

Second Quarter 2016 Groundwater Monitoring Summary Report

Eaton Commons Release Weld County, Colorado Remediation #9251

Prepared for:



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

Prepared by:



6899 Pecos Street, Unit C
Denver, Colorado 80221

July 27, 2016

Table of Contents

1. Introduction	1
2. Site Location and Background.....	1
2.1 Monitoring Well Installation	1
3. Groundwater Monitoring.....	2
3.1 Groundwater Elevation Monitoring.....	2
3.2 Groundwater Quality Monitoring	2
4. Remediation Activities	3
4.1 Groundwater Remediation Activities.....	3
4.2 Supplemental Remediation Efforts	3
5. Conclusions	4
6. Recommendations	4

Tables

1	Second Quarter 2016 Summary of Groundwater Elevation Data
2	Second Quarter 2016 Summary of BTEX Concentrations in Groundwater

Figures

1	Site Location Map
2	Site Map with Monitoring Well Locations
3	Groundwater Elevation Contour Map – June 6, 2016
4	Analytical Results Map – June 6, 2016

Appendices

A	Historic Analytical Results – BTEX Concentrations in Groundwater
B	Laboratory Analytical Report

1. Introduction

This report summarizes the groundwater monitoring and remediation activities conducted during the second quarter 2016 at the Eaton Commons project (Site) in Weld County, 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 in the Site subsurface and performing groundwater remediation. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period on June 6, 2016.

2. Site Location and Background

The Site is located in the northeastern quarter of the southeastern quarter of Section 31, Township 7 North, Range 65 West (approximate coordinates 40.528161 degrees north and -104.696969 degrees west). It is approximately 0.28 miles north of the intersection of US Highway 74 and County Road 39 within the Eaton Commons Neighborhood. Specifically, the Site is located partially within two backyards of private residences located at 301 Hickory Street and 940 East Third St in the southeast corner of the Eaton Commons neighborhood.

On May 4, 2015, a petroleum hydrocarbon release from a buried DCP sales line was discovered. An initial Form 19 was submitted to the Colorado Oil and Gas Conservation Commission (COGCC) on May 6, 2015 and a supplemental Form 19 was submitted on June 2, 2015. Excavation activities were conducted to remove surface and subsurface soil impacts and approximately 1,140 cubic yards of impacted soil was removed and disposed of at the Waste Management Facility in Ault, CO.

Additionally, during excavation activities, groundwater was encountered at approximately 8-feet below ground surface (bgs) and approximately 375 barrels of groundwater was removed from the excavation with a vacuum truck prior to backfilling.

A Form 27 (document number 200437203) was submitted to the COGCC on August 20, 2015 and the COGCC issued remediation #9251 for the Site. Groundwater monitoring and remediation activities are being conducted in accordance with the approved work plan provided in the Form 27.

2.1 Monitoring Well Installation

In accordance with the Form 27 and the September 15, 2015 Conditions of Approval (COA) as set forth by the COGCC, additional groundwater monitoring well installation (BH06, BH07, BH07R, & BH08) was conducted between September 25 and October 16, 2015, as illustrated on Figure 2. On September 25, 2015 during direct push drilling activities at BH07, the direct push drill rig reached refusal at approximately 11 feet bgs which was not within the saturated interval. However, due to moist soils that were encountered at approximately 8 feet bgs, a monitoring well with a 5-foot screened interval from 11 to 6 feet bgs was installed to observe groundwater infiltration over time, if any.

Subsequent to an approximate one week period, BH07 was gauged and groundwater was not observed within the well. Therefore, on October 16, 2015, supplemental hollow stem auger drilling activities were conducted to install monitoring wells BH07R and BH08.

3. Groundwater Monitoring

This section describes the field and laboratory activities performed during the second quarter 2016 groundwater monitoring event. Quarterly monitoring activities were conducted on June 6, 2016, and included Site-wide groundwater gauging and sampling. Figure 2 illustrates the groundwater monitoring network utilized to perform these activities at the Site.

3.1 Groundwater Elevation Monitoring

Groundwater levels were measured in order to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations in groundwater elevations at the Site. During the second quarter 2016, groundwater levels were measured at eight (8) monitoring well locations.

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 were 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 2016 groundwater elevation contour map, included as Figure 3, indicates that groundwater flow at the Site generally trends to the northwest. The range of groundwater elevations and the calculated average hydraulic gradient (using elevations from BH01 and BH08) at the Site are summarized in the table below.

Summary of Measured Hydraulic Parameters

	Second Quarter 2016 (6/6/16)
Maximum Elevation (Well ID)	4,822.11 (BH01)
Minimum Elevation (Well ID)	4,817.82 (BH08)
Average Change from Previous Monitoring Event – All Wells	-0.02 feet
Average Hydraulic Gradient (ft/ft) / (Well IDs)	0.03 (BH01 to BH08)

3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well, groundwater samples were collected from each of the 8 monitoring wells as well as one remediation well (REM W) 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 degrees Celsius (⁰C) for transportation to the laboratory. Groundwater samples were then delivered under chain-of-custody procedures to Summit Scientific Laboratories (Summit) in Golden, CO 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 reporting period. Analytical results up to and including the second quarter 2016 event are included in Appendix A and the laboratory analytical report for the second quarter 2016 is included in Appendix B. Analytical results are also displayed on Figure 4.

Analytical results/observations are summarized below:

- BTEX concentrations at the eight sampled monitoring well locations (BH01 through BH08) and the one remediation well (REM W) were below COGCC applicable standards and/or laboratory detection limits.

4. Remediation Activities

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

4.1 Groundwater Remediation Activities

Vacuum enhanced fluid recovery (EFR) groundwater remediation events were conducted at the Site during the second quarter 2016 at the EFR well locations and the horizontal remediation wells illustrated on Figure 2. Between April 4 and June 27, 2016, 11 EFR remediation events were conducted for a project total of 36 EFR events. During the second quarter 2016 EFR events, vacuum was applied continuously to the EFR, AS, and horizontal remediation wells illustrated on Figure 2 during each event for a minimum 6-hour period. A total of approximately 162 barrels (bbls) of groundwater was recovered during the second quarter 2016 through EFR remediation activities and was disposed of at the NGL Water Solutions DJ, LLC, C-3 disposal well in LaSalle, CO. A project total of approximately 339 bbls of groundwater has been removed since EFR remediation activities were initiated at the Site.

4.2 Supplemental Remediation Efforts

Additional remediation efforts described in the approved Form 27 included the following:

- Excavation and disposal of impacted soil that remains in place, up-gradient, and to the east of the initial excavation;
- Installation of up to six up-gradient monitoring wells, contingent on the results of supplemental excavation activities; and,
- Installation of one monitoring well within the excavation/source area or collection of a groundwater sample from an EFR well.

The September 15, 2015 COA required that additional remediation activities were to commence within 90 days of the Form 27 approval. However, the homeowners on-Site requested that prior to commencing the additional remediation activities and subsequent to completion of landscaping, a 6-foot privacy fence be installed along the eastern boundary of the properties. The property owners have

led the privacy fence installation effort which was initiated during the week of December 27, 2015. The privacy fence installation was completed on February 4, 2016. However, due to adjacent farmland activity and use of the irrigation ditch located in the anticipated dig area, these activities were not conducted during the second quarter 2016.

Groundwater samples were attempted to be collected from the EFR wells during the first quarter 2016. However, the groundwater sampling activities at the EFR well locations were unsuccessful. As described in the *First Quarter 2016 Groundwater Monitoring Summary Report* (April 19, 2016), all attempts to collect groundwater samples from the EFR wells were unsuccessful. Therefore, in lieu of collecting a sample from an EFR well, a sample was collected from the west horizontal remediation well (REM W) illustrated on Figure 2 during the June 6, 2016 sampling event. This sample is considered to be the representative source area sample that was required by the September 15, 2015 COA.

5. Conclusions

Evaluation of the second quarter 2016 monitoring data provides the following general observations:

- During the second quarter 2016, groundwater flow at the Site was towards the northwest which is consistent with the first quarter 2016 monitoring data.
- BTEX concentrations at the site were below applicable COGCC standards and/or laboratory detection limits at all sampled locations including the source area sample that was collected from REM W (Figure 2). This is the first quarter that all samples have been below standards since groundwater monitoring was initiated at the Site.
- EFR remediation has been successful at removing impacted groundwater from the source area.

6. Recommendations

Based on evaluation of data and Site activities from the second quarter 2016, recommendations for the Site include:

- Continue quarterly groundwater monitoring and sampling at the monitoring well locations illustrated on Figure 2.
- Continue weekly EFR activities at the EFR, AS, and horizontal remediation wells illustrated on Figure 2.
- Initiate supplemental excavation, remediation, and well installation efforts as described in the approved Form 27 once irrigation and farming activities have been discontinued.
- Submit a Remediation Implementation Report summarizing the additional remediation and investigation efforts within 60 days of completion of those efforts.

Tables

TABLE 1
SECOND QUARTER 2016
SUMMARY OF GROUNDWATER ELEVATION DATA
DCP MIDSTREAM - EATON COMMONS RELEASE
WELD COUNTY, COLORADO

Location	Date	Depth to Groundwater (feet)	Total Depth (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)	Change in Groundwater Elevation Since Previous Event (1) (feet)
BH01	6/11/2015	6.22	10.42	4829.11	4822.89	NA
BH01	10/7/2015	5.25	10.45	4829.11	4823.86	0.97
BH01	2/19/2016	6.71	10.16	4829.11	4822.40	-1.46
BH01	6/6/2016	7.00	10.16	4829.11	4822.11	-0.29
BH02	6/11/2015	8.18	11.04	4829.98	4821.80	NA
BH02	10/7/2015	5.51	10.51	4829.98	4824.47	2.67
BH02	2/19/2016	7.89	10.51	4829.98	4822.09	-2.38
BH02	6/6/2016	7.91	10.51	4829.98	4822.07	-0.02
BH03	6/11/2015	10.57	11.05	4830.93	4820.36	NA
BH03	10/7/2015	8.33	11.15	4830.93	4822.60	2.24
BH03	2/19/2016	10.41	11.40	4830.93	4820.52	-2.08
BH03	6/6/2016	10.36	11.40	4830.93	4820.57	0.05
BH04	6/11/2015	10.18	11.21	4830.80	4820.62	NA
BH04	10/7/2015	9.16	11.30	4830.80	4821.64	1.02
BH04	2/19/2016	9.70	11.20	4830.80	4821.10	-0.54
BH04	6/6/2016	9.92	11.20	4830.80	4820.88	-0.22
BH05	6/11/2015	8.14	10.67	4829.76	4821.62	NA
BH05	10/7/2015	7.56	10.70	4829.76	4822.20	0.58
BH05	2/19/2016	8.05	10.66	4829.76	4821.71	-0.49
BH05	6/6/2016	8.63	10.66	4829.76	4821.13	-0.58
BH06	10/7/2015	9.64	14.63	4831.81	4822.17	NA
BH06	2/19/2016	11.43	14.61	4831.81	4820.38	-1.79
BH06	6/6/2016	11.41	14.61	4831.81	4820.40	0.02
BH07R	10/22/2015	12.52	22.36	4830.24	4817.72	NA
BH07R	2/26/2016	12.62	22.36	4830.24	4817.62	-0.10
BH07R	6/6/2016	11.44	22.36	4830.24	4818.80	1.18
BH08	10/22/2015	15.24	24.09	4830.39	4815.15	NA
BH08	2/19/2016	12.28	24.33	4830.39	4818.11	2.96
BH08	6/6/2016	12.57	24.33	4830.39	4817.82	-0.29
Average groundwater elevation change between 2/19/2016 and 6/6/2016						-0.02

Notes:

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

amsl = feet above mean sea level

TOC = top of casing

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

NA = Not Applicable

TABLE 2
SECOND QUARTER 2016
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
DCP MIDSTREAM - EATON COMMONS 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)⁽¹⁾		5	560	700	1,400	
BH01	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH02	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH03	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH04	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH05	6/6/2016	4.3	<1.0	<1.0	<1.0	
BH06	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH07R	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH08	6/6/2016	<1.0	<1.0	<1.0	<1.0	
REM W	6/6/2016	<1.0	<1.0	<1.0	<1.0	

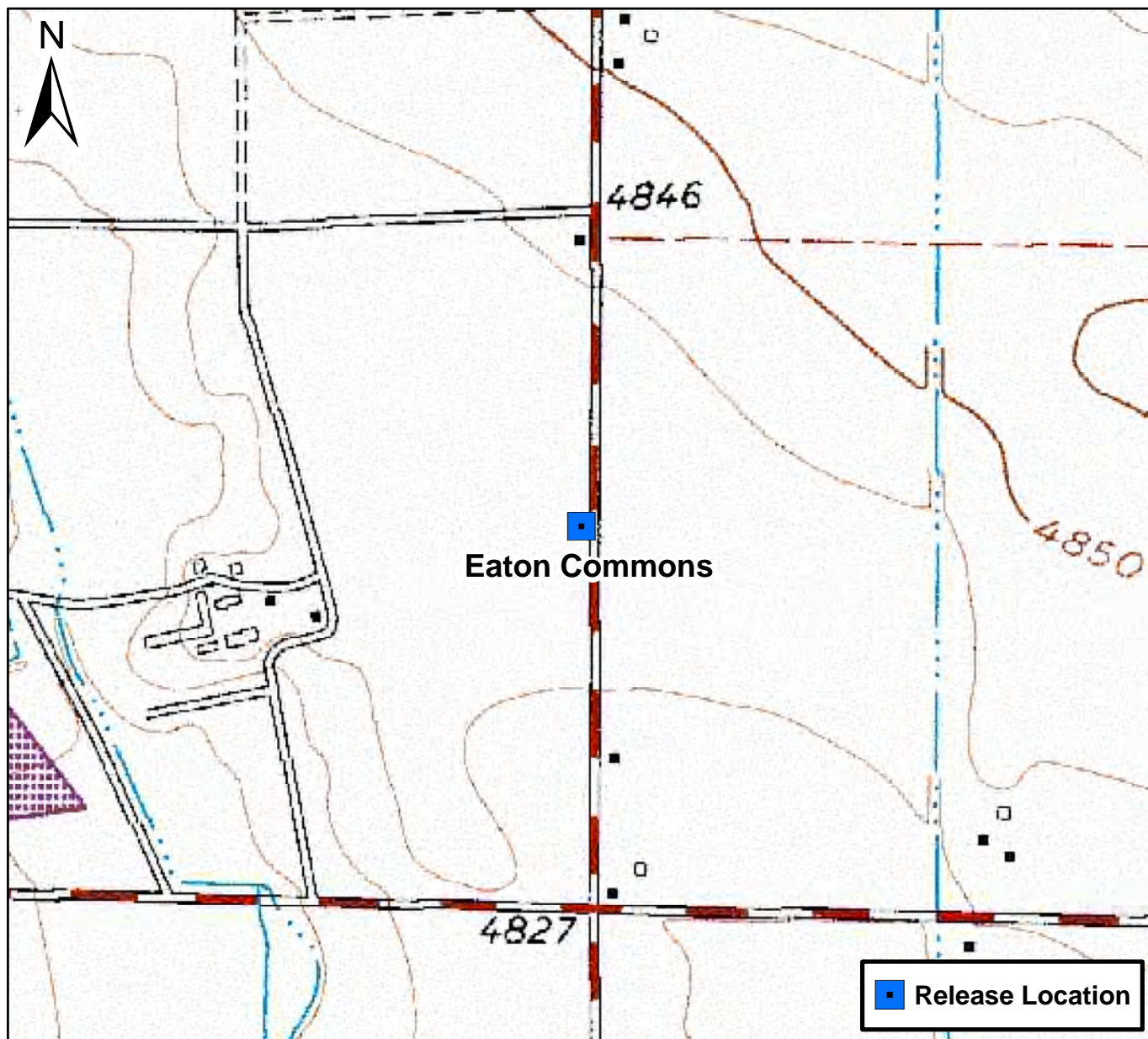
Notes:

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.

µg/L = micrograms per liter.

Figures



0 750 1,500 Feet

Figure 1

Site Location Map
Eaton Commons
NESE S31 T7N R65W
Weld County, Colorado





DATE:	December 2015
DESIGNED BY:	B. Humphrey
DRAWN BY:	D. Arnold



**DCP Midstream
Eaton Commons**
NESE Section 31, Township 7 North, Range 65 West
Weld County, Colorado

Site Overview
Map with Well Locations

Figure
2



DATE:	June 2016
DESIGNED BY:	B. Humphrey
DRAWN BY:	D. Arnold



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

**DCP Midstream
Eaton Commons**
NESE Section 31, Township 7 North, Range 65 West
Weld County, Colorado

Groundwater Elevation
Contour Map
(June 6, 2016)

Figure
3



DATE: June 2016
DESIGNED BY: B. Humphrey
DRAWN BY: D. Arnold

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

**DCP Midstream
Eaton Commons**
NESE Section 31, Township 7 North, Range 65 West
Weld County, Colorado

Groundwater Analytical
Results Map
(June 6, 2016)

Figure
4

Appendix A

Historic Analytical Results

APPENDIX A
HISTORICAL ANALYTICAL DATA
DCP MIDSTREAM - EATON COMMONS 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)⁽¹⁾		5	560	700	1,400	
BH01	6/11/2015	<1.0	<1.0	<1.0	<1.0	
BH01	10/7/2015	<1.0	<1.0	<1.0	<1.0	
BH01	2/19/2016	<1.0	<1.0	<1.0	<1.0	
BH01	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH02	6/11/2015	<1.0	4.3	2.7	14	
BH02	10/7/2015	<1.0	<1.0	<1.0	<1.0	
BH02	2/19/2016	<1.0	<1.0	<1.0	<1.0	
BH02	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH03	6/11/2015	2,600	1.2	14	70	
BH03	10/7/2015	4,600	1.8	81	14	
BH03	2/19/2016	220	<1.0	26	20	
BH03	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH04	6/11/2015	<1.0	<1.0	<1.0	<1.0	
BH04	10/7/2015	<1.0	<1.0	<1.0	<1.0	
BH04	2/19/2016	<1.0	<1.0	<1.0	<1.0	
BH04	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH05	6/11/2015	<1.0	<1.0	<1.0	<1.0	
BH05	10/7/2015	76	7.2	<1.0	5.2	
BH05	2/19/2016	<1.0	<1.0	<1.0	<1.0	
BH05	6/6/2016	4.3	<1.0	<1.0	<1.0	
BH06	10/7/2015	<1.0	<1.0	2.4	<1.0	
BH06	2/19/2016	<1.0	<1.0	<1.0	<1.0	
BH06	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH07R	10/22/2015	<1.0	<1.0	<1.0	<1.0	
BH07R	2/26/2016	<1.0	<1.0	<1.0	<1.0	
BH07R	6/6/2016	<1.0	<1.0	<1.0	<1.0	
BH08	10/22/2015	<1.0	<1.0	<1.0	<1.0	
BH08	2/19/2016	<1.0	<1.0	<1.0	<1.0	
BH08	6/6/2016	<1.0	<1.0	<1.0	<1.0	

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.

Appendix B

Laboratory Analytical Report

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 10, 2016

Brian Humphrey
DCP Midstream
370 17th Street #2500
Denver, CO 80202
RE: Eaton Commons

Enclosed are the results of analyses for samples received by Summit Scientific on 06/06/16 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury
President



DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	1606051-01	Water	06/06/16 15:45	06/06/16 17:30
BH02	1606051-02	Water	06/06/16 15:50	06/06/16 17:30
BH03	1606051-03	Water	06/06/16 15:55	06/06/16 17:30
BH04	1606051-04	Water	06/06/16 14:50	06/06/16 17:30
BH05	1606051-05	Water	06/06/16 15:00	06/06/16 17:30
BH06	1606051-06	Water	06/06/16 14:40	06/06/16 17:30
BH07R	1606051-07	Water	06/06/16 15:30	06/06/16 17:30
BH08	1606051-08	Water	06/06/16 15:40	06/06/16 17:30
REM W	1606051-09	Water	06/06/16 14:18	06/06/16 17:30

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.



DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons

Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

Summit Scientific

741 Corporate Circle Suite I • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

1606051

Page 1 of 1

Client: DEP
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: MEP, EB, DC

Project Manager: Steve Weather's / Brian Humphrey
E-Mail: swweather's@dcpmidstream.com / bhumphrey@eaton-co.com
Project Name: Eaton Commons
Project Number: _____

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)				
BH01	6/6/16	15:45	3			X									
BH02	6/6/16	15:50	3			X									
BH03	6/6/16	15:55	2			X									
BH04	6/6/16	14:50	3			X									
BH05	6/6/16	15:00	3			X									
BH06	6/6/16	14:40	3			X									
BH07R	6/6/16	15:30	3			X									
BH08	6/6/16	15:40	3			X									
Rem W	6/6/16	14:12	3			X									

Relinquished by: <u>Mark Beaulieu</u>	Date/Time: <u>6-6-16 1730</u>	Received by: <u>ML</u>	Date/Time: <u>6/6/16 1730</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	Notes: <u>on ICE</u>
Relinquished by: <u>ML</u>	Date/Time: <u>6/6/16 1815</u>	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <u>5.5°C</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		

www.s2scientific.com

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 #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

Sample Receipt Checklist

S2 Work Order: 1606051

Client: DCP

Client Project ID: Eaton Commons

Shipped Via: p/u
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

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

Cooler ID					
Temp (°C)	<u>5.5</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.			<input checked="" type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?				
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Nakita
Custodian Printed Name

MA
Signature or Initials of Custodian

6/16/16 1300
Date/Time



DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH01
1606051-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1606082	06/08/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		89.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH02
1606051-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.2 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.1 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH03
1606051-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 15:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 15:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		90.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH04
1606051-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **06/06/16 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		87.0 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.0 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.7 %		45-146		"	"	"	"	

Summit Scientific

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370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
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Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH05
1606051-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	4.3	1.0	ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		86.0 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.3 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.5 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH06
1606051-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		89.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		100 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH07R
1606051-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 15:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 15:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		89.4 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

BH08
1606051-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 15:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 15:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		88.2 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

REM W
1606051-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/16 14:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1606082	06/09/16	06/09/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/06/16 14:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		86.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	45-146		"	"	"	"	

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch 1606082 - EPA 5030 Water MS

Blank (1606082-BLK1)

Prepared: 06/08/16 Analyzed: 06/09/16

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.3		86.5	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	45-149			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		93.7	45-146			

LCS (1606082-BS1)

Prepared: 06/08/16 Analyzed: 06/09/16

Benzene	33.6	1.0	ug/l	33.3		101	51-132			
Toluene	37.9	1.0	"	33.3		114	51-138			
Ethylbenzene	40.0	1.0	"	33.1		121	58-146			
m,p-Xylene	80.4	2.0	"	66.5		121	57-144			
o-Xylene	37.7	1.0	"	32.7		115	53-146			
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.4	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.8	45-146			

Matrix Spike (1606082-MS1)

Source: 1606051-01

Prepared: 06/08/16 Analyzed: 06/09/16

Benzene	34.0	1.0	ug/l	33.3	ND	102	34-141			
Toluene	37.9	1.0	"	33.3	ND	114	27-151			
Ethylbenzene	39.7	1.0	"	33.1	ND	120	29-160			
m,p-Xylene	81.0	2.0	"	66.5	ND	122	20-166			
o-Xylene	37.8	1.0	"	32.7	ND	116	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.2	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.5	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.9	45-146			

Summit Scientific

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

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 1606082 - EPA 5030 Water MS

Matrix Spike Dup (1606082-MSD1)		Source: 1606051-01			Prepared: 06/08/16 Analyzed: 06/09/16					
Benzene	33.9	1.0	ug/l	33.3	ND	102	34-141	0.0884	32	
Toluene	37.5	1.0	"	33.3	ND	112	27-151	1.14	25	
Ethylbenzene	39.4	1.0	"	33.1	ND	119	29-160	0.632	50	
m,p-Xylene	80.1	2.0	"	66.5	ND	120	20-166	1.03	36	
o-Xylene	37.4	1.0	"	32.7	ND	114	33-159	1.25	26	
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.3		97.3	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.9	45-146			

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DCP Midstream
370 17th Street #2500
Denver CO, 80202

Project: Eaton Commons
Project Number: [none]
Project Manager: Brian Humphrey

Reported:
06/10/16 08:45

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

Summit Scientific

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A handwritten signature in black ink, appearing to be 'MSM'.