1RP-1728

4th QTR 2009 GW Mon. Results

DATE:
February 25, 2010

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

February 25, 2010

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

RE: 4th Quarter 2009 Groundwater Monitoring Results
DCP Midstream, LP J-4-2 Pipeline Release (1RP-1728)
Unit C, Section 27, Township 19 South, Range 35 East
Lea County, New Mexico

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 4th Quarter 2009 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 .

Sincerely

DCP Midstream, LP

Stephen Weathers, PG
Principal Environmental Specialist

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

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

February 16, 2010

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

Re: Summary of the Fourth Quarter 2009 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release, Lea County New Mexico **(1RP-1728)**
Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the fourth quarter 2009 groundwater monitoring activities completed at the J-4-2 release location 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 32.647 degrees north and 103.447 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. Six wells were sampled. Well MW-2 was not sampled because it contained free phase hydrocarbons (FPH).

GROUNDWATER SAMPLING

Groundwater sampling was completed on December 20, 2009. The depth to water and, if present, 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:

$GWE_{corr} = MGWE + (PT*PD)$: 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 calculated groundwater elevations for all monitoring episodes are summarized in Table 2. FPH was measured at thicknesses of 0.05 feet in MW-2. The historic FPH thickness values are summarized in Table 3. There was no FPH in MW-1 for the first time since March 2008. AEC attributes this absence to the soils remediation activities and the weekly FPH removal program that was conducted in the fourth quarter of 2009.

Wells MW-1, 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 exception was MW-6 where blockage from mesquite roots has limited the capacity of the well; however, AEC believes that the sample that was collected was representative. 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.

RESULTS AND INTERPRETATIONS

The laboratory report is attached. The QA/QC evaluation included:

- All of the individual surrogate spikes were within their control limits.
- All samples were analyzed within the method holding times.
- The method blanks and blank spikes were all within their respective control limits.
- The matrix spike and matrix spike duplicate results from MW-7 were within the control limits for all four constituents.
- There were no BTEX detects in the trip blanks or the primary and field duplicate samples from MW-3.
- The 18.0 relative percentage difference for chlorides from the primary and field duplicate samples from MW-3 acceptable because the data is to be used for routine groundwater monitoring evaluation..

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

The laboratory analysis for the fourth quarter 2009 sampling episode are summarized in Table 4. Tables 5, 6, 7 and 8 summarize all of the data collected during this project for benzene, toluene, ethylbenzene and xylenes respectively. Table 9 summarizes the chloride data. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of each table. The constituents that exceed these standards are highlighted as bold text. Note that the chlorides standard is a secondary (non-health based) standard.

Groundwater Flow

Figure 3 shows the hydrographs for the corrected water-table elevations for the site wells. The water table declined in all wells with the highest rate in MW-7 and MW-8. The water table decreased slightly in all wells except MW-1 where it exhibited a small increase. The water table has declined between approximately 2 and 3 feet in in all of the wells since measurements began in February 2006.

The fourth quarter 2009 calculated water table elevation contours as generated using the Surfer® program with the kriging option are shown on Figure 4. Groundwater flow is toward the southeast. The groundwater flow direction has remained constant over the duration of the project.

FPH is now absent in MW-1 and nearly absent in MW-2. AEC anticipates that the FPH will also be absent in MW-2 by the time of the first quarter 2010 monitoring event.

Groundwater Chemistry

Examination of Table 4 shows that none of the BTEX constituents were detected in the sampled wells. The benzene concentrations are plotted on Figure 5 along with the wells that contained FPH. Comparison of Figure 4 with Figure 5 demonstrates that any dissolved-phase BTEX constituents from 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:

- There were no detected BTEX constituents in MW-1 even though it historically contained FPH. This finding will be verified during subsequent monitoring events.
- The toluene, ethylbenzene and total xylenes concentrations have never exceeded the NMWQCC standards in wells MW-3 through MW-8;
- Benzene has not been detected in MW-4 since March 2007; and
- Benzene has never been detected in down-gradient wells MW-6, MW-7 and MW-8.

Examination of Table 9, the historical chlorides data, indicates that the chlorides concentrations in all wells exceed the NMWQCC secondary standard of 250 mg/l except for the fourth quarter 2008 value from MW-4 which appears to have been anomalously low. The chloride concentrations are plotted verses the sampling dates on Figure 6 with the anomalous fourth quarter MW-4 value deleted. There was an apparent substantial increase in the chloride concentration in MW-6 from 373 mg/l in September 2009 to 1.090 mg/l in December 2009.

A chloride isopleth map generated from the fourth quarter 2009 data using the Surfer® program is included as Figure 7. The chloride distribution indicates a source to the west and outside of the DCP release area even with the increase at MW-6. This pattern had 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 presence of dissolved phase BTEX constituents is limited to the original release area;
3. The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is either stable or contracting;
4. The fourth quarter 2009 data 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 first quarter of 2010. Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely,
AMERICAN ENVIRONMENTAL CONSULTING, LLC

Michael H. Stewart

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 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
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15	3711.86	3712.42
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63	3712.34	3712.91
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79	3711.50	3712.09
MW-4		3712.80	3712.82	3712.78	3713.25	3712.98	3713.48
MW-6		3711.76	3712.00	3711.96	3711.87	3711.56	3711.92
MW-7		3711.03	3710.80	3710.73	3710.50	3709.87	3710.33
MW-8		3709.22	3708.95	3708.79	3708.54	3708.06	3708.33

Well	3/20/08	6/27/08	9/16/08	12/3/08	3/11/09	5/18/09	9/24/09	12/20/09
MW-1	3713.48	NM	NM	3711.94	3712.19	3712.05	3711.48	3711.50
MW-2	3713.40	NM	NM	3712.14	3711.99	3711.87	3711.28	3711.17
MW-3	3713.30	3713.09	3712.34	3712.25	3712.10	3711.90	3711.35	3711.28
MW-4	3713.70	3713.13	3712.18	3712.10	3712.36	3712.13	3711.69	3711.61
MW-6	3712.53	3712.20	3711.86	3711.70	3711.57	3711.42	3711.22	3710.72
MW-7	3711.38	3710.95	3710.11	3710.00	3709.84	3709.51	3708.55	3708.37
MW-8	3709.17	3708.78	3708.23	3708.13	3707.95	3708.10	3706.79	3706.73

Units are feet
Blank cells: wells not installed
NM: Not measured because of probe malfunction.

Table 3 - 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

Units are feet

Table 4 - Summary of Fourth Quarter 2009 Groundwater Sampling Results

Well	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Chlorides
NMWQCC Groundwater Standard	0.01	0.75	0.75	0.62	250*
MW-1	<0.002	0.0014J	<0.002	0.0418	**2680**
MW-3	<0.002	<0.002	<0.002	<0.006	**3280**
MW-3 Duplicate	<0.002	<0.002	<0.002	<0.006	**3930**
MW-4	<0.002	<0.002	<0.002	<0.006	**1740**
MW-6	<0.002	<0.002	<0.002	<0.006	**1090**
MW-7	<0.002	<0.002	<0.002	<0.006	**1440**
MW-8	<0.002	<0.002	<0.002	<0.006	**308**
Trip Blank	<0.002	<0.002	<0.002	<0.006	NA

Notes: Units are mg/l,
MW-2 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.
* Secondary (aesthetics) rather than primary (health-based) standards.
NA: not analyzed

Table 5 – 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	12/20/09
MW-1	0.139	0.0487	FPH	FPH	FPH	0.011	0.107	0.037	FPH	FPH	FPH	FPH	FPH	FPH	<0.002
MW-2	0.026	0.0045	0.006	0.188	FPH	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	<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	<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	<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	<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	<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

Table 6 – 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	12/20/09
MW-1	0.326	0.0058	FPH	FPH	FPH	0.003	0.024	0.0155	FPH	FPH	FPH	FPH	FPH	FPH	<0.002
MW-2	0.038	<0.001	0.003	0.006	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH	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	<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	<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	<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	<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	<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

Table 7 – 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	12/20/09
MW-1	0.34	0.0284	FPH	FPH	FPH	0.004	0.04	0.014	FPH	FPH	FPH	FPH	FPH	FPH	0.0014J
MW-2	0.04	0.0027	0.003	0.026	FPH	FPH	FPH	FPH	FPH	FPH	FPH	FPH	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	<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	<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	<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	<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	<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

Table 8 – 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	12/20/09
MW-1	0.31	0.0694	FPH	FPH	FPH	0.098	0.39	0.215	FPH	FPH	FPH	FPH	FPH	FPH	0.0418
MW-2	0.335	0.0471	0.0613	0.125	FPH	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	<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	<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	<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	<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	<0.006

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

Table 9 – 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
MW-1	FPH	FPH	FPH	FPH	FPH	FPH	FPH	2,680
MW-3	7,800	10,800	4,070	2,625	2,860	3,270	3,195	3,605
MW-4	1,300	1,380	1,440	70	1,390	1,440	1,490	1,740
MW-6	669	544	537	391	363	383	373	1,090
MW-7	1,230	1,150	1,180	1,050	944	1,090	1,140	1,440
MW-8	609	617	735	480	417	378	403	308

Notes: Units are mg/l
Duplicates are averaged together
Values above the 250 NMWQCC secondary standard are highlighted as bold text

FIGURES

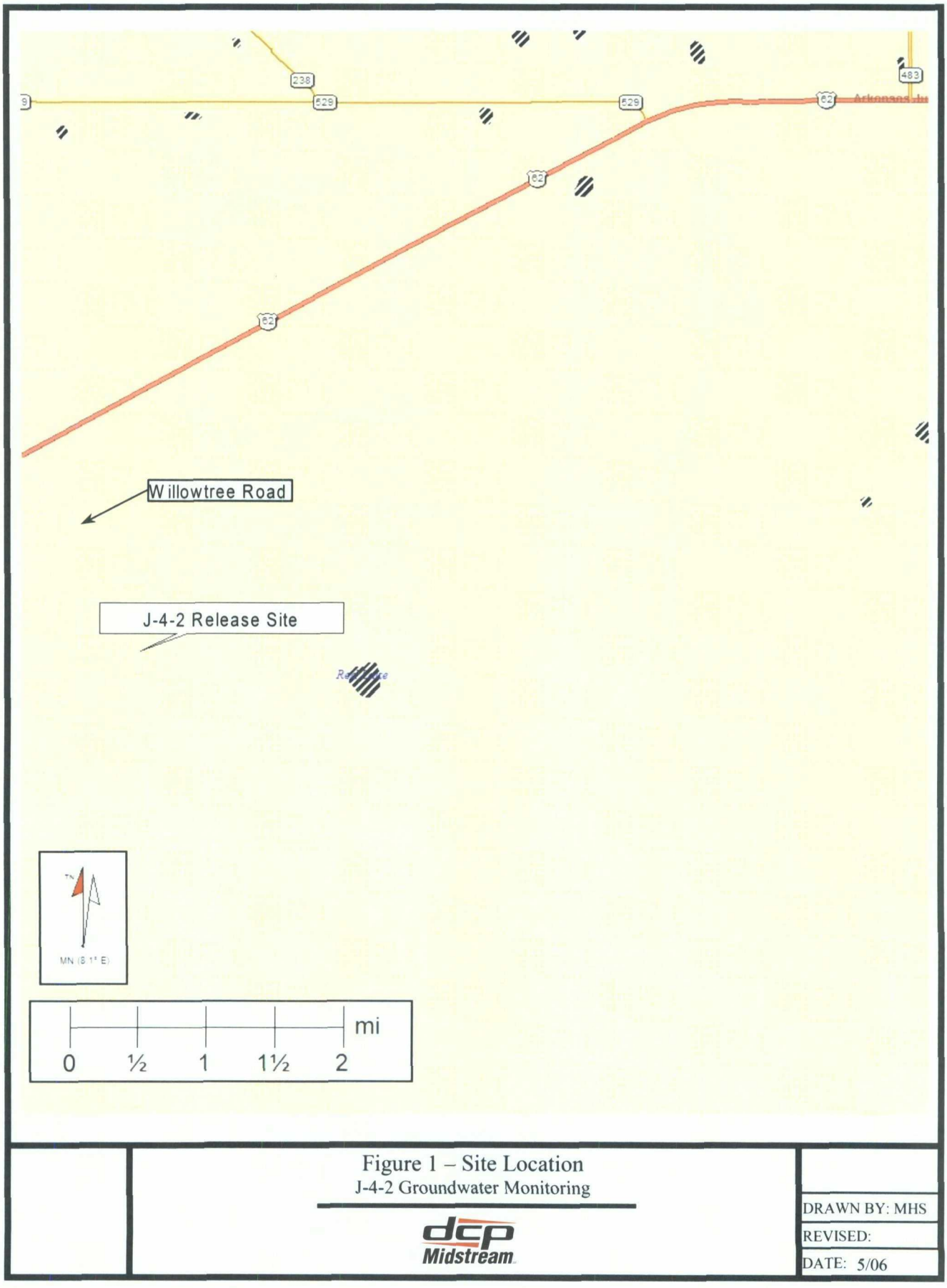


Figure 1 – Site Location
J-4-2 Groundwater Monitoring

dcp Midstream

DRAWN BY:	MHS
REVISED:	
DATE:	5/06

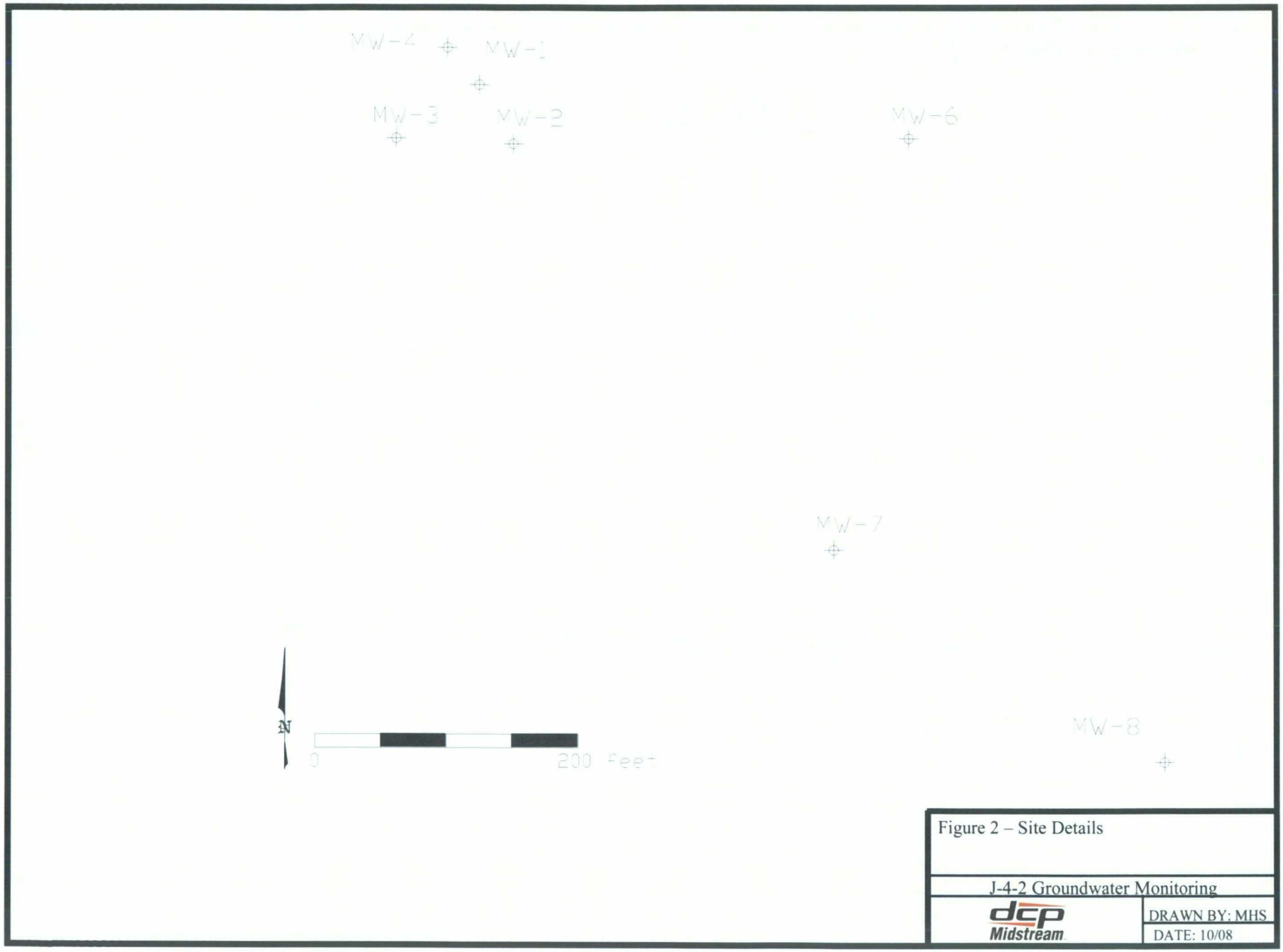


Figure 2 – Site Details

J-4-2 Groundwater Monitoring

dcp Midstream

DRAWN BY: MHS

DATE: 10/08

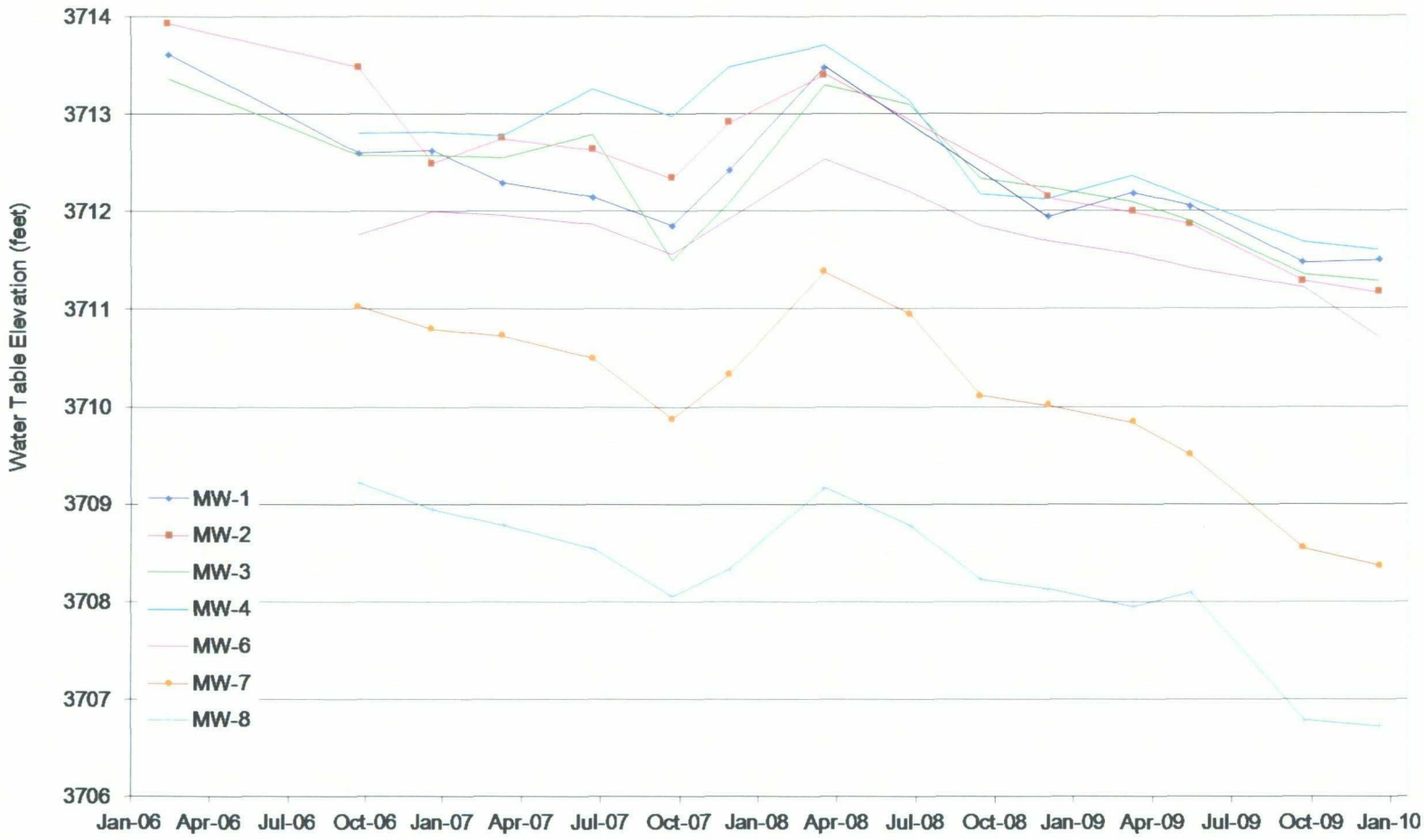


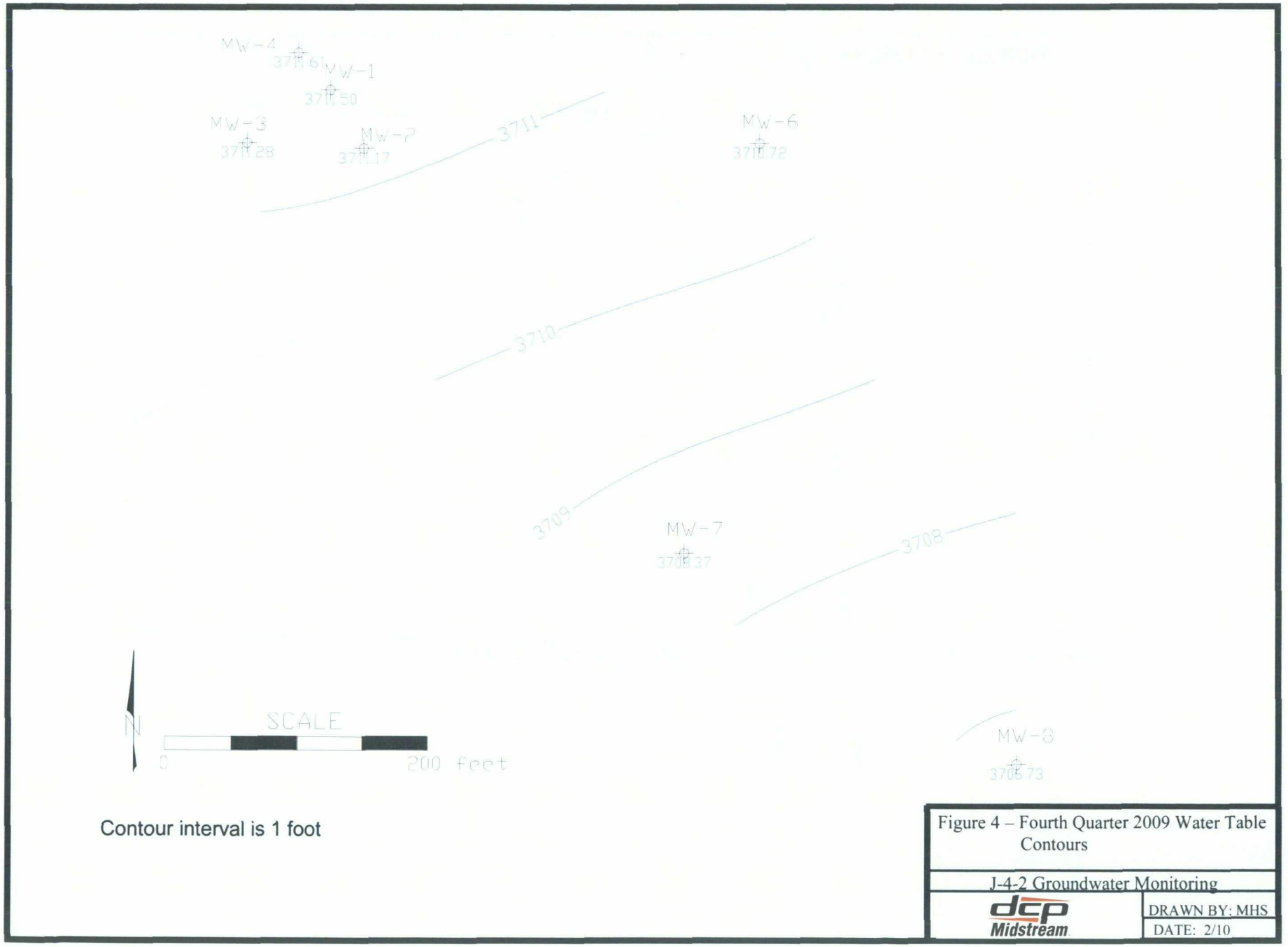
Figure 3 – Monitoring Well Hydrographs

J-4-2 Groundwater Monitoring

dcp Midstream

DRAWN BY: MHS

DATE: 2/10



Contour interval is 1 foot

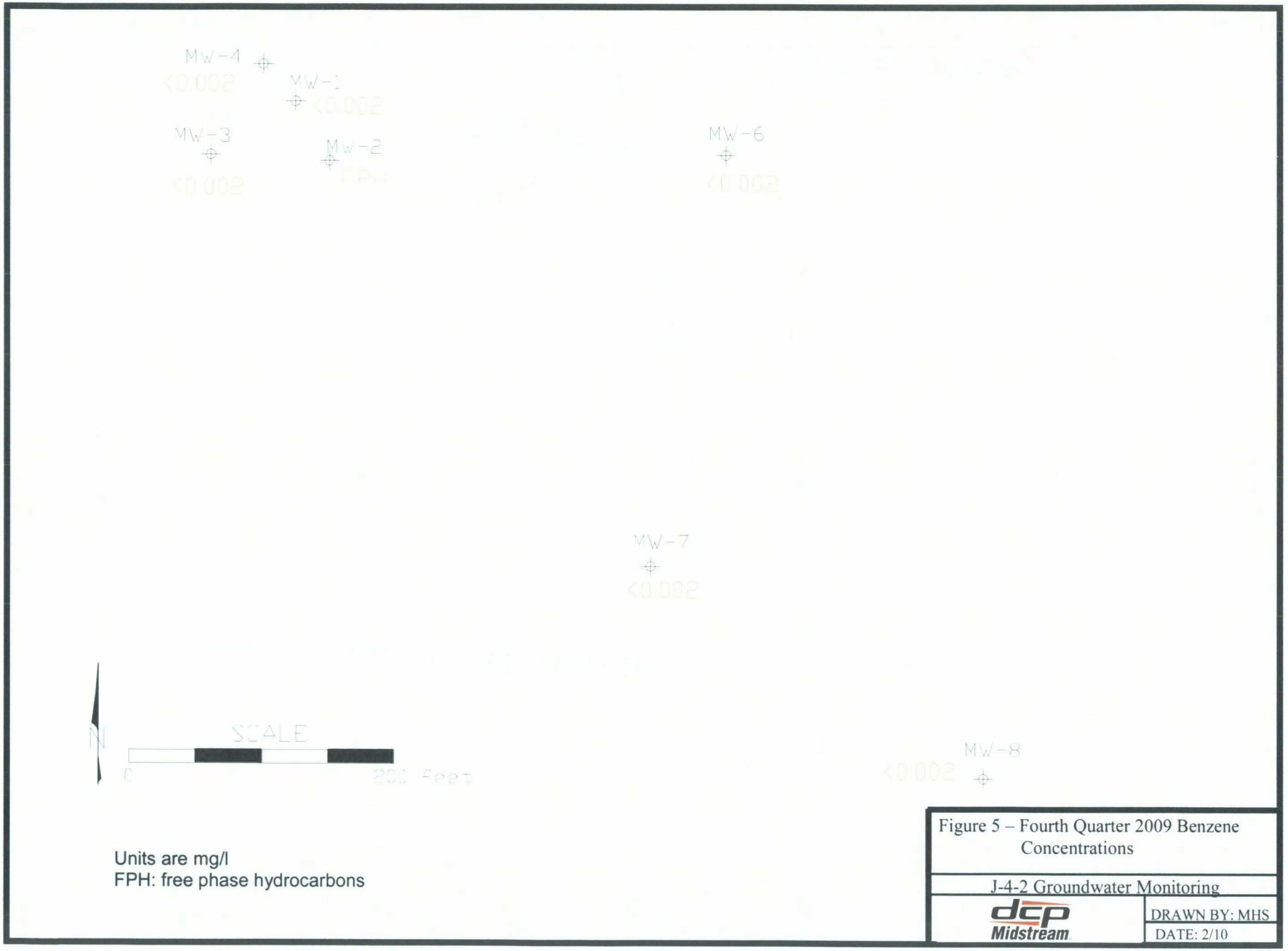
Figure 4 – Fourth Quarter 2009 Water Table Contours

J-4-2 Groundwater Monitoring

dcp Midstream

DRAWN BY: MHS

DATE: 2/10



Units are mg/l
FPH: free phase hydrocarbons

Figure 5 – Fourth Quarter 2009 Benzene Concentrations

J-4-2 Groundwater Monitoring

dcp Midstream

DRAWN BY: MHS

DATE: 2/10

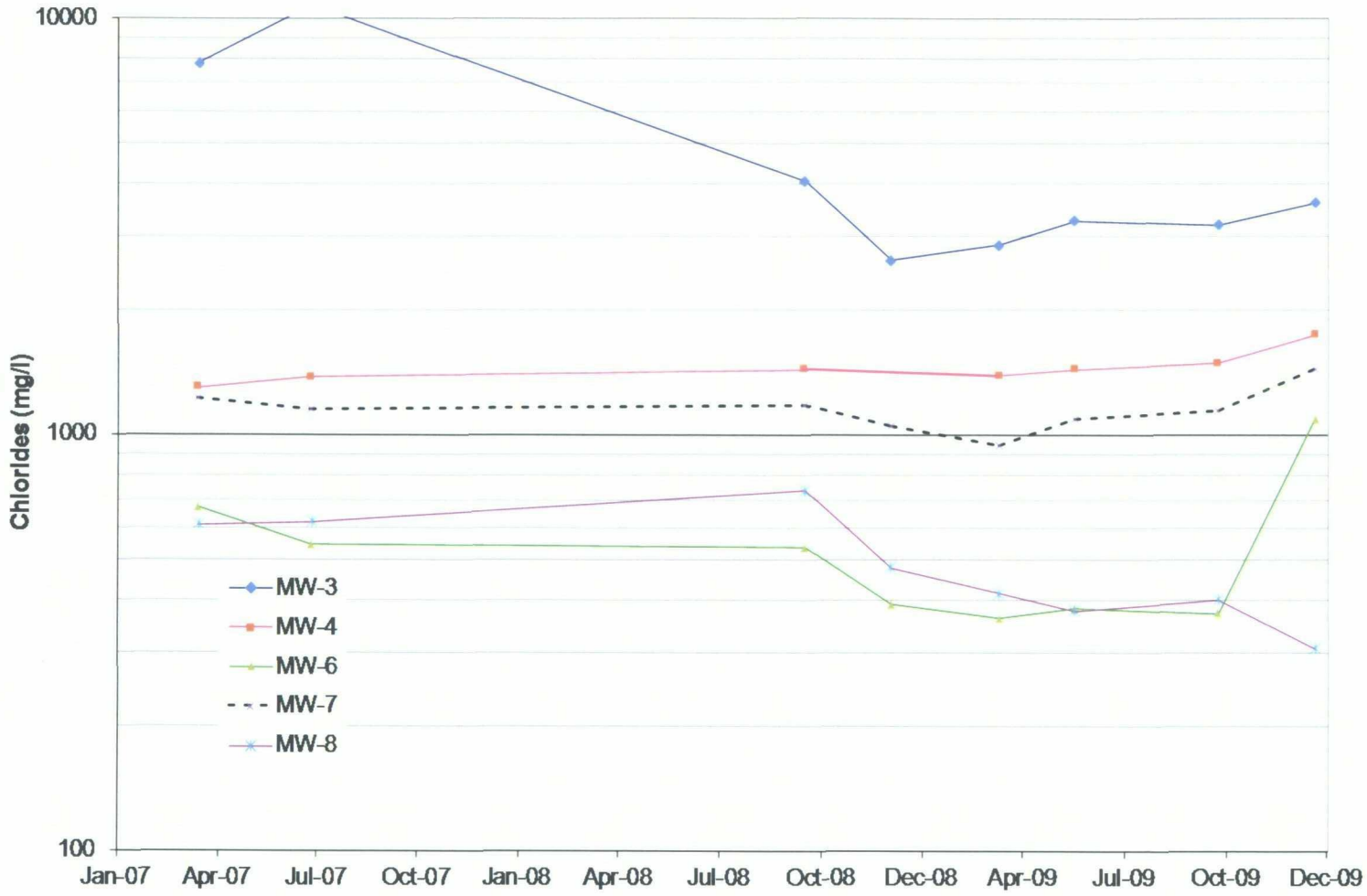


Figure 6 – Chloride Concentrations Verses Sampling Date

J-4-2 Groundwater Monitoring

dcp Midstream

DRAWN BY: MHS

DATE: 2/10

Units are mg/l
Contour 500 mg/l

Figure 7 – Fourth Quarter 2009 Chloride Isopleths

J-4-2 Groundwater Monitoring

dcp Midstream

DRAWN BY: MHS

DATE: 2/10

WELL SAMPLING DATA

AND LABORATORY ANALYTICAL REPORT

WELL SAMPLING DATA FORM

CLIENT: **DCP Midstream** WELL ID: **MW-1**

SITE NAME: J 4 2 DATE: 12/20/2009

PROJECT NO. _____ SAMPLER: M. Stewart/A. Taylor

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: 43.30 Feet
DEPTH TO WATER: 29.45 Feet
HEIGHT OF WATER COLUMN: 13.85 Feet
WELL DIAMETER: 2.0 Inch

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

TIME	VOLUME PURGED	TEMP. °C	COND. *m*S/cm	pH	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	2.5	18.7	6.03	6.98			
	5.0	19.0	4.97	6.82			
	7.5	19.1	5.82	6.83			Sampled at 1115
7.5	: Total volume purged						

SAMPLE NO.: MW-1

ANALYSES: _____

COMMENTS: _____

WELL SAMPLING DATA FORM

CLIENT: **DCP Midstream** WELL ID: **MW-2**

SITE NAME: J 4 2 DATE: 12/20/2009

PROJECT NO. _____ SAMPLER: M. Stewart/A. Taylor

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: 28.95 Feet
HEIGHT OF WATER COLUMN: 14.10 Feet
WELL DIAMETER: 4.0 Inch

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

TIME	VOLUME PURGED	TEMP. °C	COND. *m* S/cm	pH	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	0.0	--	--	--			No Sampe / Free Product Present
0.0	: Total volume purged						

SAMPLE NO.: MW-2

ANALYSES: _____

COMMENTS: No Sampe / Free Product Present

WELL SAMPLING DATA FORM

CLIENT: **DCP Midstream** WELL ID: **MW-3**

SITE NAME: J 4 2 DATE: 12/20/2009

PROJECT NO. _____ SAMPLER: M. Stewart/A. Taylor

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: 28.11 Feet
HEIGHT OF WATER COLUMN: 14.89 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. °C	COND. *m*S/cm	pH	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	2.5	18.5	4.2				
	5	18.5	4.89				
	7.5	18.5	4.98				Sampled at 1040
7.5	: Total volume purged						

SAMPLE NO.: MW-3

ANALYSES: BTEX (8260)

COMMENTS: Collected duplicate sample DUP

WELL SAMPLING DATA FORM

CLIENT: **DCP Midstream** WELL ID: **MW-4**

SITE NAME: J 4 2 DATE: 12/20/2009

PROJECT NO. _____ SAMPLER: M. Stewart/A. Taylor

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: 28.63 Feet
HEIGHT OF WATER COLUMN: 9.49 Feet
WELL DIAMETER: 2.0 Inch

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

TIME	VOLUME PURGED	TEMP. °C	COND. *m*S/cm	pH	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	1.6	18.5	1.93	7.16			
	3.2	18.7	1.94	7.03			
	4.8	18.8	1.98	7.01			Sampled at 1100
4.8	: Total volume purged						

SAMPLE NO.: MW-4

ANALYSES: BTEX (8260)

COMMENTS: _____

WELL SAMPLING DATA FORM

CLIENT: **DCP Midstream** WELL ID: **MW-6**

SITE NAME: J 4 2 DATE: 12/20/2009

PROJECT NO. _____ SAMPLER: M. Stewart/A. Taylor

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: 29.24 Feet

HEIGHT OF WATER COLUMN: 5.11 Feet

WELL DIAMETER: 2.0 Inch

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

TIME	VOLUME PURGED	TEMP. °C	COND. *m* S/cm	pH	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	1.6	18.8	1.53	7.23			
	3.2	19.0	1.50	7.18			Sampled at 1020
							Root matting prevents full purge
3.2	: Total volume purged						

SAMPLE NO.: MW-6

ANALYSES: BTEX (8260)

COMMENTS: _____

WELL SAMPLING DATA FORM

CLIENT: **DCP Midstream** WELL ID: **MW-7**

SITE NAME: J 4 2 DATE: 12/20/2009

PROJECT NO. _____ SAMPLER: M. Stewart/A. Taylor

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: 32.36 Feet

HEIGHT OF WATER COLUMN: 7.09 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. °C	COND. *m*S/cm	pH	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	1.3	18.6	2.81	7.15			
	2.9	18.7	2.81	7.17			
	3.9	18.8	2.79	7.06			Sampled at 1005
3.9	: 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: 12/20/2009

PROJECT NO. _____ SAMPLER: M. Stewart/A. Taylor

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: 30.59 Feet

HEIGHT OF WATER COLUMN: 7.73 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. °C	COND. *m*S/cm	pH	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	1.3	18.1	1.38	7.40			
	2.6	18.3	1.40	7.35			
	3.9	18.1	1.40	7.31			Sampled at 0950
3.9	: Total volume purged						

SAMPLE NO.: MW-8

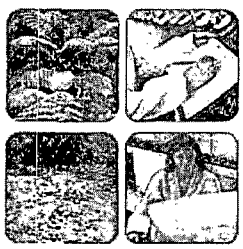
ANALYSES: BTEX (8260)

COMMENTS: _____

Gulf Coast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

02/13/10



Technical Report for

DCP Midstream, LLC

AECCOLI: DEFS J-4-2

Accutest Job Number: T44621

Sampling Date: 12/20/09

Report to:

American Environmental Consulting

mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: **31**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

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.

Paul K Canevaro

Paul Canevaro
Laboratory Director

Client Service contact: Georgia Jones 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004) OK (9103) UT(7132714700)

Test results relate only to samples analyzed.

Table of Contents

-1-

Sections: 1 2 3 4 5

Section 1: Sample Summary **3**
Section 2: Sample Results **4**
2.1: T44621-1: MW-1 5
2.2: T44621-2: MW-3 7
2.3: T44621-3: MW-4 9
2.4: T44621-4: MW-6 11
2.5: T44621-5: MW-7 13
2.6: T44621-6: MW-8 15
2.7: T44621-7: DUP 17
2.8: T44621-8: TRIP BLANK 19
Section 3: Misc. Forms **20**
3.1: Chain of Custody 21
Section 4: GC/MS Volatiles - QC Data Summaries **24**
4.1: Method Blank Summary 25
4.2: Blank Spike Summary 26
4.3: Matrix Spike/Matrix Spike Duplicate Summary 27
Section 5: General Chemistry - QC Data Summaries **28**
5.1: Method Blank and Spike Results Summary 29
5.2: Duplicate Results Summary 30
5.3: Matrix Spike Results Summary 31

Sample Summary

DCP Midstream, LLC

Job No: T44621

AECCOLI: DEFS J-4-2

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T44621-1	12/20/09	11:15		12/22/09	AQ	Ground Water	MW-1
T44621-2	12/20/09	10:40		12/22/09	AQ	Ground Water	MW-3
T44621-3	12/20/09	11:00		12/22/09	AQ	Ground Water	MW-4
T44621-4	12/20/09	10:20		12/22/09	AQ	Ground Water	MW-6
T44621-5	12/20/09	10:05		12/22/09	AQ	Ground Water	MW-7
T44621-5D	12/20/09	10:05		12/22/09	AQ	Water Dup/MSD	MW-7 MSD
T44621-5S	12/20/09	10:05		12/22/09	AQ	Water Matrix Spike	MW-7 MS
T44621-6	12/20/09	09:50		12/22/09	AQ	Ground Water	MW-8
T44621-7	12/20/09	00:00		12/22/09	AQ	Ground Water	DUP
T44621-8	12/20/09	00:00		12/22/09	AQ	Trip Blank Water	TRIP BLANK

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	T44621-1	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z0054887.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	0.0014	0.0020	0.00055	mg/l	J
1330-20-7	Xylene (total)	0.0418	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		79-122%
17060-07-0	1,2-Dichloroethane-D4	100%		75-121%
2037-26-5	Toluene-D8	104%		87-119%
460-00-4	4-Bromofluorobenzene	96%		80-133%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	T44621-1	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
		Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	2680	100	mg/l	100	01/06/10 12:00	KD	SM 4500 CL C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	T44621-2	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z0054888.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		79-122%
17060-07-0	1,2-Dichloroethane-D4	103%		75-121%
2037-26-5	Toluene-D8	102%		87-119%
460-00-4	4-Bromofluorobenzene	93%		80-133%

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		
Lab Sample ID:	T44621-2	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
		Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	3280	100	mg/l	100	01/06/10 12:00	KD	SM 4500 CL C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	T44621-3	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z0054889.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		79-122%
17060-07-0	1,2-Dichloroethane-D4	102%		75-121%
2037-26-5	Toluene-D8	107%		87-119%
460-00-4	4-Bromofluorobenzene	92%		80-133%

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-4		
Lab Sample ID:	T44621-3	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
		Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1740	100	mg/l	100	01/06/10 12:00	KD	SM 4500 CL C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	T44621-4	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Z0054890.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-122%
17060-07-0	1,2-Dichloroethane-D4	106%		75-121%
2037-26-5	Toluene-D8	100%		87-119%
460-00-4	4-Bromofluorobenzene	93%		80-133%

(a) Sample was not preserved to a pH < 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

2.4 02

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	T44621-4	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
		Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1090	100	mg/l	100	01/06/10 12:00	KD	SM 4500 CL C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	T44621-5	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Z0054884.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-122%
17060-07-0	1,2-Dichloroethane-D4	102%		75-121%
2037-26-5	Toluene-D8	105%		87-119%
460-00-4	4-Bromofluorobenzene	89%		80-133%

(a) Sample was not preserved to a pH < 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	T44621-5	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
		Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1440	100	mg/l	100	01/06/10 12:00	KD	SM 4500 CL C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	T44621-6	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z0054891.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		79-122%
17060-07-0	1,2-Dichloroethane-D4	102%		75-121%
2037-26-5	Toluene-D8	105%		87-119%
460-00-4	4-Bromofluorobenzene	94%		80-133%

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		
Lab Sample ID:	T44621-6	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
		Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	308	10	mg/l	10	01/06/10 12:00	KD	SM 4500 CL C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP		
Lab Sample ID:	T44621-7	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z0054892.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		79-122%
17060-07-0	1,2-Dichloroethane-D4	102%		75-121%
2037-26-5	Toluene-D8	102%		87-119%
460-00-4	4-Bromofluorobenzene	89%		80-133%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP		
Lab Sample ID:	T44621-7	Date Sampled:	12/20/09
Matrix:	AQ - Ground Water	Date Received:	12/22/09
		Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	3930	100	mg/l	100	01/06/10 12:00	KD	SM 4500 CL C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	T44621-8	Date Sampled:	12/20/09
Matrix:	AQ - Trip Blank Water	Date Received:	12/22/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	AECCOLI: DEFS J-4-2		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z0054882.D	1	12/30/09	JL	n/a	n/a	VZ2719
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-122%
17060-07-0	1,2-Dichloroethane-D4	105%		75-121%
2037-26-5	Toluene-D8	102%		87-119%
460-00-4	4-Bromofluorobenzene	88%		80-133%

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

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

Page ___ of

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # T44621

Client / Reporting Information

Company Name: DCP Midstream

Project Contact: Stephen Weathers | E-Mail: SWWeathers@dcpmidstream.com

Address: 370 Seventeenth Street, Suite 2500

City: Denver | State: CO | Zip: 80202

Phone No.: 303-605-1718 | Fax No.:

Samplers's Name:

Project Information

Project Name / No.: DCP J-4-2

Bill to: Same | Invoice Attn.:

Address:

City | State | Zip

Phone No. | Fax No.

Client Purchase Order #

Requested Analyses

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Wastewater
SO - Soil
SL - Sludge
OI - Oil
LIQ - Liquid
SOL - Other Solid

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles: HCl	MeOH	EnCore	H2SO4	EnCore	NaHSO4	NaOH	NONE	BTEX 8260B	Chlorides	LAB USE ONLY
1	MW-1 12/20	~~12/29~~	1115	GW	4	x							x	X	X	
	MW-2	—	—	GW	4	x							x	X	X	
2	MW-3	12/29	1040	GW	4	x							x	X	X	
3	MW-4	12/20	1100	GW	4	x							x	X	X	
4	MW-6	12/20	1020	GW	4	x							x	X	X	
5	MW-7	12/20	1005	GW	4	x							x	X	X	
6	MW-8	12/20	950	GW	4	x							x	X	X	
7	DUP 12/20	~~12/20~~	950	GW	4	x							x	X	X	
8	Trip Blank	YES	YES	WTB	3	x								X		
9	MW- 7 MS/MSD	12/20	1005	GW	6	x								X		

Turnaround Time (Business days)

- [ ] 10 Day *STANDARD* — Approved By / Date:
- [X] 7 Day
- [ ] 4 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*
- [ ] Other

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12/21 500	1	2 FedEx	12/22/09	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 1.6

3.1 (3)

T44621: Chain of Custody
Page 1 of 3

SAMPLE INSPECTION FORM

Accutest Job Number: T44621 Client: DCP MIDSTREAM Date/Time Received: 12/22/09 09:00

# of Coolers Received: 1 Thermometer #: IR1 Temperature Adjustment Factor: +0.4

Cooler Temps: #1: 3.6 #2: _____ #3: _____ #4: _____ #5: _____ #6: _____ #7: _____ #8: _____

Method of Delivery: (FEDEX) UPS Accutest Courier Greyhound Delivery Other

Airbill Numbers: 8709 8619 0801

COOLER INFORMATION

- [ ] Custody seal missing or not intact
- [ ] Temperature criteria not met
- [ ] Wet ice received in cooler

CHAIN OF CUSTODY

- [ ] Chain of Custody not received
- [ ] Sample D/T unclear or missing
- [ ] Analyses unclear or missing
- [ ] COC not properly executed

SAMPLE INFORMATION

- [ ] Sample containers received broken
- [ ] VOC vials have headspace
- [ ] Sample labels missing or illegible
- [ ] ID on COC does not match label(s)
- [ ] D/T on COC does not match label(s)
- [ ] Sample/Bottles rcvd but no analysis on COC
- [ ] Sample listed on COC, but not received
- [ ] Bottles missing for requested analysis
- [ ] Insufficient volume for analysis
- [ ] Sample received improperly preserved

TRIP BLANK INFORMATION

- [ ] Trip Blank on COC but not received
- [ ] Trip Blank received but not on COC
- [ ] Trip Blank not intact
- [ ] Received Water Trip Blank
- [ ] Received Soil TB

Number of Encores? _____
Number of 5035 kits? _____
Number of lab-filtered metals? _____

Summary of Discrepancies:

TECHNICIAN SIGNATURE/DATE: TClauch 12/22/09

INFORMATION AND SAMPLE LABELING VERIFIED BY: EL 12-22-09

CORRECTIVE ACTIONS

Client Representative Notified: _____ **Date:** _____

By Accutest Representative: _____ **Via:** Phone Email

Client Instructions:

SAMPLE RECEIPT LOG

JOB #: T44621 DATE/TIME RECEIVED: 12/22/09 0900

CLIENT: DCP Midstream INITIALS: TC

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH
1	1	MW-1	12/20/09 11:15	W	P-500	1	3-K	(1) 2 3 4 5 6 7 8	<2 >12
					40mL	2-4	VR	1 (2) 3 4 5 6 7 8	<2 >12
	2	MW-3	12/20/09 10:40		P-500	1	3-K	(1) 2 3 4 5 6 7 8	<2 >12
					40mL	2-4	VR	1 (2) 3 4 5 6 7 8	<2 >12
	3	MW-4	12/20/09 11:00		P-500	1	3-K	(1) 2 3 4 5 6 7 8	<2 >12
					40mL	2-4	VR	1 (2) 3 4 5 6 7 8	<2 >12
	4	MW-6	12/20/09 10:20		P-500	1	3-K	(1) 2 3 4 5 6 7 8	<2 >12
					40mL	2-4	VR	1 (2) 3 4 5 6 7 8	<2 >12
	5	MW-7	12/20/09 10:05		P-500	1	3-K	(1) 2 3 4 5 6 7 8	<2 >12
					40mL	2-4	VR	1 (2) 3 4 5 6 7 8	<2 >12
		MS			40mL	5-7	VR	1 (2) 3 4 5 6 7 8	<2 >12
		MSD			40mL	8-10	VR	1 (2) 3 4 5 6 7 8	<2 >12
	6	MW-8	12/20/09 9:50		P-500	1	3-K	(1) 2 3 4 5 6 7 8	<2 >12
					40mL	2-4	VR	1 (2) 3 4 5 6 7 8	<2 >12
	7	Dup	12/20/09		P-500	1	3-K	(1) 2 3 4 5 6 7 8	<2 >12
					40mL	2-4	VR	1 (2) 3 4 5 6 7 8	<2 >12
	8	TRIP Blank	12/10/09 14:00		40mL	1-2	VR	1 (2) 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
			TC 12/22/09					1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

Rev 8/13/01 ewn

3.1

T44621: Chain of Custody

Page 3 of 3

ACCUTEST. Laboratories T44621

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: T44621
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2719-MB	Z0054881.D	1	12/30/09	JL	n/a	n/a	VZ2719

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

T44621-1, T44621-2, T44621-3, T44621-4, T44621-5, T44621-6, T44621-7, T44621-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.55	ug/l	
108-88-3	Toluene	ND	2.0	0.43	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.7	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	79-122%
17060-07-0	1,2-Dichloroethane-D4	105%	75-121%
2037-26-5	Toluene-D8	101%	87-119%
460-00-4	4-Bromofluorobenzene	94%	80-133%

Blank Spike Summary

Job Number: T44621
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2719-BS	Z0054879.D	1	12/30/09	JL	n/a	n/a	VZ2719

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

T44621-1, T44621-2, T44621-3, T44621-4, T44621-5, T44621-6, T44621-7, T44621-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	25.6	102	76-118
100-41-4	Ethylbenzene	25	26.0	104	75-112
108-88-3	Toluene	25	26.1	104	77-114
1330-20-7	Xylene (total)	75	78.7	105	75-111

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	79-122%
17060-07-0	1,2-Dichloroethane-D4	92%	75-121%
2037-26-5	Toluene-D8	103%	87-119%
460-00-4	4-Bromofluorobenzene	94%	80-133%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T44621
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T44621-5MS [a]	Z0054885.D	1	12/30/09	JL	n/a	n/a	VZ2719
T44621-5MSD [a]	Z0054886.D	1	12/30/09	JL	n/a	n/a	VZ2719
T44621-5 [a]	Z0054884.D	1	12/30/09	JL	n/a	n/a	VZ2719

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

T44621-1, T44621-2, T44621-3, T44621-4, T44621-5, T44621-6, T44621-7, T44621-8

CAS No.	Compound	T44621-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	26.5	106	27.0	108	2	76-118/16
100-41-4	Ethylbenzene	ND		25	26.7	107	26.4	106	1	75-112/12
108-88-3	Toluene	ND		25	25.9	104	25.9	104	0	77-114/12
1330-20-7	Xylene (total)	ND		75	80.0	107	75.8	101	5	75-111/12

CAS No.	Surrogate Recoveries	MS	MSD	T44621-5	Limits
1868-53-7	Dibromofluoromethane	97%	98%	101%	79-122%
17060-07-0	1,2-Dichloroethane-D4	97%	99%	102%	75-121%
2037-26-5	Toluene-D8	100%	100%	105%	87-119%
460-00-4	4-Bromofluorobenzene	94%	89%	89%	80-133%

(a) Sample was not preserved to a pH < 2

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44621
Account: DUKE - DCP Midstream, LLC
Project: AECCOLI: DEFS J-4-2

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP7617/GN19965	1.0	0.0	mg/l	1000	969	96.9	92-107%

Associated Samples:
Batch GP7617: T44621-1, T44621-2, T44621-3, T44621-4, T44621-5, T44621-6, T44621-7
(*) Outside of QC limits

5.1

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44621
Account: DUKE - DCP Midstream, LLC
Project: AECCOLI: DEFS J-4-2

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP7617/GN19965	T44570-1	mg/l	363	363	0.0	0-5%

Associated Samples:
Batch GP7617: T44621-1, T44621-2, T44621-3, T44621-4, T44621-5, T44621-6, T44621-7
(*) Outside of QC limits

5.2

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44621
Account: DUKE - DCP Midstream, LLC
Project: AECCOLI: DEFS J-4-2

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP7617/GN19965	T44570-1	mg/l	363	100	457	94.4	81-119%

5.3

Associated Samples:
Batch GP7617: T44621-1, T44621-2, T44621-3, T44621-4, T44621-5, T44621-6, T44621-7
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits