



June 21, 2011

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

#### RE: 1st Quarter 2011 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release (1RP-1728) Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

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Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 1st Quarter 2011 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East).

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

Sincerely

**DCP Midstream, LP** 

Stephen Weathers, PG Principal Environmental Specialist

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

#### www.dcpmidstream.com



June 2, 2011

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

### Re: Summary of the First Quarter 2011 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release, Lea County New Mexico (1RP-1728) Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the first quarter 2011 groundwater monitoring activities that were completed at the J-4-2 release location on March 30, 2011 for DCP Midstream, LP. The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 in Lea County New Mexico (Figure 1). The approximate coordinates are 32.6386 degrees north and 103.4469 degrees west.

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

#### **GROUNDWATER SAMPLING**

The depth to water and, if present, the free phase hydrocarbons (FPH), were measured in each well prior to completing the purging and sampling activities. The water-table elevations for the wells containing FPH were adjusted using the following formula:

 $GWE_{corr} = MGWE + (PT*PD)$ : 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 fluid measurements for this event are summarized in Table 2. The corrected groundwater elevations for all monitoring episodes are summarized in Table 3. FPH was measured at a thickness of 0.16 feet in MW-1 and 0.10 feet in MW-2. The historic FPH thickness values are summarized in Table 4. The residual FPH thickness of less than 0.25 feet in both wells indicates that the majority of mobile FPH have probably been removed.

Mr. Stephen Weathers J-4-2 Release Site June 2, 2011 Page 2

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

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

#### **RESULTS AND INTERPRETATIONS**

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

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

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

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

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#### **Groundwater Flow**

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

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

#### **Groundwater** Chemistry

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

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

It is also important to note that:

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

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

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

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#### CONCLUSIONS AND RECOMMENDATIONS

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

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

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

#### Sincerely, AMERICAN ENVIRONMENTAL CONSULTING, LLC

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

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

MHS/tbm

attachment

**TABLES** 

| Name | Date<br>Installed | Stickup | Casing<br>Diameter<br>(inches) | Total<br>Depth<br>(btoc) | Screen<br>Interval<br>(ground) | Sand<br>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 in  | stalled beca                   | use of drill             | ing 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            |

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

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All units are feet except as noted

btoc: Below top of casing

|   |            | Depth to     | Corrected   |
|---|------------|--------------|-------------|
| A THE AND A | Depth      | Free Phase   | Groundwater |
| Well  | to Water - | Hydrocarbons | Elevation   |
|   |            |              |             |
| MW-1  | 28.88      | 28.72        | 3711.69     |
| MW-2  | 29.35      | 29.25        | 3711.35     |
| MW-3  | 28.14      |              | 3711.25     |
| MW-4  | 28.47      |              | 3711.77     |
| MW-6  | 29.05      |              | 3710.91     |
| MW-7  | 32.37      |              | 3708.36     |
| MW-8  | 30.63      |              | 3706.69     |
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### Table 2 - Summary of First Quarter 2011 Fluid Measurements

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Units are feet

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

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

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

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

Units are feet

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Blank cells<sup>•</sup> wells not installed NM: Not measured because of probe malfunction.

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

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

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Units are feet

| Well                  | Benzene   | Toluene | Ethyl-  | Total<br>Xylenes | Chlorides |
|-----------------------|-----------|---------|---------|------------------|-----------|
| NMWQCC<br>Groundwater | 0.01      | 0.75    | 0.75    | 0.62             | 250       |
| Standard              | No Carlos |         |         |                  |           |
| MW-3                  | < 0.001   | < 0.002 | < 0.002 | < 0.002          | 2,230     |
| MW-4                  | < 0.001   | < 0.002 | < 0.002 | < 0.002          | 2,360     |
| MW-4 DUP              | < 0.001   | < 0.002 | < 0.002 | < 0.002          | 2,220     |
| MW-6                  | < 0.001   | < 0.002 | < 0.002 | <0.002           | 491       |
| MW-7                  | < 0.001   | < 0.002 | < 0.002 | < 0.002          | 1,210     |
| MW-8                  | < 0.001   | < 0.002 | < 0.002 | < 0.002          | 383       |
| trip                  | < 0.001   | < 0.002 | < 0.002 | < 0.002          | NA        |

#### Table 5 - Summary of First Quarter 2011 Groundwater Results

Notes:

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

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NA: not analyzed

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

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

Notes:

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Units are mg/l, MW-5 was not installed

Duplicates are averaged together J modifiers are not included in this table FPH: Free phase hydrocarbons present so well not sampled NI: Well not installed

NA: Not analyzed due to well obstruction

| Tab | le 7 | – Sum | mary ( | of Tol | luene | Ground | lwater | Data |
|-----|------|-------|--------|--------|-------|--------|--------|------|
|-----|------|-------|--------|--------|-------|--------|--------|------|

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

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

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 MW-8
 <0.002</td>
 <0.001</td>
 <0.002</td>

 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

 NI:
 Well not installed

NA: Not analyzed due to well obstruction

#### Table 8 – Summary of Ethylbenzene Groundwater Data

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

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

Notes: Units are mg/l,

MW-5 was not installed

Duplicates are averaged together J modifiers are not included in this table FPH: Free phase hydrocarbons present so well not sampled

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NI: Well not installed

NA: Not analyzed due to well obstruction

#### Table 9 – Summary of Total Xylenes Groundwater Data

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

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| Well | 12/20/09 | .3/10/10 | 6/13/10  | 9/29/10 | 12/8/10  | 3/30/11 |
|------|----------|----------|----------|---------|----------|---------|
| MW-1 | 0.0418   | FPH      | 0.0095   | FPH     | FPH      | FPH     |
| MW-2 | FPH      | FPH      | FPH      | FPH     | FPH      | FPH     |
| MW-3 | < 0.006  | < 0.004  | < 0.0006 | < 0.004 | < 0.004  | < 0.002 |
| MW-4 | < 0.006  | < 0.004  | < 0.0006 | < 0.004 | < 0.004  | < 0.002 |
| MW-6 | < 0.006  | NA       | < 0.0006 | < 0.004 | < 0.004  | < 0.002 |
| MW-7 | < 0.006  | < 0.004  | < 0.0006 | < 0.004 | < 0.0 04 | < 0.002 |
| MW-8 | < 0.006  | < 0.004  | < 0.0006 | < 0.004 | < 0.004  | < 0.002 |

Notes: Units are mg/l,

MW-5 was not installed

Duplicates are averaged together J modifiers are not included in this table FPH: Free phase hydrocarbons present.so well not sampled NI: Well not installed NA: Not analyzed due to well obstruction

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

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### Table 10 – Summary of Chlorides Groundwater Data

Notes:

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

**FIGURES** 

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### WELL SAMPLING DATA

### AND LABORATORY ANALYTICAL REPORT

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|   | CLIENT:                                      | DC                      | P Midstre                       | am          |            | WELL ID:   | MW-1                               |
|---|--|-------------------------|---------------------------------|-------------|------------|--|------------------------------------|
| s   | ITE NAME:                                    |                         | J 4 2                           |             |            | DATE:  | 3030/11                            |
| PRO   | DJECT NO.                                    |                         |                                 | ····        | . S/       | AMPLER:  | M. Stewart                         |
|   |  |                         |                                 |             |            |  |                                    |
| PURGING                                     | METHOD:                                      |                         | 🗌 Hand Bai                      | led 🗌 Puj   | mp If Pur  | mp, Type:  |                                    |
| SAMPLIN                                     | G METHOE                                     | ):                      | 🗸 Disposab                      | le Bailer [ | Direct f   | rom Disch  | narge Hose 🗌 Other:                |
| DESCRIB                                     | E EQUIPMI                                    | ENT DECOI               | NTAMINATI                       | ON METHO    | D BEFO     | RE SAMP  | LING THE WELL:                     |
| Glove:                                      | s 🗌 Alcono                                   | x Distill               | ed Water Rii                    | nse 🗌 O     | ther:      |  |                                    |
| TOTAL DI<br>DEPTH T<br>HEIGHT (<br>WELL DIA | EPTH OF W<br>O WATER:<br>DF WATER<br>AMETER: | /ELL:<br>COLUMN:<br>2.0 | 43.30<br>28.88<br>14.42<br>Inch |             | 7.1        | Minimum Gallons to<br>purge 3 well volumes<br>(Water Column Height x 0.49) |                                    |
| ТІМЕ  |  | TEMP.                   | COND.<br>mS/cm                  | pН          | DO<br>ma\l | Turb   | PHYSICAL APPEARANCE AND<br>REMARKS |
|   | TOROLD                                       | <b>P</b>                |                                 |             | ingte      |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  | · · ·                              |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   |  |                         |                                 |             |            |  |                                    |
|   | 0.0  | : Total volu            | me purged                       |             |            |  |                                    |
| SAMP  | LE NO.:                                      | MW-1                    |                                 |             | <u> </u>   |  |                                    |
| ANAL  | YSES:  |                         |                                 |             |            |  |                                    |
| COMN  | IENTS:                                       | Not sample              | d FPH                           |             |            |  |                                    |

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|  | CLIENT:                                      | DC  | P Midstre                       | am         | _   | WELL ID:   | MW-2                               |  |  |  |  |
|--|--|---|---------------------------------|------------|---|------------|------------------------------------|--|--|--|--|
| S  |  | <b>.</b>                                      | J 4 2                           |            | -   | DATE:      | 3030/11                            |  |  |  |  |
| PR   | DJECT NO.                                    |   |                                 |            | S   | AMPLER:    | M. Stewart                         |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
| PURGING                                    | 3 METHOD                                     | :   | 🗌 Hand Ba                       | iled 🛄 Pui | mp If Pui   | mp, Type:  |                                    |  |  |  |  |
| SAMPLIN                                    | IG METHO                                     | D:  | 🗌 Disposat                      | ble Bailer | Direct f  | from Disch | narge Hose 🗌 Other:                |  |  |  |  |
| DESCRIE                                    | BE EQUIPM                                    | ENT DECO                                      | NTAMINATI                       | ON METHO   | DD BEFO   | RE SAMP    | LING THE WELL:                     |  |  |  |  |
| ✓ Glove                                    | s 🗌 Alcono                                   | x ⊡Distill                                    | ed Water Ri                     | nse 🗌 O    | ther:   |            |                                    |  |  |  |  |
| TOTAL D<br>DEPTH T<br>HEIGHT (<br>WELL DI) | EPTH OF V<br>O WATER:<br>OF WATER<br>AMETER: | VELL:<br>COLUMN:<br>4.0                       | 43.05<br>29.28<br>13.78<br>Inch |            | <b>27.0</b> Minimum Gallons to purge 3 well volumes |            |                                    |  |  |  |  |
| TIME                                       |  | TEMP.   | COND.                           | рН         | DO  | Turb       | PHYSICAL APPEARANCE AND<br>REMARKS |  |  |  |  |
|  | TORGED                                       | <u>,                                     </u> | molom                           |            | I IIIg\L  |            | NEMARKO                            |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            | ·                                  |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
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|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            | · · · ·                            |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  |  |   |                                 |            |   |            |                                    |  |  |  |  |
|  | 0.0  | : Total volu                                  | me purged                       |            |   |            |                                    |  |  |  |  |
| SAMP                                       | LE NO.:                                      | MW-2  |                                 |            |   |            |                                    |  |  |  |  |
| ANAL                                       | YSES:  |   |                                 |            |   |            |                                    |  |  |  |  |
| COMN                                       | IENTS:                                       | Not sample                                    | d FPH                           |            |   |            |                                    |  |  |  |  |

|  | CLIENT:                                      | DC                      | P Midstre                       | am          | -                                      | WELL ID:  | MW-3                               |
|--|--|-------------------------|---------------------------------|-------------|--|---|------------------------------------|
| S  | ITE NAME:                                    |                         | J 4 2                           | ,           | -                                      | DATE:   | 3030/11                            |
| PRO  | DJECT NO.                                    |                         |                                 |             | S/                                     | AMPLER:   | M. Stewart                         |
|  |  |                         |                                 |             |  |   |                                    |
| PURGING                                    | G METHOD:                                    |                         | 🗸 Hand Bai                      | led 🗌 Pu    | mp If Pur                              | np, Type:   | ·                                  |
| SAMPLIN                                    | G METHOE                                     | <b>)</b> :              | 🗸 Disposab                      | le Bailer [ | Direct f                               | rom Disc  | harge Hose 🗌 Other:                |
| DESCRIB                                    | E EQUIPMI                                    | ENT DECO                | NTAMINATI                       | ON METHO    | D BEFO                                 | RE SAMF   | PLING THE WELL:                    |
| Glove                                      | s 🗌 Alcono                                   | x 🗌 Distill             | ed Water Ri                     | nse 🗌 C     | ther:                                  | <u> </u>  |                                    |
| TOTAL D<br>DEPTH T<br>HEIGHT (<br>WELL DI/ | EPTH OF W<br>O WATER:<br>OF WATER<br>AMETER: | /ELL:<br>COLUMN:<br>2.0 | 43.00<br>28.14<br>14.86<br>Inch |             | 7.3                                    | _Minimum Gallons to<br>purge 3 well volumes<br>(Water Column Height x 0.49) |                                    |
| TIME                                       | VOLUME<br>PURGED                             | TEMP.<br>° <b>F</b>     | COND.<br><i>m</i> S/cm          | pН          | DO<br>mg\L                             | Turb  | PHYSICAL APPEARANCE AND<br>REMARKS |
|  | 2.5  | 18.9                    | 1.62                            | 7.05        |  |   |                                    |
|  | 5.0  | 18.1                    | 1.74                            | 7.03        |  |   |                                    |
| 1  | 7.5  | 17.9                    | 1.75                            | 7.14        |  |   |                                    |
|  |  |                         |                                 |             |  |   |                                    |
|  |  |                         | · · · ·                         |             |  |   |                                    |
|  |  |                         |                                 |             |  |   |                                    |
|  |  |                         |                                 |             |  |   |                                    |
|  |  |                         |                                 | •           |  |   |                                    |
| -  |  |                         |                                 |             |  |   |                                    |
|  |  |                         |                                 |             |  |   |                                    |
|  |  |                         |                                 |             | · ·                                    |   |                                    |
|  |  |                         |                                 |             |  |   |                                    |
|  |  |                         |                                 |             |  |   |                                    |
|  | 1  |                         |                                 |             |  |   | l                                  |
|  | 7.5  | : Total volu            | me purged                       |             |  |   |                                    |
| SAMP                                       | LE NO.:                                      | MW-3                    |                                 |             | s.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |   |                                    |
| ANAL                                       | ANALYSES: <u>BTEX (8260)</u>                 |                         |                                 |             |  |   | <u> </u>                           |
| COM  | MENTS:                                       |                         |                                 |             |  |   |                                    |

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|  | CLIENT                                       | DC                      | P Midstre                      | am                   | _ `         | WELL ID:  |                                  | MW-4   |    |
|--|--|-------------------------|--------------------------------|----------------------|-------------|-----------|----------------------------------|--|----|
| s  |  | : <u> </u>              | J 4 2                          |                      | _           | DATE:     |                                  | 3030/11  |    |
| PRO  | DJECT NO                                     |                         |                                |                      | S/          | AMPLER:   |                                  | M. Stewart   |    |
|  |  |                         |                                |                      |             |           |                                  |  |    |
| PURGING                                      | G METHOD                                     | :                       | ⊡ Hand Ba                      | iled 🗌 Pu            | mp If Pur   | mp, Type: |                                  |  |    |
| SAMPLIN                                      | G METHO                                      | D:                      | 🗸 Disposat                     | le Bailer [          | Direct f    | rom Disch | narge Hos                        | e 🗌 Other:   |    |
| DESCRIB                                      | E EQUIPM                                     | ENT DECO                | NTAMINATI                      | ON METHO             | DD BEFO     | RE SAMP   | LING TH                          | E WELL:  |    |
| Glove:                                       | s 🗹 Alcono                                   | ox                      |                                |                      |             |           |                                  |  |    |
| TOTAL DI<br>DEPTH TO<br>HEIGHT (<br>WELL DIA | EPTH OF V<br>O WATER:<br>OF WATER<br>AMETER: | VELL:<br>COLUMN:<br>2.0 | 38.12<br>28.47<br>9.65<br>Inch | Feet<br>Feet<br>Feet |             | 4.7       | Minimum<br>purge 3 v<br>(Water C | Gallons to<br>vell volumes<br>olumn Height x 0.49) | )  |
| TIME   | VOLUME                                       | TEMP.<br>° <b>F</b>     | COND.<br><i>m</i> S/cm         | pН                   | DO<br>ma\L  | Turb      | PHYSIC                           | CAL APPEARANCE AN<br>REMARKS                       | 1D |
|  | 1.6  | 18.6                    | >2.0                           | 7.09                 |             |           |                                  |  |    |
|  | 3.2  | 18.7                    | >2.0                           | 7.07                 |             |           |                                  |  |    |
|  | 4.8  | 18.9                    | >2.0                           | 7.07                 |             |           |                                  |  |    |
|  |  |                         |                                |                      |             |           | L                                |  |    |
|  |  |                         |                                |                      |             |           |                                  |  |    |
|  |  |                         |                                |                      |             |           |                                  | ·  |    |
|  |  |                         |                                |                      |             |           |                                  |  |    |
|  |  |                         |                                |                      |             |           |                                  |  |    |
|  |  |                         |                                |                      |             |           |                                  | · · ·  |    |
|  |  |                         |                                |                      |             |           | ·                                |  |    |
|  |  |                         |                                |                      |             |           |                                  |  |    |
|  |  |                         |                                |                      |             |           |                                  |  |    |
|  |  |                         |                                |                      |             |           |                                  |  |    |
| _  |  |                         |                                |                      |             |           | <u>-</u>                         |  |    |
|  | 4.8  | : Total volu            | me purged                      |                      |             |           |                                  | **   | •  |
| SAMPI  | LE NO.:                                      | <u>MW-4</u>             |                                |                      |             |           |                                  |  |    |
| ANAL   | YSES:  | BIEX (826)              | U)<br>                         |                      | · · · · · · |           |                                  |  |    |
| COMM   | IENTS:                                       | Duplicate s             | ample collec                   | ted                  |             |           |                                  |  |    |

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|                                | CLIENT:                           | DC                  | P Midstre              | am          | _          | WELL ID:           | MW-6                               |
|--------------------------------|-----------------------------------|---------------------|------------------------|-------------|------------|--------------------|------------------------------------|
| S                              | ITE NAME:                         |                     | J 4 2                  |             | _          | DATE:              | 3030/11                            |
| PR                             | DJECT NO.                         |                     |                        |             | S          | AMPLER:            | M. Stewart                         |
|                                |                                   |                     |                        | 3           |            |                    |                                    |
| PURGING                        | G METHOD:                         |                     | ✓ Hand Bai             | led 🗌 Pu    | mp If Pu   | mp, Type:          |                                    |
| SAMPLIN                        | IG METHOD                         | D:                  | 🗸 Disposat             | le Bailer [ | Direct 1   | from Disch         | narge Hose 🗌 Other:                |
| DESCRIE                        | BE EQUIPMI                        | ENT DECO            | NTAMINATI              | ON METHO    | DD BEFO    | RE SAMP            | PLING THE WELL:                    |
| ✓ Glove                        | s 🗌 Alcono                        | x Distill           | ed Water Ri            | nse 🗌 C     | ther:      |                    |                                    |
| TOTAL D<br>DEPTH T<br>HEIGHT ( | EPTH OF W<br>O WATER:<br>OF WATER | VELL:<br>COLUMN:    | 34.35<br>29.05<br>5.30 |             | 2.6        | Minimum Gallons to |                                    |
|                                |                                   | 2.0                 |                        |             |            |                    | (Water Column Height x 0.49)       |
| TIME                           | VOLUME<br>PURGED                  | TÊMP.<br>° <b>F</b> | COND.<br><i>m</i> S/cm | рН          | DO<br>mg\L | Turb               | PHYSICAL APPEARANCE AND<br>REMARKS |
|                                | 1.4                               | 18.8                | 1.36                   | 7.27        |            |                    |                                    |
|                                | 2.8                               | 18.8                | 1.35                   | 7.30        | 1          |                    |                                    |
|                                | 4.2                               | 18.4                | 1.30                   | 7.36        |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
| ļ                              |                                   |                     |                        |             | ;<br>      |                    |                                    |
| ļ                              |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   |                     |                        |             |            |                    |                                    |
|                                |                                   | <b></b>             |                        |             |            |                    |                                    |
|                                | 4.2                               | : I otal volu       | me purged              |             |            | <u> </u>           |                                    |
| SAMP                           | LE NU.                            |                     |                        |             |            |                    |                                    |
| ANAL                           |                                   | BIEX (826           | 0)                     |             |            |                    |                                    |
| COM                            | VIENTS:                           |                     |                        |             |            |                    |                                    |

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|  | CLIENT:    | DCP Midstream      |                        |           | WELL ID: <b>MW-7</b>   |           |                                       |  |  |
|--|------------|--------------------|------------------------|-----------|--|-----------|---------------------------------------|--|--|
| S  | ITE NAME:  |                    | J 4 2                  |           |  | DATE:     | 3030/11                               |  |  |
| PRO  | DJECT NO.  | <u></u>            |                        |           | . S/   | AMPLER:   | M. Stewart                            |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
| PURGING  | METHOD:    |                    | 🗸 Hand Bai             | led 🗌 Pur | mp If Pur  | mp, Type: |                                       |  |  |
| SAMPLIN  |            | ):                 | 🗸 Disposab             | le Bailer | Direct f   | rom Disch | narge Hose 📃 Other:                   |  |  |
| DESCRIB  | E EQUIPM   | ENT DECO           | NTAMINATI              | ON METHC  | D BEFO   | RE SAMP   | PLING THE WELL:                       |  |  |
| Glove:   | s 🗌 Alcono | x 🗌 Distille       | ed Water Ri            | nse 🔲O    | ther:  |           |                                       |  |  |
| TOTAL DEPTH OF WELL:       39.45       Feet         DEPTH TO WATER:       32.37       Feet         HEIGHT OF WATER COLUMN:       7.08       Feet         WELL DIAMETER:       2.0       Inch |            |                    |                        |           | 3.5 Minimum Gallons to<br>purge 3 well volumes<br>(Water Column Height x 0.49) |           |                                       |  |  |
| TIME   | PURGED     | TEMP.<br><b>°F</b> | COND.<br><i>m</i> S/cm | pН        | DO<br>ma\L   | Turb      | PHYSICAL APPEARANCE AND<br>REMARKS    |  |  |
|  | 1.2        | 18.8               | 2.29                   | 7.22      |  |           |                                       |  |  |
|  | 2.4        | 19.0               | 2.23                   | 7.17      |  |           |                                       |  |  |
|  | 3.6        | 19.0               | 2.29                   | 7.15      |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        | -         |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           |                                       |  |  |
|  |            |                    |                        |           |  |           | · · · · · · · · · · · · · · · · · · · |  |  |
|  | ·          |                    |                        |           |  |           |                                       |  |  |
|  | 3.6        | : Total volur      | ne purged              |           |  |           |                                       |  |  |
| SAMPI  | E NO.:     | MW-7               |                        |           |  |           |                                       |  |  |
| ANAL   | YSES:      | BTEX (8260         | )                      |           |  |           |                                       |  |  |
| COMMENTS:  |            | Collected M        | IS/MSD                 |           |  |           |                                       |  |  |

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|  | CLIENT:          | IENT: DCP Midstream |                        | -               | WELL ID:                                      | MW-8       |  |
|--|------------------|---------------------|------------------------|-----------------|---|------------|--|
| S  | ITE NAME:        |                     | J 4 2                  |                 | _   | DATE:      | 3030/11  |
| PRO  | DJECT NO.        |                     |                        | 1               | S   | AMPLER:    | M. Stewart   |
|  |                  |                     |                        |                 |   |            |  |
| PURGING  | B METHOD:        |                     | 🗹 Hand Bai             | led 🗌 Pur       | mp If Pu                                      | тр, Туре:  |  |
| SAMPLIN  | G METHOE         | <b>)</b> :          | 🗸 Disposab             | le Bailer 🛛     | Direct f                                      | from Disch | narge Hose 🗌 Other:  |
| DESCRIB  | E EQUIPMI        | ENT DECO            | NTAMINATI              | ΟΝ ΜΕΤΗΦ        | D BEFO  | RE SAMP    | LING THE WELL:   |
| Glove:   | s 🗌 Alcono       | x 🗌 Distille        | ed Water Ri            | nse 🗌 O         | ther:   |            |  |
| TOTAL DEPTH OF WELL:       38.32 Feet         DEPTH TO WATER:       30.63 Feet         HEIGHT OF WATER COLUMN:       7.69 Feet         WELL DIAMETER:       2.0 Inch |                  |                     |                        |                 |   | 3.8        | Minimum Gallons to<br>purge 3 well volumes<br>(Water Column Height x 0.49) |
| TIME   | VOLUME<br>PURGED | TEMP.<br>° <b>F</b> | COND.<br><i>m</i> S/cm | pH <sup>·</sup> | DO<br>mg\L                                    | Turb       | PHYSICAL APPEARANCE AND<br>REMARKS   |
|  | 1.3              | 17.1                | 1.22                   | 7.38            |   |            |  |
|  | 2.6              | 18.2                | 1.16                   | 7.38            |   |            |  |
|  | 3.9              | 18.4                | 1.14                   | 7.42            |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
| •  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
| -  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
|  |                  |                     |                        |                 |   |            |  |
|  | 3.9              | : Total volu        | me purged              |                 |   |            |  |
| SAMP   | LE NO.:          | MW-8                |                        |                 |   | ,          |  |
| ANALYSES: BTEX (8260)  |                  |                     | 0)                     | •• •            |   |            |  |
| COM  | MENTS:           |                     |                        |                 | <u>,                                     </u> |            |  |

e-Hardcopy 2.0 Automated Report







Technical Report for

DCP Midstream, LP

AECCOL: J-4-2 Proj#390660601

RC-GN00

Accutest Job Number: D22249

Sampling Date: 03/30/11

Report to:

American Environmental Consulting, LLC

mstewart@aecdenver.com

ATTN: Michael Stewart

Total number of pages in report: 29



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

John Hamilton Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049) This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

Mountain States • 4036 Youngfield St. • Wheat Ridge, CO 80033-3862 • tel: 303-425-6021 • fax: 303-425-6854 • http://www.accutest.com



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### Sample Summary

#### DCP Midstream, LP

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#### Job No: D22249

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

| Sample<br>Number | Collected<br>Date | Time By | Received | Matri<br>Code | іх<br>Туре         | Client<br>Sample ID |
|------------------|-------------------|---------|----------|---------------|--------------------|---------------------|
| D22249-1         | 03/30/11          | 11:30   | 03/31/11 | AQ            | Ground Water       | MW-3                |
| D22249-2         | 03/30/11          | 11:05   | 03/31/11 | AQ            | Ground Water       | MW-4                |
| D22249-3         | 03/30/11          | 10:30   | 03/31/11 | AQ            | Ground Water       | 2MW-6               |
| D22249-4         | 03/30/11          | 10:05   | 03/31/11 | AQ            | Ground Water       | MW 7                |
| D22249=4D        | 03/30/11          | 10:05   | 03/31/11 | AQ            | Water Dup/MSD      | MW-7                |
| D22249-4M        | 03/30/11          | 10:05   | 03/31/11 | AQ            | Water Matrix Spike | MW <sup>1</sup> 7   |
| D22249-5         | 03/30/11          | 09:50   | 03/31/11 | AQ            | Ground Water       | MW-8                |
| D22249-6         | <b>03/30/11</b>   | 00:00   | 03/31/11 | AQ            | Water Dup/MSD      | DUP                 |
| D22249-7         | 03/30/11          | 00:00   | 03/31/11 | AQ            | Trip Blank Water   | TRIP_BLANK          |



#### CASE NARRATIVE / CONFORMANCE SUMMARY

| Client: | DCP Midstream, LP.          | Job No     | D22249              |
|---------|-----------------------------|------------|---------------------|
| Site:   | AECCOL. J-4-2 Pro#390660601 | Report Dat | 4/7/2011 3:41 04 PM |

On 03/31/2011, six (6) samples, one (1) Trip Blank, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 4.2°C The samples were intact and properly preserved, unless noted below. An AMS Job Number of D22249 was assigned to the project The lab sample IDs, client sample IDs, and dates of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

#### Volatiles by GCMS By Method SW846 8260B

|   | Matrix AQ                        | Batch ID:                  | V5V852        |
|---|----------------------------------|----------------------------|---------------|
| 2 | All samples were analyzed within | a the recommended method h | holding time. |

The method blank for this batch meets method specific criteria.

Samples D22249-4MS and D22249-4MSD were used as the QC samples indicated

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

| <b>_</b> | Matrix | AQ | Batch ID: | GP4132 |  |  |  |
|----------|--------|----|-----------|--------|--|--|--|
|          |        |    |           |        |  |  |  |

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

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

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

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

Page 1 of 1





Sample Results

**Report of Analysis** 



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|   | Report of Analysis                                   |   |                      |  |   |                              |                   |                            |  |  |  |  |
|---|--|---|----------------------|--|---|------------------------------|-------------------|----------------------------|--|--|--|--|
| Client Sam<br>Lab Sampl<br>Matrix:<br>Method:<br>Project: | ple ID: MW-3<br>e ID: D222<br>AQ -<br>SW84<br>AECC   | 9<br>19-1<br>Ground Wate<br>6 8260B<br>COL: J-4-2 P | er<br>roj#390660601  |  | Date S<br>Date R<br>Percen              |                              |                   |                            |  |  |  |  |
| Run #1<br>Run #2  | File ID<br>5V14500.D                                 | DF<br>1   | Analyzed<br>04/01/11 | By<br>DC                                       | Prep Da<br>n/a                          | nte                          | Prep Batch<br>n/a | Analytical Batch<br>V5V852 |  |  |  |  |
| Run #1<br>Run #2  | Purge Volume<br>5.0 ml                               | ;   |                      |  |   |                              |                   |                            |  |  |  |  |
| Purgeable   | Aromatics  |   |                      |  |   |                              |                   |                            |  |  |  |  |
| CAS No.   | Compound   |   | Result               | RL   | MDL                                     | Units                        | Q                 |                            |  |  |  |  |
| 71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7              | Benzene<br>Toluene<br>Ethylbenzene<br>Xylene (total) |   | ND<br>ND<br>ND<br>ND | 0:0010<br>0.0020<br>0.0020<br>0.0020<br>0.0020 | 0.00030<br>0.0010<br>0.00030<br>0.00060 | mg/l<br>mg/l<br>mg/l<br>mg/l |                   |                            |  |  |  |  |
| CAS No  | Surrogate Re   | coveries  | <b>Run#</b> 1        | Run# 2   | . Limi                                  | ts                           |                   |                            |  |  |  |  |
| 17060-07-0<br>2037-26-5<br>460-00-4                       | 1,2-Dichloroe<br>Toluene-D8<br>4-Bromofluor          | ethane-D4<br>obenzene                               | 83%<br>114%<br>92%   |  | 63-13<br>68-13<br>61-13                 | 30%<br>30%<br>30%            |                   |                            |  |  |  |  |

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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|                                     |                    | Page 1 of 1 |                  |        |                |      |                    |
|-------------------------------------|--------------------|-------------|------------------|--------|----------------|------|--------------------|
| Client Sample ID:<br>Lab Sample ID: | MW-3<br>D22249-1   |             |                  | Date S | Sampled: 03/30 |      |                    |
| Matrix:                             | AQ - Ground Water  |             | Date 1<br>Percer |        |                |      |                    |
| Project:                            | AECCOL: J-4-2 Proj | #39066060   | 1                |        |                |      |                    |
| General Chemistry                   | 7                  |             |                  |        |                |      |                    |
| Analyte                             | Result             | RL          | Units            | DF     | Analyzed       | Ву   | Method             |
| Chloride                            | 2230               | 50          | mg/l             | 100    | 04/04/11 13:1  | 5 CB | EPA 300/SW846 9056 |

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|  | Report of Analysis                           |   |                        |                                      |   |                                  |                   |                            |  |  |  |  |
|--|--|---|------------------------|--------------------------------------|---|----------------------------------|-------------------|----------------------------|--|--|--|--|
| Client Sam<br>Lab Sample<br>Matrix:<br>Method:<br>Project: | ple ID: M<br>e ID: D<br>A<br>SV<br>A         | IW-4<br>22249-2<br>Q - Ground W<br>W846 8260B<br>ECCOL: J-4-2 | ater<br>Proj#390660601 |                                      | Date Sa<br>Date R<br>Percent            | ampled:<br>eceived:<br>t Solids: |                   |                            |  |  |  |  |
| Run #1<br>Run #2   | File ID<br>5V14501.1                         | DF<br>D 1   | Analyzed<br>04/01/11   | By<br>DC                             | Prep Da<br>n/a                          | te                               | Prep Batch<br>n/a | Analytical Batch<br>V5V852 |  |  |  |  |
| Run #1<br>Run #2   | Purge Vol<br>5.0 ml                          | lume  |                        |                                      |   |                                  |                   |                            |  |  |  |  |
| Purgeable A  | Aromatics                                    |   |                        |                                      |   |                                  |                   |                            |  |  |  |  |
| CAS No.  | Compour                                      | nd  | Result                 | RL                                   | MDL                                     | Units                            | Q                 |                            |  |  |  |  |
| 71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7               | Benzene<br>Toluene<br>Ethylbenz<br>Xylene (t | zene<br>otal)   | NÐ<br>ND<br>ND<br>ND   | 0.0010<br>0.0020<br>0.0020<br>0.0020 | 0.00030<br>0.0010<br>0.00030<br>0.00060 | mg/l<br>mg/l<br>mg/l<br>mg/l     |                   |                            |  |  |  |  |
| CAS No.  | Surrogat                                     | e Recoveries  | Run# 1                 | Run# 2                               | Limit                                   | ts                               |                   |                            |  |  |  |  |
| 17060-07-0<br>2037-26-5<br>460-00-4                        | 1,2-Dichl<br>Toluene-I<br>4-Bromof           | loroethane-D4<br>D8<br>fluorobenzene                          | 82%<br>114%<br>94%     |                                      | 63-13<br>68-13<br>61-13                 | 80%<br>80%<br>80%                |                   |                            |  |  |  |  |

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

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



|  |                                       | Report of Analysis |       |                            |   |            |                    |  |  |  |
|--|---------------------------------------|--------------------|-------|----------------------------|---|------------|--------------------|--|--|--|
| Client Sample ID:<br>Lab Sample ID:<br>Matrix: | MW-4<br>D22249-2<br>AQ - Ground Water |                    |       | Date S<br>Date I<br>Percer | Sampled: 03/30<br>Received: 03/31<br>nt Solids: n/a | /11<br>/11 |                    |  |  |  |
| Project:                                       | AECCOL: J-4-2 Proj                    | #39066060          | 1     | 1 01 00                    |   |            |                    |  |  |  |
| General Chemistry                              | 7                                     |                    |       |                            |   |            |                    |  |  |  |
| Analyte  | Result                                | RL                 | Units | DF                         | Analyzed  | By         | Method             |  |  |  |
| Chloride                                       | 2360                                  | 50                 | mg/l  | 100                        | 04/04/11 13:2                                       | 7 СВ       | EPA 300/SW846 9056 |  |  |  |

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|   | Page 1 of 1                                      |   |                      |  |   |                              |  |                            |  |  |
|---|--|---|----------------------|--|---|------------------------------|--|----------------------------|--|--|
| Client Sam<br>Lab Sampl<br>Matrix:<br>Method:<br>Project: | ple ID: MW<br>e ID: D22<br>AQ<br>SW<br>AE0       | ID: MW-6<br>D: D22249-3<br>AQ - Ground Water<br>SW846 8260B<br>AECCOL: J-4-2 Proj#390660601 |                      |  |   |                              | Date Sampled: 03/30/11<br>Date Received: 03/31/11<br>Percent Solids: n/a |                            |  |  |
| Run #1<br>Run #2  | File ID<br>5V14502.D                             | DF<br>1   | Analyzed<br>04/01/11 | By<br>DC                                       | Prep Da<br>n/a                          | te                           | Prep Batch<br>n/a  | Analytical Batch<br>V5V852 |  |  |
| Run #1<br>Run #2  | Purge Volun<br>5.0 ml                            | ne  |                      |  |   |                              |  |                            |  |  |
| Purgeable A   | Aromatics  |   |                      |  |   |                              |  |                            |  |  |
| CAS No.   | Compound   |   | Result               | RL   | MDL                                     | Units                        | Q  |                            |  |  |
| 71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7              | Benzene<br>Toluene<br>Ethylbenzer<br>Xylene (tot | ne<br>al)   | ND<br>ND<br>ND<br>ND | 0.0010<br>0.0020<br>0.0020<br>0.0020<br>0.0020 | 0.00030<br>0.0010<br>0.00030<br>0.00060 | mg/l<br>mg/l<br>mg/l<br>mg/l |  |                            |  |  |
| CAS No.   | Surrogate  | Recoveries  | Run# 1               | Run#2  | Limit                                   | s                            |  |                            |  |  |
| 17060-07-0<br>2037-26-5                                   | 1,2-Dichlor<br>Toluene-D8                        | oethane-D4  | 84%<br>115%          |  | 63-13<br>68-13                          | 0%<br>0%                     |  |                            |  |  |

93%

ND = Not detected MDL - Method Detection Limit

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4-Bromofluorobenzene

RL = Reporting Limit

460-00-4

E = Indicates value exceeds calibration range

J = Indicates an estimated value

61-130%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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|                                     |                      | Page 1 of 1 |       |        |                         |      |                    |  |  |  |
|-------------------------------------|----------------------|-------------|-------|--------|-------------------------|------|--------------------|--|--|--|
| Client Sample ID:<br>Lab Sample ID: | MW-6<br>D22249-3     |             |       | Date   | Sampled: 03/30/         | '11  |                    |  |  |  |
| Matrix:                             | AQ - Ground Water    |             |       | Date 2 | Date Received: 03/31/11 |      |                    |  |  |  |
| Project:                            | AECCOL: J-4-2 Proj#3 |             |       |        |                         |      |                    |  |  |  |
| General Chemistry                   | 7                    |             |       |        |                         |      |                    |  |  |  |
| Analyte                             | Result               | RL          | Units | DF     | Analyzed                | By   | Method             |  |  |  |
| Chloride                            | 491                  | 10          | mg/l  | 20     | 04/04/11 13:40          | ) СВ | EPA 300/SW846 9056 |  |  |  |

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|  | Page 1 of 1  |  |                      |  |   |                                |                                 |                            |
|--|--|--|----------------------|--|---|--------------------------------|---------------------------------|----------------------------|
| Client Sam<br>Lab Sample<br>Matrix:<br>Method:<br>Project: | ple ID: MW-7<br>e ID: D2224<br>AQ -<br>SW84<br>AECC  | ,<br>Ground Wat<br>6 8260B<br>COL: J-4-2 P | er<br>Proj#390660601 |  | Date Sa<br>Date R<br>Percent            | ampled:<br>eceived<br>t Solids | 03/30/11<br>: 03/31/11<br>: n/a |                            |
| Run #1<br>Run #2   | File ID<br>5V14491.D                                 | DF<br>1                                    | Analyzed<br>04/01/11 | By<br>DC                                       | Prep Da<br>n/a                          | te                             | Prep Batch<br>n/a               | Analytical Batch<br>V5V852 |
| Run #1<br>Run #2   | Purge Volume<br>5.0 ml                               | •  |                      |  |   |                                |                                 |                            |
| Purgeable A  | Aromatics  |  |                      |  |   |                                |                                 |                            |
| CAS No.  | Compound   |  | Result               | R.L  | MDL                                     | Units                          | Q                               |                            |
| 71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7               | Benzene<br>Toluene<br>Ethylbenzene<br>Xylene (total) |  | ND<br>ND<br>ND<br>ND | 0.0010<br>0.0020<br>0.0020<br>0.0020<br>0.0020 | 0.00030<br>0.0010<br>0.00030<br>0.00060 | mg/l<br>mg/l<br>mg/l<br>mg/l   |                                 |                            |
| CAS No.  | Surrogate Re   | coveries                                   | Run# 1               | Run#2  | Limit                                   | ts                             |                                 |                            |
| 17060-07-0<br>2037-26-5                                    | 1,2-Dichloroe<br>Toluene-D8                          | ethane-D4                                  | <b>78%</b><br>113%   | ni.  | 63-13<br>68-13                          | 0%<br>0%                       |                                 |                            |

90%

ND = Not detectedMDL - Method Detection Limit

4-Bromofluorobenzene

RL = Reporting Limit

460-00-4

- E = Indicates value exceeds calibration range
- J = Indicates an estimated value

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61-130%

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



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|  |                                       | Page 1 of 1 |       |    |                |    |                    |
|--|---------------------------------------|-------------|-------|----|----------------|----|--------------------|
| Client Sample ID:<br>Lab Sample ID:<br>Matrix: | MW-7<br>D22249-4<br>AQ - Ground Water | 1<br> 1     |       |    |                |    |                    |
| Project:                                       | AECCOL: J-4-2 Proj#                   |             |       |    |                |    |                    |
| General Chemistry                              | 1                                     |             |       |    |                |    |                    |
| Analyte  | Result                                | RL          | Units | DF | Analyzed       | Ву | Method             |
| Chloride                                       | 1210                                  | 25          | mg/l  | 50 | 04/04/11 13:52 | СВ | EPA 300/SW846 9056 |

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#### RL = Reporting Limit



|   | Page 1 of 1  |   |                      |  |   |                                  |                             |                            |
|---|--|---|----------------------|--|---|----------------------------------|-----------------------------|----------------------------|
| Client Sam<br>Lab Sampl<br>Matrix:<br>Method:<br>Project: | ple ID: MW-8<br>e ID: D22249-<br>AQ - Gr<br>SW846 8<br>AECCO | 5<br>ound Water<br>8260B<br>L: J-4-2 Pr | r<br>oj#390660601    |  | Date Sa<br>Date R<br>Percen             | ampled:<br>eceived:<br>t Solids: | 03/30/11<br>03/31/11<br>n/a |                            |
| Run #1<br>Run #2  | File ID<br>5V14503.D   | <b>DF</b><br>1                          | Analyzed<br>04/02/11 | By!<br>DC                                      | Prep Da<br>n/a                          | ite                              | Prep Batch<br>n/a           | Analytical Batch<br>V5V852 |
| Run #1<br>Run #2  | Purge Volume<br>5.0 ml                                       |   |                      |  |   |                                  |                             |                            |
| Purgeable   | Aromatics  |   |                      |  |   |                                  |                             |                            |
| CAS No.   | Compound   |   | Result               | RL   | MDL                                     | Units                            | Q                           |                            |
| 71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7              | Benzene<br>Toluene<br>Ethylbenzene<br>Xylene (total)         |   | NÐ<br>ND<br>ND<br>NÐ | 0.0010<br>0.0020<br>0.0020<br>0.0020<br>0.0020 | 0.00030<br>0.0010<br>0.00030<br>0.00060 | mg/l<br>mg/l<br>mg/l<br>mg/l     |                             |                            |
| CAS No.   | Surrogate Reco   | veries                                  | Run# 1               | Run# 2   | Limi                                    | ts                               |                             |                            |
| 17060-07-0<br>2037-26-5<br>460-00-4                       | 1,2-Dichloroeth<br>Toluene-D8<br>4-Bromofluorob              | ane-D4<br>enzene                        | 77%<br>110%<br>90%   |  | 63-13<br>68-13<br>61-13                 | 30%<br>30%<br>30%                |                             |                            |

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ND = Not detected MDL - Method Detection Limit RL = Reporting Limit

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- 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 Page             |   |         |       |       |                 |    |                    |  |  |  |  |
|-------------------------------------|---|---------|-------|-------|-----------------|----|--------------------|--|--|--|--|
| Client Sample ID:<br>Lab Sample ID: | MW-8<br>D22249-5                          |         |       | Date  | Sampled: 03/30/ | 11 |                    |  |  |  |  |
| Project:                            | AQ - Ground Water<br>AECCOL: J-4-2 Proj#3 | 9066060 | 1     | Perce |                 |    |                    |  |  |  |  |
| General Chemistry                   | ,   |         |       |       |                 |    |                    |  |  |  |  |
| Analyte                             | Result                                    | RL      | Units | DF    | Analyzed        | By | Method             |  |  |  |  |
| Chloride                            | 383                                       | 5.0     | mg/l  | 10    | 04/04/11 14:05  | св | EPA 300/SW846 9056 |  |  |  |  |

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|   | Report of Analysis                                  |   |  |                                |  |  |                                    |                                   |                            |  |  |  |
|---|---|---|--|--------------------------------|--|--|------------------------------------|-----------------------------------|----------------------------|--|--|--|
| Client Sam<br>Lab Sampl<br>Matrix:<br>Method:<br>Project: | ple ID: I<br>e ID: I<br>S                           | DUP<br>D2224<br>AQ - V<br>SW846<br>AECC | 9-6<br>Vater Dup/N<br>5 8260B<br>OL: J-4-2 P | /ISD<br>roj#390660601          |  | Date Sa<br>Date R<br>Percen                      | ampled:<br>eceived<br>t Solids     | : 03/30/11<br>: 03/31/11<br>: n/a |                            |  |  |  |
| Run #1<br>Run #2  | File ID<br>5V14504                                  | .D                                      | DF<br>1                                      | Analyzed<br>04/02/11           | By<br>DC                                       | Prep Da<br>n/a                                   | ite                                | Prep Batch<br>n/a                 | Analytical Batch<br>V5V852 |  |  |  |
| Run #1<br>Run #2  | Purge Vo<br>5.0 ml                                  | olume                                   |  |                                |  |  | •                                  |                                   |                            |  |  |  |
| Purgeable A   | Aromatics   | 5                                       |  |                                |  |  |                                    |                                   |                            |  |  |  |
| CAS No.   | Compou  | ınd                                     |  | Result                         | RL   | MDL  | Units                              | Q                                 |                            |  |  |  |
| 71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>CAS No.   | Benzene<br>Toluene<br>Ethylber<br>Xylene<br>Surroga | nzene<br>(total)<br>ite Re              | coveries                                     | ND<br>ND<br>ND<br>ND<br>Run# 1 | 0.0010<br>0.0020<br>0.0020<br>0.0020<br>Run# 2 | 0.00030<br>0.0010<br>0.00030<br>0.00060<br>Limit | mg/l<br>mg/l<br>mg/l<br>mg/l<br>ts |                                   |                            |  |  |  |
| 17060-07-0<br>2037-26-5<br>460-00-4                       | 1,2-Dicl<br>Toluene<br>4-Bromo                      | ıloroe(<br>-D8<br>əfluoro               | hane-D4<br>obenzene                          | 80%<br>1114%<br>92%            |  | 63-13<br>68-13<br>61-13                          | 80%<br>80%<br>80%                  |                                   |                            |  |  |  |

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ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

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- 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



|                                     |   | Page 1 of 1 |       |                  |                  |    |                    |
|-------------------------------------|---|-------------|-------|------------------|------------------|----|--------------------|
| Client Sample ID:<br>Lab Sample ID: | DUP<br>D22249-6                             |             |       | Date S           | Sampled: 03/30/1 |    |                    |
| Project:                            | AQ - Water Dup/MSD<br>AECCOL: J-4-2 Proj#39 | 066060      | 1     | Date I<br>Percer | •                |    |                    |
| General Chemistry                   | 7   |             |       |                  |                  |    |                    |
| Analyte                             | Result                                      | RL          | Units | DF               | Analyzed         | By | Method             |
| Chloride                            | 2220  | <u>50</u>   | mg/l  | 100              | 04/04/11 14:18   | СВ | EPA 300/SW846 9056 |

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|   | Page 1 of 1  |  |                         |  |   |                                  |                                 |                            |
|---|--|--|-------------------------|--|---|----------------------------------|---------------------------------|----------------------------|
| Client Sam<br>Lab Sampl<br>Matrix:<br>Method:<br>Project: | ple ID: TRIP  <br>e ID: D2224<br>AQ - 7<br>SW846<br>AECC | BLANK<br>9-7<br>Frip Blank V<br>6 8260B<br>OL: J-4-2 F | Vater<br>Proj#390660601 |  | Date Sa<br>Date R<br>Percen             | ampled:<br>eceived:<br>t Solids: | 03/30/11<br>: 03/31/11<br>: n/a |                            |
| Run #1<br>Run #2  | File ID<br>5V14505.D                                     | DF<br>1  | Analyzed<br>04/02/11    | By<br>DC                                       | Prep Da<br>n/a                          | ite                              | Prep Batch<br>n/a               | Analytical Batch<br>V5V852 |
| Run #1<br>Run #2  | Purge Volume<br>5.0 ml                                   |  |                         |  |   |                                  |                                 |                            |
| Purgeable .   | Aromatics  |  |                         |  |   |                                  |                                 |                            |
| CAS No.   | Compound   |  | Result                  | RL   | MDL                                     | Units                            | Q                               |                            |
| 71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7              | Benzene<br>Toluene<br>Ethylbenzene<br>Xylene (total)     |  | ND<br>ND<br>ND          | 0:0010<br>0:0020<br>0:0020<br>0:0020<br>0:0020 | 0.00030<br>0.0010<br>0.00030<br>0.00060 | mg/l<br>mg/l<br>mg/l<br>mg/l     |                                 |                            |
| CAS No.   | Surrogate Re   | coveries   | Run# 1                  | Rjun# 2  | Limi                                    | ts                               |                                 |                            |
| 17060-07-0<br>2037-26-5                                   | 1,2-Dichloroe<br>Toluene-D8                              | thane-D4   | 79%<br>115%             |  | 63-13<br>68-13                          | 30%<br>30%                       |                                 |                            |

91%

ND = Not detected MDL - Method Detection Limit

4-Bromofluorobenzene

460-00-4

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

61-130%

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





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Misc. Forms **Custody Documents and Other Forms** Includes the following where applicable: • Chain of Custody . --- 43



|                       |  |                               |  | CHAI                  | NO            | DF C               | CUST                      | 0            | DY            | •               |                 |           |                  |                     |                   |            |   |       |             | PA        | GE        |               | OF       | : <u> </u>                      |
|-----------------------|--|-------------------------------|--|-----------------------|---------------|--------------------|---------------------------|--------------|---------------|-----------------|-----------------|-----------|------------------|---------------------|-------------------|------------|---|-------|-------------|-----------|-----------|---------------|----------|---------------------------------|
|                       | ACCUTE                                   | ST                            |  |                       |               |                    |                           |              |               |                 |                 |           | FED              | EX Track            | ng #              |            |   |       | Bottle      | Order Con | trol #    |               |          |                                 |
| L                     | LABORA                                   | TORIES                        |  | 4036 Young<br>TEL, 30 | field Stree   | et, Wheat I        | Ridge, CO I<br>303-425-68 | 80033<br>854 |               |                 |                 |           | Accutest Quote # |                     |                   |            |   |       |             |           |           |               |          |                                 |
| NOT THE MA            |  | A State of the Section of the |  |                       | www.4         | acculest.co        | מא                        | the o        |               |                 |                 | 10-17 W H |                  |                     |                   |            |   |       |             |           | D         | 24            | -        | 49                              |
| 编出之间                  | Client / Reporting Information           | Project Name                  | DC9 14.2                                     | Project               | Informa       | tion               | E.MAY                     | i se s       | 2-1-39        | či ste          | 25.             | 14 P 44 1 | 16 19 19         | Re                  | queste            | d Ana      | lysis (                                 | see T | EST C       | ODE s     | heet)     |               | T. i.e.  | Matnx Codes                     |
| Company N             | lame                                     | r rojuči rašno                | DCF 344-2                                    |                       |               |                    |                           |              |               |                 |                 |           |                  |                     |                   |            |   |       |             |           |           |               |          | DW - Dooking Water              |
| Americ<br>Stroot Addo | an Environmental Consulting              | Skeet                         |  |                       | Dat of Street | Without a          | JU HIGH VON               | 1 485        | and to a      | d um if         |                 | 1         |                  |                     |                   | 1          |   |       |             |           |           |               |          | GW - Ground Water               |
| 6995 9                | Marshall Street Suite 1                  | 2000                          |  |                       | Billing b     | to and full 1      | en alle differe           | 18-7056.<br> | 1             | <u>973</u>      | <u></u>         | 201 20.20 | 24               | 1                   |                   |            |   |       |             |           |           |               |          | SW - Surface Water              |
| City                  | majanan Street Suite S                   | City                          |  | State                 | Compan        | y Name             | ភា ក្រា ជនោមទ             | ent n        | UT RE         | pont            |                 |           | -                | 1                   | 1                 |            | 1                                       | 1     | 1           |           |           |               |          | SU - Soli<br>SL - Sludge        |
| Littleto              | n CO 80128                               |                               |  |                       | DCP           | Midstre            | am                        |              |               |                 |                 |           |                  |                     |                   | 1          |   |       |             |           |           |               |          | SED-Sediment<br>OI - OII        |
| Project Con           | lact                                     | Project #                     |  |                       | Street Ac     | ddreas<br>Box 4870 | ,                         |              |               |                 |                 |           |                  |                     | Ă                 |            |   |       |             |           |           |               |          | LIQ - Other Liquid<br>AIR - Arr |
| Michae<br>Phone #     | el Stewart mstewart@aecdenver            | Client Purchase               | Project - 390660<br>Order #                  | 601                   | City          |                    |                           |              |               |                 |                 |           |                  |                     | 808               |            |   |       | ł           |           |           |               |          | SOL - Other Solid               |
| 303-60                | 5-1718                                   |                               |  |                       | Porti         | land OF            | 97208-                    | 4870         |               |                 |                 |           |                  |                     | 826               | ł          |   |       |             |           |           |               |          | FB-Field Blank                  |
| Sampler(s)            | Name(s)                                  | Project Manager               | r  |                       | Attention     | 1                  |                           |              |               |                 |                 |           | ٦×               |                     | 1 Z               |            |   |       |             | Í         |           |               |          | RB Rinse Blank                  |
|                       |  |                               |  |                       | Steve         | Weather            | SWWent                    | herse        | dcpm          | Idstra          | oam.c           | m         | 16               | 1                   | 6                 |            |   |       |             | ł.        | 1 1       |               |          | TB-Top Blank                    |
|                       |  |                               | <u> </u>                                     | Collection            |               |                    |                           |              | Numpe         | of pre          | rserved<br>1    | Bottles   | - 20             | Ι.                  | NS I              |            |   |       |             |           |           |               | ł        |                                 |
| Accutest<br>Sampie #  | Field ID / Point of Collection           | MEOH/DI V al #                | Date   | Time                  | Sampled<br>by | Matrix             | # of bottles              | i H          | HN03          | H2SD4           | DI Wali         | RECH      | 282              | 통                   | WS/               |            |   |       |             |           |           |               |          | LAB USE ONLY                    |
|                       | ALL REAL                                 |                               |  |                       |               | GW                 | 4                         | 3            |               |                 | 1               |           | x                | X                   |                   |            |   |       |             |           |           |               |          | D+                              |
|                       | Miria-                                   |                               |  |                       |               | GW                 | 4                         | з            |               | 1               | 1               |           | X                | X                   |                   |            |   |       |             |           |           |               |          | PE -                            |
|                       | MW-3                                     |                               | 300-30                                       | 1130                  |               | GW                 | 4                         | з            |               | 1               | 1               |           | X                | X                   |                   |            |   |       |             |           |           |               |          | -DBADI                          |
|                       | MW-4                                     |                               | 3/30   | 1105                  |               | GW                 | 4                         | 3            |               | 1               | 1               |           | X                | x                   | 1                 |            |   |       |             | 1         |           |               |          | 02                              |
|                       | MW-6                                     |                               | 330  | 1030                  |               | GW                 | 4                         | 3            | Т             | 1               |                 |           | x                | x                   |                   |            |   |       |             |           |           |               |          | 03                              |
|                       | MW-7                                     |                               | 330  | 1005                  |               | GW                 | 4                         | 3            | 17            | 1               | •               |           | X                | X                   |                   |            |   |       |             |           |           |               | $\neg$   | 04                              |
|                       | MW-8                                     |                               | 330  | 0950                  |               | GW                 | 4                         | 3            |               | 1               | 1               |           | X                | X                   | 1                 |            |   |       |             |           |           |               |          | OS                              |
|                       | DUP                                      |                               | 3 3D   | 1                     |               | GW                 | 4                         | 3            |               | 1               | 1               | П         | X                | X                   |                   |            |   |       |             |           |           |               |          | 06                              |
|                       | MW-7 MS/MSD                              |                               | 730  | por                   |               | GW                 | 6                         | 6            |               |                 |                 |           |                  |                     | x                 |            |   |       |             |           |           |               |          | 04                              |
|                       | Trip Blank                               |                               | ڊ<br>ب                                       |                       |               |                    | 1                         |              |               |                 |                 |           | X                |                     |                   |            |   |       |             |           |           |               |          | 70                              |
|                       |  |                               |  |                       |               |                    |                           | _            | Ľ.            | _               |                 |           |                  |                     |                   |            |   |       | <u> </u>    | ļ         |           | $\rightarrow$ | _        |                                 |
|                       |  | r a salahin in thi            | P 1011 - Che - 11 - 1                        |                       |               |                    |                           |              | Ľ             |                 |                 |           |                  |                     |                   | L          | <u> </u>                                |       | L           | ļ         |           |               |          | 7                               |
|                       | Turnaround Time ( Business days)         | Annument By (Acc              | fit fur" en finer i Sing<br>utest PMI / Date | winder - in           | 100           | Commerc            | Data C                    | Jeirvez      | natie li<br>N | 10m             | ation<br>Tista  | e Forme   | Recuto           | na haise<br>Dahaise | 1,4 19454<br>  .4 | 4,769-97-1 | - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 | Con   | ments       | / Specia  | ป โกรโกมด | aons          | 5.4.3    | Constant and the second         |
| H                     | Std. 10 Business Days                    |                               |  |                       | 日             | Commerc            | iat "B" ( La              | evel 2)      | ,<br>}        | F               | ]Sen            | d Forms   | to State         | ~                   | Ema               | ail res    | sults                                   | to St | eve V       | Veath     | ers       |               |          |                                 |
| ŭ                     | Day RUSH                                 |                               |  |                       |               | COMMEN             |                           |              |               | Ē               | Rep             | ort by Fi | NX.              |                     |                   |            |   |       |             |           |           |               |          |                                 |
|                       | Day Emergency                            |                               |  |                       |               | COMMEN             | i+                        |              |               | X               | Rep             | on by PDi | •                |                     |                   |            |   |       |             |           |           |               |          |                                 |
| <u> </u>              | Day Emergency                            |                               |  |                       |               |                    |                           |              | _             |                 | ED              | ) Format  |                  | -                   |                   |            |   |       |             |           |           |               |          |                                 |
|                       | Day Emergency                            |                               |  |                       |               |                    | Commerce                  | al "A" :     | = Flesu       | its On          | niy<br>An Fu    |           |                  |                     | -                 |            |   |       |             |           |           |               |          |                                 |
| Emerger               | ncy & Rush T/A data available VIA Labini | k                             |  |                       |               |                    | Commercial                | BN = F       | Results/      | na + u<br>DC/Na | ac su<br>mative | + = chrom | ustograms        | ,                   | 1                 |            |   |       |             |           |           |               |          |                                 |
| skith Jan             |  | Sa                            | mple Custody m                               | st be docum           | ented be      | low eacl           | time san                  | nples        | chang         | ie po           | ssess           | lon, Inc  | luding           | ourler              | deliver           | ( <u>.</u> |   |       | 123.2       | Hann S d  | 轨动的       | a bu jai      | .2,503   | 行之后的制度建筑的                       |
| Relinquial            | had by Sampler                           | Date Time<br>1210 5-31        | 1 Valas                                      | ) ONH                 | 43            | 31/11              | 121                       | Reling<br>2  | uished        | By              |                 |           |                  |                     |                   | Date T     | ime                                     |       | Receiv<br>2 | ed By     |           |               |          |                                 |
| Relinquis             | hed by Sampler                           | Date Time                     | Received By                                  | 1                     |               | 1 7 -              |                           | Reling<br>4  | wished        | By:             |                 |           | ,                |                     |                   | Date T     | Ime                                     |       | Receiv<br>4 | ed By     |           |               |          |                                 |
| Rellaquis             | hed by                                   | Date Time                     | Received By                                  |                       |               |                    |                           | Custo        | dy lieal      | *               |                 | 2         | inter            | (ari                | Preser            | ved whe    | re applic                               | able  | • ·         | •         | On Ice    |               | Caaler   | Temp 42                         |
| <i>,</i>              |  | l                             | L  |                       |               |                    |                           |              |               |                 |                 | `         | - 140( 8         |                     |                   |            |   |       |             |           |           |               | <u> </u> |                                 |

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### D22249: Chain of Custody Page 1 of 2

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| ACCUTES"   | Te  |
|------------|-----|
| LABORATORI | E 5 |

#### Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D22249 Client: AMERICAN ENV CONSULTING Immediate Client Services Action Required: No Client Service Action Required at Login: Date / Time Received: 3/31/2011 12 10 00 PM No No. Coolers: 1 Project: DCP-J-4-2 Airbill #'s: HD Cooler Security Y or N Y or N Sample Integrity - Documentation Y or N 3 COC Present  $\checkmark$  $\checkmark$ 1 Custody Seals Present  $\checkmark$ 1 Sample labels present on bottles V 4 Smpl Dates/Time OK V 2 Custody Seals Intact 2 Container labeling complete ✓ 3 Sample container label / COC agree Cooler Temperature Y or N 1 Temp criteria achieved Y or N Sample Integrity - Condition 2. Cooler temp verification Infared gun ✓ 1 Sample recvd within HT 3. Cooler media Ice (bag) 2 All containers accounted for V Quality Control Preservation 3 Condition of sample Y or N N/A Intact 1. Trip Blank present / cooler Sample Integrity - Instructions Y or N N/A 2 Trip Blank listed on COC 1 Analysis requested is clear Ø V 3 Samples preserved properly 2 Bottles received for unspecified tests 4 VOCs headspace free 3 Sufficient volume rec'd for analysis ~ 4 Compositing instructions clear Z 5 Filtering instructions clear. Z Comments 4036 Youngfield Street F (303) 425-6854 Accutest Laboratories V (303) 425-6021 Wheat Ridge, CO www/accutest.com

D22249: Chain of Custody Page 2 of 2





## GC/MS Volatiles

### QC Data Summaries

Mountain States

LABORATORIES

1787

Includes the following where applicable:

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



#### Method Blank Summary

| Job Number:<br>Account:<br>Project: | D22249<br>DCPMCODN I<br>AECCOL: J-4-7 | OCP Mid<br>2 Proj#3 | lstream, LP<br>90660601 |    |           |            |                  |
|-------------------------------------|---------------------------------------|---------------------|-------------------------|----|-----------|------------|------------------|
| Sample                              | File ID                               | DF                  | Analyzed                | By | Prep Date | Prep Batch | Analytical Batch |
| V5V852-MB                           | 5V14489.D                             | 1                   | 04/01/11                | DC | n/a       | n/a        | V5V852           |

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The QC reported here applies to the following samples:

Method: SW846 8260B

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

| CAS No.   | Compound       | Result | RL  | MDL  | Units Q |
|-----------|----------------|--------|-----|------|---------|
| 71-43-2   | Benzene        | ND     | 1.0 | 0.30 | ug/l    |
| 100-41-4  | Ethylbenzene   | ND     | 2.0 | 0.30 | ug/l    |
| 108-88-3  | Toluene        | ND     | 2.0 | 1.0  | ug/l    |
| 1330-20-7 | Xylene (total) | ND     | 2.0 | 0.60 | ug/l    |

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

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Page 1 of 1

5.1.1 5

#### Blank Spike Summary Job Number: D22249

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| Account:<br>Project: | DZZZ49<br>DCPMCODN I<br>AECCOL: J-4- | DCP Mic<br>2 Proj#3 | lstream, LP<br>90660601 |          |                  |                   |                            |
|----------------------|--------------------------------------|---------------------|-------------------------|----------|------------------|-------------------|----------------------------|
| Sample<br>V5V852-BS1 | File ID<br>5V14490.D                 | DF<br>1             | Analyzed<br>04/01/11    | By<br>DC | Prep Date<br>n/a | Prep Batch<br>n/a | Analytical Batch<br>V5V852 |
| The QC repor         | ted here applies                     | to the fo           | llowing sample          | s:       | ]                | Method: SW84      | 6 8260B                    |

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

| CAS No.                                      | Compound  | Spike<br>ug/l         | BSP<br>ug/l                 | BSP<br>%                      | Limits                               |
|--|---|-----------------------|-----------------------------|-------------------------------|--------------------------------------|
| 71-43-2<br>100-41-4<br>108-88-3<br>1330-20-7 | Benzene<br>Ethylbenzene<br>Toluene<br>Xylene (total)        | 50<br>50<br>50<br>100 | 55.1<br>55.6<br>52.4<br>101 | 110<br>110<br>105<br>101      | 70-130<br>70-130<br>70-140<br>55-134 |
| CAS No.                                      | Surrogate Recoveries  | BSP                   | ]                           | Limits                        |                                      |
| 17060-07-0<br>2037-26-5<br>460-00-4          | 1,2-Dichloroethane-D4<br>Toluene-D8<br>4-Bromofluorobenzene | 79%<br>117%<br>99%    |                             | 53-130%<br>58-130%<br>51-130% |                                      |



Page 1 of 1

5.2.1 **5** 

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#### Matrix Spike/Matrix Spike Duplicate Summary

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

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

The QC reported here applies to the following samples:

Method: SW846 8260B

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

| CAS No.    | Compound              | D22249-4<br>ug/l ( | Spike<br>Q ug/1 | MS<br>ug/l | MS<br>%  | MSD<br>ug/l | MSD<br>% | RPD   | Limits<br>Rec/RPD |
|------------|-----------------------|--------------------|-----------------|------------|----------|-------------|----------|-------|-------------------|
| 71-43-2    | Benzene               | ND                 | 25              | 30.4       | 122      | 30.5        | 122      | 0     | 59-132/30         |
| 100-41-4   | Ethylbenzene          | ND                 | 25              | 30.4       | 122      | 30.6        | 122      | 1     | 68-130/30         |
| 108-88-3   | Toluene               | ND                 | 25              | 28.3       | 114      | 28.7        | 114      | 1 2 3 | 56-142/30         |
| 1330-20-7  | Xylene (total)        | ND ·               | 50              | 54.7       | 110      | 54.8        | 110,     | 0     | 36-146/30         |
| CAS No.    | Surrogate Recoveries  | MS                 | MSD             | D2         | 22249-4  | Limits      |          |       |                   |
| 17060-07-0 | 1.2-Dichloroethane-D4 | 78%                | 79%             | 78         | <b>%</b> | 63-130      | %        |       |                   |
| 2037-26-5  | Toluene-D8            | 115%               | 115%            | 11         | 3%       | 68-130      | %        |       |                   |
| 460-00-4   | 4-Bromofluorobenzene  | 96%                | 97%             | 90         | %        | 61-130      | %        |       |                   |

(a) Spiked at 1/2.

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5.3.1 5

## General Chemistry

### QC Data Summaries

海流的方力

Mountain States

LABORATORIES

Includes the following where applicable:

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



### METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

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# Login Number· D22249 Account: DCPMCODN - DCP Midstream, LP Project: AECCOL: J-4-2 Proj#390666601

| Analyte  | Batch ID      | RL   | MB<br>Result | Units | Spike<br>Amount | BSP<br>Result | BSP<br>%Recov | QC<br>Limits |
|----------|---------------|------|--------------|-------|-----------------|---------------|---------------|--------------|
| Chloride | GP4132/GN8963 | 0.50 | 0.0          | mg/l  | 20              | 18.6          | 93/.0         | 90-110%      |
| Fluoride | GP4132/GN8963 | 0.20 |              | mg/l  | 10              | 9.59          | 95.9          | 90-110%      |

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

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### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

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

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

Associated Samples:

Associated Samples: Batch GP4132: D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6 (\*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits

6.2

### MATRIX SPIKE DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

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# Login Number: D22249 Account: DCPMCODN - DCP Midstream, LP Project: AECCOL: J-4-2 Proj#390666601

| Analyte  | Batch ID      | QC<br>Sample | Units | Original<br>Result | Spike<br>Amount | MSD<br>Result | RPD | QC<br>Limit |
|----------|---------------|--------------|-------|--------------------|-----------------|---------------|-----|-------------|
| Chloride | GP4132/GN8963 | D22149-1     | mg/l  | 1.8                | 10              | 11.8          | 0:8 | 20%         |
| Fluoride | GP4132/GN8963 | D22149-1     | mg/l  | 0.36               | 2.5             | 2.7           | 0:0 | 20%         |

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Associated Samples: Batch GP4132: D22249-1, D22249-2, D22249-3, D22249-4, D22249-5, D22249-6 (\*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits

