



**PDC Energy, Inc.**  
**Fourth Quarter 2012 Groundwater Monitoring Summary**

January 29, 2013

Becker 5-1, 2, 14, 15 Tank Battery  
SE 1/4 Section 5 T3N R64W  
Weld County, API # 05-123-12297

This groundwater summary has been prepared by Tasman Geosciences, LLC for the Becker 5-1, 2, 14, 15 tank battery. Three temporary monitoring wells were installed on December 13, 2012 for groundwater monitoring and remediation purposes. On December 20, 2012 groundwater sampling was conducted at three monitoring well locations. Groundwater samples were submitted for laboratory analysis of BTEX constituents using USEPA Method 8260B. Analytical results are summarized in Table 1 below and a complete lab report is included as Attachment A. Sample locations and corresponding analytical results are illustrated on Figure 2. Fourth quarter analytical results indicate benzene concentrations are in exceedance of COGCC regulatory standards in BH01 and BH02. Elevated total xylenes were also observed in BH02 during the fourth quarter monitoring period. BTEX concentrations were below laboratory detection limits in BH03.

Tasman will initiate bi-weekly enhanced fluid recovery (EFR) and air sparging (AS) events during the first quarter 2013 to address residual dissolved phase petroleum hydrocarbon concentrations in groundwater. Chemical oxidation injections may be implemented as a final polishing technique, if warranted.

First quarter 2013 groundwater sampling will be conducted during March 2013.

**TABLE 1**  
**BECKER 5-1, 2, 14, 15**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE**

| Sample ID  | Date Sampled | Benzene (ug/L) | Toluene (ug/L) | Ethylbenzene (ug/L) | Total Xylenes (ug/L) | Depth to Water (feet) |
|--|--------------|----------------|----------------|---------------------|----------------------|-----------------------|
| GW01   | 11/29/2012   | <b>3,100</b>   | <b>610</b>     | 320                 | <b>3,700</b>         | 16                    |
| BH01   | 12/20/2012   | <b>97</b>      | <1.0           | 180                 | 1,200                | 13.24                 |
| BH02   | 12/20/2012   | <b>170</b>     | 1.6            | 490                 | <b>1,700</b>         | 10.20                 |
| BH03   | 12/20/2012   | <1.0           | <1.0           | <1.0                | <1.0                 | 12.78                 |
| <b>COGCC standards for Groundwater (ug/L) <sup>(1)</sup></b> |              | <b>5</b>       | <b>560</b>     | <b>700</b>          | <b>1,400</b>         |                       |

Notes:

1). The environmental cleanup standards for groundwater that are applicable to this site are the Colorado Oil and Gas Conservation Commission (COGCC) standards for contaminants in groundwater according to Table 910-1 of the COGCC 900 Series Rule for E&P Waste Management.

**Bold** red values indicate an exceedance of the COGCC groundwater standards for the Site.

ug/L= Micrograms per liter.

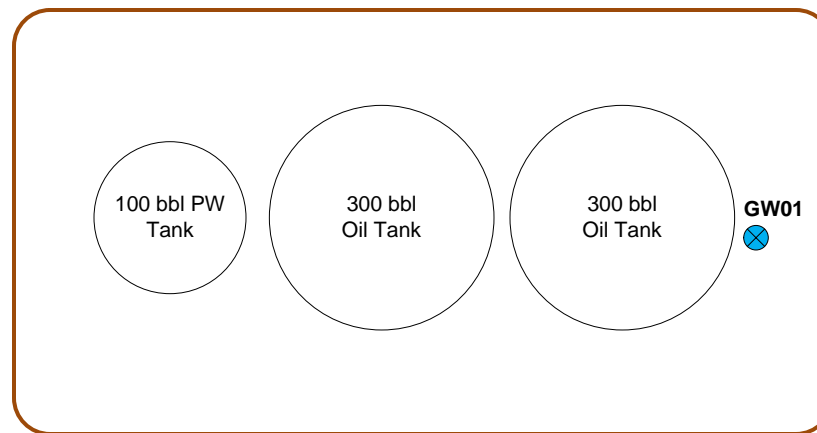


### DCP / PDC Tank Battery

Property Fence

BH03

| BH03            |            |
|-----------------|------------|
| Compound (ug/L) | 12/20/2012 |
| Benzene         | <1.0       |
| Toluene         | <1.0       |
| Ethylbenzene    | <1.0       |
| Total Xylenes   | <1.0       |



BH01

| BH01            |            |
|-----------------|------------|
| Compound (ug/L) | 12/20/2012 |
| Benzene         | 97         |
| Toluene         | <1.0       |
| Ethylbenzene    | 180        |
| Total Xylenes   | 1,200      |

BH02

| BH02            |            |
|-----------------|------------|
| Compound (ug/L) | 12/20/2012 |
| Benzene         | 170        |
| Toluene         | 1.6        |
| Ethylbenzene    | 490        |
| Total Xylenes   | 1,700      |

Separator 10 bbl

Separator 10 bbl

Note: Surface drainage is approximated based on visual observation of the tank battery. It is not based on regional topography.

DRAWN BY: CAW

DATE: 1/14/2013

**Facility Diagram**  
PDC Energy – DJ Basin  
Becker 5-1, 2, 14, 15  
SE 1/4 S5 T3N R64W  
Weld County, CO



6899 Pecos Street  
Unit C  
Denver, CO 80221

#### LEGEND

- Earthen Berm
- Temporary Monitoring Well
- Groundwater Sample Location Collected During Excavation Activities

**FIGURE 2**  
**GROUNDWATER**  
**ANALYTICAL RESULTS**  
Not to Scale

## **ATTACHMENT A**

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 27, 2012

Brandon Bruns  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Becker 5-1,2,14,15

Enclosed are the results of analyses for samples received by Summit Scientific on 12/21/12 12:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph J. Egry IV". The signature is stylized with a large, sweeping initial "J" and a distinct "IV" at the end.

Joseph J Egry IV  
Laboratory Director



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
12/27/12 15:50

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| BH01      | R212143-01    | Water  | 12/20/12 13:20 | 12/21/12 12:00 |
| BH02      | R212143-02    | Water  | 12/20/12 13:25 | 12/21/12 12:00 |
| BH03      | R212143-03    | Water  | 12/20/12 13:30 | 12/21/12 12:00 |

Summit Scientific

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*





PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
12/27/12 15:50

**BH01**  
**R212143-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/20/12 13:20

| Analyte                | Result      | Reporting |  | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|------------------------|-------------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
|                        |             | Limit     |  |       |          |         |          |          |           |       |
| <b>Benzene</b>         | <b>97</b>   | 1.0       |  | ug/l  | 1        | 2122608 | 12/26/12 | 12/27/12 | EPA 8260B |       |
| Toluene                | ND          | 1.0       |  | "     | "        | "       | "        | "        | "         |       |
| <b>Ethylbenzene</b>    | <b>180</b>  | 1.0       |  | "     | "        | "       | "        | "        | "         |       |
| <b>Xylenes (total)</b> | <b>1200</b> | 100       |  | "     | 100      | "       | "        | 12/27/12 | "         |       |

Date Sampled: 12/20/12 13:20

| Analyte                          | Result | Reporting |  | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     |  |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 107 %     |  | 37-154 |          | "     | "        | 12/27/12 | "      |       |
| Surrogate: Toluene-d8            |        | 115 %     |  | 45-149 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 75.7 %    |  | 45-146 |          | "     | "        | "        | "      |       |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
12/27/12 15:50

**BH02**  
**R212143-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/20/12 13:25

| Analyte                | Result      | Reporting |  | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|------------------------|-------------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
|                        |             | Limit     |  |       |          |         |          |          |           |       |
| <b>Benzene</b>         | <b>170</b>  | 1.0       |  | ug/l  | 1        | 2122608 | 12/26/12 | 12/27/12 | EPA 8260B |       |
| <b>Toluene</b>         | <b>1.6</b>  | 1.0       |  | "     | "        | "       | "        | "        | "         |       |
| <b>Ethylbenzene</b>    | <b>490</b>  | 100       |  | "     | 100      | "       | "        | 12/27/12 | "         |       |
| <b>Xylenes (total)</b> | <b>1700</b> | 100       |  | "     | "        | "       | "        | "        | "         |       |

Date Sampled: 12/20/12 13:25

| Analyte                          | Result | Reporting |  | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     |  |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 109 %     |  | 37-154 |          | "     | "        | 12/27/12 | "      |       |
| Surrogate: Toluene-d8            |        | 104 %     |  | 45-149 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 75.3 %    |  | 45-146 |          | "     | "        | "        | "      |       |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15  
Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
12/27/12 15:50

**BH03**  
**R212143-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/20/12 13:30

| Analyte         | Result | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
|                 |        | Limit     | Units |          |         |          |          |           |       |
| Benzene         | ND     | 1.0       | ug/l  | 1        | 2122608 | 12/26/12 | 12/27/12 | EPA 8260B |       |
| Toluene         | ND     | 1.0       | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene    | ND     | 1.0       | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total) | ND     | 1.0       | "     | "        | "       | "        | "        | "         |       |

Date Sampled: 12/20/12 13:30

| Analyte                          | Result | Reporting |        | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | Units  |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 117 %     | 37-154 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 98.4 %    | 45-149 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 106 %     | 45-146 |          | "     | "        | "        | "      |       |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15  
Project Number: [none]  
Project Manager: Brandon Bruns

Reported:  
12/27/12 15:50

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

| Analyte | Reporting |       |       | Spike | Source | %REC |        | RPD |       | Notes |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
|         | Result    | Limit | Units | Level | Result | %REC | Limits | RPD | Limit |       |

#### Batch 2122608 - EPA 5030 Water MS

##### Blank (2122608-BLK1)

Prepared & Analyzed: 12/26/12

|                                  |      |     |      |      |  |      |        |  |  |  |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene                          | ND   | 1.0 | ug/l |      |  |      |        |  |  |  |
| Toluene                          | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Ethylbenzene                     | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Xylenes (total)                  | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.8 |     | "    | 13.2 |  | 96.9 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 12.8 |     | "    | 13.3 |  | 96.2 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 12.3 |     | "    | 13.3 |  | 92.4 | 45-146 |  |  |  |

##### Blank (2122608-BLK2)

Prepared & Analyzed: 12/26/12

|                                  |      |     |      |      |  |      |        |  |  |  |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene                          | ND   | 1.0 | ug/l |      |  |      |        |  |  |  |
| Toluene                          | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Ethylbenzene                     | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Xylenes (total)                  | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.4 |     | "    | 13.2 |  | 93.3 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 12.7 |     | "    | 13.3 |  | 95.0 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 12.5 |     | "    | 13.3 |  | 93.7 | 45-146 |  |  |  |

##### LCS (2122608-BS1)

Prepared & Analyzed: 12/26/12

|                                  |      |     |      |      |  |      |        |  |  |  |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene                          | 27.1 | 1.0 | ug/l | 33.3 |  | 81.3 | 51-132 |  |  |  |
| Toluene                          | 32.3 | 1.0 | "    | 33.3 |  | 96.9 | 51-138 |  |  |  |
| Ethylbenzene                     | 42.1 | 1.0 | "    | 33.3 |  | 126  | 58-146 |  |  |  |
| m,p-Xylene                       | 77.3 | 2.0 | "    | 66.7 |  | 116  | 57-144 |  |  |  |
| o-Xylene                         | 40.5 | 1.0 | "    | 33.3 |  | 121  | 53-146 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.6 |     | "    | 13.2 |  | 94.9 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 12.9 |     | "    | 13.3 |  | 96.5 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 12.8 |     | "    | 13.3 |  | 95.9 | 45-146 |  |  |  |

##### LCS (2122608-BS2)

Prepared & Analyzed: 12/26/12

|                                  |      |     |      |      |  |      |        |  |  |  |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene                          | 27.5 | 1.0 | ug/l | 33.3 |  | 82.4 | 51-132 |  |  |  |
| Toluene                          | 32.3 | 1.0 | "    | 33.3 |  | 97.0 | 51-138 |  |  |  |
| Ethylbenzene                     | 41.5 | 1.0 | "    | 33.3 |  | 124  | 58-146 |  |  |  |
| m,p-Xylene                       | 75.5 | 2.0 | "    | 66.7 |  | 113  | 57-144 |  |  |  |
| o-Xylene                         | 40.1 | 1.0 | "    | 33.3 |  | 120  | 53-146 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.3 |     | "    | 13.2 |  | 93.2 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 13.1 |     | "    | 13.3 |  | 98.3 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 12.3 |     | "    | 13.3 |  | 92.1 | 45-146 |  |  |  |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15  
Project Number: [none]  
Project Manager: Brandon Bruns

Reported:  
12/27/12 15:50

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

| Analyte | Reporting |       |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
|         | Result    | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

**Batch 2122608 - EPA 5030 Water MS**

**LCS Dup (2122608-BSD1)**

Prepared & Analyzed: 12/26/12

|                                  |      |     |      |      |  |      |        |       |    |  |
|----------------------------------|------|-----|------|------|--|------|--------|-------|----|--|
| Benzene                          | 27.7 | 1.0 | ug/l | 33.3 |  | 83.1 | 51-132 | 2.19  | 17 |  |
| Toluene                          | 32.1 | 1.0 | "    | 33.3 |  | 96.4 | 51-138 | 0.497 | 17 |  |
| Ethylbenzene                     | 41.8 | 1.0 | "    | 33.3 |  | 126  | 58-146 | 0.524 | 16 |  |
| m,p-Xylene                       | 74.9 | 2.0 | "    | 66.7 |  | 112  | 57-144 | 3.11  | 16 |  |
| o-Xylene                         | 40.7 | 1.0 | "    | 33.3 |  | 122  | 53-146 | 0.468 | 15 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.5 |     | "    | 13.2 |  | 94.6 | 37-154 |       |    |  |
| Surrogate: Toluene-d8            | 12.9 |     | "    | 13.3 |  | 96.6 | 45-149 |       |    |  |
| Surrogate: 4-Bromofluorobenzene  | 12.4 |     | "    | 13.3 |  | 93.2 | 45-146 |       |    |  |

**LCS Dup (2122608-BSD2)**

Prepared & Analyzed: 12/26/12

|                                  |      |     |      |      |  |      |        |       |    |  |
|----------------------------------|------|-----|------|------|--|------|--------|-------|----|--|
| Benzene                          | 27.9 | 1.0 | ug/l | 33.3 |  | 83.8 | 51-132 | 1.70  | 17 |  |
| Toluene                          | 33.2 | 1.0 | "    | 33.3 |  | 99.5 | 51-138 | 2.50  | 17 |  |
| Ethylbenzene                     | 41.3 | 1.0 | "    | 33.3 |  | 124  | 58-146 | 0.387 | 16 |  |
| m,p-Xylene                       | 75.1 | 2.0 | "    | 66.7 |  | 113  | 57-144 | 0.624 | 16 |  |
| o-Xylene                         | 40.6 | 1.0 | "    | 33.3 |  | 122  | 53-146 | 1.29  | 15 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.7 |     | "    | 13.2 |  | 95.9 | 37-154 |       |    |  |
| Surrogate: Toluene-d8            | 13.2 |     | "    | 13.3 |  | 99.2 | 45-149 |       |    |  |
| Surrogate: 4-Bromofluorobenzene  | 12.4 |     | "    | 13.3 |  | 92.7 | 45-146 |       |    |  |

**Matrix Spike (2122608-MS1)**

Source: R212154-01

Prepared & Analyzed: 12/26/12

|                                  |      |     |      |      |    |      |        |  |  |  |
|----------------------------------|------|-----|------|------|----|------|--------|--|--|--|
| Benzene                          | 27.7 | 1.0 | ug/l | 33.3 | ND | 83.2 | 34-141 |  |  |  |
| Toluene                          | 33.3 | 1.0 | "    | 33.3 | ND | 99.9 | 27-151 |  |  |  |
| Ethylbenzene                     | 40.9 | 1.0 | "    | 33.3 | ND | 123  | 29-160 |  |  |  |
| m,p-Xylene                       | 75.5 | 2.0 | "    | 66.7 | ND | 113  | 20-166 |  |  |  |
| o-Xylene                         | 40.0 | 1.0 | "    | 33.3 | ND | 120  | 33-159 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 13.0 |     | "    | 13.2 |    | 98.4 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 13.1 |     | "    | 13.3 |    | 98.2 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 11.8 |     | "    | 13.3 |    | 88.6 | 45-146 |  |  |  |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15  
Project Number: [none]  
Project Manager: Brandon Bruns

Reported:  
12/27/12 15:50

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

| Analyte | Reporting |       |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
|         | Result    | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

**Batch 2122608 - EPA 5030 Water MS**

| Matrix Spike (2122608-MS2)       |      | Source: R212154-02 |      |      | Prepared & Analyzed: 12/26/12 |      |        |  |  |  |
|----------------------------------|------|--------------------|------|------|-------------------------------|------|--------|--|--|--|
| Benzene                          | 28.5 | 1.0                | ug/l | 33.3 | ND                            | 85.5 | 34-141 |  |  |  |
| Toluene                          | 33.2 | 1.0                | "    | 33.3 | ND                            | 99.5 | 27-151 |  |  |  |
| Ethylbenzene                     | 42.1 | 1.0                | "    | 33.3 | ND                            | 126  | 29-160 |  |  |  |
| m,p-Xylene                       | 77.0 | 2.0                | "    | 66.7 | ND                            | 116  | 20-166 |  |  |  |
| o-Xylene                         | 41.0 | 1.0                | "    | 33.3 | ND                            | 123  | 33-159 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.4 |                    | "    | 13.2 |                               | 94.1 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 13.3 |                    | "    | 13.3 |                               | 99.7 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 12.4 |                    | "    | 13.3 |                               | 92.6 | 45-146 |  |  |  |

| Matrix Spike Dup (2122608-MSD1)  |      | Source: R212154-01 |      |      | Prepared & Analyzed: 12/26/12 |      |        |       |    |  |
|----------------------------------|------|--------------------|------|------|-------------------------------|------|--------|-------|----|--|
| Benzene                          | 28.3 | 1.0                | ug/l | 33.3 | ND                            | 85.0 | 34-141 | 2.18  | 32 |  |
| Toluene                          | 33.6 | 1.0                | "    | 33.3 | ND                            | 101  | 27-151 | 0.926 | 25 |  |
| Ethylbenzene                     | 42.7 | 1.0                | "    | 33.3 | ND                            | 128  | 29-160 | 4.38  | 50 |  |
| m,p-Xylene                       | 78.3 | 2.0                | "    | 66.7 | ND                            | 117  | 20-166 | 3.66  | 36 |  |
| o-Xylene                         | 41.7 | 1.0                | "    | 33.3 | ND                            | 125  | 33-159 | 4.24  | 26 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.5 |                    | "    | 13.2 |                               | 94.5 | 37-154 |       |    |  |
| Surrogate: Toluene-d8            | 13.3 |                    | "    | 13.3 |                               | 99.9 | 45-149 |       |    |  |
| Surrogate: 4-Bromofluorobenzene  | 12.6 |                    | "    | 13.3 |                               | 94.7 | 45-146 |       |    |  |

| Matrix Spike Dup (2122608-MSD2)  |      | Source: R212154-02 |      |      | Prepared & Analyzed: 12/26/12 |      |        |       |    |  |
|----------------------------------|------|--------------------|------|------|-------------------------------|------|--------|-------|----|--|
| Benzene                          | 28.4 | 1.0                | ug/l | 33.3 | ND                            | 85.3 | 34-141 | 0.211 | 32 |  |
| Toluene                          | 33.7 | 1.0                | "    | 33.3 | ND                            | 101  | 27-151 | 1.56  | 25 |  |
| Ethylbenzene                     | 41.2 | 1.0                | "    | 33.3 | ND                            | 124  | 29-160 | 2.04  | 50 |  |
| m,p-Xylene                       | 75.1 | 2.0                | "    | 66.7 | ND                            | 113  | 20-166 | 2.50  | 36 |  |
| o-Xylene                         | 40.7 | 1.0                | "    | 33.3 | ND                            | 122  | 33-159 | 0.832 | 26 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.4 |                    | "    | 13.2 |                               | 93.9 | 37-154 |       |    |  |
| Surrogate: Toluene-d8            | 13.0 |                    | "    | 13.3 |                               | 97.6 | 45-149 |       |    |  |
| Surrogate: 4-Bromofluorobenzene  | 12.1 |                    | "    | 13.3 |                               | 90.8 | 45-146 |       |    |  |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Becker 5-1,2,14,15

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
12/27/12 15:50

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to read 'Daniel A. Bruns IV'.