free phase hydrocarbons (FPH).

## **GROUNDWATER SAMPLING**

The depth to water and, if present, the free phase hydrocarbons (FPH), were measured in each well prior to completing the purging and sampling activities. 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)

The fluid measurements for this event are summarized in Table 2. The corrected groundwater elevations for all monitoring episodes are summarized in Table 3. FPH was measured at a thickness of 0.16 feet in MW-1 and 0.10 feet in MW-2. The historic FPH thickness values are summarized in Table 4. The residual FPH thickness of less than 0.25 feet in both wells indicates that the majority of mobile FPH have probably been removed.

Wells MW-3, MW-4, MW-6, MW-7 and MW-8 were purged and sampled with dedicated bailers. Purging continued until a minimum of three casing volumes of water was removed and the field parameters temperature, pH and conductivity stabilized. The well purging forms are attached. The affected purge water was disposed of at the DCP Linam Ranch facility.

Unfiltered samples were collected following stabilization using the dedicated bailers. All samples were placed in an ice-filled chest immediately upon collection and delivered to Accutest Laboratories using standard chain-of-custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) by method SW846 8260B and chlorides by method SM 4500 CL. The laboratory report is attached.

## **RESULTS AND INTERPRETATIONS**

A field duplicate sample was collected from MW-4. Matrix spike, matrix spike duplicate samples were collected from MW-7. The QA/QC evaluation included:

- All samples were analyzed within the method holding times.
- All of the individual surrogate spikes were within their control limits.
- The method blanks and blank spikes were all within their respective control limits.
- The matrix spike and matrix spike duplicate results from MW-7 and the laboratory-selected sample were all within their respective control limits.
- There were no BTEX detects in the trip blank or the primary and field duplicate samples from MW-4.
- The 5.6 relative percentage difference for chlorides between the primary and duplicate samples from MW-4 is acceptable.

The above information indicates that the data is suitable for evaluating the quarterly groundwater monitoring data.

The laboratory analyses from this sampling event are summarized in Table 5. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of Table 5. The constituents that exceed these standards are highlighted as bold text. Tables 6, 7, 8 and 9 summarize all of the data collected during this project for benzene, toluene, ethylbenzene and xylenes respectively. Table 10 summarizes the chloride data.

### **Groundwater Flow**

Figure 3 shows the hydrographs for the corrected water-table elevations for the site wells. The water table has remained relatively consistent since September 2010.

The calculated water table elevation contours for this event as generated using the Surfer® program with the kriging option are shown on Figure 4. Groundwater flow is toward the southeast at a consistent gradient. The groundwater flow direction has remained constant over the duration of the project.

### **Groundwater Chemistry**

Examination of Table 5 shows that none of the BTEX constituents were detected in wells MW-3 to MW-8.

The benzene concentrations are plotted on Figure 5 along with wells MW-1 and MW-2 that contained FPH. Comparison of Figure 4 with Figure 5 demonstrates that any dissolved-phase BTEX constituents from MW-1 and MW-2 attenuate to concentrations that are below the method reporting limits before reaching MW-7 or MW-8.

It is also important to note that:

1. The toluene, ethylbenzene and total xylenes concentrations have never exceeded the NMWQCC standards in wells MW-3 through MW-8;
2. Benzene has not been detected in MW-4 since March 2007; and
3. Benzene has never been detected in down-gradient wells MW-6, MW-7 and MW-8.

Examination of Table 10 indicates that the chlorides concentrations in all wells exceed the NMWQCC groundwater standard of 250 mg/l except for the fourth quarter 2008 value from MW-4 which was anomalously low. The chloride concentrations are plotted versus the sampling dates on Figure 6 with the anomalous fourth quarter MW-4 value deleted. The chloride concentration have remained relatively consistent since June 2010.

A chloride isopleth map generated from data for this event using the Surfer® program is included as Figure 7. The chloride distribution continues to indicate a source to the west and outside of the DCP release area. This pattern has remained constant throughout the duration of the project.

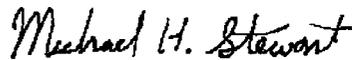
## CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected to date, AEC concludes that:

1. Groundwater flow remains constant toward the southeast;
2. The residual FPH is probably immobile and only a minimal volume remains given the historic remediation activities;
3. The presence of dissolved phase BTEX constituents appears to be limited to the original release area;
4. The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is either stable or contracting;
5. The chloride data from this event continue to confirm that the chlorides that are present in the groundwater did not originate from the DCP release.

The next groundwater-monitoring event is scheduled for the second quarter of 2011. Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely,  
**AMERICAN ENVIRONMENTAL CONSULTING, LLC**



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

MHS/tbm

attachment

## **TABLES**

Table 1 – Summary of Monitoring Well Completions at the J-4-2 Site

Name	Date Installed	Stickup	Casing Diameter (inches)	Total Depth (btoc)	Screen Interval (ground)	Sand Interval
MW-1	2/06	3.17	2	43.05	19-39	17-39
MW-2	2/06	3.08	4	43.30	19-39	17-39
MW-3	2/06	3.21	2	43.00	19-39	17-39
MW-4	9/06	3.12	2	38.12	20-35	18-35
MW-5	Not installed because of drilling refusal					
MW-6	9/06	3.32	2	38.32	20-35	18-35
MW-7	9/06	2.95	2	39.45	21.5-36.5	19.5-36.5
MW-8	9/06	3.32	2	38.32	20-35	18-35

All units are feet except as noted

btoc: Below top of casing

Table 2 - Summary of First Quarter 2011 Fluid Measurements

Well	Depth to Water	Depth to Free Phase Hydrocarbons	Corrected Groundwater Elevation
MW-1	28.88	28.72	3711.69
MW-2	29.35	29.25	3711.35
MW-3	28.14		3711.25
MW-4	28.47		3711.77
MW-6	29.05		3710.91
MW-7	32.37		3708.36
MW-8	30.63		3706.69

Units are feet

Table 3 - Summary of Water Table Elevations for the J-4-2 Site

Well	2/15/06	9/25/06	12/21/06	3/14/07	6/26/07	9/25/07	11/30/07	3/20/08
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15	3711.86	3712.42	3713.48
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63	3712.34	3712.91	3713.40
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79	3711.50	3712.09	3713.30
MW-4		3712.80	3712.82	3712.78	3713.25	3712.98	3713.48	3713.70
MW-6		3711.76	3712.00	3711.96	3711.87	3711.56	3711.92	3712.53
MW-7		3711.03	3710.80	3710.73	3710.50	3709.87	3710.33	3711.38
MW-8		3709.22	3708.95	3708.79	3708.54	3708.06	3708.33	3709.17

Well	6/27/08	9/16/08	12/3/08	3/11/09	5/18/09	9/24/09	12/20/09	3/10/10	6/13/10
MW-1	NM	NM	3711.94	3712.19	3712.05	3711.48	3711.50	3711.45	3711.31
MW-2	NM	NM	3712.14	3711.99	3711.87	3711.28	3711.17	NM	3710.89
MW-3	3713.09	3712.34	3712.25	3712.10	3711.90	3711.35	3711.28	3711.19	3711.01
MW-4	3713.13	3712.18	3712.10	3712.36	3712.13	3711.69	3711.61	3711.56	3711.41
MW-6	3712.20	3711.86	3711.70	3711.57	3711.42	3711.22	3710.72	3710.67	3710.61
MW-7	3710.95	3710.11	3710.00	3709.84	3709.51	3708.55	3708.37	3708.35	3708.11
MW-8	3708.78	3708.23	3708.13	3707.95	3708.10	3706.79	3706.73	3706.71	3707.46

Well	9/28/10	12/8/10	3/30/11
MW-1	3711.65	3711.66	3711.69
MW-2	3711.12	3711.14	3711.35
MW-3	3711.24	3711.25	3711.25
MW-4	3711.64	3711.72	3711.77
MW-6	3710.56	3710.71	3710.91
MW-7	3708.23	3708.28	3708.36
MW-8	3706.62	3706.70	3706.69

Units are feet

Blank cells: wells not installed

NM: Not measured because of probe malfunction.

Table 4 – Summary of Free Phase Hydrocarbon Thickness Values for MW-1 and MW-2

Date	MW-1	MW-2
02/15/06	0.00	0.57
09/25/06	0.00	0.15
12/21/06	0.09	0.13
03/14/07	0.07	0.10
06/26/07	0.09	0.00
09/25/07	0.09	0.03
11/30/07	0.00	0.00
03/20/08	0.00	0.00
06/27/08	0.04	0.01
09/16/08	0.08	0.02
12/03/08	0.21	0.17
03/11/09	0.32	0.27
05/18/09	0.35	0.26
09/24/09	0.29	0.24
12/20/09	0.00	0.05
03/10/10	0.03	0.04
06/13/10	0.00	0.05
09/29/10	0.40	0.20
12/8/10	0.39	0.25
3/30/11	0.16	0.10

Units are feet

Table 5 - Summary of First Quarter 2011 Groundwater Results

Well	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chlorides
NMWQCC Groundwater Standard	0.01	0.75	0.75	0.62	250
MW-3	<0.001	<0.002	<0.002	<0.002	<b>2,230</b>
MW-4	<0.001	<0.002	<0.002	<0.002	<b>2,360</b>
MW-4 DUP	<0.001	<0.002	<0.002	<0.002	<b>2,220</b>
MW-6	<0.001	<0.002	<0.002	<0.002	<b>491</b>
MW-7	<0.001	<0.002	<0.002	<0.002	<b>1,210</b>
MW-8	<0.001	<0.002	<0.002	<0.002	<b>383</b>
trip	<0.001	<0.002	<0.002	<0.002	NA

Notes: Units are mg/l,  
 MW-1 and MW-2 were not sampled because free phase hydrocarbons were present  
 MW-5 was not installed because of drilling refusal  
 NMWQCC: New Mexico Water Quality Control Commission  
 Values above the NMWQCC standard are highlighted as bold text.  
 NA: not analyzed

Table 6 – Summary of Benzene Groundwater Data

Well	2/06	9/06	12/06	3/07	6/07	9/07	11/07	3/08	6/08	9/08	12/08	3/11/09	5/18/09	9/24/09
MW-1	0.139	0.0487	FPH	FPH	FPH	0.011	0.107	0.037	FPH	FPH	FPH	FPH	FPH	FPH
MW-2	0.026	0.0045	0.006	0.188	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH
MW-3	<0.001	<0.002	<0.002	<0.002	0.003	<0.001	0.0011J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-4	NI	0.0086	0.025	0.004	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-6	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-7	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-8	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Well	12/20/09	3/10/10	6/13/10	9/29/10	12/8/10	3/30/11
MW-1	<0.002	FPH	0.0016	FPH	FPH	FPH
MW-2	FPH	FPH	FPH	FPH	FPH	FPH
MW-3	<0.002	<0.001	<0.0003	<0.001	<0.001	<0.001
MW-4	<0.002	<0.001	<0.0003	<0.001	<0.001	<0.001
MW-6	<0.002	NA	<0.0003	<0.001	<0.001	<0.001
MW-7	<0.002	<0.001	<0.0003	<0.001	<0.001	<0.001
MW-8	<0.002	<0.001	<0.0003	<0.001	<0.001	<0.001

Notes: Units are mg/l,  
 MW-5 was not installed  
 Duplicates are averaged together  
 J modifiers are not included in this table  
 FPH: Free phase hydrocarbons present so well not sampled  
 NI: Well not installed  
 NA: Not analyzed due to well obstruction

Table 7 – Summary of Toluene Groundwater Data

Well	2/06	9/06	12/06	3/07	6/07	9/07	11/07	3/08	6/08	9/08	12/08	3/11/09	5/18/09	9/24/09
MW-1	0.326	0.0058	FPH	FPH	FPH	0.003	0.024	0.0155	FPH	FPH	FPH	FPH	FPH	FPH
MW-2	0.038	<0.001	0.003	0.006	FPH	FPH	FPH							
MW-3	<0.001	<0.002	<0.002	<0.002	0.005	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-4	NI	0.00093J	0.005	6E-04	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-6	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-7	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-8	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Well	12/20/09	3/10/10	6/13/10	9/29/10	12/8/10	3/30/11
MW-1	<0.002	FPH	<0.001	FPH	FPH	FPH
MW-2	FPH	FPH	FPH	FPH	FPH	FPH
MW-3	<0.002	<0.002	<0.001	<0.002	<0.002	<0.002
MW-4	<0.002	<0.002	<0.001	<0.002	<0.002	<0.002
MW-6	<0.002	NA	<0.001	<0.002	<0.002	<0.002
MW-7	<0.002	<0.002	<0.001	<0.002	<0.002	<0.002
MW-8	<0.002	<0.002	<0.001	<0.002	<0.002	<0.002

Notes: Units are mg/l,  
 MW-5 was not installed  
 Duplicates are averaged together  
 J modifiers are not included in this table  
 FPH: Free phase hydrocarbons present so well not sampled  
 NI: Well not installed  
 NA: Not analyzed due to well obstruction

Table 8 – Summary of Ethylbenzene Groundwater Data

Well:	2/06	9/06	12/06	3/07	6/07	9/07	11/07	3/08	6/08	9/08	12/08	3/11/09	5/18/09	9/24/09
MW-1	0.34	0.0284	FPH	FPH	FPH	0.004	0.04	0.014	FPH	FPH	FPH	FPH	FPH	FPH
MW-2	0.04	0.0027	0.003	0.026	FPH	FPH	FPH							
MW-3	<0.001	<0.002	<0.002	<0.002	0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-4	NI	0.0092	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-6	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-7	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW-8	NI	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Well:	12/20/09	3/10/10	6/13/10	9/29/10	12/8/10	3/30/11
MW-1	0.0014J	FPH	<0.0003	FPH	FPH	FPH
MW-2	FPH	FPH	FPH	FPH	FPH	FPH
MW-3	<0.002	<0.002	<0.0003	<0.002	<0.002	<0.002
MW-4	<0.002	<0.002	<0.0003	<0.002	<0.002	<0.002
MW-6	<0.002	NA	<0.0003	<0.002	<0.002	<0.002
MW-7	<0.002	<0.002	<0.0003	<0.002	<0.002	<0.002
MW-8	<0.002	<0.002	<0.0003	<0.002	<0.002	<0.002

Notes: Units are mg/l,  
 MW-5 was not installed  
 Duplicates are averaged together  
 J modifiers are not included in this table  
 FPH: Free phase hydrocarbons present so well not sampled  
 NI: Well not installed  
 NA: Not analyzed due to well obstruction

Table 9 – Summary of Total Xylenes Groundwater Data

Well	2/06	9/06	12/06	3/07	6/07	9/07	11/07	3/08	6/08	9/08	12/08	3/11/09	5/18/09	9/24/09
MW-1	0.31	0.0694	FPH	FPH	FPH	0.098	0.39	0.215	FPH	FPH	FPH	FPH	FPH	FPH
MW-2	0.335	0.0471	0.0613	0.125	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH
MW-3	<0.002	<0.006	<0.006	<0.006	0.01	<0.001	<0.006	<0.006	0.007	<0.006	<0.006	<0.002	<0.002	<0.006
MW-4	NI	0.0061	0.0065	0.003	0.003	<0.001	<0.006	<0.006	<0.006	0.0041J	<0.006	<0.002	<0.002	<0.006
MW-6	NI	<0.006	<0.006	<0.006	<0.001	<0.001	<0.006	<0.006	<0.006	<0.006	<0.006	<0.002	<0.002	<0.006
MW-7	NI	<0.006	<0.006	<0.006	0.003	<0.001	<0.006	<0.006	<0.006	<0.006	<0.006	<0.002	<0.002	<0.006
MW-8	NI	<0.006	<0.006	<0.006	<0.001	<0.001	<0.006	<0.006	<0.006	<0.006	<0.006	<0.002	<0.002	<0.006

Well	12/20/09	3/10/10	6/13/10	9/29/10	12/8/10	3/30/11
MW-1	0.0418	FPH	0.0095	FPH	FPH	FPH
MW-2	FPH	FPH	FPH	FPH	FPH	FPH
MW-3	<0.006	<0.004	<0.0006	<0.004	<0.004	<0.002
MW-4	<0.006	<0.004	<0.0006	<0.004	<0.004	<0.002
MW-6	<0.006	NA	<0.0006	<0.004	<0.004	<0.002
MW-7	<0.006	<0.004	<0.0006	<0.004	<0.004	<0.002
MW-8	<0.006	<0.004	<0.0006	<0.004	<0.004	<0.002

Notes: Units are mg/l,  
 MW-5 was not installed  
 Duplicates are averaged together  
 J modifiers are not included in this table  
 FPH: Free phase hydrocarbons present, so well not sampled  
 NI: Well not installed  
 NA: Not analyzed due to well obstruction

Table 10 – Summary of Chlorides Groundwater Data

Well	3/14/07	6/26/07	9/16/08	12/3/08	3/11/09	5/18/09	9/24/09	12/20/09	3/10/10	6/13/10	9/29/10	12/8/10	3/30/11
MW-1	FPH	2,680	FPH	1,800	FPH	FPH	FPH						
MW-3	7,800	10,800	4,070	2,625	2,860	3,270	3,195	3,605	3,030	2,130	2,220	2,530	2,230
MW-4	1,300	1,380	1,440	70	1,390	1,440	1,490	1,740	1,950	2,150	2,130	2,470	2,300
MW-6	669	544	537	391	363	383	373	1,090	NA	533	445	513	491
MW-7	1,230	1,150	1,180	1,050	944	1,090	1,140	1,440	1,230	1,280	1,210	1,180	1,210
MW-8	609	617	735	480	417	378	403	308	414	415	347	336	383

Notes: Units are mg/l  
 Duplicates are averaged together  
 NA: Not analyzed due to well obstruction

## FIGURES

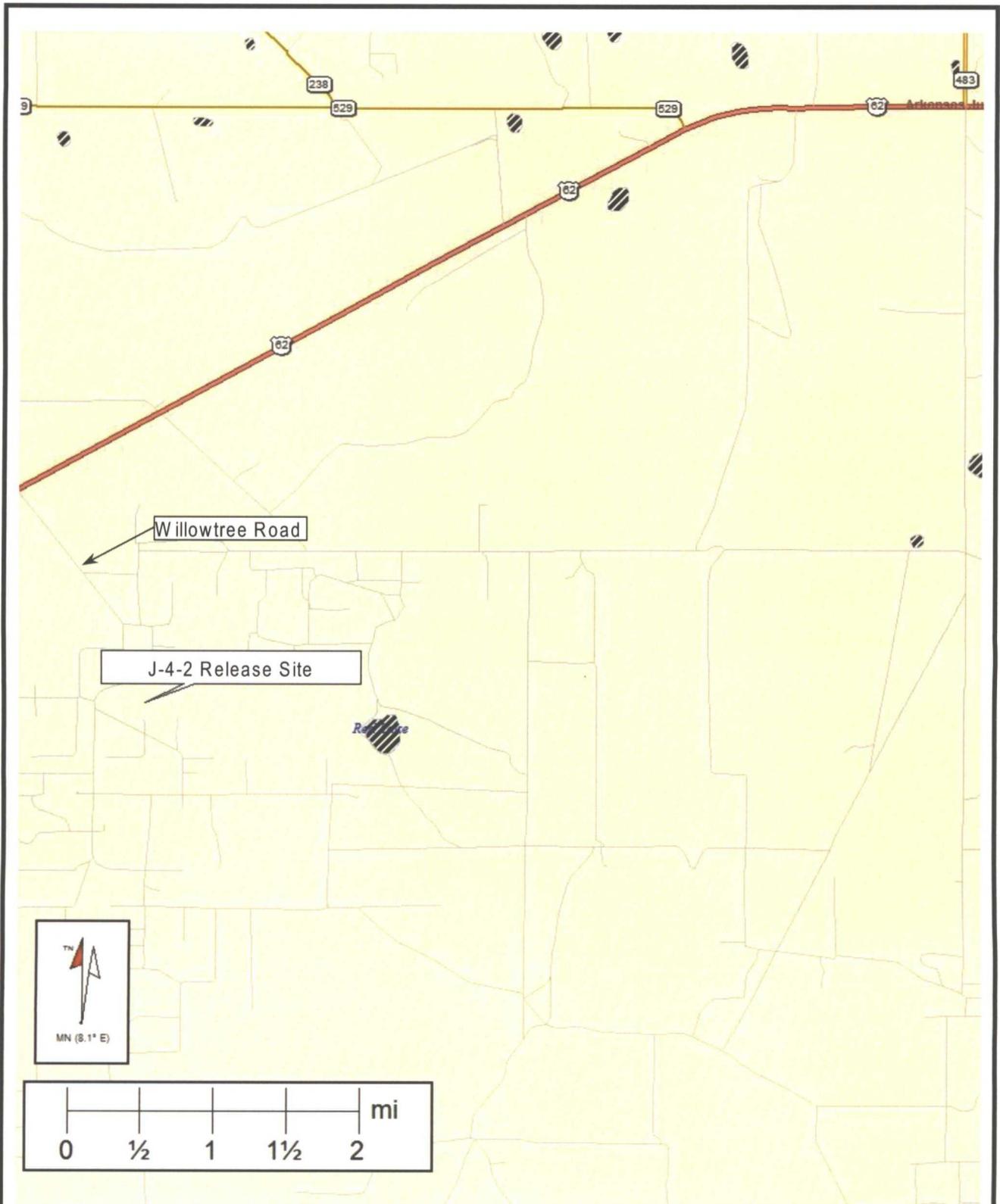


Figure 1 – Site Location  
 J-4-2 Groundwater Monitoring



DRAWN BY: MHS
REVISED:
DATE: 5/06

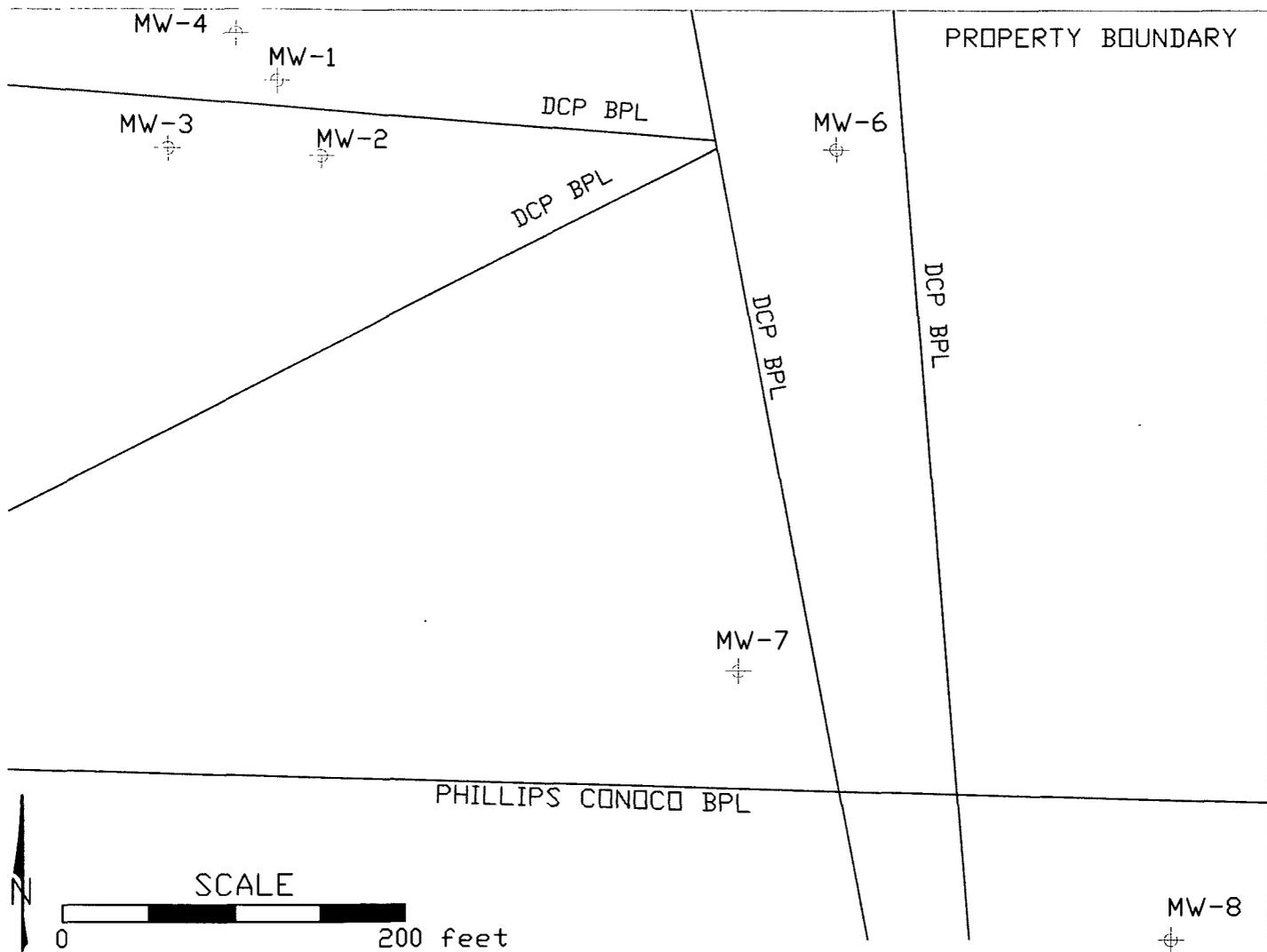


Figure 2 - Site Details

J-4-2 Groundwater Monitoring



DRAWN BY: MHS

REVISED:

DATE: 8/10

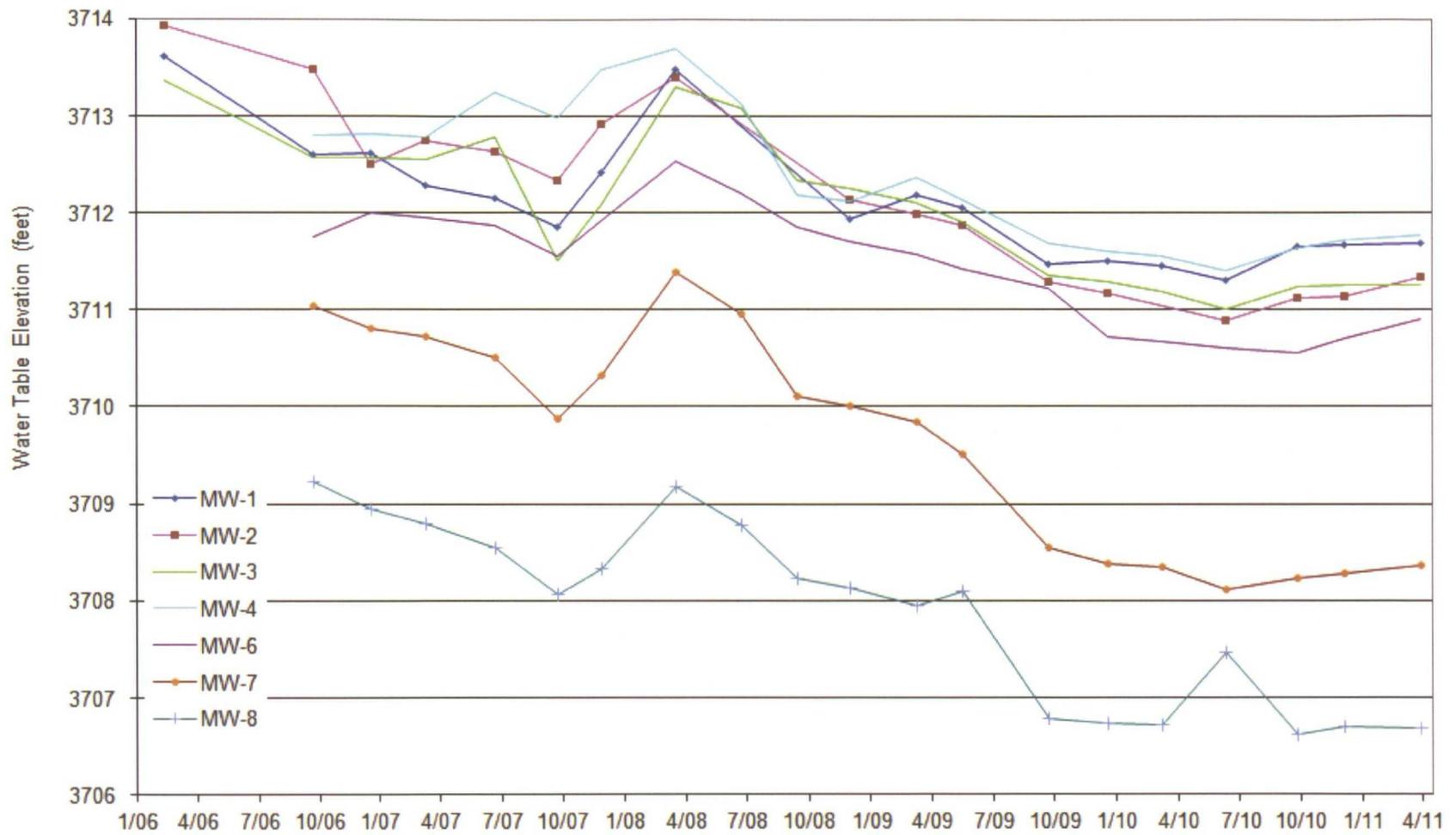
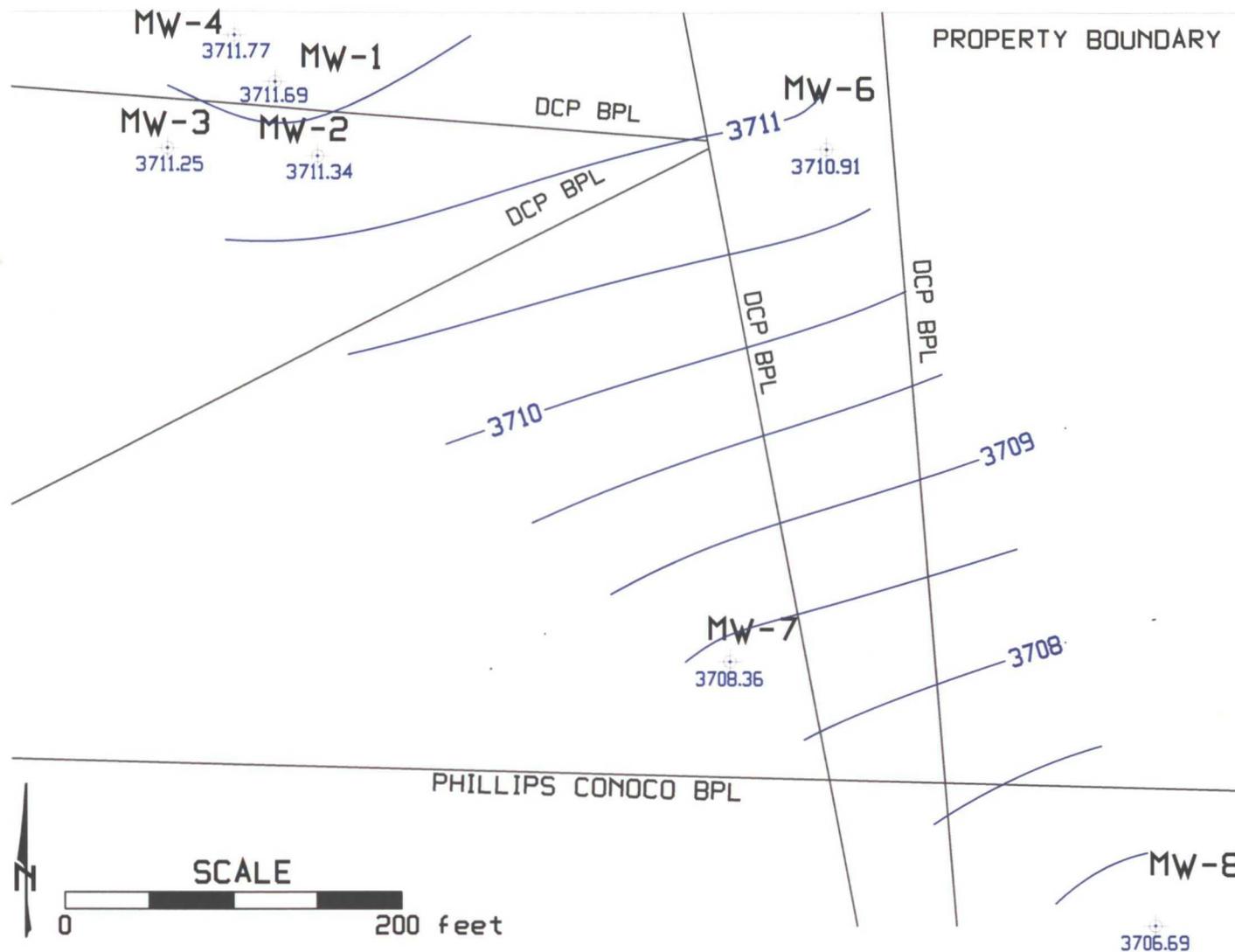


Figure 3 – Monitoring Well Hydrographs

J-4-2 Groundwater Monitoring



DRAWN BY: MHS  
DATE: 5/11



Contour interval is 0.5 feet

Figure 4 - First Quarter 2011 Water Table Contours

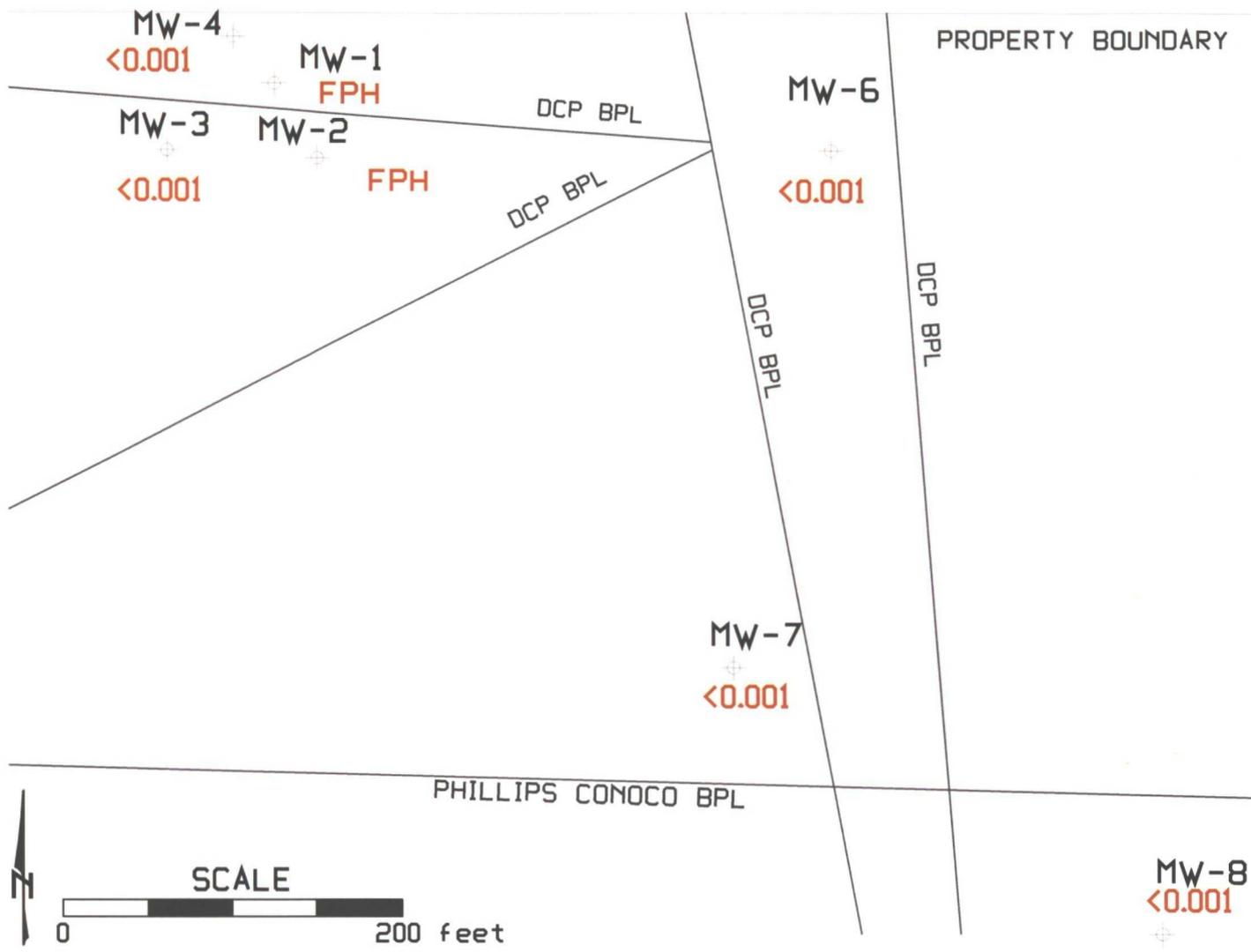
J-4-2 Groundwater Monitoring



DRAWN BY: MHS

REVISED:

DATE: 5/11



Units are mg/l

Figure 5 - First Quarter 2011 Benzene Concentrations

J-4-2 Groundwater Monitoring



DRAWN BY: MHS

REVISED:

DATE: 5/11

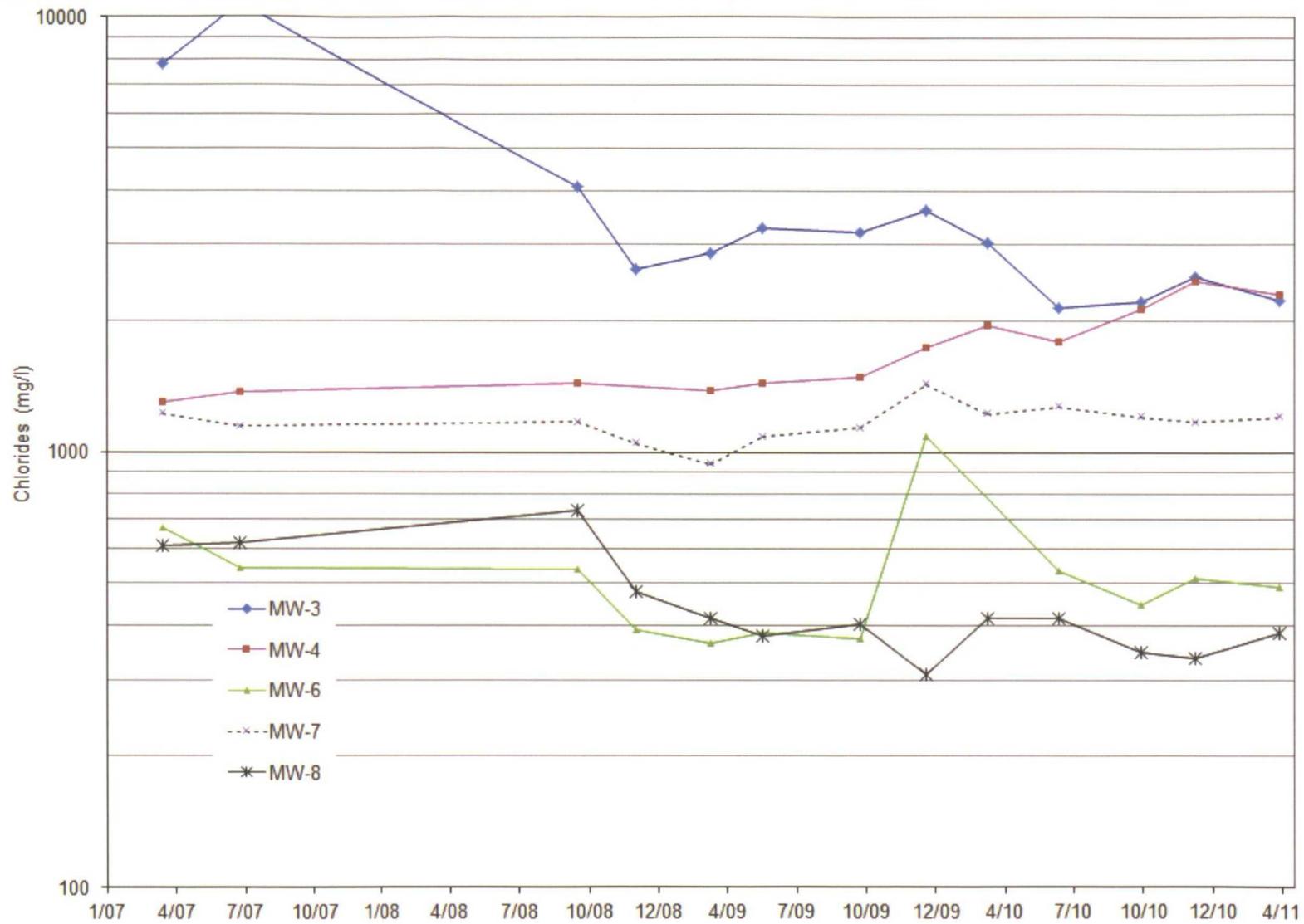


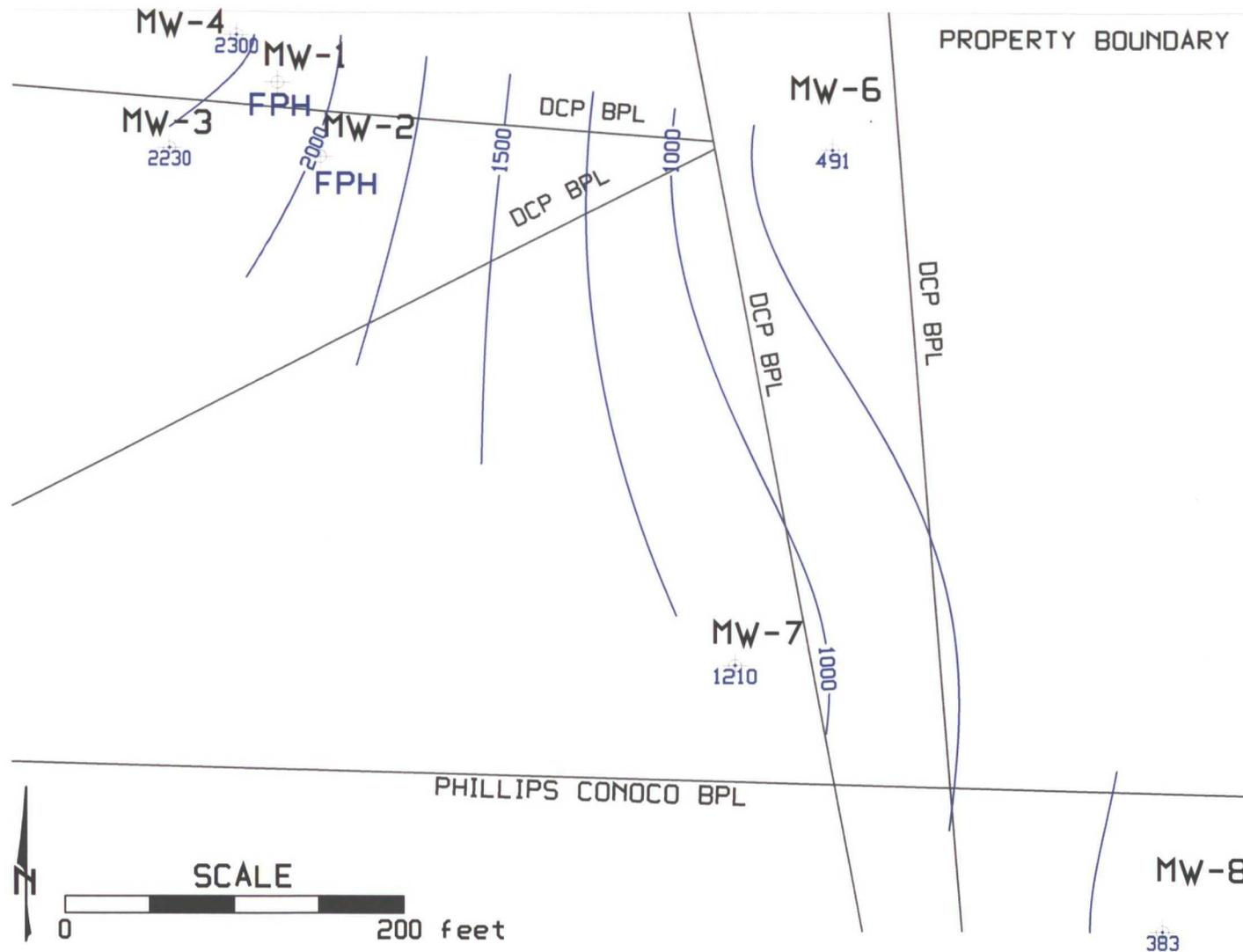
Figure 6 – Chloride Concentrations Verses Sampling Date

J-4-2 Groundwater Monitoring



DRAWN BY: MHS

DATE: 5/11



Units are mg/l  
 Contour interval is 250 mg/l  
 FPH No Sample because of free phase hydrocarbons

Figure 7 - First Quarter 2011 Chloride Isopleths

J-4-2 Groundwater Monitoring



DRAWN BY: MHS

REVISED:

DATE: 5/11

**WELL SAMPLING DATA  
AND LABORATORY ANALYTICAL REPORT**



## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream                      WELL ID: MW-2  
 SITE NAME: J 4 2                                      DATE: 3030/11  
 PROJECT NO. \_\_\_\_\_                              SAMPLER: M. Stewart

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

SAMPLING METHOD:             Disposable Bailer     Direct from Discharge Hose     Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

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

TOTAL DEPTH OF WELL:            43.05 Feet

DEPTH TO WATER:                      29.28 Feet

HEIGHT OF WATER COLUMN:            13.78 Feet

WELL DIAMETER:                      4.0 Inch

27.0 Minimum Gallons to  
purge 3 well volumes  
(Water Column Height x 1.96)

TIME	VOLUME PURGED	TEMP. °F	COND. mS/cm	pH	DO mg/L	Turb	PHYSICAL APPEARANCE AND REMARKS
0.0						: Total volume purged	

SAMPLE NO.: MW-2  
 ANALYSES: \_\_\_\_\_  
 COMMENTS: Not sampled FPH

## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream                      WELL ID: MW-3  
 SITE NAME: J 4 2                                      DATE: 3030/11  
 PROJECT NO. \_\_\_\_\_                              SAMPLER: M. Stewart

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

SAMPLING METHOD:                       Disposable Bailer     Direct from Discharge Hose     Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

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

TOTAL DEPTH OF WELL:                      43.00 Feet

DEPTH TO WATER:                              28.14 Feet

HEIGHT OF WATER COLUMN:                      14.86 Feet

WELL DIAMETER:                              2.0 Inch

7.3 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
	2.5	18.9	1.62	7.05			
	5.0	18.1	1.74	7.03			
	7.5	17.9	1.75	7.14			
7.5						: Total volume purged	

SAMPLE NO.: MW-3

ANALYSES: BTEX (8260)

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

## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream                      WELL ID: MW-4  
 SITE NAME: J 4 2                                      DATE: 3030/11  
 PROJECT NO. \_\_\_\_\_                              SAMPLER: M. Stewart

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

SAMPLING METHOD:                       Disposable Bailer     Direct from Discharge Hose     Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

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

TOTAL DEPTH OF WELL:                      38.12 Feet  
 DEPTH TO WATER:                              28.47 Feet  
 HEIGHT OF WATER COLUMN:                      9.65 Feet  
 WELL DIAMETER:                              2.0 Inch

4.7 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
	1.6	18.6	>2.0	7.09			
	3.2	18.7	>2.0	7.07			
	4.8	18.9	>2.0	7.07			
4.8						: Total volume purged	

SAMPLE NO.: MW-4  
 ANALYSES: BTEX (8260)  
 COMMENTS: Duplicate sample collected

## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream                      WELL ID: MW-6  
 SITE NAME: J 4 2                                      DATE: 3030/11  
 PROJECT NO. \_\_\_\_\_                              SAMPLER: M. Stewart

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

SAMPLING METHOD:                       Disposable Bailer     Direct from Discharge Hose     Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

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

TOTAL DEPTH OF WELL:                      34.35 Feet  
 DEPTH TO WATER:                              29.05 Feet  
 HEIGHT OF WATER COLUMN:                      5.30 Feet  
 WELL DIAMETER:                              2.0 Inch

**2.6** 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
	1.4	18.8	1.36	7.27			
	2.8	18.8	1.35	7.30			
	4.2	18.4	1.30	7.36			
4.2						: Total volume purged	

SAMPLE NO.: \_\_\_\_\_  
 ANALYSES: BTEX (8260)  
 COMMENTS: \_\_\_\_\_

## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream                      WELL ID: MW-7  
 SITE NAME: J 4 2                                  DATE: 3030/11  
 PROJECT NO. \_\_\_\_\_                      SAMPLER: M. Stewart

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

SAMPLING METHOD:             Disposable Bailer     Direct from Discharge Hose     Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

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

TOTAL DEPTH OF WELL:            39.45 Feet  
 DEPTH TO WATER:                    32.37 Feet  
 HEIGHT OF WATER COLUMN:        7.08 Feet  
 WELL DIAMETER:                    2.0 Inch

3.5 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
	1.2	18.8	2.29	7.22			
	2.4	19.0	2.23	7.17			
	3.6	19.0	2.29	7.15			
3.6 : Total volume purged							

SAMPLE NO.: MW-7  
 ANALYSES: BTEX (8260)  
 COMMENTS: Collected MS/MSD

## WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-8  
 SITE NAME: J 4 2 DATE: 3030/11  
 PROJECT NO. \_\_\_\_\_ SAMPLER: M. Stewart

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

SAMPLING METHOD:  Disposable Bailer  Direct from Discharge Hose  Other:

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

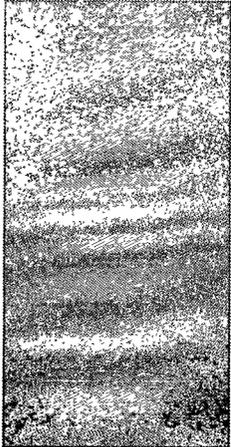
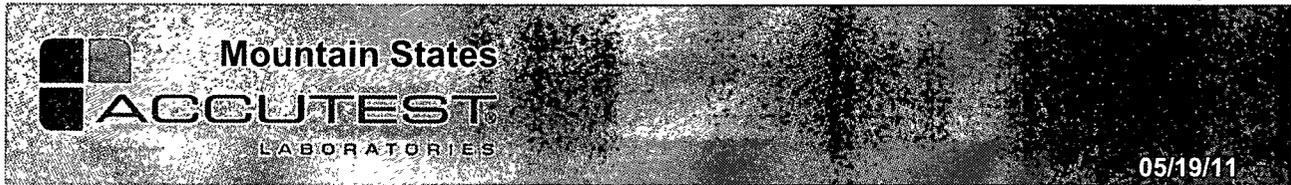
Gloves  Alconox  Distilled Water Rinse  Other: \_\_\_\_\_

TOTAL DEPTH OF WELL: 38.32 Feet  
 DEPTH TO WATER: 30.63 Feet  
 HEIGHT OF WATER COLUMN: 7.69 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	17.1	1.22	7.38			
	2.6	18.2	1.16	7.38			
	3.9	18.4	1.14	7.42			
3.9						: Total volume purged	

SAMPLE NO.: MW-8  
 ANALYSES: BTEX (8260)  
 COMMENTS: \_\_\_\_\_



**Technical Report for**

**DCP Midstream, LP**  
AECCOL: J-4-2 Proj#390660601  
RC-GN00  
Accutest Job Number: D22249

Sampling Date: 03/30/11

**Report to:**

American Environmental Consulting, LLC  
  
mstewart@aecdenver.com  
  
ATTN: Michael Stewart

Total number of pages in report: 29



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: Shea Greiner 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: D22249

AECCOL: J-4-2 Proj#390660601  
 Project No: RC-GN00

Sample Number	Collected		Received	Matrix Code Type	Client Sample ID
	Date	Time By			
D22249-1	03/30/11	11:30	03/31/11	AQ Ground Water	MW-3
D22249-2	03/30/11	11:05	03/31/11	AQ Ground Water	MW-4
D22249-3	03/30/11	10:30	03/31/11	AQ Ground Water	MW-6
D22249-4	03/30/11	10:05	03/31/11	AQ Ground Water	MW-7
D22249-4D	03/30/11	10:05	03/31/11	AQ Water Dup/MSD	MW-7
D22249-4M	03/30/11	10:05	03/31/11	AQ Water Matrix Spike	MW-7
D22249-5	03/30/11	09:50	03/31/11	AQ Ground Water	MW-8
D22249-6	03/30/11	00:00	03/31/11	AQ Water Dup/MSD	DUP
D22249-7	03/30/11	00:00	03/31/11	AQ Trip Blank Water	TRIP-BLANK



### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: DCP Midstream, LP.

Job No D22249

Site: AECCOL. J-4-2 Proj#390660601

Report Dat 4/7/2011 3:41 04 PM

On 03/31/2011, six (6) samples, one (1) Trip Blank, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 4.2°C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D22249 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:	V5V852
--------	----	-----------	--------

- All samples were analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D22249-4MS and D22249-4MSD were used as the QC samples indicated.

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

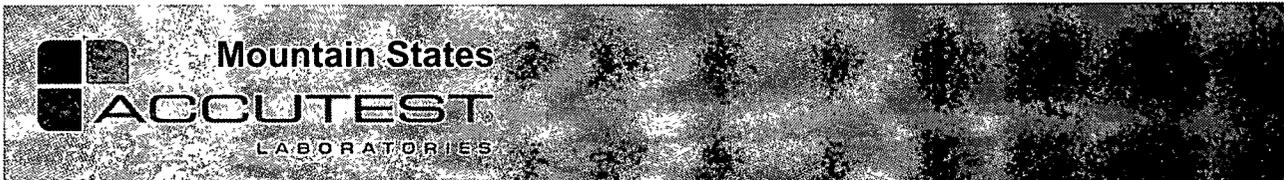
Matrix	AQ	Batch ID:	GP4132
--------	----	-----------	--------

- All samples were prepared and analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D22149-1MS and D22149-1MSD 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.



**Sample Results**

**Report of Analysis**

---

## Report of Analysis

3.1  


Client Sample ID: MW-3 Lab Sample ID: D22249-1 Matrix: AQ - Ground Water Method: SW846 8260B Project: AECCOL: J-4-2 Proj#390660601	Date Sampled: 03/30/11 Date Received: 03/31/11 Percent Solids: n/a
------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V14500.D	1	04/01/11	DC	n/a	n/a	V5V852
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	
1330-20-7	Xylene (total)	ND	0:0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	83%		63-130%
2037-26-5	Toluene-D8	114%		68-130%
460-00-4	4-Bromofluorobenzene	92%		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-3	Date Sampled: 03/30/11
Lab Sample ID: D22249-1	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: AECCOL: J-4-2 Proj#390660601	

#### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	2230	50	mg/l	100	04/04/11 13:15	CB	EPA 300/SW846 9056

RL = Reporting Limit

### Report of Analysis

32  
3

Client Sample ID: MW-4	Date Sampled: 03/30/11
Lab Sample ID: D22249-2	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: AECCOL: J-4-2 Proj#390660601	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V14501.D	1	04/01/11	DC	n/a	n/a	V5V852
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	
1330-20-7	Xylene (total)	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	82%		63-130%
2037-26-5	Toluene-D8	114%		68-130%
460-00-4	4-Bromofluorobenzene	94%		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

3.2  
3

Client Sample ID: MW-4	Date Sampled: 03/30/11
Lab Sample ID: D22249-2	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: AECCOL: J-4-2 Proj#390660601	

#### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	2360	50	mg/l	100	04/04/11 13:27	CB	EPA 300/SW846 9056

---

RL = Reporting Limit

## Report of Analysis

Client Sample ID: MW-6 Lab Sample ID: D22249-3 Matrix: AQ - Ground Water Method: SW846 8260B Project: AECCOL: J-4-2 Proj#390660601	Date Sampled: 03/30/11 Date Received: 03/31/11 Percent Solids: n/a
------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V14502.D	1	04/01/11	DC	n/a	n/a	V5V852
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	
1330-20-7	Xylene (total)	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	84%		63-130%
2037-26-5	Toluene-D8	115%		68-130%
460-00-4	4-Bromofluorobenzene	93%		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	Date Sampled: 03/30/11
Lab Sample ID: D22249-3	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: AECCOL: J-4-2 Proj#390660601	

#### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	491	10	mg/l	20	04/04/11 13:40	CB	EPA 300/SW846 9056

RL = Reporting Limit

### Report of Analysis

Client Sample ID: MW-7	Date Sampled: 03/30/11
Lab Sample ID: D22249-4	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: AECCOL: J-4-2 Proj#390660601	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V14491.D	1	04/01/11	DC	n/a	n/a	V5V852
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	
1330-20-7	Xylene (total)	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	78%		63-130%
2037-26-5	Toluene-D8	113%		68-130%
460-00-4	4-Bromofluorobenzene	90%		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-7	Date Sampled: 03/30/11
Lab Sample ID: D22249-4	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: AECCOL: J-4-2 Proj#390660601	

#### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1210	25	mg/l	50	04/04/11 13:52	CB	EPA 300/SW846 9056

RL = Reporting Limit

### Report of Analysis



Client Sample ID: MW-8	Date Sampled: 03/30/11
Lab Sample ID: D22249-5	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: AECCOL: J-4-2 Proj#390660601	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V14503.D	1	04/02/11	DC	n/a	n/a	V5V852
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	
1330-20-7	Xylene (total)	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	77%		63-130%
2037-26-5	Toluene-D8	110%		68-130%
460-00-4	4-Bromofluorobenzene	90%		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-8	Date Sampled: 03/30/11
Lab Sample ID: D22249-5	Date Received: 03/31/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: AECCOL: J-4-2 Proj#390660601	

#### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	383	5.0	mg/l	10	04/04/11 14:05	CB	EPA 300/SW846 9056

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RL = Reporting Limit

Report of Analysis

3.6  
3

Client Sample ID: DUP	Date Sampled: 03/30/11
Lab Sample ID: D22249-6	Date Received: 03/31/11
Matrix: AQ - Water Dup/MSD	Percent Solids: n/a
Method: SW846 8260B	
Project: AECCOL: J-4-2 Proj#390660601	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V14504.D	1	04/02/11	DC	n/a	n/a	V5V852
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	
1330-20-7	Xylene (total)	ND	0.0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	80%		63-130%
2037-26-5	Toluene-D8	114%		68-130%
460-00-4	4-Bromofluorobenzene	92%		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

3.6  
3

Client Sample ID: DUP	Date Sampled: 03/30/11
Lab Sample ID: D22249-6	Date Received: 03/31/11
Matrix: AQ - Water Dup/MSD	Percent Solids: n/a
Project: AECCOL: J-4-2 Proj#390660601	

#### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	2220	50	mg/l	100	04/04/11 14:18	CB	EPA 300/SW846 9056

RL = Reporting Limit

Report of Analysis



Client Sample ID:	TRIP BLANK	Date Sampled:	03/30/11
Lab Sample ID:	D22249-7	Date Received:	03/31/11
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	AECCOL: J-4-2 Proj#390660601		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V14505.D	1	04/02/11	DC	n/a	n/a	V5V852
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	
1330-20-7	Xylene (total)	ND	0:0020	0.00060	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	79%		63-130%
2037-26-5	Toluene-D8	115%		68-130%
460-00-4	4-Bromofluorobenzene	91%		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



Misc. Forms

Custody Documents and Other Forms

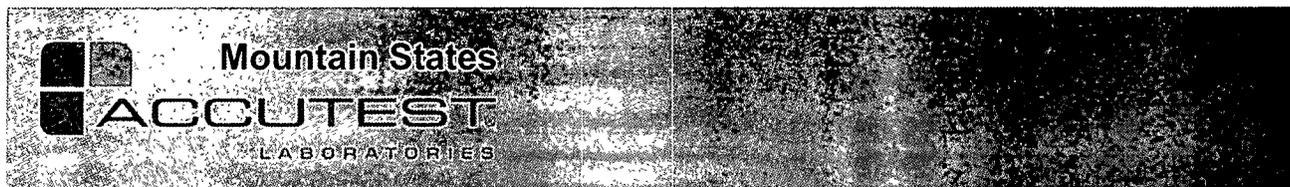
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Includes the following where applicable:

- Chain of Custody







GC/MS Volatiles



QC Data Summaries

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Includes the following where applicable:

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

# Method Blank Summary

Job Number: D22249  
 Account: DCPMCO DN DCP Midstream, LP  
 Project: AECCOL: J-4-2 Proj#390660601

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V852-MB	5V14489.D	1	04/01/11	DC	n/a	n/a	V5V852

5.1.1  
5

The QC reported here applies to the following samples:

Method: SW846 8260B

D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6, D22249-7

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	
1330-20-7	Xylene (total)	ND	2.0	0.60	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	78% 63-130%
2037-26-5	Toluene-D8	117% 68-130%
460-00-4	4-Bromofluorobenzene	92% 61-130%

# Blank Spike Summary

Job Number: D22249  
 Account: DCPMCO DN DCP Midstream, LP  
 Project: AECCOL: J-4-2 Proj#390660601

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V852-BS1	5V14490.D	1	04/01/11	DC	n/a	n/a	V5V852

The QC reported here applies to the following samples:

Method: SW846 8260B

D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6, D22249-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	55.1	110	70-130
100-41-4	Ethylbenzene	50	55.6	111	70-130
108-88-3	Toluene	50	52.4	105	70-140
1330-20-7	Xylene (total)	100	101	101	55-134

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	79%	63-130%
2037-26-5	Toluene-D8	117%	68-130%
460-00-4	4-Bromofluorobenzene	99%	61-130%

5.2.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D22249  
 Account: DCPM CODN DCP Midstream, LP  
 Project: AECCOL: J-4-2 Proj#390660601

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D22249-4MS <sup>a</sup>	5V14492.D	1	04/01/11	DC	n/a	n/a	V5V852
D22249-4MSD <sup>a</sup>	5V14493.D	1	04/01/11	DC	n/a	n/a	V5V852
D22249-4	5V14491.D	1	04/01/11	DC	n/a	n/a	V5V852

5.3.1  
5

The QC reported here applies to the following samples:

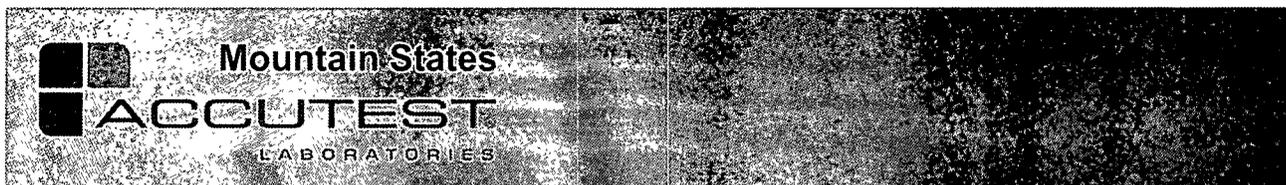
Method: SW846 8260B

D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6, D22249-7

CAS No.	Compound	D22249-4 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	30.4	122	30.5	122	0	59-132/30
100-41-4	Ethylbenzene	ND	25	30.4	122	30.6	122	1	68-130/30
108-88-3	Toluene	ND	25	28.3	114	28.7	114	1	56-142/30
1330-20-7	Xylene (total)	ND	50	54.7	110	54.8	110	0	36-146/30

CAS No.	Surrogate Recoveries	MS	MSD	D22249-4	Limits
17060-07-0	1,2-Dichloroethane-D4	78%	79%	78%	63-130%
2037-26-5	Toluene-D8	115%	115%	113%	68-130%
460-00-4	4-Bromofluorobenzene	96%	97%	90%	61-130%

(a) Spiked at 1/2.



General Chemistry



QC Data Summaries

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Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D22249  
Account: DCPMCO DN - DCP Midstream, LP  
Project: AECCOL: J-4-2 Proj#390660601

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP4132/GN8963	0.50	0.0	mg/l	20	18.6	93.0	90-110%
Fluoride	GP4132/GN8963	0.20	0.0	mg/l	10	9.59	95.9	90-110%

Associated Samples:

Batch GP4132: D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6  
(\* ) Outside of QC limits

6.1  
6

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D22249  
Account: DCPMCOEN - DCP Midstream, LP  
Project: AECCOL: J-4-2 Proj#390660601

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP4132/GN8963	D22149-1	mg/l	1.8	10	11.9	101.0%	80-120%
Fluoride	GP4132/GN8963	D22149-1	mg/l	0.36	2.5	2.7	93.6%	80-120%

Associated Samples:

Batch GP4132: D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

6.2

6

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D22249  
Account: DCPMCO DN - DCP Midstream, LP  
Project: AECCOL: J-4-2 Proj#390660601

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP4132/GN8963	D22149-1	mg/l	1.8	10	11.8	0.8	20%
Fluoride	GP4132/GN8963	D22149-1	mg/l	0.36	2.5	2.7	0.0	20%

Associated Samples:

Batch GP4132: D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

6.3  
