

# Third Quarter 2016 Groundwater Monitoring Summary Report

## Tampa Compressor Station Release Weld County, Colorado Remediation #9353

Prepared for:



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**November 30, 2016**

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## 1. Introduction

This report summarizes the groundwater monitoring activities conducted during the third quarter 2016 at the Tampa Compressor Station, 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. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period on August 17, 2016.

## 2. Site Location and Background

The Site is located in the southwestern quarter of the southwestern quarter of Section 31, Township 3 North, Range 63 West (approximate coordinates 40.176595 degrees north and -104.489837 degrees west), approximately 5 miles north on County Road (CR) 59 from Keenesburg, Colorado.

A petroleum hydrocarbon release originating from an underground pipeline occurred at the Site resulting in surface soil staining. DCP submitted an initial Form 19 on February 2, 2015, with a Supplemental Form 19 submitted on February 10, 2015, and the Colorado Oil and Gas Conservation Commission (COGCC) issued a spill tracking facility ID# 440770 for the Site.

Initial soil investigation activities conducted on February 2, 2015, indicated that surface soil impacts were above COGCC standards. On February 6, 2015, hydrovacuum excavation and soil removal activities of the surface stained soils to approximately 1-foot below ground surface (bgs) was conducted and approximately 14 cubic yards (yd<sup>3</sup>) of material was removed.

On February 13, 2015, three soil borings (BH01 – BH03) were advanced and soil samples were collected from just above the saturated interval at each location. On February 19, 2015, groundwater monitoring activities were conducted at the well locations and light non-aqueous phase liquid (LNAPL) was observed in monitoring wells BH01 and BH03 with measured thicknesses of 3.14 feet and 1.83 feet, respectively. A groundwater sample was collected from BH02 and the laboratory analytical results from that well were below COGCC Table 910-1 standards. Locations of the soil borings are illustrated on Figure 2.

On April 28, 2015, a vacuum enhanced fluid recovery (EFR) event was conducted at monitoring wells BH01 and BH03 and approximately 5 barrels (bbl) of liquid was removed during that event. Additional source area excavation activities were conducted at the site between May 6 and 22, 2015, and approximately 210 yd<sup>3</sup> of impacted soil and 33 bbl of groundwater were removed during excavation. Soil samples were collected during excavation activities and based on the laboratory analytical results, impacted soil within the vadose zone remains in place in the northwest corner of the Site. Due to the existing infrastructure and off-site conditions, the soil was left in place and in-situ remediation activities have been conducted. Additionally, during the May 2015 excavation activities, monitoring well BH01 was destroyed.

A Form 27 was submitted to the COGCC on November 4, 2015, and the COGCC issued remediation #9353 for the Site. In accordance with the approved work plan described in the Form 27, DCP installed

an additional nine (9) temporary monitoring wells and replaced the destroyed BH01 (Figure 2). Furthermore, DCP initiated approved groundwater monitoring activities at the Site.

### 3. Groundwater Monitoring

This section describes the field and laboratory activities performed during the third quarter 2016 groundwater monitoring event. Quarterly monitoring activities were conducted on August 17, 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 third quarter 2016, groundwater levels were measured at 12 monitoring well locations (BH01R through BH12).

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 third quarter 2016 groundwater elevation contour map, included as Figure 3, indicates that groundwater flow at the Site generally trends to the northeast. The range of groundwater elevations, average elevation change from the previous monitoring event, and the calculated average hydraulic gradient (using elevations from BH04 and BH08) at the Site are summarized in the table below.

**Summary of Measured Hydraulic Parameters**

	<b>Third Quarter 2016 (8/17/2016)</b>
Maximum Elevation (Well ID)	4,795.90 (BH04)
Minimum Elevation (Well ID)	4,795.39 (BH08)
Average Change from Previous Monitoring Event – All Wells	0.55 feet
Average Hydraulic Gradient (ft/ft) / (Well IDs)	0.006 (BH04 to BH08)

#### 3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well, groundwater samples were collected from 12 monitor wells using disposable polyethylene bailers. LNAPL was observed in BH04, but was purged from well after 4 gals.

A minimum of three well casing volumes of groundwater were purged from each monitor 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 (°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 reporting period. Historic analytical results up to and including the third quarter 2016 event are included in Appendix A and the laboratory analytical report for the third quarter 2016 is included in Appendix B. Analytical results are also displayed on Figure 4.

Analytical results/observations are summarized below:

- Benzene concentration in groundwater samples from wells BH04 (28 micrograms per liter [ $\mu\text{g/L}$ ]), BH05 (1,800  $\mu\text{g/L}$ ), BH06 (5,400  $\mu\text{g/L}$ ), BH07 (2,500  $\mu\text{g/L}$ ), BH08 (5.1  $\mu\text{g/L}$ ), and BH11 (1,100  $\mu\text{g/L}$ ) were in exceedance of the COGCC Table 910-1 standard of 5  $\mu\text{g/L}$ .
- The toluene concentration in the groundwater sample from well BH06 (3,100  $\mu\text{g/L}$ ) was in exceedance of the COGCC Table 910-1 standard of 560  $\mu\text{g/L}$ .
- The ethylbenzene concentration in the groundwater sample from well BH06 (1,400  $\mu\text{g/L}$ ) was in exceedance of the COGCC Table 910-1 standard of 700  $\mu\text{g/L}$ .
- Total Xylenes in groundwater samples from wells BH06 (7,600  $\mu\text{g/L}$ ) and BH07 (2,600  $\mu\text{g/L}$ ) were in exceedance of the COGCC Table 910-1 standard of 1,400  $\mu\text{g/L}$ .
- BTEX concentrations from the remaining sample locations were below COGCC standards and/or below laboratory detection limits.
- A trace amount of LNAPL was observed in wells BH04 with a measured thickness of 0.06 feet.

#### **4. Remediation Activities**

In accordance with the approved Form 27 Remediation Work Plan, vacuum enhanced fluid recovery (EFR) remediation activities were initiated at the Site during the second quarter 2016. Between June 1, 2016 and September 27, 2016, fourteen mobile EFR events were conducted simultaneously at monitoring wells BH03, BH04, BH06, and BH11 for a minimum 6-hour period during each event. A total of approximately 520 barrels (bbls) of groundwater was removed during the third quarter EFR remediation events. A project total of approximately 800 barrels of liquid has been removed through EFR remediation activities. The groundwater was subsequently transported and disposed of at the NGL Water Solutions DJ, LLC, C-3 disposal well in LaSalle, CO.

#### **5. Conclusions**

Observations of the third quarter 2016 monitoring data provides the following:

- LNAPL was observed in BH04 during the third quarter 2016.

- Benzene concentrations in exceedance of the COGCC applicable groundwater standard was detected in six (6) of the sampled monitoring wells.
- BTEX concentrations across the Site decreased when compared to the second quarter 2016 event.

## **6. Recommendations**

Based on evaluation of data from the third quarter 2016, recommendations for future activities include:

- Continue quarterly groundwater monitoring and sampling at the monitoring well locations illustrated on Figure 2.
- Based on LNAPL measurements that have been collected during the weekly EFR remediation events and during the third quarter 2016 monitoring event, EFR remediation will be converted from weekly to bi-weekly. This change will allow increased recharge time for LNAPL to infiltrate the monitoring well locations on-Site. Additionally, as discussed in the Form 27, mobile air sparge (AS) groundwater remediation activities will be conducted in conjunction with EFR activities to address dissolved phase BTEX concentrations in monitoring wells that do not contain measurable or trace amounts of LNAPL.

## Tables

**TABLE 1**  
**THIRD QUARTER 2016 MONITORING EVENT**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**  
**DCP TAMPA COMPRESSOR STATION**  
**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)
BH01R	11/12/2015	11.48			16.41	4,805.57	4,794.09	NA
BH01R	2/23/2016	10.50			15.00	4,805.57	4,795.07	0.98
BH01R	5/27/2016	10.25			NM	4,805.57	4,795.32	0.25
BH01R	8/17/2016	9.86			15.89	4,805.57	4,795.71	0.39
BH02	11/12/2015	13.64			18.90	4,807.70	4,794.06	NA
BH02	2/23/2016	13.55			18.55	4,807.70	4,794.15	0.09
BH02	5/27/2016	12.41			NM	4,807.70	4,795.29	1.14
BH02	8/17/2016	12.02			18.82	4,807.70	4,795.68	0.39
BH03	11/12/2015	11.79	10.13	1.66	NM	4,804.31	4,793.76	NA
BH03	2/23/2016	10.34	10.23	0.11	NM	4,804.31	4,794.05	0.29
BH03	5/27/2016	9.16	9.15	0.01	NM	4,804.31	4,795.15	1.10
BH03	8/17/2016	8.78			16.43	4,804.31	4,795.53	0.37
BH04	11/12/2015	12.58	11.79	0.79	16.36	4,806.95	4,794.96	NA
BH04	2/23/2016	12.70	12.57	0.13	NM	4,806.95	4,794.34	-0.61
BH04	5/27/2016	11.40	11.39	0.01	NM	4,806.95	4,795.55	1.21
BH04	8/17/2016	11.09	11.03	0.06	16.25	4,806.95	4,795.90	0.35
BH05	11/12/2015	12.29			16.18	4,806.51	4,794.22	NA
BH05	2/23/2016	12.21			16.19	4,806.51	4,794.30	0.08
BH05	5/27/2016	11.90			NM	4,806.51	4,794.61	0.31
BH05	8/17/2016	10.69			16.20	4,806.51	4,795.82	1.21
BH06	11/12/2015	12.44	12.29	0.15	16.37	4,806.46	4,794.13	NA
BH06	2/23/2016	12.31	12.24	0.07	NM	4,806.46	4,794.20	0.07
BH06	5/27/2016	11.17	11.08	0.09	NM	4,806.46	4,795.35	1.16
BH06	8/17/2016	10.73			15.94	4,806.46	4,795.73	0.37
BH07	11/12/2015	12.02			15.26	4,806.01	4,793.99	NA
BH07	2/23/2016	11.96			15.57	4,806.01	4,794.05	0.06
BH07	5/27/2016	10.81			NM	4,806.01	4,795.20	1.15
BH07	8/17/2016	10.42			15.20	4,806.01	4,795.59	0.39
BH08	11/12/2015	9.97			15.13	4,803.78	4,793.81	NA
BH08	2/23/2016	9.95			15.14	4,803.78	4,793.83	0.02
BH08	5/27/2016	8.80			NM	4,803.78	4,794.98	1.15
BH08	8/17/2016	8.39			15.16	4,803.78	4,795.39	0.41
BH09	11/12/2015	10.24			15.25	4,804.08	4,793.84	NA
BH09	2/23/2016	10.20			15.29	4,804.08	4,793.88	0.04
BH09	5/27/2016	9.05			NM	4,804.08	4,795.03	1.15
BH09	8/17/2016	8.65			15.20	4,804.08	4,795.43	0.40
BH10	11/12/2015	11.25			15.14	4,805.37	4,794.12	NA
BH10	2/23/2016	11.22			15.26	4,805.37	4,794.15	0.03
BH10	5/27/2016	10.05			NM	4,805.37	4,795.32	1.17
BH10	8/17/2016	9.66			15.28	4,805.37	4,795.71	0.39

**TABLE 1**  
**THIRD QUARTER 2016 MONITORING EVENT**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**  
**DCP TAMPA COMPRESSOR STATION**  
**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)
BH11	11/12/2015	11.00			14.44	4,804.97	4,793.97	NA
BH11	2/23/2016	11.09	11.07	0.02	14.43	4,804.97	4,793.89	-0.07
BH11	5/27/2016	9.81			NM	4,804.97	4,795.16	1.26
BH11	8/17/2016	9.42			14.49	4,804.97	4,795.55	0.39
BH12	11/12/2015	11.27			15.24	4,805.13	4,793.86	NA
BH12	2/23/2016	11.28			15.19	4,805.13	4,793.85	-0.01
BH12	5/27/2016	10.10			NM	4,805.13	4,795.03	1.17
BH12	8/17/2016	9.69			15.28	4,805.13	4,795.44	1.59
Average change in groundwater elevation between 5/27/17 to 8/17/2016								0.55

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)

\* Groundwater elevation was corrected for product thickness using the following calculation, when applicable:

Groundwater elevation = (TOC Elevation - Measured Depth to Water) + (LNAPL Thickness in Well \* LNAPL Relative Density)

LNAPL relative density is assumed to be approximately 0.75

NA = Not Applicable

TD = Total Depth

**TABLE 2**  
**THIRD QUARTER 2016 MONITORING EVENT**  
**SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER**  
**DCP TAMPA COMPRESSOR STATION**  
**WELD COUNTY, COLORADO**

Location Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
<b>COGCC Standards (µg/L)<sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	
BH01R	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH02	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH03	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH04	8/17/2016	<b>28</b>	73	140	840	LNAPL
BH05	8/17/2016	<b>1,800</b>	30	100	1,100	
BH06	8/17/2016	<b>5,400</b>	<b>3,100</b>	<b>1,400</b>	<b>7,600</b>	
BH07	8/17/2016	<b>2,500</b>	170	550	<b>2,600</b>	
BH08	8/17/2016	<b>5.1</b>	6.2	20	320	
BH09	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH10	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH11	8/17/2016	<b>1,100</b>	3.5	34	770	
BH12	8/17/2016	<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.

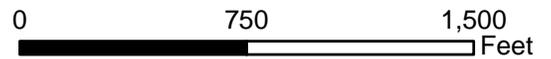
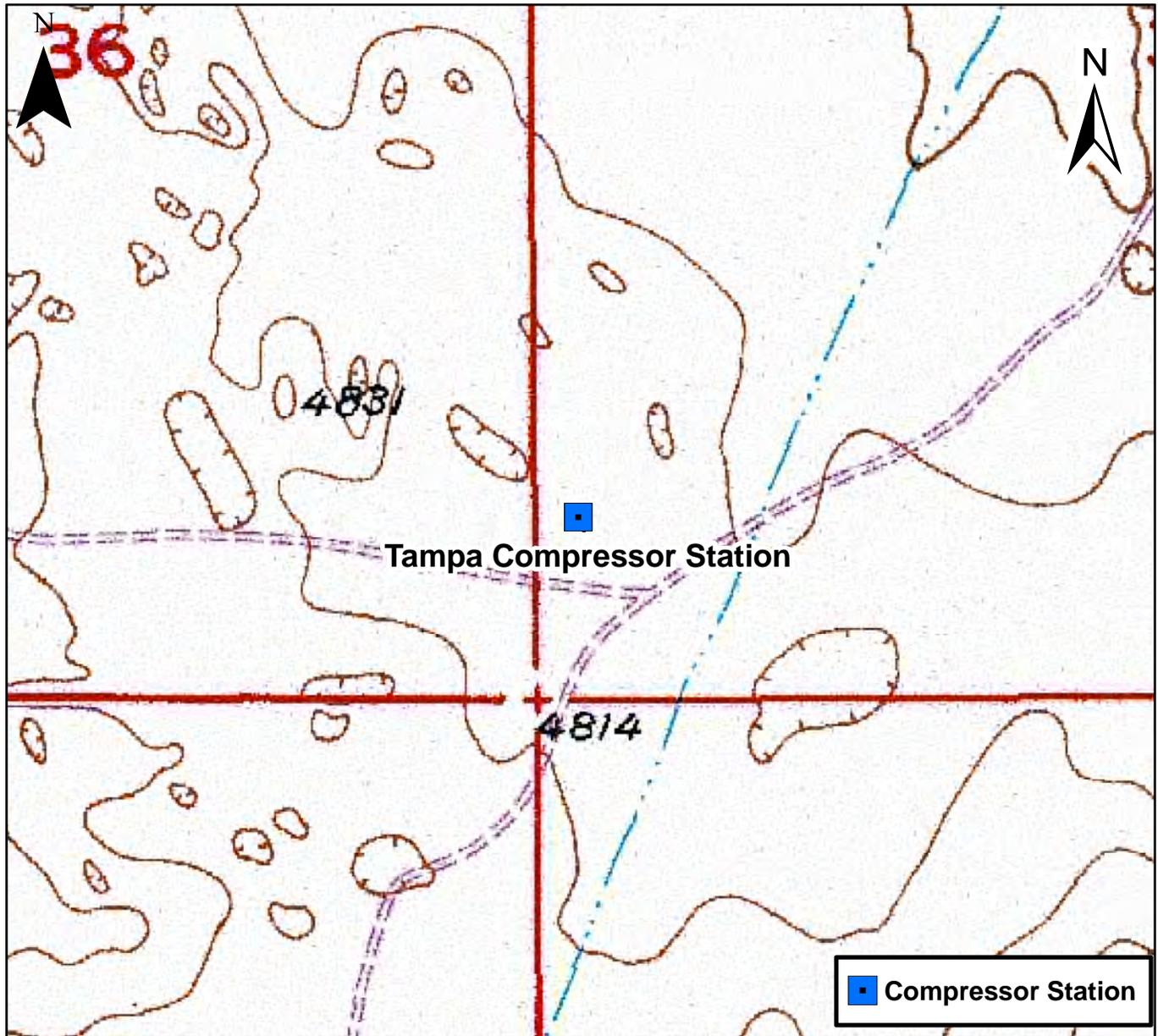
**Bold** red values indicate an exceedance of the COGCC groundwater standards for the Site.

NS = Not sampled.

µg/L = micrograms per liter.

LNAPL - Light non-aqueous phase liquid

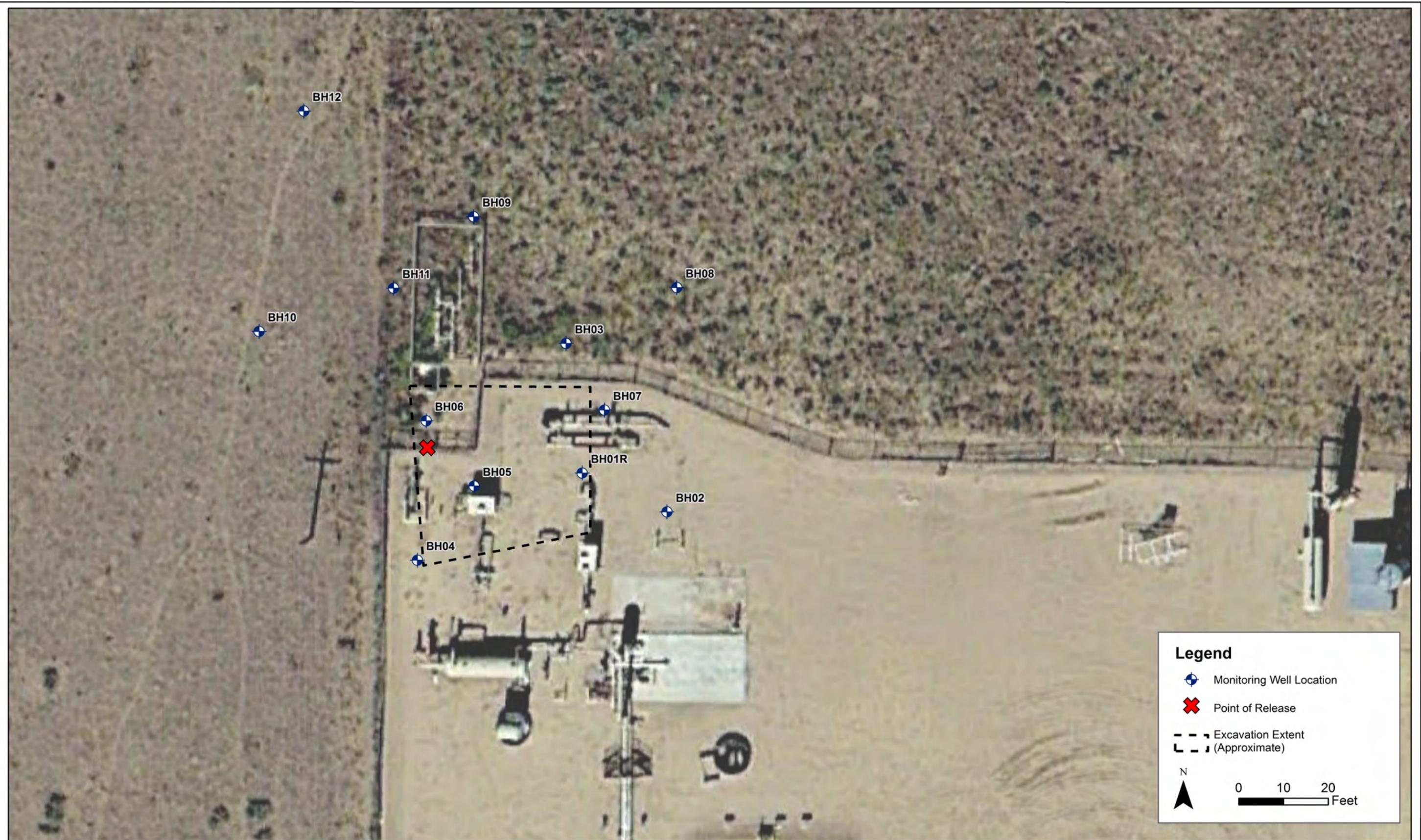
## Figures



### Figure 1

Site Location Map  
 Tampa Compressor Station  
 SWSW S31 T3N R63W  
 Weld County, Colorado





DATE:	November 2016
DESIGNED BY:	B. Humphrey
DRAWN BY:	D. Cavinder



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

**DCP Midstream**  
**Tampa Compressor Station**  
SWSW Section 31, Township 3 North, Range 63 West  
Weld County, Colorado

Site Map with  
Monitoring Well Location

Figure  
2



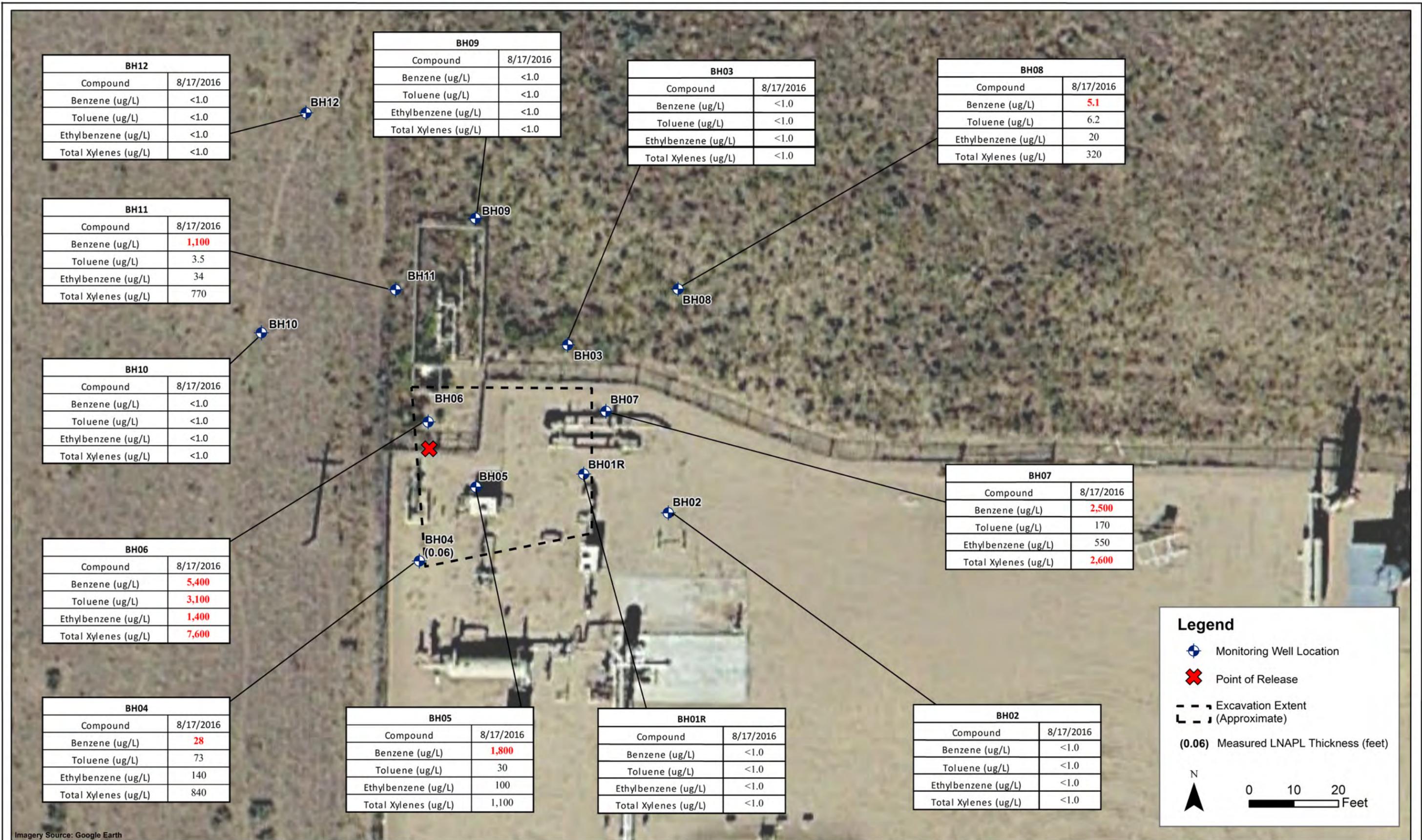
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**TASMAN**  
 GEOSCIENCES  
 Tasman Geosciences Inc.  
 6899 Pecos Street - Unit C  
 Denver, CO 80221

**DCP Midstream**  
**Tampa Compressor Station**  
 SWSW Section 31, Township 3 North, Range 63 West  
 Weld County, Colorado

Groundwater Elevation  
 Contour Map  
 (August 17, 2016)

Figure  
 3



DATE: November 2016  
 DESIGNED BY: B. Humphrey  
 DRAWN BY: D. Cavinder



**DCP Midstream  
 Tampa Compressor Station**  
 SWSW Section 31, Township 3 North, Range 63 West  
 Weld County, Colorado

Groundwater Analytical Results  
 Map  
 (August 17, 2016)

Figure  
 4

Appendix A  
Historic Analytical Results

**APPENDIX A  
HISTORIC ANALYTIC DATA  
DCP TAMPA COMPRESSOR STATION  
WELD COUNTY, COLORADO**

Location Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
<b>COGCC Standards (µg/L)</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	
BH01	2/19/2015	NS	NS	NS	NS	LNAPL
BH01R	11/12/2015	<b>82</b>	<1.0	7.5	3.8	
BH01R	2/23/2016	<b>35</b>	<1.0	3.7	1.5	
BH01R	5/27/2016	4.2	<1.0	2.0	<1.0	
BH01R	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH02	2/19/2015	<1.0	1.7	<1.0	1.1	
BH02	11/12/2015	<1.0	1.6	<1.0	4.5	
BH02	2/23/2016	<1.0	<1.0	<1.0	<1.0	
BH02	5/27/2016	<1.0	<1.0	<1.0	<1.0	
BH02	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH03	2/19/2015	NS	NS	NS	NS	LNAPL
BH03	11/12/2015	NS	NS	NS	NS	LNAPL
BH03	2/23/2016	NS	NS	NS	NS	LNAPL
BH03	5/27/2016	<b>53</b>	65	100	700	
BH03	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH04	11/12/2015	NS	NS	NS	NS	LNAPL
BH04	2/23/2016	NS	NS	NS	NS	LNAPL
BH04	5/27/2016	<b>120</b>	490	560	<b>2,600</b>	
BH04	8/17/2016	<b>28</b>	73	140	840	LNAPL
BH05	11/12/2015	<b>6,700</b>	<b>590</b>	610	<b>2,300</b>	
BH05	2/23/2016	<b>2,900</b>	180	540	<b>1,500</b>	
BH05	5/27/2016	<b>2,300</b>	130	610	<b>2,900</b>	
BH05	8/17/2016	<b>1,800</b>	30	100	1,100	
BH06	11/12/2015	NS	NS	NS	NS	LNAPL
BH06	2/23/2016	NS	NS	NS	NS	LNAPL
BH06	5/27/2016	<b>6,500</b>	<b>6,200</b>	<b>2,500</b>	<b>14,000</b>	
BH06	8/17/2016	<b>5,400</b>	<b>3,100</b>	<b>1,400</b>	<b>7,600</b>	
BH07	11/12/2015	<b>1,600</b>	<b>1,000</b>	290	1,000	
BH07	2/23/2016	<b>130</b>	70	170	110	
BH07	5/27/2016	<b>3,100</b>	<b>1,500</b>	500	<b>2,700</b>	
BH07	8/17/2016	<b>2,500</b>	170	550	<b>2,600</b>	
BH08	11/12/2015	<b>160</b>	16	11	40	
BH08	2/23/2016	<b>150</b>	37	15	74	
BH08	5/27/2016	<b>60</b>	10	19	110	
BH08	8/17/2016	<b>5.1</b>	6.2	20	320	
BH09	11/12/2015	<b>610</b>	46	18	80	
BH09	2/23/2016	<b>23</b>	<1.0	<1.0	<1.0	
BH09	5/27/2016	<b>8.0</b>	<1.0	<1.0	<1.0	
BH09	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH10	11/12/2015	<1.0	<1.0	<1.0	<1.0	
BH10	2/23/2016	<1.0	<1.0	<1.0	<1.0	
BH10	5/27/2016	<1.0	<1.0	<1.0	<1.0	
BH10	8/17/2016	<1.0	<1.0	<1.0	<1.0	

**APPENDIX A  
HISTORIC ANALYTIC DATA  
DCP TAMPA COMPRESSOR STATION  
WELD COUNTY, COLORADO**

Location Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
<b>COGCC Standards (µg/L)</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	
BH11	11/12/2015	<b>2,100</b>	<b>1,800</b>	200	840	
BH11	2/23/2016	NS	NS	NS	NS	LNAPL
BH11	5/27/2016	<b>2,100</b>	180	600	<b>1,900</b>	
BH11	8/17/2016	<b>1,100</b>	3.5	34	770	
BH12	11/12/2015	<1.0	<1.0	<1.0	<1.0	
BH12	2/23/2016	<1.0	<1.0	<1.0	<1.0	
BH12	5/27/2016	<1.0	<1.0	<1.0	<1.0	
BH12	8/17/2016	<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.

LNAPL - Light non-aqueous phase liquid

## Appendix B

Laboratory Analytical Report  
Summit Scientific - 1608144

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 25, 2016

Brian Humphrey  
DCP Midstream  
370 17th Street #2500  
Denver, CO 80202  
RE: Tampa Compressor Station

Enclosed are the results of analyses for samples received by Summit Scientific on 08/17/16 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President



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

Project: Tampa Compressor Station

Project Number: [none]  
Project Manager: Brian Humphrey

**Reported:**  
08/25/16 13:27

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH12	1608144-01	Water	08/17/16 10:45	08/17/16 16:30
BH10	1608144-02	Water	08/17/16 11:00	08/17/16 16:30
BH02	1608144-03	Water	08/17/16 11:10	08/17/16 16:30
BH01R	1608144-04	Water	08/17/16 11:28	08/17/16 16:30
BH09	1608144-05	Water	08/17/16 11:26	08/17/16 16:30
BH03	1608144-06	Water	08/17/16 12:20	08/17/16 16:30
BH08	1608144-07	Water	08/17/16 11:50	08/17/16 16:30
BH04	1608144-08	Water	08/17/16 11:55	08/17/16 16:30
BH11	1608144-09	Water	08/17/16 12:05	08/17/16 16:30
BH05	1608144-10	Water	08/17/16 12:45	08/17/16 16:30
BH07	1608144-11	Water	08/17/16 12:45	08/17/16 16:30
BH06	1608144-12	Water	08/17/16 12:40	08/17/16 16:30

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
Project Manager: Brian Humphrey

Reported:  
08/25/16 13:27

# Summit Scientific

1608144

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Client: DCP PDC / Tasman Geosciences  
Address: 6899 Pecos St. Unit C  
City/State/Zip: Denver, CO 80221  
Phone: 303-487-1228 Fax: \_\_\_\_\_  
Sampler Name: Max Garza

Project Manager: Brian Humphrey D.S.  
E-Mail: brian.humphrey@summit-sc.com  
Project Name: Tampa Compressor  
Project Number: \_\_\_\_\_ N/A

Page 1 of 2

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions	
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX - 8260				
BH 12	8/17/16	10:45	3		X			X				X				
BH 10		11:02														
BH 02		11:10														
BH 01 R		11:28														
BH 09		11:26														
BH 03		12:20	2													
BH 08		11:50	3													
BH 04		11:55														
BH 11		12:05														
BH 05		12:45														

Relinquished by: <u>Max Garza</u>	Date/Time: <u>8/17/16 10:30</u>	Received by: <u>[Signature]</u>	Date/Time: <u>8/17/16 10:30</u>	Turn Around Time (Check) 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"/>	Notes: <u>on ice</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>8/17/16 12:00</u>	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		

Sample Integrity: Temperature Upon Receipt: 5.6C  
Intact:  Yes  No

www.s2scientific.com



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

Project: Tampa Compressor Station

Project Number: [none]  
Project Manager: Brian Humphrey

Reported:  
08/25/16 13:27

1608144

# Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 2 of 2

Client: D.P. / Tasman  
Address: 6999 Peoria Street  
City/State/Zip: Denver, Colorado  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: Max Garza

Project Manager: Brian Humphrey  
E-Mail: \_\_\_\_\_  
Project Name: Tampa Compressor  
Project Number: \_\_\_\_\_

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions	
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)					
BH07	8/17/16	12:45	3			X		X								
BH06	↓	12:40	↓			X		X								
Relinquished by: <u>Max Garza</u>		Date/Time: <u>8/17/16 1630</u>		Received by: <u>MD</u>		Date/Time: <u>8/17/16 1630</u>		Turn Around Time (Check)				Notes:				
								Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>				on ice				
								24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>								
Relinquished by: <u>MD</u>		Date/Time: <u>8/17/16 1700</u>		Received in Lab by:		Date/Time:		Sample Integrity:								
								Temperature Upon Receipt: <u>5.6°C</u>								
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								

www.s2scientific.com



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

Project: Tampa Compressor Station

Project Number: [none]  
Project Manager: Brian Humphrey

Reported:  
08/25/16 13:27

**Sample Receipt Checklist**

S2 Work Order: 1608144  
Client: PhC/Tasman Client Project ID: Tampa Compressor  
Shipped 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)	<u>5.6</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 <sup>(1)?</sup> 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 <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact <sup>(1)?</sup>			<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 <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)?</sup>	<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) <sup>(1)?</sup> Note the type of preservative in the Comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)?</sup> 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):				

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

Nakita  
Custodian Printed Name

[Signature]  
Signature or Initials of Custodian

8/25/16 1700  
Date/Time

[Signature]



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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH12**  
**1608144-01 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1608216	08/23/16	08/23/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/17/16 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>113 %</i>	<i>37-154</i>		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		<i>101 %</i>	<i>45-149</i>		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>92.7 %</i>	<i>45-146</i>		"	"	"	"	

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
Project Manager: Brian Humphrey

Reported:  
08/25/16 13:27

**BH10**  
**1608144-02 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1608216	08/23/16	08/23/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/17/16 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH02**  
**1608144-03 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1608216	08/23/16	08/23/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/17/16 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>107 %</i>	<i>37-154</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: Toluene-d8</i>		<i>94.0 %</i>	<i>45-149</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>95.3 %</i>	<i>45-146</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH01R**  
**1608144-04 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1608216	08/23/16	08/23/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/17/16 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>111 %</i>	<i>37-154</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: Toluene-d8</i>		<i>95.0 %</i>	<i>45-149</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>97.7 %</i>	<i>45-146</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH09**  
**1608144-05 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1608216	08/23/16	08/23/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/17/16 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>111 %</i>	<i>37-154</i>		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		<i>95.5 %</i>	<i>45-149</i>		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>96.9 %</i>	<i>45-146</i>		"	"	"	"	

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH03**  
**1608144-06 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1608216	08/23/16	08/23/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/17/16 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95.7 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91.6 %	45-146		"	"	"	"	

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH08**  
**1608144-07 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>5.1</b>	1.0	ug/l	1	1608216	08/23/16	08/23/16	EPA 8260B	
<b>Toluene</b>	<b>6.2</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>20</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>320</b>	1.0	"	"	"	"	"	"	

Date Sampled: **08/17/16 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		111 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.4 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.2 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH04**  
**1608144-08 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>28</b>	10	ug/l	10	1608216	08/23/16	08/23/16	EPA 8260B	
<b>Toluene</b>	<b>73</b>	10	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>140</b>	10	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>840</b>	10	"	"	"	"	"	"	

Date Sampled: **08/17/16 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.4 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95.9 %	45-146		"	"	"	"	

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

Project: Tampa Compressor Station

Project Number: [none]  
Project Manager: Brian Humphrey

**Reported:**  
08/25/16 13:27

**BH11**  
**1608144-09 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1100</b>	10	ug/l	10	1608216	08/23/16	08/23/16	EPA 8260B	
<b>Toluene</b>	<b>3.5</b>	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>34</b>	10	"	10	"	"	"	"	
<b>Xylenes (total)</b>	<b>770</b>	10	"	"	"	"	"	"	

Date Sampled: **08/17/16 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.3 %	45-146		"	"	"	"	

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH05**  
**1608144-10 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1800</b>	10	ug/l	10	1608216	08/23/16	08/23/16	EPA 8260B	
<b>Toluene</b>	<b>30</b>	10	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>100</b>	10	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1100</b>	10	"	"	"	"	"	"	

Date Sampled: **08/17/16 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.4 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95.3 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH07**  
**1608144-11 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2500</b>	100	ug/l	100	1608216	08/23/16	08/23/16	EPA 8260B	
<b>Toluene</b>	<b>170</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>550</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2600</b>	100	"	"	"	"	"	"	

Date Sampled: **08/17/16 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		108 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.4 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.4 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Tampa Compressor Station

Project Number: [none]  
 Project Manager: Brian Humphrey

**Reported:**  
 08/25/16 13:27

**BH06**  
**1608144-12 (Water)**

**Summit Scientific**

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

Date Sampled: **08/17/16 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>5400</b>	100	ug/l	100	1608216	08/23/16	08/23/16	EPA 8260B	
<b>Toluene</b>	<b>3100</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>1400</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>7600</b>	100	"	"	"	"	"	"	

Date Sampled: **08/17/16 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		107 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.5 %	45-146		"	"	"	"	

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**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 1608216 - EPA 5030 Water MS**

**Blank (1608216-BLK1)**

Prepared & Analyzed: 08/23/16

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		107	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.3	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.1	45-146			

**LCS (1608216-BS1)**

Prepared & Analyzed: 08/23/16

Benzene	42.4	1.0	ug/l	33.3		127	51-132			
Toluene	45.0	1.0	"	33.3		135	51-138			
Ethylbenzene	47.6	1.0	"	33.1		144	58-146			
m,p-Xylene	78.6	2.0	"	66.5		118	57-144			
o-Xylene	46.8	1.0	"	32.7		143	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.9		"	13.3		112	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.1	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.2	45-146			

**Matrix Spike (1608216-MS1)**

Source: 1608144-01

Prepared & Analyzed: 08/23/16

Benzene	42.1	1.0	ug/l	33.3	ND	126	34-141			
Toluene	45.9	1.0	"	33.3	ND	138	27-151			
Ethylbenzene	48.5	1.0	"	33.1	ND	147	29-160			
m,p-Xylene	101	2.0	"	66.5	ND	151	20-166			
o-Xylene	48.2	1.0	"	32.7	ND	148	33-159			
Surrogate: 1,2-Dichloroethane-d4	15.2		"	13.3		114	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.4	45-149			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.2	45-146			

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**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 1608216 - EPA 5030 Water MS**

<b>Matrix Spike Dup (1608216-MSD1)</b>	<b>Source: 1608144-01</b>			<b>Prepared &amp; Analyzed: 08/23/16</b>						
Benzene	41.7	1.0	ug/l	33.3	ND	125	34-141	1.00	32	
Toluene	45.5	1.0	"	33.3	ND	137	27-151	0.766	25	
Ethylbenzene	48.2	1.0	"	33.1	ND	146	29-160	0.765	50	
m,p-Xylene	100	2.0	"	66.5	ND	151	20-166	0.398	36	
o-Xylene	47.9	1.0	"	32.7	ND	147	33-159	0.582	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>15.6</i>		<i>"</i>	<i>13.3</i>		<i>117</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>99.8</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>96.8</i>	<i>45-146</i>			

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### 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