

Second Quarter 2018 Groundwater Monitoring Summary Report

County Road 20 and Highway 85 Release Fort Lupton, Colorado

Prepared for:



370 17th St., Suite 2500
Denver, CO 80202

Prepared by:



6899 Pecos Street, Unit C
Denver, Colorado 80221

July 5, 2018

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1. Introduction

This report summarizes the groundwater monitoring and remediation activities conducted during the second quarter 2018 at the County Road (CR) 20 and Highway (Hwy) 85 pipeline release (Site) in Fort Lupton, Colorado (Figure 1). Tasman Geosciences (Tasman) performed these activities on behalf of DCP Midstream, LP (DCP). The field activities were conducted with the purpose of monitoring groundwater flow and quality conditions. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period on May 4, 2018.

2. Site Location and Background

The Site is located in the southwestern quarter of the southwestern quarter of Section 17, Township 2 North, Range 66 West (approximate coordinates 40.130908 degrees north and 104.806673 degrees west). It is approximately 0.2 miles east on CR 20 from the intersection with Hwy 85, Ft. Lupton, Colorado.

On May 28, 2014, a petroleum hydrocarbon release was discovered following pipeline repair activities. An initial Form 19 was submitted to the Colorado Oil and Gas Conservation Commission (COGCC) on June 5, 2014. Quarterly groundwater monitoring activities were initiated during May 2015 at the Site.

3. Groundwater Monitoring

This section describes the field and laboratory activities performed during the second quarter 2018 groundwater monitoring event. Quarterly monitoring activities were conducted on May 4, 2018 and included Site-wide groundwater gauging and sampling. Figure 2 illustrates the groundwater monitoring network locations utilized to monitor the Site.

3.1 Groundwater Elevation Monitoring

Groundwater levels were measured to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations in groundwater elevations at the Site. During the second quarter 2018, groundwater levels were measured at six (6) monitoring well locations (BH01 to BH03 and BH05 to BH07).

Groundwater levels were measured on the north side of the well casing to the nearest 0.01-foot using an oil-water interface probe (IP). Groundwater level data was later converted to elevation (feet above mean sea level [AMSL]). Measured groundwater levels and the calculated groundwater elevations are presented in Table 1.

A second quarter 2018 groundwater elevation map, included as Figure 3, indicates that a minimal groundwater gradient is present, and that groundwater generally flows to the north. However, the groundwater elevations appear to be mounded through the center of the Site, between BH01 and BH03, and that the flow is also towards the east and west from the center of the Site. This trend is consistent with previous data observed at the Site and is likely influenced by seasonal fluctuations, increased use of the irrigation ditch to the west of the Site, flooding or increased irrigation of the farm to the north of the Site, and/or shallow groundwater use for irrigation to the east of the Site. Groundwater elevations will continue to be monitored during subsequent events. The range of groundwater elevations, average

elevation change from the previous monitoring event, and the calculated average hydraulic gradient (using elevations from BH01 and BH06) at the Site are summarized in the table below.

Summary of Measured Hydraulic Parameters

| | Second Quarter 2018 (5/4/18) |
|---|------------------------------|
| Maximum Elevation (Well ID) | 4,859.44 (BH01) |
| Minimum Elevation (Well ID) | 4,859.32 (BH06) |
| Average Change from Previous Monitoring Event – All Wells | 0.02 feet |
| Average Hydraulic Gradient (ft/ft) / (Well IDs) | 0.0013 (BH01 to BH06) |

3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well, groundwater samples were collected from the six (6) Site monitoring wells using disposable polyethylene bailers.

A minimum of three well casing volumes of groundwater were purged from each monitoring well prior to collecting groundwater samples. Groundwater samples were placed in clean laboratory supplied containers for the selected analytical methods, packed in an ice-filled cooler and maintained at approximately four (4) degrees Celsius (°C) for transportation to the laboratory. Groundwater samples were then delivered under chain-of-custody procedures to Summit Scientific Laboratories (Summit) in Golden, Colorado for analysis.

Water quality samples were submitted for analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) by United States Environmental Protection Agency (USEPA) Method 8260B.

Table 2 summarizes BTEX concentrations in groundwater samples collected during the second quarter 2018 monitoring event. Historical analytical results up to and including the second quarter 2018 event are included in Appendix A and the laboratory analytical report for the second quarter 2018 is included in Appendix B. Analytical results are also displayed on Figure 4.

Analytical results/observations are summarized below:

- The benzene, toluene, and ethylbenzene concentrations at all 6 Site monitoring wells sampled during the second quarter 2018 were below the respective COGCC Table 910-1 standards for each constituent.
- The total xylenes concentration at monitoring well BH07 (1,600 micrograms per liter [µg/L]) was in exceedance of the COGCC Table 910-1 standard of 1,400 µg/L. Total xylenes were below the COGCC Table 910-1 standards at the remaining well locations.

4. Remediation Activities

This Section includes a description of the active remediation activities at the Site along with observations during remediation efforts.

4.1 Groundwater Remediation Activities

As reported in previous quarterly monitoring reports, mobile, vacuum enhanced fluid recovery (EFR) groundwater remediation events were initiated at the Site starting the third quarter 2015 and discontinued during the fourth quarter 2016 due to the absence of light non-aqueous phase liquid (LNAPL) as well as decreased dissolved phase BTEX concentrations. Supplemental groundwater remediation activities were last performed at the Site during December 2016.

5. Conclusions

Comparison of the second quarter 2018 monitoring data and historical information provides the following general observations:

- Groundwater elevations and flow direction at the Site continue to fluctuate when compared to previous quarterly sampling events as indicated by the groundwater elevations depicted on Figure 3 and summarized on Table 1. During the second quarter 2018 monitoring event, groundwater flow was generally consistent with historical monitoring data. Groundwater elevation and flow directions will continue to be monitored during subsequent quarterly events.
- At BH02 and BH07, concentrations of benzene and/ or total xylenes have periodically fluctuated from below to above COGCC Table 910-1 standards since groundwater monitoring was initiated in May 2015. Variability in concentrations is likely a result of residual impacts in soils contacting with fluctuating groundwater levels due to seasonal runoff and local irrigation practices. During the second quarter 2018 event, benzene was below the COGCC Table 910-1 standard at all Site monitoring well locations and total xylenes were reported above the standard at monitoring well BH07, only.
- BTEX concentrations at the remaining monitoring well locations were below COGCC standards and/or laboratory detection limits during the second quarter 2018 monitoring event.

6. Recommendations

Based on evaluation of data from the second quarter 2018 and historical Site observations and monitoring results, recommendations for future activities include:

- Continue quarterly groundwater monitoring and sampling at the monitoring well locations illustrated on Figure 2.

Tables

TABLE 1
SECOND QUARTER 2018
SUMMARY OF GROUNDWATER ELEVATION DATA
DCP CR 20 AND HWY 85 RELEASE
WELD COUNTY, COLORADO

| Location | Date | Depth to Groundwater (feet) | Depth to Product (feet) | Free Phase Hydrocarbon Thickness (feet) | Total Depth (feet) | TOC Elevation (feet amsl) | Groundwater Elevation (feet amsl) | Change in Groundwater Elevation Since Previous Event (1) (feet) |
|---|-----------|-----------------------------|-------------------------|---|--------------------|---------------------------|-----------------------------------|---|
| BH01 | 8/1/2017 | 11.00 | | | 18.11 | 4,875.68 | 4,864.68 | 4.45 |
| BH01 | 11/1/2017 | 12.70 | | | 18.13 | 4,875.68 | 4,862.98 | -1.70 |
| BH01 | 2/13/2018 | 16.25 | | | 18.10 | 4,875.68 | 4,859.43 | -3.55 |
| BH01 | 5/4/2018 | 16.24 | | | 18.04 | 4,875.68 | 4,859.44 | 0.01 |
| BH02 | 8/1/2017 | 10.29 | | | 18.73 | 4,874.94 | 4,864.65 | 4.43 |
| BH02 | 11/1/2017 | 12.11 | | | 18.80 | 4,874.94 | 4,862.83 | -1.82 |
| BH02 | 2/13/2018 | 15.62 | | | 18.71 | 4,874.94 | 4,859.32 | -3.51 |
| BH02 | 5/4/2018 | 15.58 | | | 18.71 | 4,874.94 | 4,859.36 | 0.04 |
| BH03 | 8/1/2017 | 9.80 | | | 18.82 | 4,874.51 | 4,864.71 | 4.47 |
| BH03 | 11/1/2017 | 11.59 | | | 18.84 | 4,874.51 | 4,862.92 | -1.79 |
| BH03 | 2/13/2018 | 15.11 | | | 18.77 | 4,874.51 | 4,859.40 | -3.52 |
| BH03 | 5/4/2018 | 15.09 | | | 18.78 | 4,874.51 | 4,859.42 | 0.02 |
| BH05 | 8/1/2017 | 9.97 | | | 19.00 | 4,874.67 | 4,864.70 | 4.50 |
| BH05 | 11/1/2017 | 12.09 | | | 18.80 | 4,874.67 | 4,862.58 | -2.12 |
| BH05 | 2/13/2018 | 15.29 | | | 18.88 | 4,874.67 | 4,859.38 | -3.20 |
| BH05 | 5/4/2018 | 15.28 | | | 18.89 | 4,874.67 | 4,859.39 | 0.01 |
| BH06 | 8/1/2017 | 10.30 | | | 18.81 | 4,874.95 | 4,864.65 | 4.57 |
| BH06 | 11/1/2017 | 11.75 | | | 19.00 | 4,874.95 | 4,863.20 | -1.45 |
| BH06 | 2/13/2018 | 15.64 | | | 18.75 | 4,874.95 | 4,859.31 | -3.89 |
| BH06 | 5/4/2018 | 15.63 | | | 18.74 | 4,874.95 | 4,859.32 | 0.01 |
| BH07 | 8/1/2017 | 9.37 | | | 18.73 | 4,874.04 | 4,864.67 | 4.46 |
| BH07 | 11/1/2017 | 11.22 | | | 18.75 | 4,874.04 | 4,862.82 | -1.85 |
| BH07 | 2/13/2018 | 14.72 | | | 18.67 | 4,874.04 | 4,859.32 | -3.50 |
| BH07 | 5/4/2018 | 14.67 | | | 18.67 | 4,874.04 | 4,859.37 | 0.05 |
| Average change in groundwater elevation (2/13/2018 to 5/4/2018) | | | | | | | | 0.02 |

Notes:

1- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring event from the measurement

amsl = feet above mean sea level

TOC = top of casing

Groundwater elevation = (TOC Elevation - Measured Depth to Water)

NM = Not Measured

NA = Not Applicable

TABLE 2
SECOND QUARTER 2018
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
DCP CR 20 AND HWY 85 RELEASE
WELD COUNTY, COLORADO

| Location Identification | Sample Date | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | Comments |
|-------------------------------|-------------|----------------|----------------|---------------------|----------------------|----------|
| COGCC Standards (µg/L) | | 5 | 560 | 700 | 1,400 | |
| BH01 | 5/4/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH02 | 5/4/2018 | <1.0 | <1.0 | 110 | 620 | |
| BH03 | 5/4/2018 | <1.0 | <1.0 | 13 | 100 | |
| BH05 | 5/4/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH06 | 5/4/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH07 | 5/4/2018 | <1.0 | <1.0 | 210 | 1,600 | |

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.

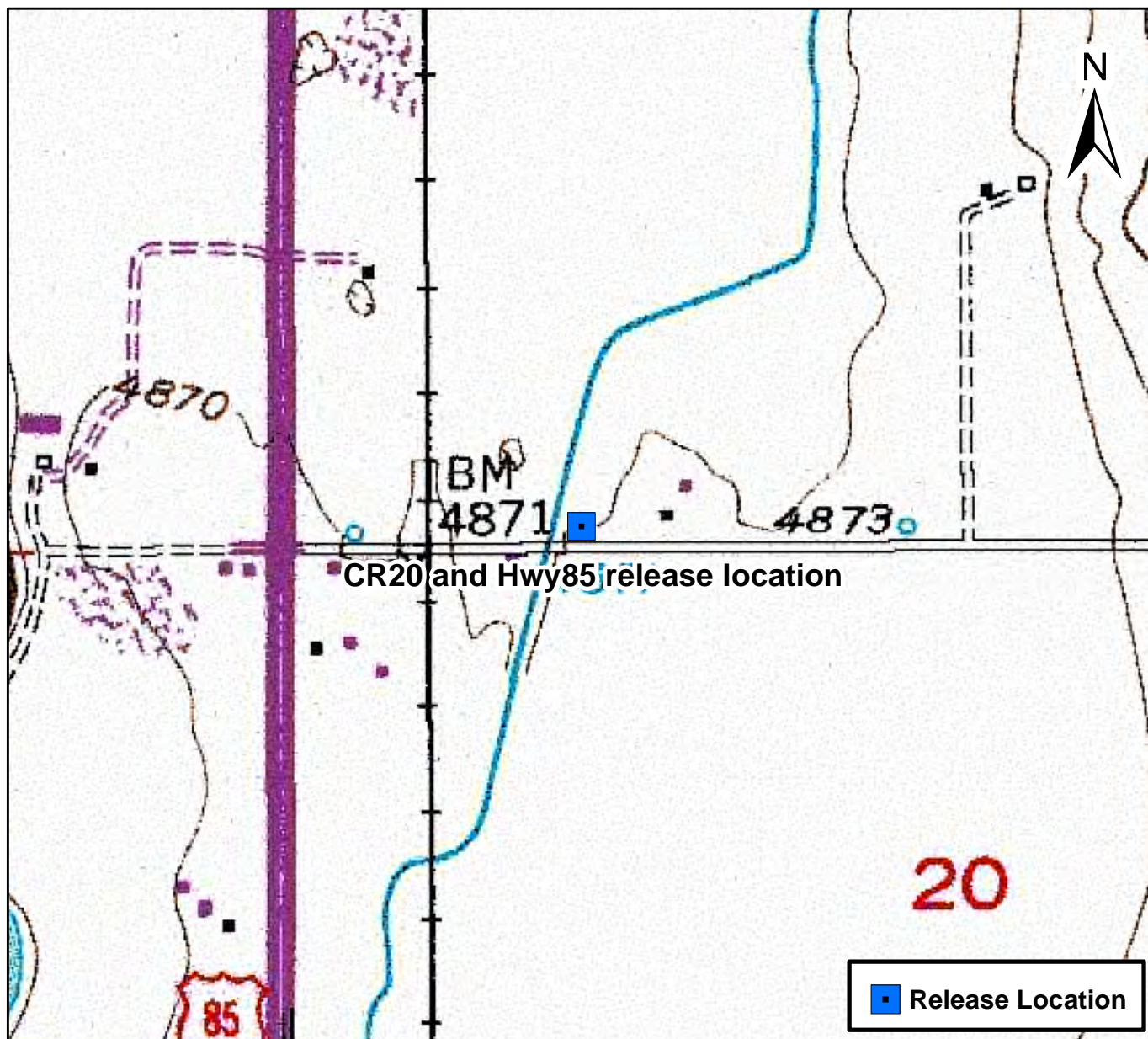
Bold red values indicate an exceedance of the COGCC groundwater standards for the Site.

NS = Not sampled.

µg/L = micrograms per liter.

LNAPL - Light non-aqueous phase liquid

Figures



0 750 1,500 Feet



Figure 1

Site Location Map
CR20 and Hwy85 release location
SWSW S17 T2N R66W
Weld County, Colorado

Drawn By: DBA
Date: 06/04/2014


Tasman Geosciences



| | |
|--------------|--------------|
| DATE: | January 2018 |
| DESIGNED BY: | B. Humphrey |
| DRAWN BY: | D. Arnold |



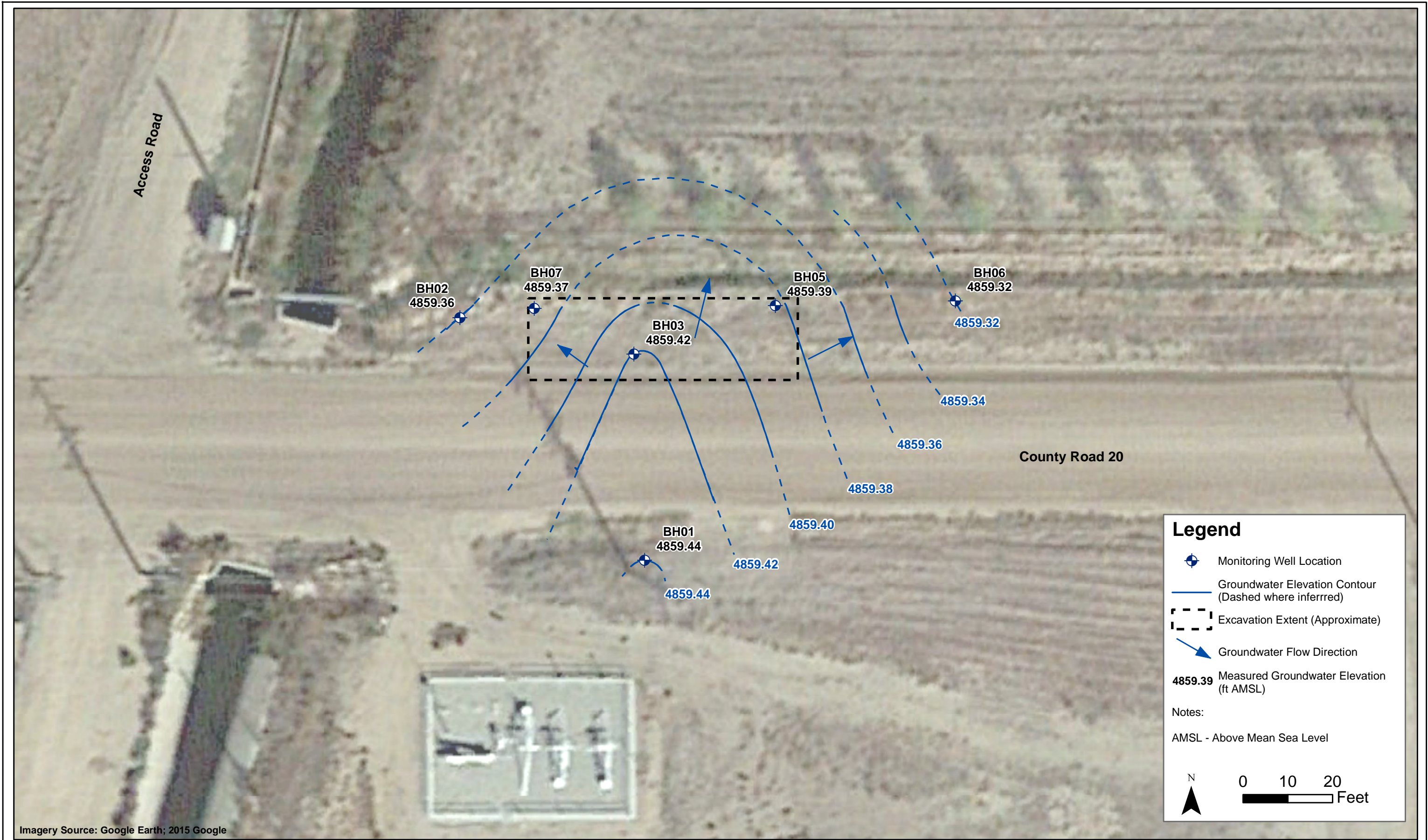
TASMAN
GEOSCIENCES

Tasman Geosciences, Inc
6899 Pecos Street - Unit C
Denver, CO 80221

DCP Midstream
County Road 20 and Highway 85 Release
SWSW Section 17, Township 2 North, Range 66 West
Weld County, Colorado

Site Overview
Map

Figure
2



| | |
|--------------|-------------|
| DATE: | May 2018 |
| DESIGNED BY: | B. Humphrey |
| DRAWN BY: | D. Arnold |



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Tasman Geosciences, Inc
6899 Pecos Street - Unit C
Denver, CO 80221

DCP Midstream
County Road 20 and Highway 85 Release
SWSW Section 17, Township 2 North, Range 66 West
Weld County, Colorado

Groundwater Elevation
Contour Map
(May 4, 2018)

Figure
3



| | |
|--------------|-------------|
| DATE: | May 2018 |
| DESIGNED BY: | B. Humphrey |
| DRAWN BY: | D. Arnold |



Tasman Geosciences, Inc
6899 Pecos Street - Unit C
Denver, CO 80221

DCP Midstream
County Road 20 and Highway 85 Release
SWSW Section 17, Township 2 North, Range 66 West
Weld County, Colorado

Groundwater Analytical
Results Map
(May 4, 2018)

Figure
4

Appendix A

Historical Analytical Groundwater Data

APPENDIX A
HISTORICAL ANALYTICAL GROUNDWATER DATA
DCP CR 20 AND HWY 85 RELEASE
WELD COUNTY, COLORADO

| Location Identification | Sample Date | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | Comments |
|-------------------------------|-------------|----------------|----------------|---------------------|----------------------|----------|
| COGCC Standards (µg/L) | | 5 | 560 | 700 | 1,400 | |
| BH01 | 5/14/2015 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 9/24/2015 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 11/17/2015 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 2/15/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 5/13/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 8/10/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 11/11/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 2/28/2017 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH01 | 5/8/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH01 | 8/1/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH01 | 11/1/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH01 | 2/13/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH01 | 5/4/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| | | | | | | |
| BH02 | 5/14/2015 | 120 | 5 | 210 | 2,000 | |
| BH02 | 9/24/2015 | 20 | <1.0 | 48 | 370 | |
| BH02 | 11/17/2015 | 14 | <1.0 | 72 | 490 | |
| BH02 | 2/15/2016 | 2.4 | 1.4 | 260 | 730 | |
| BH02 | 5/13/2016 | 2.2 | <1.0 | 160 | 1,100 | |
| BH02 | 8/10/2016 | <1.0 | <1.0 | 13 | 340 | |
| BH02 | 11/11/2016 | 1.5 | <1.0 | 17 | 910 | |
| BH02 | 2/28/2017 | <1.0 | <1.0 | <1.0 | 560 | |
| BH02 | 5/8/2017 | <1.0 | <1.0 | <1.0 | 240 | |
| BH02 | 8/1/2017 | <1.0 | <1.0 | 150 | 700 | |
| BH02 | 11/1/2017 | <1.0 | <1.0 | <1.0 | 770 | |
| BH02 | 2/13/2018 | <1.0 | <1.0 | 230 | 2,100 | |
| BH02 | 5/4/2018 | <1.0 | <1.0 | 110 | 620 | |
| | | | | | | |
| BH03 | 5/14/2015 | 220 | 130 | 400 | 3,500 | |
| BH03 | 9/24/2015 | 1.8 | <1.0 | 7.0 | 150 | |
| BH03 | 11/17/2015 | <1.0 | <1.0 | 43 | 400 | |
| BH03 | 2/15/2016 | <1.0 | <1.0 | 42 | 280 | |
| BH03* | 5/17/2016 | 5.3 | <1.0 | 79 | 590 | |
| BH03 | 8/10/2016 | 3.1 | <1.0 | 230 | 1,400 | |
| BH03 | 11/11/2016 | <1.0 | <1.0 | <1.0 | 1,200 | |
| BH03 | 2/28/2017 | <1.0 | <1.0 | <1.0 | 410 | |
| BH03 | 5/8/2017 | <1.0 | <1.0 | <1.0 | 130 | |
| BH03 | 8/1/2017 | 4.6 | <1.0 | 97 | 1,300 | |
| BH03 | 11/1/2017 | <1.0 | <1.0 | <1.0 | 110 | |
| BH03 | 2/13/2018 | <1.0 | <1.0 | <1.0 | 72 | |
| BH03 | 5/4/2018 | <1.0 | <1.0 | 13 | 100 | |

APPENDIX A
HISTORICAL ANALYTICAL GROUNDWATER DATA
DCP CR 20 AND HWY 85 RELEASE
WELD COUNTY, COLORADO

| Location Identification | Sample Date | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | Comments |
|-------------------------------|-------------|----------------|----------------|---------------------|----------------------|-----------------------|
| COGCC Standards (µg/L) | | 5 | 560 | 700 | 1,400 | |
| BH05 | 5/14/2015 | <1.0 | <1.0 | 3 | 22 | |
| BH05 | 9/24/2015 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH05 | 11/17/2015 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH05 | 2/15/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH05 | 5/13/2016 | NS | NS | NS | NS | Well was dry |
| BH05 | 8/10/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH05 | 11/11/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH05 | 2/28/2017 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH05 | 5/8/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH05 | 8/1/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH05 | 11/1/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH05 | 2/13/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH05 | 5/4/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| | | | | | | |
| BH06 | 5/14/2015 | <1.0 | <1.0 | <1.0 | 5 | |
| BH06 | 9/24/2015 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH06 | 11/17/2015 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH06 | 2/15/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH06 | 5/13/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH06 | 8/10/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH06 | 11/11/2016 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH06 | 2/28/2017 | <1.0 | <1.0 | <1.0 | <1.0 | |
| BH06 | 5/8/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH06 | 8/1/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH06 | 11/1/2017 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH06 | 2/13/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| BH06 | 5/4/2018 | <1.0 | <1.0 | <1.0 | <2.0 | |
| | | | | | | |
| BH07 | 5/14/2015 | 44 | 310 | 200 | 2,600 | |
| BH07 | 9/24/2015 | NS | NS | NS | NS | Trace amount of LNAPL |
| BH07 | 11/17/2015 | 85 | 1.1 | 210 | 3,100 | |
| BH07 | 2/15/2016 | NS | NS | NS | NS | LNAPL - 0.03 ft |
| BH07 | 5/13/2016 | 52 | <1.0 | 500 | 3,300 | |
| BH07 | 8/10/2016 | 1.8 | <1.0 | <1.0 | 560 | Trace amount of LNAPL |
| BH07 | 11/11/2016 | DRY | | | | |
| BH07 | 2/28/2017 | 4.1 | <1.0 | 90 | 1,400 | |
| BH07 | 5/8/2017 | <1.0 | <1.0 | <1.0 | 730 | |
| BH07 | 8/1/2017 | 1.2 | <1.0 | 17 | 210 | |
| BH07 | 11/1/2017 | 31 | <1.0 | 7.2 | 890 | |
| BH07 | 2/13/2018 | 8.1 | <1.0 | 230 | 560 | |
| BH07 | 5/4/2018 | <1.0 | <1.0 | 210 | 1,600 | |

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.

* Monitoring well BH03 was sampled on May 17, 2016 subsequent to purging apparent LNAPL from the well.

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

NS = Not sampled.

µg/L = micrograms per liter.

LNAPL - Light non-aqueous phase liquid

Appendix B

Laboratory Analytical Report

- Summit Scientific 1805053

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 14, 2018

Steve Weathers
DCP Midstream
370 17th Street, Suite 2500
Denver, CO 80202-5604
RE: CR 20 & HWY 85 Release

Enclosed are the results of analyses for samples received by Summit Scientific on 05/04/18 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| BH01 | 1805053-01 | Water | 05/04/18 10:20 | 05/04/18 16:30 |
| BH02 | 1805053-02 | Water | 05/04/18 11:00 | 05/04/18 16:30 |
| BH03 | 1805053-03 | Water | 05/04/18 10:50 | 05/04/18 16:30 |
| BH05 | 1805053-04 | Water | 05/04/18 10:45 | 05/04/18 16:30 |
| BH06 | 1805053-05 | Water | 05/04/18 10:35 | 05/04/18 16:30 |
| BH07 | 1805053-06 | Water | 05/04/18 11:05 | 05/04/18 16:30 |

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.

1805053

Page 1 of 1

Project Manager: Steve Weathers
E-Mail: swweathers@dcpmidstream.com ; bhumphrey@tasman-geo.com
Project Name: CR 20 + HWY 85 Release
Project Number: N/A

| Sample Description | | | | Date Sampled | Time Sampled | Number of Containers | Preservative | | | | Matrix | | | Analyze For: | | | | | | | | | | Special Instructions | | | |
|--------------------|--|--|--|--------------|---------------------|----------------------|--------------|------------------|--|-----------------|-------------|------|-------------------------|-----------------|-------------|---|--|--|--------|--|--|--|--|----------------------|--|--|--|
| | | | | | | | HCl | HNO ₃ | None | Other (Specify) | Groundwater | Soil | Air - Canister Serial # | Other (Specify) | 8260 (BTEX) | | | | | | | | | | | | |
| BH01 | | | | 5/4/18 | 1020 | 3 | X | | | | X | | | | | X | | | | | | | | | | | |
| BH02 | | | | ↓ | 1100 | ↓ | ↓ | | | | ↓ | | | | ↓ | | | | | | | | | | | | |
| BH03 | | | | ↓ | 1050 | ↓ | ↓ | | | | ↓ | | | | ↓ | | | | | | | | | | | | |
| BH05 | | | | ↓ | 1045 | ↓ | ↓ | | | | ↓ | | | | ↓ | | | | | | | | | | | | |
| BH06 | | | | ↓ | 1035 | ↓ | ↓ | | | | ↓ | | | | ↓ | | | | | | | | | | | | |
| BH07 | | | | 5/4/18 | 1105 | 3 | X | | | | ↓ | NA | | | X | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Relinquished by: | | | | Date/Time: | Received by: | | Date/Time: | | Turn Around Time (Check) | | | | | | | | | | Notes: | | | | | | | | |
| [Signature] | | | | 5/4/18 1130 | [Signature] | | 5/4/18 1630 | | Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Relinquished by: | | | | Date/Time: | Received by: | | Date/Time: | | Sample Integrity: Temperature Upon Receipt: 6.9°C Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | |
| Relinquished by: | | | | Date/Time: | Received in Lab by: | | Date/Time: | | | | | | | | | | | | | | | | | | | | |

1805053

Sample Receipt Checklist

S2 Work Order: _____

Client: DEP Midstream/Tasman Client Project ID: CR 20 & Hwy 85 ReleaseShipped Via: PIV
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☒ Water ☐ Other: _____
(Describe)

| | | | | | |
|-----------|-----|--|--|--|--|
| Cooler ID | | | | | |
| Temp (°C) | 6.9 | | | | |

Thermometer ID: 61857155-K

| | Yes | No | N/A | Comments (if any) |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun. | | | | |
| Were all samples received intact ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Was adequate sample volume provided ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| If custody seals are present, are they intact ⁽¹⁾ ? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Are short holding time analytes or samples with HTs due within 48 hours present? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | HCl |
| Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect | | | | |
| If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Record the pH in Comments. | | | | |
| If dissolved metals are requested, were samples field filtered? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Additional Comments (if any): | | | | |
| | | | | |
| | | | | |

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Custodian Printed Name

Signature or Initials of Custodian

5/4/18 1715
Date/Time



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

BH01
1805053-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/04/18 10:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|--------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 1.0 | ug/l | 1 | 1805080 | 05/08/18 | 05/11/18 | EPA 8260B | |
| Toluene | ND | 1.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 1.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 2.0 | " | " | " | " | " | " | |

Date Sampled: **05/04/18 10:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|--------------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 116 % | 70-130 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 96.0 % | 70-130 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 104 % | 70-130 | | " | " | " | " | |

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.



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

BH02
1805053-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/04/18 11:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|------------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 1.0 | ug/l | 1 | 1805080 | 05/08/18 | 05/11/18 | EPA 8260B | |
| Toluene | ND | 1.0 | " | " | " | " | " | " | |
| Ethylbenzene | 110 | 25 | " | 25 | " | " | " | " | |
| Xylenes (total) | 620 | 50 | " | " | " | " | " | " | |

Date Sampled: **05/04/18 11:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|--------------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 123 % | 70-130 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 102 % | 70-130 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 70-130 | | " | " | " | " | |

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.



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

BH03
1805053-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/04/18 10:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|------------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 1.0 | ug/l | 1 | 1805080 | 05/08/18 | 05/11/18 | EPA 8260B | |
| Toluene | ND | 1.0 | " | " | " | " | " | " | |
| Ethylbenzene | 13 | 1.0 | " | " | " | " | " | " | |
| Xylenes (total) | 100 | 2.0 | " | " | " | " | " | " | |

Date Sampled: **05/04/18 10:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|--------------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 119 % | 70-130 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 98.0 % | 70-130 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 102 % | 70-130 | | " | " | " | " | |

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.



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

BH05
1805053-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/04/18 10:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|--------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 1.0 | ug/l | 1 | 1805080 | 05/08/18 | 05/11/18 | EPA 8260B | |
| Toluene | ND | 1.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 1.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 2.0 | " | " | " | " | " | " | |

Date Sampled: **05/04/18 10:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|--------------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 122 % | 70-130 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 97.9 % | 70-130 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 99.8 % | 70-130 | | " | " | " | " | |

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.



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

BH06
1805053-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/04/18 10:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|--------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 1.0 | ug/l | 1 | 1805080 | 05/08/18 | 05/11/18 | EPA 8260B | |
| Toluene | ND | 1.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 1.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 2.0 | " | " | " | " | " | " | |

Date Sampled: **05/04/18 10:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|--------------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 121 % | 70-130 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 96.3 % | 70-130 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 70-130 | | " | " | " | " | |

Summit Scientific

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DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

BH07
1805053-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/04/18 11:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|-------------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 1.0 | ug/l | 1 | 1805080 | 05/08/18 | 05/11/18 | EPA 8260B | |
| Toluene | ND | 1.0 | " | " | " | " | " | " | |
| Ethylbenzene | 210 | 25 | " | 25 | " | " | " | " | |
| Xylenes (total) | 1600 | 50 | " | " | " | " | " | " | |

Date Sampled: **05/04/18 11:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|--------------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 72.3 % | 70-130 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 103 % | 70-130 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 113 % | 70-130 | | " | " | " | " | |

Summit Scientific

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DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

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 1805080 - EPA 5030 Water MS

Blank (1805080-BLK1)

Prepared: 05/08/18 Analyzed: 05/09/18

| | | | | | | | | | | |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene | ND | 1.0 | ug/l | | | | | | | |
| Toluene | ND | 1.0 | " | | | | | | | |
| Ethylbenzene | ND | 1.0 | " | | | | | | | |
| Xylenes (total) | ND | 2.0 | " | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 14.0 | | " | 13.2 | | 106 | 70-130 | | | |
| Surrogate: Toluene-d8 | 13.3 | | " | 13.3 | | 99.6 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 13.3 | | " | 13.3 | | 100 | 70-130 | | | |

LCS (1805080-BS1)

Prepared: 05/08/18 Analyzed: 05/09/18

| | | | | | | | | | | |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene | 50.8 | 1.0 | ug/l | 50.0 | | 102 | 70-130 | | | |
| Toluene | 50.6 | 1.0 | " | 50.0 | | 101 | 70-130 | | | |
| Ethylbenzene | 51.3 | 1.0 | " | 50.0 | | 103 | 70-130 | | | |
| m,p-Xylene | 100 | 2.0 | " | 100 | | 100 | 70-130 | | | |
| o-Xylene | 52.1 | 1.0 | " | 50.0 | | 104 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 13.7 | | " | 13.2 | | 104 | 70-130 | | | |
| Surrogate: Toluene-d8 | 13.5 | | " | 13.3 | | 101 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 13.2 | | " | 13.3 | | 99.4 | 70-130 | | | |

Matrix Spike (1805080-MS1)

Source: 1805060-01

Prepared: 05/08/18 Analyzed: 05/09/18

| | | | | | | | | | | |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|-------|
| Benzene | 70.6 | 1.0 | ug/l | 50.0 | | 141 | 70-130 | | | QM-07 |
| Toluene | 71.1 | 1.0 | " | 50.0 | | 142 | 70-130 | | | QM-07 |
| Ethylbenzene | 72.6 | 1.0 | " | 50.0 | | 145 | 70-130 | | | QM-07 |
| m,p-Xylene | 142 | 2.0 | " | 100 | | 142 | 70-130 | | | QM-07 |
| o-Xylene | 72.5 | 1.0 | " | 50.0 | | 145 | 70-130 | | | QM-07 |
| Surrogate: 1,2-Dichloroethane-d4 | 12.8 | | " | 13.2 | | 96.8 | 70-130 | | | |
| Surrogate: Toluene-d8 | 13.6 | | " | 13.3 | | 102 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 13.8 | | " | 13.3 | | 103 | 70-130 | | | |

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.



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

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 1805080 - EPA 5030 Water MS

| Matrix Spike Dup (1805080-MSD1) | | Source: 1805060-01 | | | Prepared: 05/08/18 | | Analyzed: 05/09/18 | | | |
|----------------------------------|------|--------------------|------|------|--------------------|--------|--------------------|----|--|-------|
| Benzene | 57.0 | 1.0 | ug/l | 50.0 | 114 | 70-130 | 21.4 | 30 | | QM-07 |
| Toluene | 57.7 | 1.0 | " | 50.0 | 115 | 70-130 | 20.9 | 30 | | QM-07 |
| Ethylbenzene | 58.2 | 1.0 | " | 50.0 | 116 | 70-130 | 22.0 | 30 | | QM-07 |
| m,p-Xylene | 114 | 2.0 | " | 100 | 114 | 70-130 | 22.1 | 30 | | QM-07 |
| o-Xylene | 59.3 | 1.0 | " | 50.0 | 119 | 70-130 | 20.0 | 30 | | QM-07 |
| Surrogate: 1,2-Dichloroethane-d4 | 13.1 | | " | 13.2 | 99.2 | 70-130 | | | | |
| Surrogate: Toluene-d8 | 13.4 | | " | 13.3 | 100 | 70-130 | | | | |
| Surrogate: 4-Bromofluorobenzene | 13.0 | | " | 13.3 | 97.2 | 70-130 | | | | |

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.



DCP Midstream
370 17th Street, Suite 2500
Denver CO, 80202-5604

Project: CR 20 & HWY 85 Release

Project Number: [none]
Project Manager: Steve Weathers

Reported:
05/14/18 14:04

Notes and Definitions

| | |
|-------|---|
| QM-07 | The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery. |
| 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 |