# AP-55

# 1st QTR GW results

# DATE:
# August 31, 2010

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



August 31, 2010

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

**RE: 1st Quarter 2010 Groundwater Results**
**DCP Midstream, LP RR Ext. Pipeline Release (AP #55)**
**Unit C, Section 19, Township 20 South, Range 37 East**
**Lea County, New Mexico**

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, one copy of the 1st Quarter 2010 Groundwater Results for the DCP RR Ext. Pipeline Release located in Lea County, New Mexico (Unit C, Section 19, Township 20 South, Range 37 East).

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

Sincerely

**DCP Midstream, LP**

Stephen Weathers, PG
Principal Environmental Specialist

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

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370 17th Street, Suite 2500
Denver, CO 80202
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Environmental Files

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

August 3, 2010
Mr. Stephen Weathers
DCP Midstream, LP
370 17th Street, Suite 2500
Denver, CO 80202

Re: First Quarter 2010 Groundwater Monitoring Report for the
DCP Midstream RR Ext Pipeline Release
**Unit C, Section 19 Township 20 South, Range 37 East (AP #55)**

Dear Mr. Weathers:

This letter report summarizes the first quarter 2010 groundwater monitoring event that was completed on March 22, 2010 at the DCP Midstream (DCP) RR Ext Site (Figure 1). The approximate site coordinates are 32.5624 north, 103.2923 west. The well locations are shown on Figure 2. The construction information for the wells is summarized in Table 1.

The fluid levels were first measured at each well to calculate the casing volumes. Wells MW-4 and MW-5 contained free phase hydrocarbon (FPH) so they were not purged and sampled.

The remaining six wells were first purged to equilibration using dedicated bailers based on the field parameters of temperature, pH and conductivity. They were then sampled for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method SW846 8260B and for chlorides using Method SM 4500 CL C. A field duplicate from MW-1 and a matrix spike/matrix spike duplicate (MS/MSD) from MW-6 were also collected to evaluate quality control. All affected purge water was disposed of at the DCP Linam Ranch facility.

The water gauging data are summarized in Table 2. Well hydrographs are plotted on Figure 3. Figure 3 indicates that the water table increased across the site at a relatively consistent rate.

The measured water table elevations were also used to generate a groundwater contour map using the Surfer program with a kriging option. This map is included as Figure 4. Groundwater appears to flow almost due south down gradient of MW-5. The generally-southward groundwater flow pattern is similar to that exhibited in the past.

The quality control evaluation can be summarized as follows:

- The method blanks were all within their control limits.
- The blank spikes were all within their control limits.
- The individual sample surrogates results were within the method ranges.
- The matrix spike and matrix spike duplicate values from MW-6 were within the control ranges.
- There was substantial disagreement between the MW-1 primary and duplicate samples with the ethylbenzene and xylene concentrations differing by an order of magnitude.

The above results indicate that the data are suitable for evaluation for groundwater monitoring purposes. The primary and duplicate samples will be checked against the historic data assess whether the primary or duplicate sample appears to be more accurate.

The sampling data are summarized in Table 3. The measured field parameters and a copy of the laboratory report are attached. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are included at the top of Table 3. There were no BTEX detections in wells MW-6, MW-7 and MW-8. Wells MW-1, MW-2 and MW-3 exceeded the benzene standard. Well MW-3 also exceeded the toluene, ethylbenzene and xylenes standards.

Figure 5 shows the benzene concentrations for the sampling event. The extent of benzene effects is delineated to the southeast and east by MW-6 and MW-7. Additional control is necessary to delineate the extent of the FPH now present in MW-4 and MW-5. A characterization program is scheduled for the second quarter of 2010.

The BTEX data collected for this project are summarized in Table 4. Figure 6 graphs the benzene concentration verses time for MW-1, MW-2, MW-3 and MW-5. The concentrations in MW-1 and MW-3 both declined, and they appear to be exhibiting a cyclical pattern. The concentration in MW-2 appears to be relatively consistent. The ethylbenzene and xylene data for MW-1 indicate that the primary sample results are probably more representative.

The concentrations in MW-8 have declined over the duration of the project to the point where the BTEX constituents were undetected. This trend indicates that the dissolved-phase plume is contracting on its up-gradient boundary.

Well MW-4 never contained FPH until September 2009. FPH has now been present for three consecutive quarters. FPH is now present in MW-5 almost 2 years after it was installed.

The samples were also submitted for chlorides analysis. Chloride data are summarized in Table 5. Figure 7 shows the chlorides concentrations for this event. The laboratory measured concentrations between 700 and 850 mg/l in all of the samples but one.

The chloride concentrations verses time are plotted on Figure 8. The chloride concentrations were measured at anomalously high values for all wells except MW-3. AEC compared the chloride data to the specific conductance measurements, and that data is tabulated below.

| Well | Chlorides (mg/l) | Specific Conductance (mmhos) |
|---|---|---|
| MW-1 | 750 | 2.44 |
| MW-2 | 700 | 1.47 |
| MW-3 | 440 | 1.95 |
| MW-6 | 700 | 1.84 |
| MW-7 | 750 | 1.89 |
| MW-8 | 800 | 2.39 |

The well-defined pattern that is generally present between ions and specific conductance is not present. AEC concludes that the March 2010 chloride values are probably not representative of the groundwater conditions based upon this lack of correlation and relatively stability prior to this event.

## RECOMMENDATIONS

The fact that FPH is now present in both MW-4 and MW-5 indicates that some type of FPH source that is not related to the remediated spill is probably present in the area. Additional characterization is already scheduled for the second quarter of 2010.

The next sampling event will be completed during the second quarter of 2010. Do not hesitate to contact me if you have any questions or comments on this document.

Respectfully Submitted,
**AMERICAN ENVIRONMENTAL CONSULTING, LLC**

Michael H. Stewart

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

attachments

TABLES

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

| Well | Date Installed | Stickup | Total Depth (ground) | Screen Interval (ground) | Sand Interval |
|---|---|---|---|---|---|
| | | | | | |
| MW-1 | 3/08 | 2.06 | 37.5 | 17.5-37.5 | 16-37.5 |
| MW-2 | 3/08 | 2.41 | 37.5 | 17.5-37.5 | 16-37.5 |
| MW-3 | 3/08 | 2.53 | 37.5 | 17.5-37.5 | 16-37.5 |
| MW-4 | 3/08 | 3.16 | 37.5 | 17.5-37.5 | 16-37.5 |
| MW-5 | 3/08 | 2.15 | 37.5 | 17.5-37.5 | 16-37.5 |
| MW-6 | 6/08 | 2.18 | 37.5 | 17.5-37.5 | 16-37.5 |
| MW-7 | 6/08 | 2.36 | 37.5 | 17.5-37.5 | 16-37.5 |
| MW-8 | 6/08 | 2.76 | 37.5 | 17.5-37.5 | 16-37.5 |

Notes: Units are feet
All wells are 2-inch diameter
Wells were grouted to the surface with hydrated bentonite pellets and completed with above-ground well protectors

Table 2 - Summary of First Quarter 2010 Fluids Measurement Data

| Well | Depth to Water | Depth to Product | Water Table Elevation |
|---|---|---|---|
| | | | |
| MW-1 | 29.97 | | 3504.60 |
| MW-2 | 30.76 | | 3504.42 |
| MW-3 | 32.05 | | 3504.52 |
| MW-4 | 32.36 | 30.65 | 3504.12 |
| MW-5 | 31.98 | 31.71 | 3504.14 |
| MW-6 | 32.03 | | 3504.13 |
| MW-7 | 32.76 | | 3504.33 |
| MW-8 | 31.65 | | 3504.76 |

Units are Feet

Table 3 - RR Ext First Quarter 2010 Groundwater Sampling Results

| Well | Benzene | Toluene | Ethyl-benzene | Total Xylenes | Chlorides |
|---|---|---|---|---|---|
| NMWQCC Standards | 0.010 | 0.75 | 0.75 | 0.62 | 250* |
| | | | | | |
| MW-1 | **0.726** | 0.107 | 0.0879 | 0.0278J | 750 |
| MW-1 DUP | **0.431** | 0.714 | 0.64 | 0.201 | 850 |
| MW-2 | **23.8** | 0.71 | 0.529 | <1.2 | 700 |
| MW-3 | **8.43** | **9.14** | **1.01** | **2.71** | 440 |
| MW-4 | Not sampled because free phase hydrocarbons were present | | | | |
| MW-5 | Not sampled because free phase hydrocarbons were present | | | | |
| MW-6 | <0.002 | <0.002 | <0.002 | <0.006 | 700 |
| MW-7 | <0.002 | <0.002 | <0.002 | <0.006 | 750 |
| MW-8 | <0.002 | <0.002 | <0.002 | <0.006 | 800 |

Notes: Units mg/l
NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards
Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards
* Chlorides is a secondary (non-health based) standard.

Table 4 - RR Ext BTEX Groundwater Monitoring Results Summary

| Well | Date | Benzene | Toluene | Ethylbenzene | Total Xylenes |
|---|---|---|---|---|---|
| NMWQCC Standards | | .010 | 0.75 | 0.75 | 0.62 |
| | | | | | |
| MW-1 | 3/08 | **1.4** | **0.948** | 0.0395 | 0.128 |
| | 6/08 | **2.75** | **2.17** | 0.054 | 0.232 |
| | 9/08 | **1.1** | **0.845** | 0.0375 | 0.131 |
| Duplicate | 9/08 | **1.22** | **0.883** | 0.0506 | 0.197 |
| | 12/08 | **0.869** | 0.581 | 0.0385 | 0.0709 |
| | 3/09 | **0.288** | 0.107 | 0.0149 | 0.0395 |
| | 5/09 | **1.38** | 0.175 | 0.0705 | 0.065 |
| | 9/09 | 0.267 | 0.0332 | 0.024 | 0.0078 |
| | 12/09 | **0.819** | 0.0267 | 0.088 | 0.012 |
| | 3/10 | **0.726** | 0.107 | 0.0879 | 0.0278J |
| Duplicate | 3/10 | **0.431** | 0.714 | 0.64 | 0.201 |
| | | | | | |
| MW-2 | 3/08 | **8.98** | **6.58** | 0.135J | **0.765** |
| Duplicate | 3/08 | **10** | **7** | 0.156J | **0.93** |
| | 6/08 | **24.3** | **18.5** | 0.319 | **2.58** |
| Duplicate | 6/08 | **23.5** | **19.2** | 0.309 | **2.36** |
| | 9/08 | **21.7** | **9.79** | 0.443 | **4.25** |
| | 12/08 | Not sampled: Remediation activities | | | |
| | 3/09 | **23.7** | **2.34** | 0.583 | **1.25** |
| Duplicate | 3/09 | **4.07** | **1.91** | 0.268 J | 0.49 J |
| | 5/09 | **32.7** | **1.31** | **0.791** | **1.69** |
| Duplicate | 5/09 | **30.7** | **1.43** | **0.907** | **2.14** |
| | 9/09 | 29.3 | 0.771 | 0.491 | 0.371J |
| | 12/09 | **28.5** | 0.347 | 0.57 | 0.177J |
| Duplicate | 12/09 | **31.8** | 0.397J | **0.829** | 0.193 |
| | 3/10 | **23.8** | 0.71 | 0.529 | **<1.2** |
| | | | | | |
| MW-3 | 3/08 | **0.759** | **0.849** | 0.0355 | 0.0786 |
| | 6/08 | **6.18** | **9.46** | 0.287 | **1.23** |
| | 9/08 | **2.45** | **3.62** | 0.145 | **1.14** |
| | 12/08 | **0.761** | **0.938** | 0.0492 | 0.158 |
| | 3/09 | **4.03** | **2.83** | 0.18 J | 0.61 |
| | 5/09 | **14.7** | **12.6** | **0.808** | **1.64** |
| | 9/09 | 5.5 | 1.09 | 0.271 | <0.006 |
| | 12/09 | **13.1** | **9.08** | **1.2** | **2.87** |
| | 3/10 | **8.43** | **9.14** | **1.01** | **2.71** |
| | | | | | |
| MW-4 | 3/08 | **0.0102** | 0.0093 | <0.002 | 0.0023J |
| | 6/08 | **0.0439** | 0.0256 | 0.0068 | 0.0147 |
| | 9/08 | **0.514** | 0.443 | 0.0203 | 0.125 |
| | 12/08 | **1.32** | **1.35** | 0.0812 | 0.239J |
| | 3/09 | **3.61** | **3.4** | 0.164 J | **0.831** |
| | 5/09 | **4.7** | **2.94** | 0.428 | **1.03** |
| | **Free Phase Hydrocarbons Since Third Quarter 2009** | | | | |

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

Table 4 - RR Ext BTEX Groundwater Monitoring Results Summary (continued)

| Well | Date | Benzene | Toluene | Ethylbenzene | Total Xylenes |
|---|---|---|---|---|---|
| NMWQCC Standards | | .010 | 0.75 | 0.75 | 0.62 |
| | | | | | |
| MW-5 | 3/08 | 0.0019J | 0.0012J | <0.002 | <0.006 |
| | 6/08 | 0.0037 | 0.0037 | <0.002 | <0.006 |
| | 9/08 | 0.0038 | 0.0037 | <0.002 | <0.006 |
| | 12/08 | 0.0031 | 0.004 | <0.002 | <0.006 |
| | 3/09 | 0.0067 | 0.0074 | <0.002 | <0.006 |
| | 5/09 | 0.0064 | 0.0089 | 0.0025 | 0.0045 J |
| | 9/09 | 0.0082 | 0.0132 | 0.00066J | <0.006 |
| | 12/09 | 0.0096 | 0.0155 | 0.0013J | 0.0021J |
| | 3/10 | Free Phase Hydrocarbons | | | |
| | | | | | |
| MW-6 | 6/08 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 9/08 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 12/08 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 3/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 5/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 9/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 12/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 3/10 | <0.002 | <0.002 | <0.002 | <0.006 |
| | | | | | |
| MW-7 | 6/08 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 9/08 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 12/08 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 3/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 5/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 9/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 12/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 3/10 | <0.002 | <0.002 | <0.002 | <0.006 |
| | | | | | |
| MW-8 | 6/08 | **0.0384** | 0.0255 | 0.00049J | 0.0016J |
| | 9/08 | **0.0301** | 0.0161 | <0.002 | 0.002 J |
| | 12/08 | **0.0233** | 0.011 | <0.002 | <0.006 |
| Dup | 12/08 | **0.0122** | 0.006 | <0.002 | <0.006 |
| | 3/09 | **0.0218** | 0.0066 | <0.002 | <0.006 |
| | 5/09 | 0.0098 | 0.0049 | <0.002 | <0.006 |
| | 9/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| Dup | 9/09 | <0.4 | <0.4 | <0.4 | <1.2 |
| | 12/09 | <0.002 | <0.002 | <0.002 | <0.006 |
| | 3/10 | <0.002 | <0.002 | <0.002 | <0.006 |

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

Table 5 - RR Ext Chlorides Groundwater Monitoring Results Summary

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

Notes: Units are mg/l
Duplicate values averaged together
FPH free phase hydrocarbons present

FIGURES

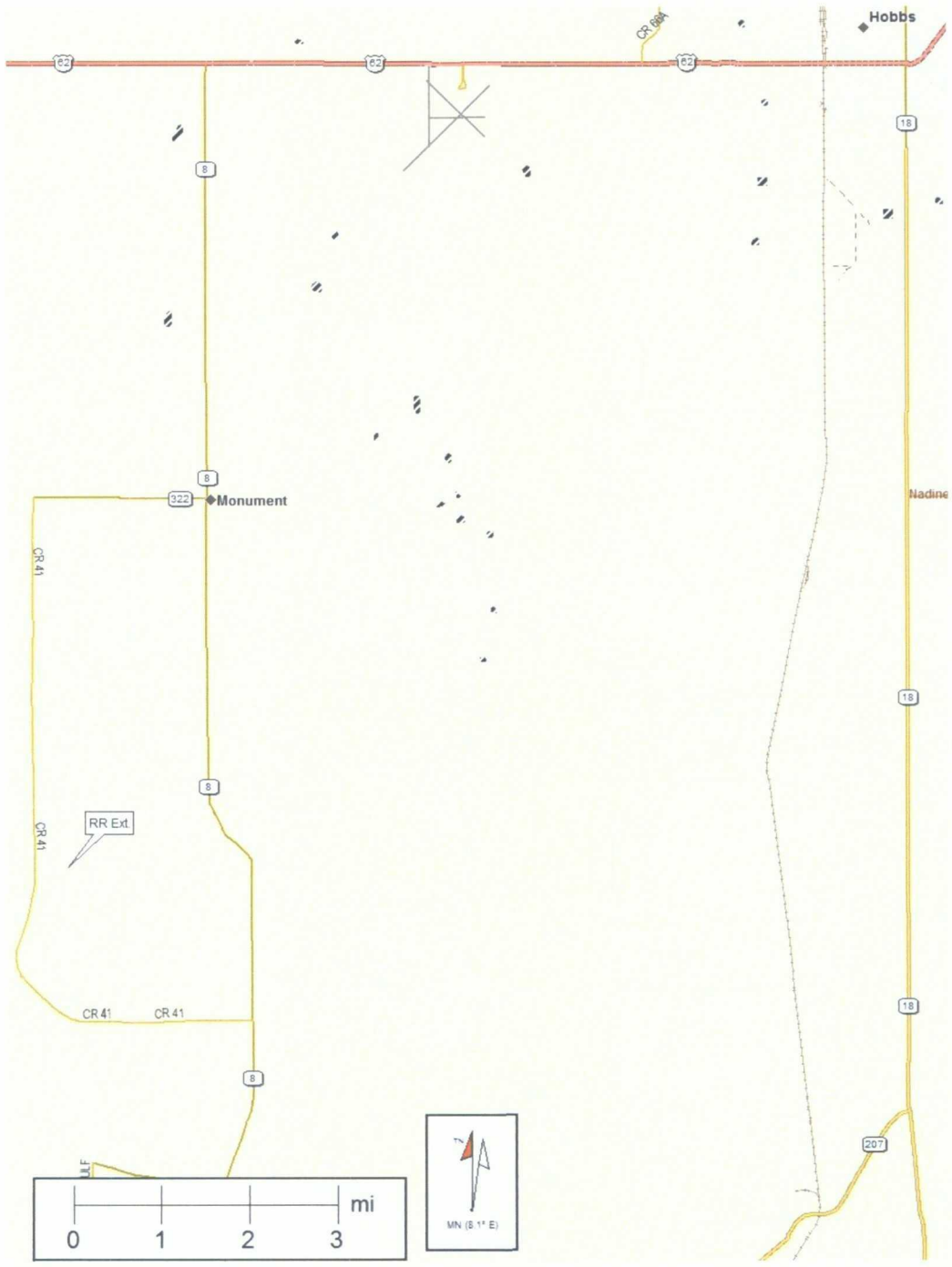



Figure 1 – Site Location

RR Ext. AP #55

dcp Midstream.

| |
|---|
| DRAWN BY: MHS |
| REVISED: |
| DATE: 5/06 |

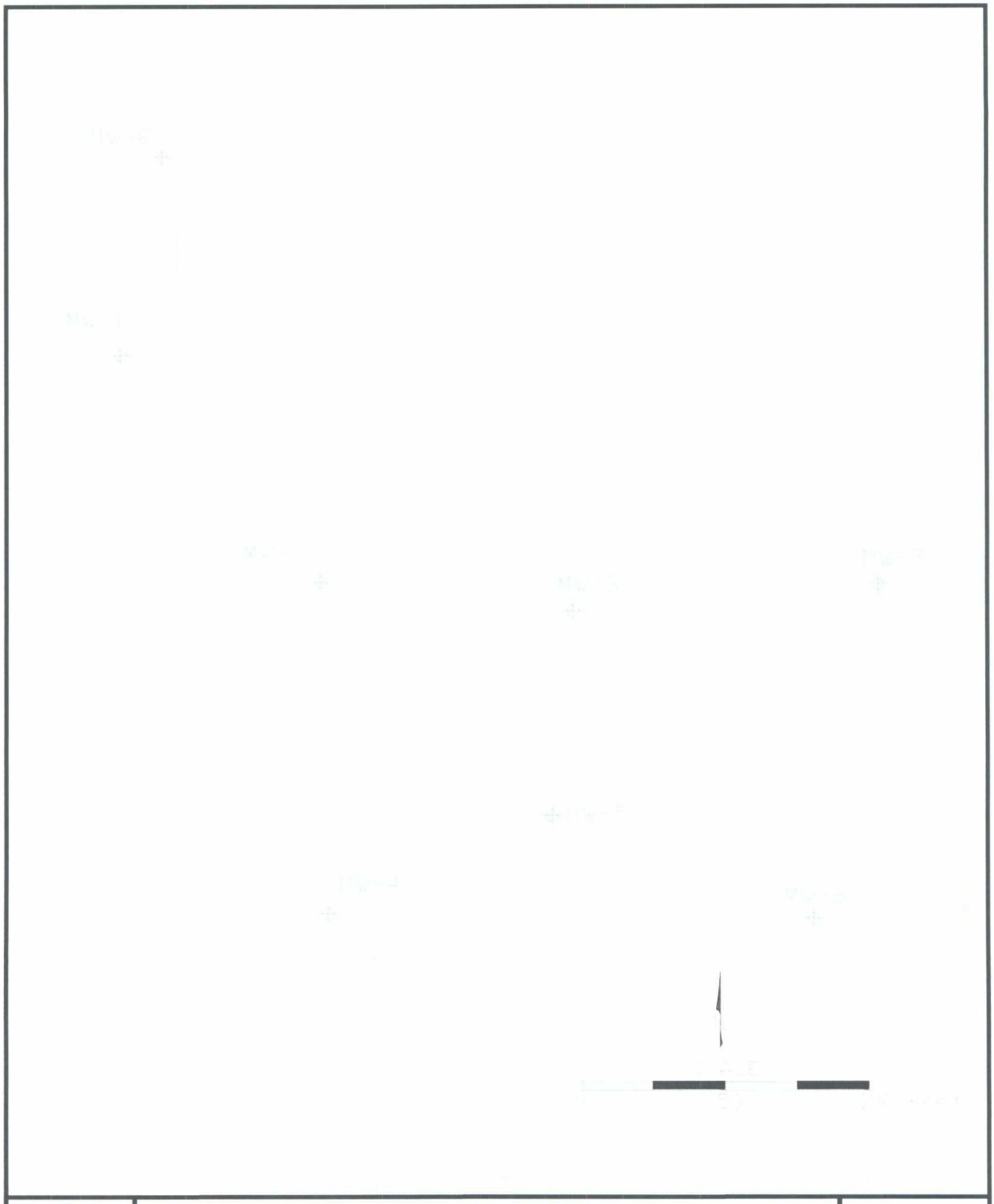


Figure 2 – Monitoring Well Locations
RR Ext. AP #55

dcp Midstream.

| |
|---|
| DRAWN BY: MHS |
| REVISED: |
| DATE: 1/09 |

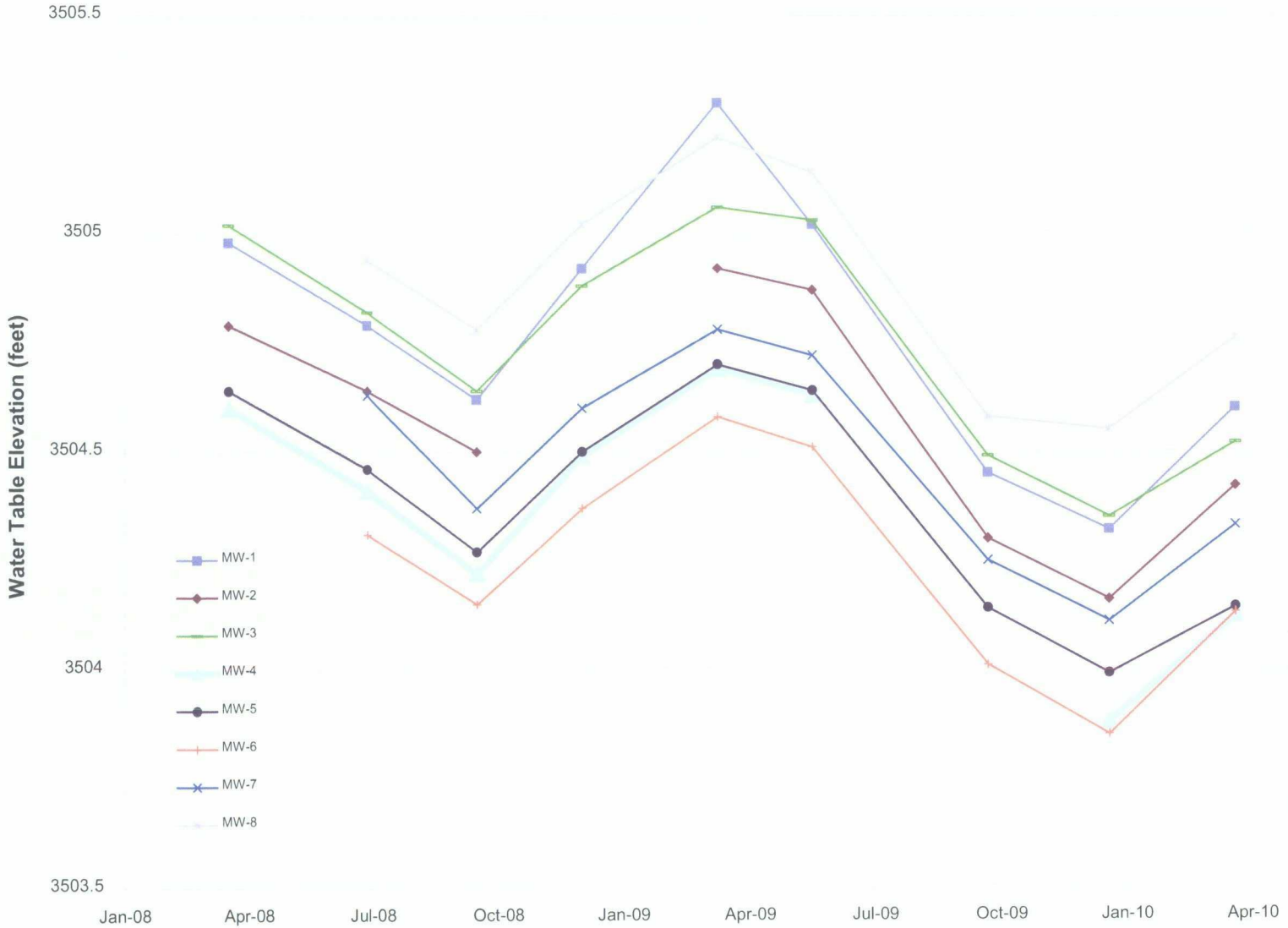


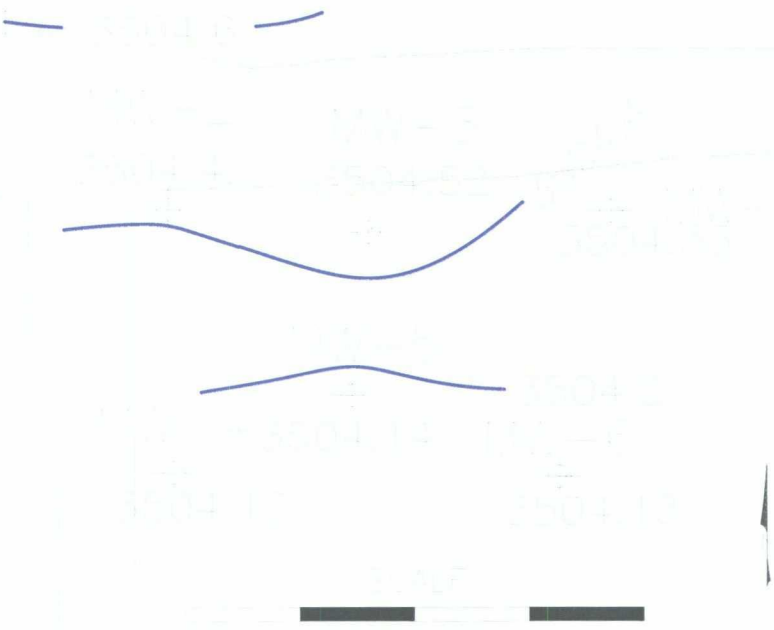

Figure 3 – Monitoring Well Hydrographs

RR EXT AP #55

dcp Midstream.

DRAWN BY: MHS

DATE:7/10

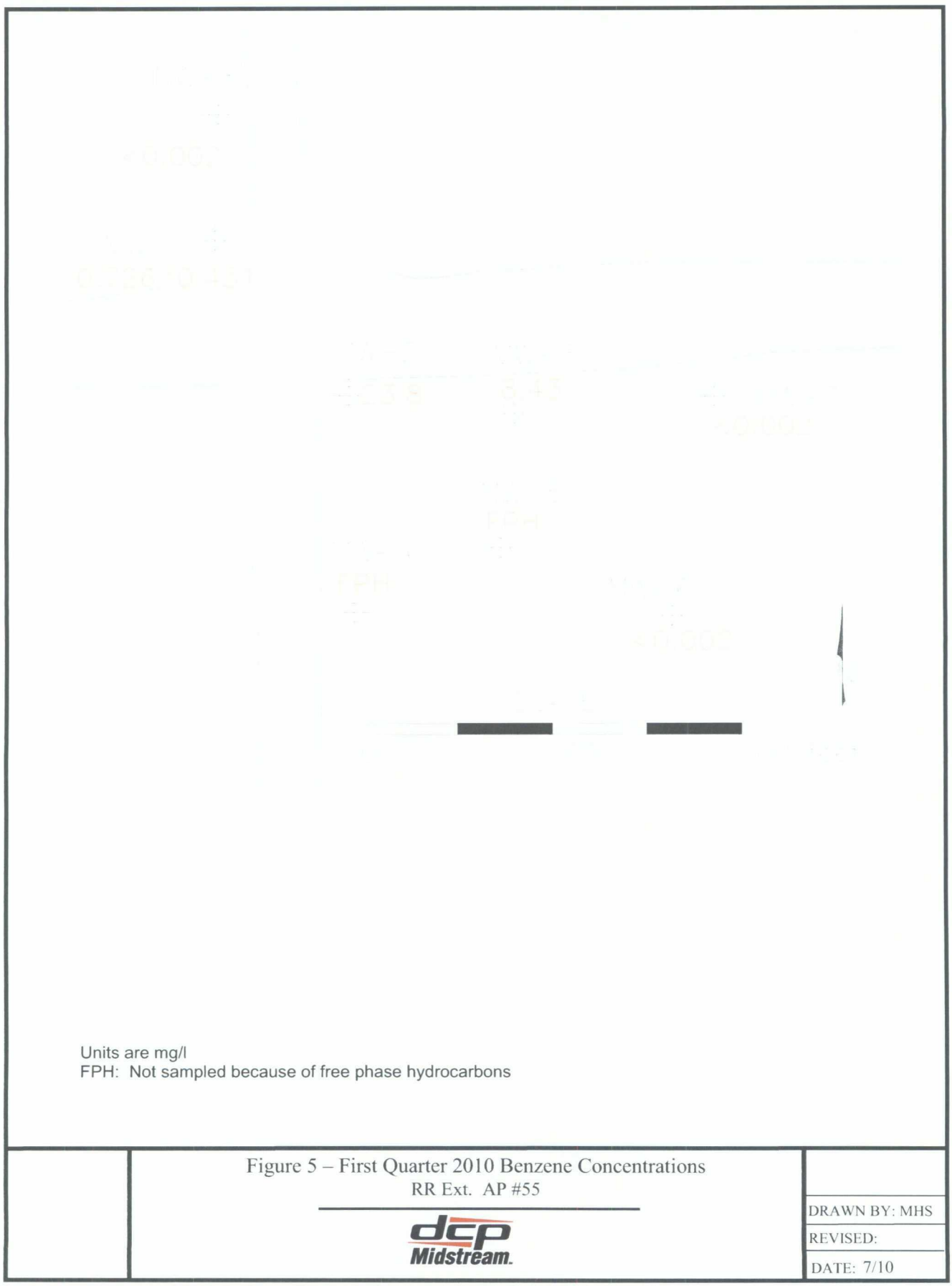


Contour interval is 0.2 feet

Figure 4 – First Quarter 2010 Water Table Contours
RR Ext. AP #55

dcp Midstream

DRAWN BY: MHS
REVISED:
DATE: 7/10



Units are mg/l
FPH: Not sampled because of free phase hydrocarbons

Figure 5 – First Quarter 2010 Benzene Concentrations
RR Ext. AP #55

dcp Midstream.

DRAWN BY: MHS
REVISED:
DATE: 7/10

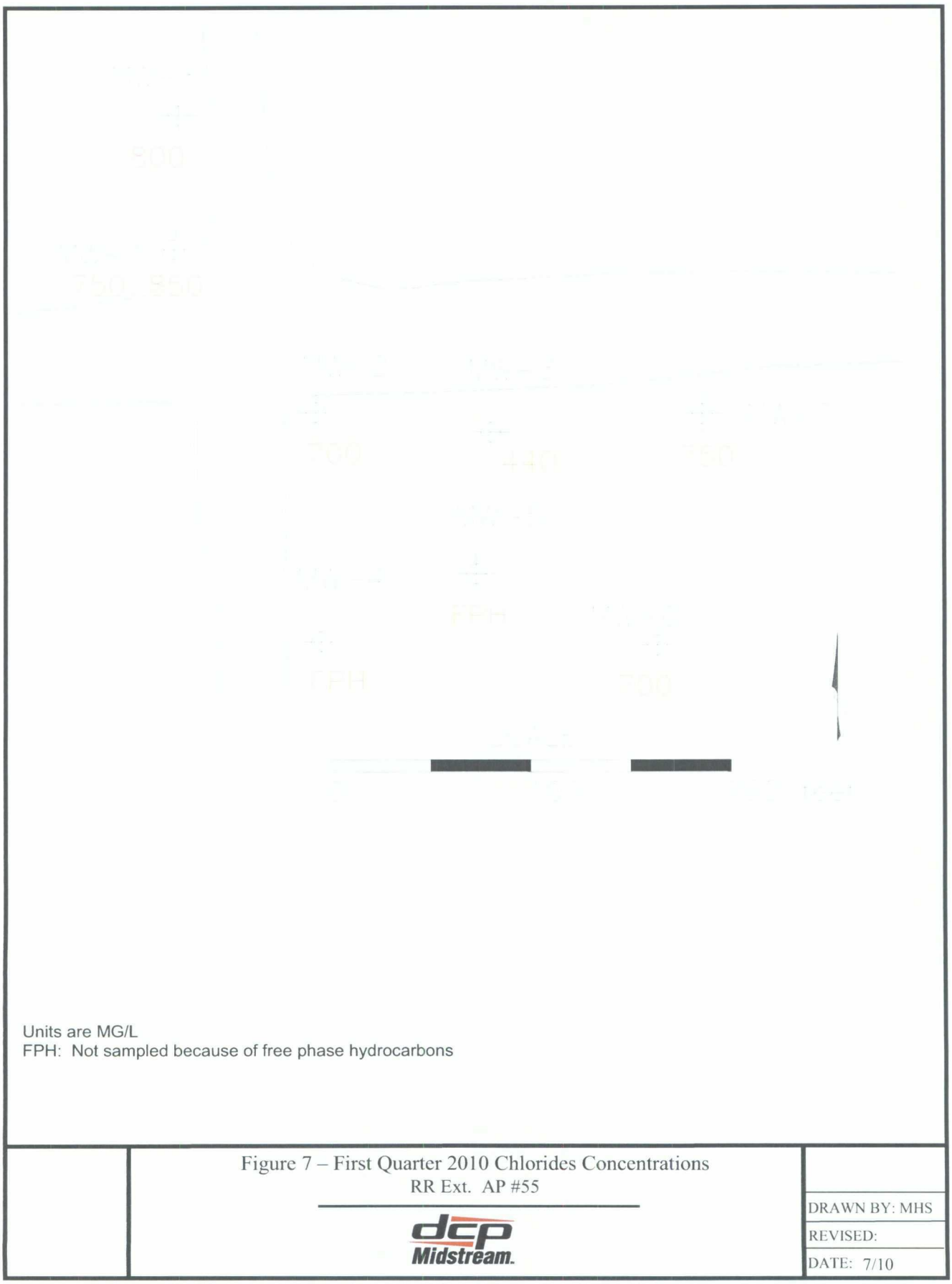

Figure 6 – Benzene Concentrations Verses Time

RR EXT AP #55

dcp Midstream.

DRAWN BY: MHS

DATE: 7/10




Units are MG/L
FPH: Not sampled because of free phase hydrocarbons

Figure 7 – First Quarter 2010 Chlorides Concentrations
RR Ext. AP #55

dcp Midstream

DRAWN BY: MHS
REVISED:
DATE: 7/10

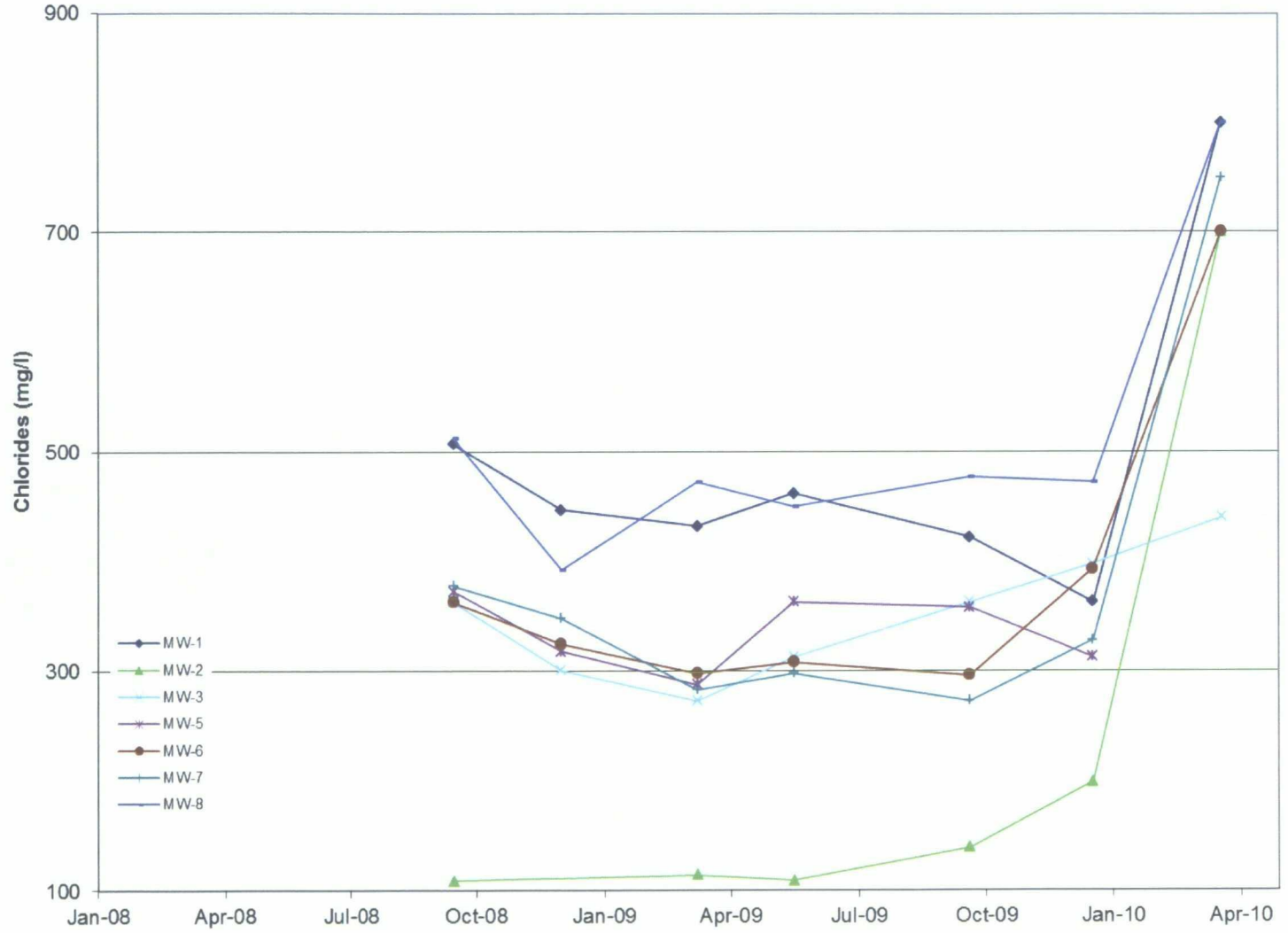



Figure 8 – Chloride Concentrations Verses Time

RR EXT AP #55

DRAWN BY: MHS

DATE: 7/10

ATTACHMENT

WELL SAMPLING DATA AND
ANALYTICAL LABORATORY REPORT

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-1

SITE NAME: RR-EXT DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet
DEPTH TO WATER: 29.97 Feet
HEIGHT OF WATER COLUMN: 7.53 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 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | 4.5 | 18.8 | 2.44 | 7.67 | | | Readings after 3 casing volumes |
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| 4.5 | Volume: (gallons) | | | | | | |

SAMPLE NO.: Collected Sample No.: MW-1

ANALYSES: BTEX (8260)

COMMENTS: _____

Duplicate sample collected

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-2

SITE NAME: RR-EXT DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet

DEPTH TO WATER: 30.76 Feet

HEIGHT OF WATER COLUMN: 6.74 Feet

WELL DIAMETER: 2.0 Inch

**3.4** 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 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | 4.5 | 18.7 | 1.47 | 7.44 | | | Readings after 3 casing volumes |
| | | | | | | | |
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| | | | | | | | |
| 4.5 | Volume: (gallons) | | | | | | |

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

ANALYSES: BTEX (8260)

COMMENTS: _____

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-3

SITE NAME: RR-EXT DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet

DEPTH TO WATER: 32.05 Feet

HEIGHT OF WATER COLUMN: 5.45 Feet

WELL DIAMETER: 2.0 Inch

**2.7** 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 | 19.2 | 1.94 | 7.49 | | | |
| | 3.2 | 19.4 | 1.95 | 7.51 | | | |
| | 4.8 | 19.4 | 1.95 | 7.58 | | | |
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4.8 Volume: (gallons)

SAMPLE NO.: Collected Sample No.: MW-3

ANALYSES: BTEX (8260)

COMMENTS: _____

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-4

SITE NAME: RR-EXT DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet

DEPTH TO WATER: 32.36 Feet

HEIGHT OF WATER COLUMN: 5.14 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. °C | COND. *m* S/cm | pH | DO mg\L | Turb | PHYSICAL APPEARANCE AND REMARKS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | No sample because of FPH |
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| 0.0 | Volume: (gallons) | | | | | | |

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

ANALYSES: _____

COMMENTS: _____

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-5

SITE NAME: RR-EXT DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet

DEPTH TO WATER: 31.98 Feet

HEIGHT OF WATER COLUMN: 5.52 Feet

WELL DIAMETER: 2.0 Inch

**2.8** 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 |
|---|---|---|---|---|---|---|---|
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| | | | | | | | |
| | | | | | | | Sampled at 0820 |
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| 0.0 | Volume: (gallons) | | | | | | |

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

ANALYSES: BTEX (8260)

COMMENTS: _____

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-6

SITE NAME: RR-EXT DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet

DEPTH TO WATER: 32.03 Feet

HEIGHT OF WATER COLUMN: 5.47 Feet

WELL DIAMETER: 2.0 Inch

**2.7** 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 | 20.6 | 1.83 | 7.70 | | | |
| | 3.2 | 19.0 | 1.84 | 7.62 | | | |
| | 4.8 | 19.2 | 1.84 | 7.63 | | | Sampled at 0800 |
| | | | | | | | |
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| | | | | | | | |
| | 4.8 | Volume: (gallons) | | | | | |

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

ANALYSES: BTEX (8260)

COMMENTS: Collected samples for MS and MSD analyses

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream  WELL ID: MW-7

SITE NAME: RR-EXT  DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet

DEPTH TO WATER: 32.76 Feet

HEIGHT OF WATER COLUMN: 4.74 Feet

WELL DIAMETER: 2.0 Inch

**2.4** 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 | 19.7 | 1.9 | 7.66 | | | |
| | 3.2 | 19.2 | 1.89 | 7.62 | | | |
| | 4.8 | NR | NR | NR | | | |
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| | 4.8 | Volume: (gallons) | | | | | |

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

ANALYSES: BTEX (8260)

COMMENTS: NR: reading inadvertently not recorded

# WELL SAMPLING DATA FORM

CLIENT: DCP Midstream WELL ID: MW-8

SITE NAME: RR-EXT DATE: 3/22/2010

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

PURGING METHOD: ☑ Hand Bailed ☐ Pump If Pump, Type: _____

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

DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:

☑ Gloves ☐ Alconox ☐ Distilled Water Rinse ☐ Other: _____

TOTAL DEPTH OF WELL: 37.50 Feet

DEPTH TO WATER: 31.65 Feet

HEIGHT OF WATER COLUMN: 5.85 Feet

WELL DIAMETER: 2.0 Inch

**2.9** 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 | 18.7 | 2.44 | 7.60 | | | |
| | 4 | 18.9 | 2.46 | 7.66 | | | |
| | 6.0 | 18.9 | 2.39 | 7.69 | | | |
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| | | | | | | | |
| 6.0 | Volume: (gallons) | | | | | | |

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

ANALYSES: BTEX (8260)

COMMENTS: _____

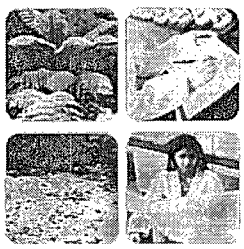
Gulf Coast ACCUTEST Laboratories

04/14/10

## Technical Report for

DCP Midstream, LLC

AECCOLI: DCP Midstream RR Ext



Accutest Job Number: T49812

Sampling Date: 03/22/10

Report to:

American Environmental Consulting

mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 36

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 (T104704220-09C-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004) OK (9103) UT(7132714700)

Sections: 1 2 3 4 5

# Table of Contents

-1-

# Sample Summary

DCP Midstream, LLC

Job No: T49812

AECCOLI: DCP Midstream RR Ext

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| T49812-1 | 03/22/10 | 17:35 | MS | 03/25/10 | AQ | Ground Water | MW-1 |
| T49812-2 | 03/22/10 | 15:25 | MS | 03/25/10 | AQ | Ground Water | MW-2 |
| T49812-3 | 03/22/10 | 17:15 | MS | 03/25/10 | AQ | Ground Water | MW-3 |
| T49812-4 | 03/22/10 | 16:40 | MS | 03/25/10 | AQ | Ground Water | MW-6 |
| T49812-4D | 03/22/10 | 16:40 | MS | 03/25/10 | AQ | Water Dup/MSD | MW-6 MSD |
| T49812-4S | 03/22/10 | 16:40 | MS | 03/25/10 | AQ | Water Matrix Spike | MW-6 MS |
| T49812-5 | 03/22/10 | 16:45 | MS | 03/25/10 | AQ | Ground Water | MW-7 |
| T49812-6 | 03/22/10 | 17:40 | MS | 03/25/10 | AQ | Ground Water | MW-8 |
| T49812-7 | 03/22/10 | 16:40 | MS | 03/25/10 | AQ | Ground Water | DUP |

## Sample Results

Report of Analysis

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-1 | | |
| Lab Sample ID: | T49812-1 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | F024821.D | 10 | 04/01/10 | RR | n/a | n/a | VF3805 |
| Run #2 | | | | | | | |

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

Purgeable Aromatics

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | 0.726 | 0.020 | 0.0050 | mg/l | |
| 108-88-3 | Toluene | 0.107 | 0.020 | 0.0043 | mg/l | |
| 100-41-4 | Ethylbenzene | 0.0879 | 0.020 | 0.0055 | mg/l | |
| 1330-20-7 | Xylene (total) | 0.0278 | 0.060 | 0.017 | mg/l | J |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 113% | | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 102% | | 75-121% |
| 2037-26-5 | Toluene-D8 | 113% | | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 125% | | 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

Accutest LabLink@42596 13:48 14-Apr-2010

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-1 | | |
| Lab Sample ID: | T49812-1 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| | | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 750 | 100 | mg/l | 100 | 04/05/10 10:45 | SS | SM 4500 CL C |

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-2 | | |
| Lab Sample ID: | T49812-2 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | F024822.D | 200 | 04/01/10 | RR | n/a | n/a | VF3805 |
| 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 | 23.8 | 0.40 | 0.10 | mg/l | |
| 108-88-3 | Toluene | 0.710 | 0.40 | 0.087 | mg/l | |
| 100-41-4 | Ethylbenzene | 0.529 | 0.40 | 0.11 | mg/l | |
| 1330-20-7 | Xylene (total) | ND | 1.2 | 0.33 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 114% | | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 102% | | 75-121% |
| 2037-26-5 | Toluene-D8 | 114% | | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 128% | | 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

Accutest LabLink@42596 13:48 14-Apr-2010

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-2 | | |
| Lab Sample ID: | T49812-2 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| | | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 700 | 100 | mg/l | 100 | 04/05/10 10:45 | SS | SM 4500 CL C |

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-3 | | |
| Lab Sample ID: | T49812-3 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | F024823.D | 100 | 04/01/10 | RR | n/a | n/a | VF3805 |
| 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 | 8.43 | 0.20 | 0.050 | mg/l | |
| 108-88-3 | Toluene | 9.14 | 0.20 | 0.043 | mg/l | |
| 100-41-4 | Ethylbenzene | 1.01 | 0.20 | 0.055 | mg/l | |
| 1330-20-7 | Xylene (total) | 2.71 | 0.60 | 0.17 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 114% | | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 103% | | 75-121% |
| 2037-26-5 | Toluene-D8 | 114% | | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 128% | | 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

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# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-3 | | |
| Lab Sample ID: | T49812-3 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| | | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

*General Chemistry*

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 440 | 10 | mg/l | 10 | 04/05/10 10:45 | SS | SM 4500 CL C |

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-6 | | |
| Lab Sample ID: | T49812-4 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | F024810.D | 1 | 04/01/10 | RR | n/a | n/a | VF3805 |
| 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 | 112% | | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 103% | | 75-121% |
| 2037-26-5 | Toluene-D8 | 114% | | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 127% | | 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

Accutest LabLink@42596 13:48 14-Apr-2010

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-6 | | |
| Lab Sample ID: | T49812-4 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| | | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 700 | 100 | mg/l | 100 | 04/05/10 10:45 | SS | SM 4500 CL C |

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-7 | | |
| Lab Sample ID: | T49812-5 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | F024826.D | 1 | 04/01/10 | RR | n/a | n/a | VF3805 |
| 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 | 113% | | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 105% | | 75-121% |
| 2037-26-5 | Toluene-D8 | 115% | | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 129% | | 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-7 | | |
| Lab Sample ID: | T49812-5 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| | | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 750 | 100 | mg/l | 100 | 04/05/10 10:45 | SS | SM 4500 CL C |

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-8 | | |
| Lab Sample ID: | T49812-6 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | F024827.D | 1 | 04/01/10 | RR | n/a | n/a | VF3805 |
| 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 | 112% | | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 103% | | 75-121% |
| 2037-26-5 | Toluene-D8 | 115% | | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 128% | | 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

Accutest LabLink@42596 13:48 14-Apr-2010

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-8 | | |
| Lab Sample ID: | T49812-6 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| | | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 800 | 100 | mg/l | 100 | 04/05/10 10:45 | SS | SM 4500 CL C |

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | DUP | | |
| Lab Sample ID: | T49812-7 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | F024847.D | 10 | 04/01/10 | RR | n/a | n/a | VF3806 |
| Run #2 | F024956.D | 10 | 04/04/10 | RR | n/a | n/a | VF3815 |

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

Purgeable Aromatics

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | 0.431 [a] | 0.020 | 0.0050 | mg/l | |
| 108-88-3 | Toluene | 0.714 | 0.020 | 0.0043 | mg/l | |
| 100-41-4 | Ethylbenzene | 0.640 | 0.020 | 0.0055 | mg/l | |
| 1330-20-7 | Xylene (total) | 0.201 | 0.060 | 0.017 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 117% | 103% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 101% | 96% | 75-121% |
| 2037-26-5 | Toluene-D8 | 115% | 105% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 131% | 101% | 80-133% |

(a) Result is from Run# 2

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

Accutest LabLink@42596 13:48 14-Apr-2010

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | DUP | | |
| Lab Sample ID: | T49812-7 | Date Sampled: | 03/22/10 |
| Matrix: | AQ - Ground Water | Date Received: | 03/25/10 |
| | | Percent Solids: | n/a |
| Project: | AECCOLI: DCP Midstream RR Ext | | |

General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 850 | 100 | mg/l | 100 | 04/05/10 10:45 | SS | SM 4500 CL C |

RL = Reporting Limit

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

# Accutest Laboratories Southeast
# Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # T49812 PAGE_____OF_____

Accutest Quote # | SKIFF#

**Client / Reporting Information**

Company Name: DCP Midstream
Address: 370 17th Street Ste 2500
City: Denver State: CO Zip: 80202
Project Contact: S. Weathers E-mail: SNWeathers@dcpmidstream.com
Phone#: 303 605 1718 Fax #:
Sampler(s) Name(s) (Printed): M. Stewart / A. Taylor

**Project Information**

Project Name: RR EXT
Street:
City: State:
Client Purchase Order #:

**Analytical Information**

BTEX 8260
Chlorides

**Matrix Codes**

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

| Accutest Sample # | Field ID / Point of Collection | COLLECTION DATE 2010 | TIME | SAMPLED BY | MATRIX | TOTAL # OF BOTTLES | CONTAINER INFORMATION: OTHER | NONE | HCl | H2SO4 | NaOH-ZnAc | DI WATER | MEOH | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-1 | 3/22 | 1135 | AEC | GW | 4 | | | X | | | | | |
| 2 | MW-2 | | 1525 | | | 4 | | | X | | | | | |
| 3 | MW-3 | | 1715 | | | 4 | | | X | | | | | |
| 4 | MW-6 | | 1640 | | | 4 | | | X | | | | | |
| 5 | MW-7 | | 1645 | | | 4 | | | X | | | | | |
| 6 | MW-8 | | 1740 | | | 4 | | | X | | | | | |
| 7 | MS/MSD MW-6 | | 1646 | | | 6 | | | X | | | | | |
| 8 | Dup | | 000 | | | 4 | | | X | | | | | |

**TURNAROUND TIME (Business Days)**

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

**Data Deliverable Information**

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

**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 | 3/24/10 600 | 2 | 3 FedEx | 03/25/10 | 4 |
| Relinquished by: | Date Time: | Received By: | Relinquished by: | Date Time: | Received By: |
| 5 | | 6 | 7 | | 8 |

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 1.4

T49812: Chain of Custody
Page 1 of 3

# SAMPLE INSPECTION FORM

Accutest Job Number: T49812 Client: DCP Midstream Date/Time Received: 03/25/10 09:25

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

Cooler Temps: #1: 1.4 #2: _____ #3: _____ #4: _____ #5: _____ #6: _____ #7: _____ #8: _____

Method of Delivery: FEDEX UPS Accutest Courier Greyhound Delivery Other

Airbill Numbers: _____

**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: 03/25/10

INFORMATION AND SAMPLE LABELING VERIFIED BY: EC 3-25-10

## CORRECTIVE ACTIONS

Client Representative Notified: _____ Date: _____

By Accutest Representative: _____ Via: Phone Email

Client Instructions:

# SAMPLE RECEIPT LOG

JOB #: T49812 DATE/TIME RECEIVED: 03/25/10 0920

CLIENT: DCP Midstream INITIALS: EF

| COOLER# | SAMPLE ID | FIELD ID | DATE | MATRIX | VOL | BOTTLE # | LOCATION | PRESERV | PH | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | MW-1 | 3/22/10 1225 | W | P125 | 1 | 3E | 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-2 | 1525 | | P125 | 1 | 3E | 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-3 | 1215 | | P125 | 1 | 3E | 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 | 1640 | | P125 | 1 | 3E | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | | | | | 40ml | 2-3 | VR | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | | MS | | | 40ml | 5-7 | | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | | MSD | | | 40ml | 8-10 | | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | 5 | MW-7 | 1645 | | P125 | 1 | 3E | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | | | | | 40ml | 2-4 | VR | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | 6 | MW-8 | 1710 | | P125 | 1 | 3E | 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 | — | | P125 | 1 | 3E | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | | | | | 40ml | 2-4 | VR | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | | | | | | | | 1 2 3 4 5 6 7 8 | <2 | >12 |
| | | | 03/25/10 | | | | | 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 ewj

**T49812: Chain of Custody**
**Page 3 of 3**



ACCUTEST Laboratories T49812

## 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: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext



| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VF3805-MB | F024809.D | 1 | 04/01/10 | RR | n/a | n/a | VF3805 |

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

T49812-1, T49812-2, T49812-3, T49812-4, T49812-5, T49812-6

| 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 | 112% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 102% | 75-121% |
| 2037-26-5 | Toluene-D8 | 114% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 127% | 80-133% |

# Method Blank Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VF3806-MB | F024832.D | 1 | 04/01/10 | RR | n/a | n/a | VF3806 |

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

T49812-7

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 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 | 112% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 106% | 75-121% |
| 2037-26-5 | Toluene-D8 | 113% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 121% | 80-133% |

# Method Blank Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext



| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VF3815-MB | F024949.D | 1 | 04/04/10 | RR | n/a | n/a | VF3815 |

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

T49812-7

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 2.0 | 0.50 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 101% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 75-121% |
| 2037-26-5 | Toluene-D8 | 104% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | 80-133% |

# Blank Spike Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VF3805-BS | F024807.D | 1 | 03/31/10 | RR | n/a | n/a | VF3805 |

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

T49812-1, T49812-2, T49812-3, T49812-4, T49812-5, T49812-6

| 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 | 25.0 | 100 | 75-112 |
| 108-88-3 | Toluene | 25 | 25.8 | 103 | 77-114 |
| 1330-20-7 | Xylene (total) | 75 | 76.8 | 102 | 75-111 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 106% | 75-121% |
| 2037-26-5 | Toluene-D8 | 114% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 110% | 80-133% |

# Blank Spike Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext



| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VF3806-BS | F024830.D | 1 | 04/01/10 | RR | n/a | n/a | VF3806 |

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

T49812-7

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | 25 | 24.9 | 100 | 75-112 |
| 108-88-3 | Toluene | 25 | 25.5 | 102 | 77-114 |
| 1330-20-7 | Xylene (total) | 75 | 76.5 | 102 | 75-111 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | 75-121% |
| 2037-26-5 | Toluene-D8 | 113% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 110% | 80-133% |

# Blank Spike Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VF3815-BS | F024947.D | 1 | 04/04/10 | RR | n/a | n/a | VF3815 |

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

T49812-7

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | 25 | 22.6 | 90 | 76-118 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 102% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | 75-121% |
| 2037-26-5 | Toluene-D8 | 104% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | 80-133% |

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext



| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| T49812-4MS | F024811.D | 1 | 04/01/10 | RR | n/a | n/a | VF3805 |
| T49812-4MSD | F024812.D | 1 | 04/01/10 | RR | n/a | n/a | VF3805 |
| T49812-4 | F024810.D | 1 | 04/01/10 | RR | n/a | n/a | VF3805 |

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

T49812-1, T49812-2, T49812-3, T49812-4, T49812-5, T49812-6

| CAS No. | Compound | T49812-4 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | | 25 | 26.9 | 108 | 26.9 | 108 | 0 | 76-118/16 |
| 100-41-4 | Ethylbenzene | ND | | 25 | 26.1 | 104 | 25.7 | 103 | 2 | 75-112/12 |
| 108-88-3 | Toluene | ND | | 25 | 27.1 | 108 | 26.5 | 106 | 2 | 77-114/12 |
| 1330-20-7 | Xylene (total) | ND | | 75 | 80.2 | 107 | 78.8 | 105 | 2 | 75-111/12 |

| CAS No. | Surrogate Recoveries | MS | MSD | T49812-4 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | 112% | 112% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 106% | 106% | 103% | 75-121% |
| 2037-26-5 | Toluene-D8 | 113% | 111% | 114% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 110% | 108% | 127% | 80-133% |

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| T49884-10MS | F024843.D | 1 | 04/01/10 | RR | n/a | n/a | VF3806 |
| T49884-10MSD | F024844.D | 1 | 04/01/10 | RR | n/a | n/a | VF3806 |
| T49884-10 | F024833.D | 1 | 04/01/10 | RR | n/a | n/a | VF3806 |

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

T49812-7

| CAS No. | Compound | T49884-10 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | ND | | 25 | 29.2 | 117* | 29.1 | 116* | 0 | 75-112/12 |
| 108-88-3 | Toluene | ND | | 25 | 30.0 | 120* | 29.7 | 119* | 1 | 77-114/12 |
| 1330-20-7 | Xylene (total) | ND | | 75 | 90.2 | 120* | 89.2 | 119* | 1 | 75-111/12 |

| CAS No. | Surrogate Recoveries | MS | MSD | T49884-10 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 114% | 113% | 112% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 110% | 106% | 103% | 75-121% |
| 2037-26-5 | Toluene-D8 | 114% | 113% | 113% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 110% | 110% | 121% | 80-133% |

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: T49812
Account: DUKE DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext



| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| T49684-1MS | F024954.D | 1 | 04/04/10 | RR | n/a | n/a | VF3815 |
| T49684-1MSD | F024955.D | 1 | 04/04/10 | RR | n/a | n/a | VF3815 |
| T49684-1 | F024953.D | 1 | 04/04/10 | RR | n/a | n/a | VF3815 |

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

T49812-7

| CAS No. | Compound | T49684-1 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | | 25 | 23.9 | 96 | 24.0 | 96 | 0 | 76-118/16 |

| CAS No. | Surrogate Recoveries | MS | MSD | T49684-1 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 102% | 101% | 101% | 79-122% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 98% | 98% | 96% | 75-121% |
| 2037-26-5 | Toluene-D8 | 103% | 104% | 104% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | 97% | 100% | 80-133% |

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: T49812
Account: DUKE - DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext

| Analyte | Batch ID | RL | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits |
|---|---|---|---|---|---|---|---|---|
| Chloride | GP8421/GN21847 | 1.0 | 0.0 | mg/l | 1000 | 1010 | 101.2 | 92-107% |

Associated Samples:
Batch GP8421: T49812-1, T49812-2, T49812-3, T49812-4, T49812-5, T49812-6, T49812-7
(*) Outside of QC limits

5.1

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T49812
Account: DUKE - DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext

| Analyte | Batch ID | QC Sample | Units | Original Result | DUP Result | RPD | QC Limits |
|---|---|---|---|---|---|---|---|
| Chloride | GP8421/GN21847 | T49812-4 | mg/l | 700 | 700 | 0.0 | 0-5% |

Associated Samples:
Batch GP8421: T49812-1, T49812-2, T49812-3, T49812-4, T49812-5, T49812-6, T49812-7
(*) Outside of QC limits

5.2

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T49812
Account: DUKE - DCP Midstream, LLC
Project: AECCOLI: DCP Midstream RR Ext

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MS Result | %Rec | QC Limits |
|---|---|---|---|---|---|---|---|---|
| Chloride | GP8421/GN21847 | T49812-4 | mg/l | 700 | 1000 | 1650 | 95.0 | 81-119% |

Associated Samples:
Batch GP8421: T49812-1, T49812-2, T49812-3, T49812-4, T49812-5, T49812-6, T49812-7
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

5.3