

Fourth Quarter 2017
Groundwater Monitoring Summary Report

Tampa Compressor Station Release
Weld County, Colorado
Remediation #9353

Prepared for:



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February 2, 2018

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1. Introduction

This report summarizes the groundwater monitoring activities conducted during the fourth quarter 2017 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 November 28, 2017.

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 (yd³) 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. Subsequently, these soil borings were completed as monitoring wells (BH01 – BH03). On February 19, 2015, initial 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. The monitoring well locations 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. Additional source area excavation activities were conducted at the site between May 6 and 22, 2015, and approximately 210 yd³ of impacted soil and 33 bbl of groundwater were removed during excavation. Soil samples were collected during excavation activities and reported laboratory analytical results indicated 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 impacted 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 (BH04 through BH12) and replaced the destroyed BH01 with monitoring well BH01R (Figure 2). Quarterly groundwater monitoring activities were initiated at the Site in November 2015.

3. Groundwater Monitoring

This section describes the field and laboratory activities performed during the fourth quarter 2017 groundwater monitoring event. Quarterly monitoring activities were conducted on November 28, 2017, and included Site-wide groundwater gauging, LNAPL measurements, and groundwater sampling. Figure 2 illustrates the groundwater monitoring network utilized to perform these activities at the Site.

3.1 Groundwater Elevation Monitoring

Groundwater and LNAPL levels were measured to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations in groundwater and LNAPL elevations at the Site. During the fourth quarter 2017, 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 and LNAPL levels and the calculated groundwater elevations are presented in Table 1.

A fourth quarter 2017 groundwater elevation contour map, included as Figure 3, indicates that groundwater flow at the Site generally trends to the northeast which is similar to previous quarterly monitoring data. 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

	Fourth Quarter 2017 (11/28/2017)
Maximum Elevation (Well ID)	4,795.60 (BH04)
Minimum Elevation (Well ID)	4,795.07 (BH08)
Average Change from Previous Monitoring Event – All Wells	-0.02 feet
Average Hydraulic Gradient (ft/ft) / (Well IDs)	0.006 (BH04 to BH08)

Measurable LNAPL was not detected during the fourth quarter monitoring event.

3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well location, groundwater samples were collected from 12 monitor wells using disposable polyethylene bailers.

A minimum of three well casing volumes of groundwater were purged from each monitor well or the water column was purged dry and allowed to sufficiently recover 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 fourth quarter 2017 event are included in Appendix A and the laboratory analytical report is included in Appendix B. Analytical results are also displayed on Figure 4.

Analytical results/observations are summarized below:

- LNAPL was not measured in any of the twelve (12) monitoring well locations, although a visible sheen was observed on purge water generated at monitoring locations BH04 and BH06, which have historically exhibited elevated BTEX concentrations or measurable LNAPL.
- The benzene concentration at BH06 (1,400 micrograms per liter [µg/L]) was in exceedance of the COGCC Table 910-1 standard of 5 µg/L.
- The toluene concentration at BH06 (770 µg/L) was in exceedance of the COGCC Table 910-1 standard of 560 µg/L.
- Ethylbenzene concentrations were not in exceedance of the COGCC Table 910-1 standard of 700 µg/L in any of the sampled monitor well locations. However, ethylbenzene concentrations were reported above laboratory detection limits at BH04 (140 µg/L), BH06 (190 µg/L), BH08 (7.5 µg/L), and BH11 (370 µg/L).
- The total xylenes concentration at BH06 (1,900 µg/L) was in exceedance of the COGCC Table 910-1 standard of 1,400 µg/L.
- BTEX concentrations from the remaining sample locations were below COGCC Table 910-1 standards and/or laboratory detection limits.
- Benzene concentrations at BH05 and BH07 were reported below COGCC Table 910-1 standards and below laboratory detection limits for the first time since monitoring was initiated at these locations in November 2015.

- Total xylene concentrations at BH05 and BH07 were reported below laboratory detection limits for the first time since monitoring was initiated at these locations in November 2015. Previously, total xylenes at BH05 have periodically fluctuated above and below COGCC standards, and at BH07 have been reported consistently above COGCC standards since May 2016.

4. Remediation Activities

As reported in previous quarterly summary reports, and 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 to mitigate dissolved phase petroleum hydrocarbons and residual LNAPL within groundwater at the Site. EFR remediation activities have been ongoing through May 17, 2017, in which a project total of approximately 1,188 barrels (bbls) of groundwater was removed between the second quarter 2016 and second quarter 2017 EFR remediation events. Recovered groundwater through EFR remediation was subsequently transported and disposed of at the NGL Water Solutions DJ, LLC, C-3 disposal well in LaSalle, CO. Subsequent to the EFR event conducted on May 17, 2017, EFR activities were discontinued to evaluate LNAPL recovery and dissolved phase petroleum hydrocarbon concentration trends.

Due to typically elevated dissolved phase petroleum hydrocarbon concentrations reported at BH05, BH06, and BH07, an alternative remedial approach utilizing mobile air sparge (AS) and soil vapor extraction (SVE) (AS/SVE) techniques was initiated at the Site on August 29, 2017. AS compressed air was delivered to monitoring wells BH05 and BH07 concurrent with SVE at monitoring wells BH01R, BH03, BH04, and BH06 for a continuous six-hour period. AS/SVE remediation activities have been performed on a weekly schedule through the fourth quarter 2017. Average AS delivery pressures were operated at 15-20 pounds per square inch (psi) with air delivery flow rates ranging between 14-30 cubic feet per minute (CFM). SVE vacuum pressures were operated between 18 and 115 inches of water (in/H₂O), depending on individual well performance conditions. Mobile AS/SVE remediation operations will continue at the Site on a weekly frequency through the first quarter 2018 to further mitigate dissolved phase petroleum hydrocarbon impacts observed at the Site.

5. Conclusions

Observations of the fourth quarter 2017 monitoring data provides the following:

- LNAPL was not observed in any of the twelve (12) monitoring well locations.
- Benzene, toluene, and total xylenes were reported above COGCC applicable groundwater standards at one monitoring well location (BH06) during the fourth quarter 2017 as described in Section 3.2.
- Overall decreasing trends in BTEX concentrations have been observed at Site well locations typically exhibiting impacts, with recent significant decreases to below laboratory detection limits

reported at BH05 and BH07. These observations, as well as measurable LNAPL thickness last recorded at BH06 in May 2017, indicate that active remedial efforts at the Site are effective.

6. Recommendations

Based on evaluation of data from the fourth quarter 2017, recommendations for future activities include:

- Continue quarterly groundwater monitoring and sampling activities at the monitoring well locations illustrated on Figure 2.
- Continue to operate AS/SVE remediation activities on a weekly frequency through the first quarter 2018. AS/SVE will be applied to the well network previously described and operated for 6-hour intervals.
- If measurable LNAPL is again observed at the Site, the need to implement EFR remediation activities will be evaluated.

Tables

TABLE 1
FOURTH QUARTER 2017
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	2/1/2017	10.24			NM	4,805.57	4,795.33	-0.11
BH01R	5/1/2017	10.29			NM	4,805.57	4,795.28	-0.05
BH01R	8/2/2017	10.21			16.01	4,805.57	4,795.36	0.08
BH01R	11/28/2017	10.36			NM	4,805.57	4,795.21	-0.15
BH02	2/1/2017	12.38			NM	4,807.70	4,795.32	-0.08
BH02	5/1/2017	12.45			NM	4,807.70	4,795.25	-0.07
BH02	8/2/2017	12.35			18.83	4,807.70	4,795.35	0.10
BH02	11/28/2017	12.35			NM	4,807.70	4,795.35	0.00
BH03	2/1/2017	9.13			NM	4,804.31	4,795.18	0.02
BH03	5/1/2017	9.18			NM	4,804.31	4,795.13	-0.05
BH03	8/2/2017	9.43			16.75	4,804.31	4,794.88	-0.25
BH03	11/28/2017	9.01			NM	4,804.31	4,795.30	0.42
BH04	2/1/2017	11.34			NM	4,806.95	4,795.61	-0.07
BH04	5/1/2017	11.40			NM	4,806.95	4,795.55	-0.06
BH04	8/2/2017	11.32			16.17	4,806.95	4,795.63	0.08
BH04	11/28/2017	11.35			NM	4,806.95	4,795.60	-0.03
BH05	2/1/2017	11.05			NM	4,806.51	4,795.46	-0.07
BH05	5/1/2017	11.12			NM	4,806.51	4,795.39	-0.07
BH05	8/2/2017	11.01			16.15	4,806.51	4,795.50	0.11
BH05	11/28/2017	11.27			NM	4,806.51	4,795.24	-0.26
BH06	2/1/2017	11.12	11.07	0.05	NM	4,806.46	4,795.37	-0.11
BH06	5/1/2017	11.13	11.11	0.02	NM	4,806.46	4,795.34	-0.03
BH06	8/2/2017	11.07			16.07	4,806.46	4,795.39	0.05
BH06	11/28/2017	11.02			NM	4,806.46	4,795.44	0.05
BH07	2/1/2017	10.77			NM	4,806.01	4,795.24	-0.08
BH07	5/1/2017	10.83			NM	4,806.01	4,795.18	-0.06
BH07	8/2/2017	10.76			15.24	4,806.01	4,795.25	0.07
BH07	11/28/2017	11.02			NM	4,806.01	4,794.99	-0.26
BH08	2/1/2017	8.75			NM	4,803.78	4,795.03	-0.09
BH08	5/1/2017	8.80			NM	4,803.78	4,794.98	-0.05
BH08	8/2/2017	8.71			15.17	4,803.78	4,795.07	0.09
BH08	11/28/2017	8.71			NM	4,803.78	4,795.07	0.00
BH09	2/1/2017	8.97			NM	4,804.08	4,795.11	-0.08
BH09	5/1/2017	9.03			NM	4,804.08	4,795.05	-0.06
BH09	8/2/2017	8.97			15.24	4,804.08	4,795.11	0.06
BH09	11/28/2017	8.95			NM	4,804.08	4,795.13	0.02
BH10	2/1/2017	9.97			NM	4,805.37	4,795.40	-0.09
BH10	5/1/2017	10.02			NM	4,805.37	4,795.35	-0.05
BH10	8/2/2017	9.95			15.35	4,805.37	4,795.42	0.07
BH10	11/28/2017	9.93			NM	4,805.37	4,795.44	0.02
BH11	2/1/2017	9.72			NM	4,804.97	4,795.25	-0.07
BH11	5/1/2017	9.79			NM	4,804.97	4,795.18	-0.07
BH11	8/2/2017	9.72			14.50	4,804.97	4,795.25	0.07
BH11	11/28/2017	9.77			NM	4,804.97	4,795.20	-0.05
BH12	2/1/2017	10.02			NM	4,805.13	4,795.11	-0.10
BH12	5/1/2017	10.07			NM	4,805.13	4,795.06	-0.05
BH12	8/2/2017	10.03			15.23	4,805.13	4,795.10	0.04
BH12	11/28/2017	10.02			NM	4,805.13	4,795.11	0.01
Average change in groundwater elevation (8/2/2017 to 11/28/2017)								-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)

* 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
FOURTH QUARTER 2017
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
COGCC Standards (µg/L)		5	560	700	1,400	
BH01R	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH02	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH03	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH04	11/28/2017	<1.0	3.7	140	440	
BH05	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH06	11/28/2017	1,400	770	190	1,900	
BH07	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH08	11/28/2017	1.6	<1.0	7.5	41	
BH09	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH10	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH11	11/28/2017	<1.0	22	370	430	
BH12	11/28/2017	<1.0	<1.0	<1.0	<2.0	

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

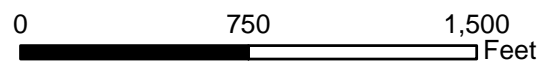
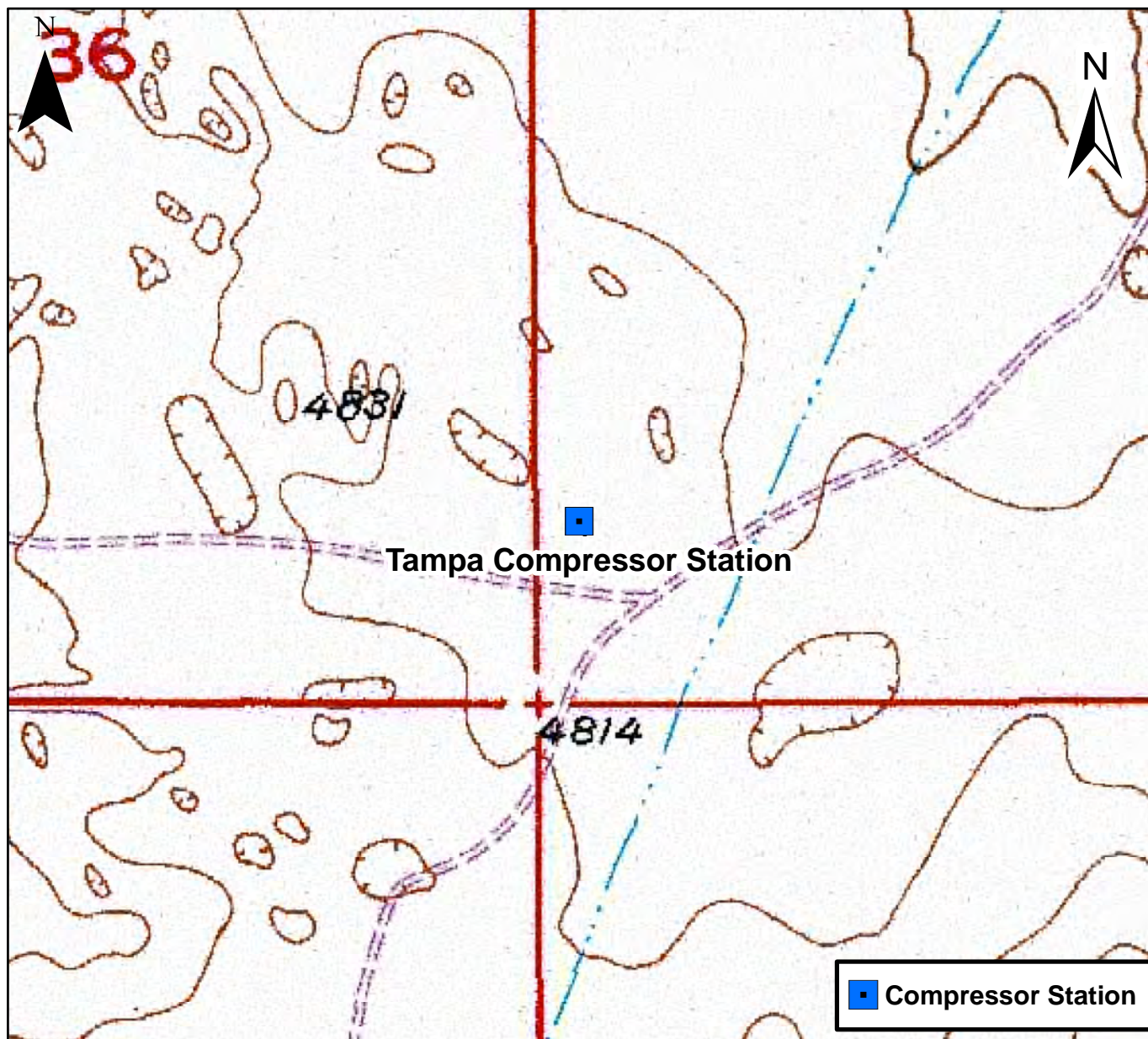


Figure 1

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





DATE:	January 2018
DESIGNED BY:	B. Humphrey
DRAWN BY:	D. Cavinder



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 Locations

Figure
2



DATE:	January 2018
DESIGNED BY:	B. Humphrey
DRAWN BY:	D. Cavinder



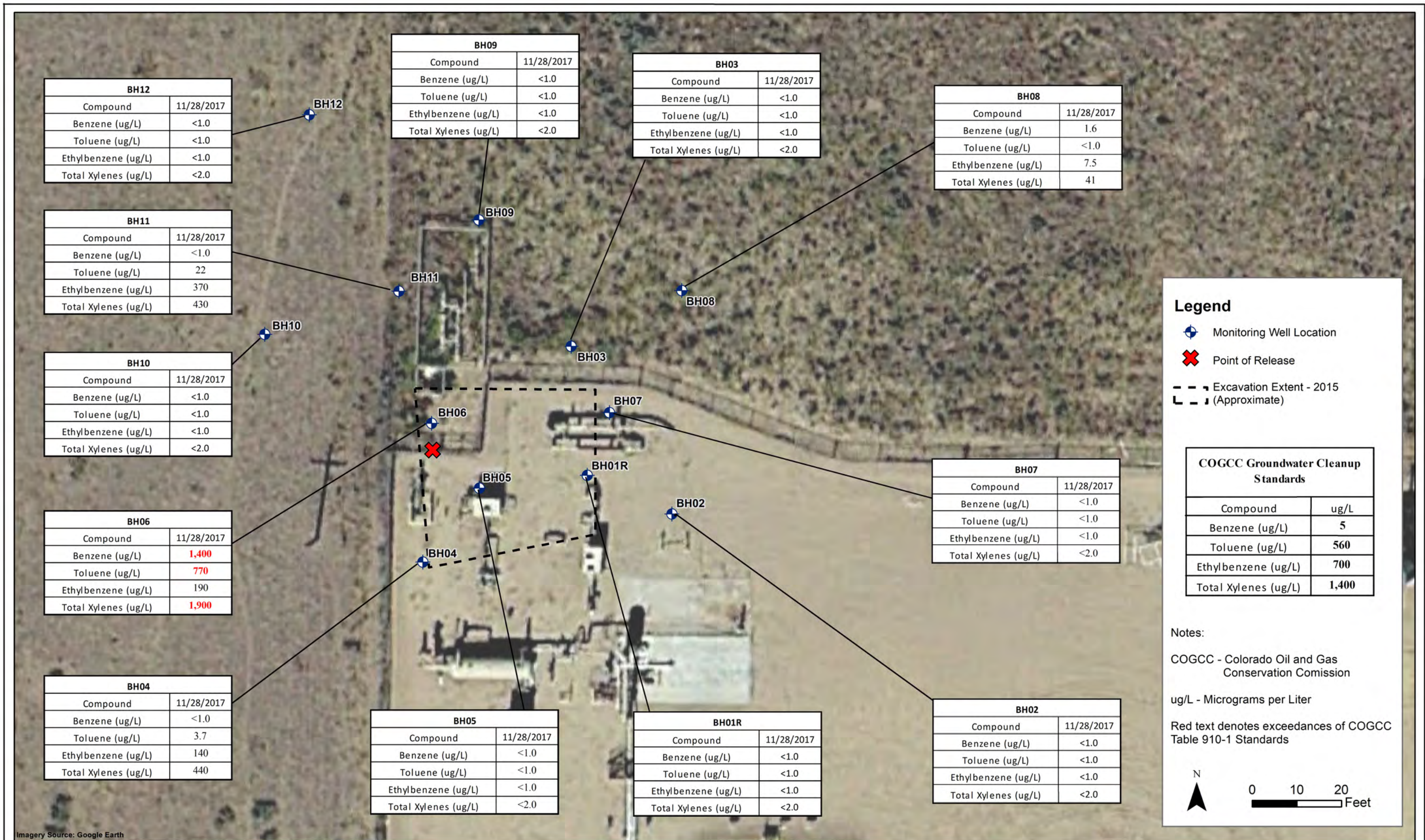
TASMAN
GEOSCIENCES

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

Groundwater Elevation
Contour Map
(November 28, 2017)

**Figure
3**



DATE: January 2018

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
(November 28, 2017)

Figure
4

Appendix A

Historic Groundwater Analytical Results

APPENDIX A
HISTORIC GROUNDWATER 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
COGCC Standards (µg/L)		5	560	700	1,400	
BH01	2/19/2015	NS	NS	NS	NS	LNAPL
BH01R	11/12/2015	82	<1.0	7.5	3.8	
BH01R	2/23/2016	35	<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	
BH01R	11/9/2016	<1.0	<1.0	3.4	<1.0	
BH01R	2/1/2017	<1.0	<1.0	<1.0	<1.0	
BH01R	5/1/2017	<1.0	<1.0	<1.0	<2.0	
BH01R	8/2/2017	<1.0	<1.0	<1.0	<2.0	
BH01R	11/28/2017	<1.0	<1.0	<1.0	<2.0	
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	
BH02	11/9/2016	<1.0	<1.0	<1.0	<1.0	
BH02	2/1/2017	<1.0	<1.0	1.9	<1.0	
BH02	5/1/2017	<1.0	<1.0	<1.0	<2.0	
BH02	8/2/2017	<1.0	<1.0	<1.0	<2.0	
BH02	11/28/2017	<1.0	<1.0	<1.0	<2.0	
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	53	65	100	700	
BH03	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH03	11/9/2016	<1.0	<1.0	<1.0	<1.0	
BH03	2/1/2017	<1.0	<1.0	<1.0	<1.0	
BH03	5/1/2017	<1.0	<1.0	<1.0	<2.0	
BH03	8/2/2017	1.1	<1.0	<1.0	<2.0	
BH03	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH04	11/12/2015	NS	NS	NS	NS	LNAPL
BH04	2/23/2016	NS	NS	NS	NS	LNAPL
BH04	5/27/2016	120	490	560	2,600	
BH04	8/17/2016	28	73	140	840	LNAPL
BH04	11/9/2016	120	590	1,800	5,500	LNAPL
BH04	2/1/2017	3.9	46	220	560	
BH04	5/1/2017	1.0	13	83	280	
BH04	8/2/2017	<1.0	8.6	190	390	
BH04	11/28/2017	<1.0	3.7	140	440	
BH05	11/12/2015	6,700	590	610	2,300	
BH05	2/23/2016	2,900	180	540	1,500	
BH05	5/27/2016	2,300	130	610	2,900	
BH05	8/17/2016	1,800	30	100	1,100	
BH05	11/9/2016	19,000	2,000	3,500	15,000	
BH05	2/1/2017	2,300	95	450	1,800	
BH05	5/1/2017	1,500	17	210	1,000	
BH05	8/2/2017	1,700	<1.0	230	1,400	
BH05	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH06	11/12/2015	NS	NS	NS	NS	LNAPL
BH06	2/23/2016	NS	NS	NS	NS	LNAPL
BH06	5/27/2016	6,500	6,200	2,500	14,000	
BH06	8/17/2016	5,400	3,100	1,400	7,600	
BH06	11/9/2016	NS	NS	NS	NS	LNAPL
BH06	2/1/2017	2,000	800	510	2,100	LNAPL
BH06	5/1/2017	1,100	620	260	1,900	LNAPL
BH06	8/2/2017	3,000	2,600	570	4,100	
BH06	11/28/2017	1,400	770	190	1,900	

APPENDIX A
HISTORIC GROUNDWATER 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
COGCC Standards (µg/L)		5	560	700	1,400	
BH07	11/12/2015	1,600	1,000	290	1,000	
BH07	2/23/2016	130	70	170	110	
BH07	5/27/2016	3,100	1,500	500	2,700	
BH07	8/17/2016	2,500	170	550	2,600	
BH07	11/9/2016	790	71	510	2,400	
BH07	2/1/2017	240	30	410	2,000	
BH07	5/1/2017	56	9.3	300	1,400	
BH07	8/2/2017	26	5.3	130	1,600	
BH07	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH08	11/12/2015	160	16	11	40	
BH08	2/23/2016	150	37	15	74	
BH08	5/27/2016	60	10	19	110	
BH08	8/17/2016	5.1	6.2	20	320	
BH08	11/9/2016	<1.0	<1.0	<1.0	9.1	
BH08	2/1/2017	4.6	<1.0	11	32	
BH08	5/1/2017	<1.0	<1.0	4.7	6.8	
BH08	8/2/2017	<1.0	<1.0	<1.0	<2.0	
BH08	11/28/2017	1.6	<1.0	7.5	41	
BH09	11/12/2015	610	46	18	80	
BH09	2/23/2016	23	<1.0	<1.0	<1.0	
BH09	5/27/2016	8.0	<1.0	<1.0	<1.0	
BH09	8/17/2016	<1.0	<1.0	<1.0	<1.0	
BH09	11/9/2016	<1.0	<1.0	<1.0	<1.0	
BH09	2/1/2017	<1.0	<1.0	<1.0	<1.0	
BH09	5/1/2017	<1.0	<1.0	<1.0	<2.0	
BH09	8/2/2017	<1.0	<1.0	<1.0	<2.0	
BH09	11/28/2017	<1.0	<1.0	<1.0	<2.0	
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	
BH10	11/9/2016	<1.0	<1.0	<1.0	<1.0	
BH10	2/1/2017	<1.0	<1.0	<1.0	<1.0	
BH10	5/1/2017	<1.0	<1.0	<1.0	<2.0	
BH10	8/2/2017	<1.0	<1.0	<1.0	<2.0	
BH10	11/28/2017	<1.0	<1.0	<1.0	<2.0	
BH11	11/12/2015	2,100	1,800	200	840	
BH11	2/23/2016	NS	NS	NS	NS	LNAPL
BH11	5/27/2016	2,100	180	600	1,900	
BH11	8/17/2016	1,100	3.5	34	770	
BH11	11/9/2016	27	<1.0	100	260	
BH11	2/1/2017	2.0	<1.0	290	330	
BH11	5/1/2017	<1.0	<1.0	160	14	
BH11	8/2/2017	<1.0	<1.0	<1.0	<2.0	
BH11	11/28/2017	<1.0	22	370	430	
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	
BH12	11/9/2016	<1.0	<1.0	<1.0	<1.0	
BH12	2/1/2017	<1.0	<1.0	<1.0	<1.0	
BH12	5/1/2017	<1.0	<1.0	<1.0	<2.0	
BH12	8/2/2017	<1.0	<1.0	<1.0	<2.0	
BH12	11/28/2017	<1.0	<1.0	<1.0	<2.0	

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 – 1711373

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 05, 2017

Steve Weathers
DCP Operating Company
370 17th Street #2500
Denver, CO 80202
RE: Tampa Compressor Station

Enclosed are the results of analyses for samples received by Summit Scientific on 11/29/17 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 Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station

Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R	1711373-01	Water	11/28/17 16:25	11/29/17 16:30
BH02	1711373-02	Water	11/28/17 16:15	11/29/17 16:30
BH03	1711373-03	Water	11/28/17 15:57	11/29/17 16:30
BH04	1711373-04	Water	11/28/17 16:40	11/29/17 16:30
BH05	1711373-05	Water	11/28/17 16:44	11/29/17 16:30
BH06	1711373-06	Water	11/28/17 16:55	11/29/17 16:30
BH07	1711373-07	Water	11/28/17 16:51	11/29/17 16:30
BH08	1711373-08	Water	11/28/17 16:12	11/29/17 16:30
BH09	1711373-09	Water	11/28/17 16:24	11/29/17 16:30
BH10	1711373-10	Water	11/28/17 15:18	11/29/17 16:30
BH11	1711373-11	Water	11/28/17 15:11	11/29/17 16:30
BH12	1711373-12	Water	11/28/17 15:32	11/29/17 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.

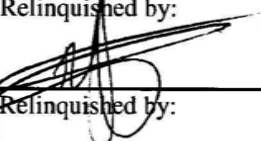
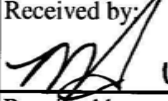
1711373.1

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

Page 1 of 2

Client:	Tasman Geosciences	FOR DCP
Address:	6899 Pecos St, Unit C	
City/State/Zip:	Denver, CO 80221	
Phone:	303-487-1228	Fax:
Sampler Name:	T. LICHTENBERG, J. CARBINGTON	

Project Manager: STEVE WEATHERS
E-Mail: SWWEATHERS@DCPMINISTERAM.COM; BAUMPHREY@TASMAN-GEOLIN
Project Name: TAMPA COMPRESSOR STATION
Project Number: _____

				Preservative				Matrix		Analyze For:										Special Instructions		
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX - 8260										
BH01R	11/28/17	1625	3			X		X														
BH02		1615																				
BH03		1557																				
BH04		1640																				
BH05		1644																				
BH06		1655																				
BH07		1651																				
BH08		1612																				
BH09		1624																				
BH10		1518																				
Relinquished by:  11/29/17				Date/Time: 1630		Received by:  11/29/17				Date/Time: 1630		Turn Around Time (Check)										Notes: ON ICE
Relinquished by:				Date/Time:		Received by:				Date/Time:		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 in Lab by:				Date/Time:		Sample Integrity: Temperature Upon Receipt: 2.5°C Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										

1711373.2

Page 2 of 2

Project Manager: STEVE WEATHERS
E-Mail: SWEATHERS@DCPMINSTREAM.COM; BHUMPHREY@TASMANIA.GOV.AU
Project Name: TAMPA COMPRESSOR STATION
Project Number:

				Preservative				Matrix				Analyze For:									
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX - 8260								Special Instructions	
BH11	11/28/17	1511	3			X		X				X									
BH12		1532	1																		
Relinquished by:				Date/Time: 11/29/17 1630				Received by:				Date/Time: 11/29/17 1630				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: on ice
Relinquished by:				Date/Time:				Received by:				Date/Time:				Sample Integrity: Temperature Upon Receipt: 2.5°C Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:									

1711373

Sample Receipt Checklist

S2 Work Order: _____

Client: Tasman for DCP Client Project ID: Tampa Compressor StationShipped Via: PIU
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

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

Cooler ID					
Temp (°C)	2.5				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?				
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⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		✓		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?				
Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			✓	
Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.Nakita
Custodian Printed Name[Signature]
Signature or Initials of Custodian11/29/17 1700
Date/Time



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH01R
1711373-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		93.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

Summit Scientific

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



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH02
1711373-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		85.2 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.9 %	45-146		"	"	"	"	

Summit Scientific

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DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH03
1711373-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 15:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 15:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	45-146		"	"	"	"	

Summit Scientific

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



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH04
1711373-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	3.7	1.0	"	"	"	"	"	"	
Ethylbenzene	140	25	"	25	"	"	"	"	
Xylenes (total)	440	50	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		88.3 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

Summit Scientific

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



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH05
1711373-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		83.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %	45-146		"	"	"	"	

Summit Scientific

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



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH06
1711373-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1400	100	ug/l	100	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	770	100	"	"	"	"	"	"	
Ethylbenzene	190	100	"	"	"	"	"	"	
Xylenes (total)	1900	200	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:55**

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>		96.9 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	45-146		"	"	"	"	

Summit Scientific

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DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH07
1711373-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %	45-146		"	"	"	"	

Summit Scientific

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DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH08
1711373-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1.6	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	7.5	1.0	"	"	"	"	"	"	
Xylenes (total)	41	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	45-146		"	"	"	"	

Summit Scientific

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



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH09
1711373-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 16:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 16:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		101 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	45-146		"	"	"	"	

Summit Scientific

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



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH10
1711373-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 15:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 15:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	45-146		"	"	"	"	

Summit Scientific

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



DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH11
1711373-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 15:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	22	1.0	"	"	"	"	"	"	
Ethylbenzene	370	25	"	25	"	"	"	"	
Xylenes (total)	430	50	"	"	"	"	"	"	

Date Sampled: **11/28/17 15:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	45-146		"	"	"	"	

Summit Scientific

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DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

BH12
1711373-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/28/17 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1711387	12/01/17	12/01/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/28/17 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		100 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	45-146		"	"	"	"	

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DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

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 1711387 - EPA 5030 Water MS

Blank (1711387-BLK1)

Prepared & Analyzed: 12/01/17

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.3		85.5	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		95.8	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.2	45-146			

LCS (1711387-BS1)

Prepared & Analyzed: 12/01/17

Benzene	20.2	1.0	ug/l	33.3		60.7	51-132			
Toluene	25.8	1.0	"	33.3		77.4	51-138			
Ethylbenzene	30.6	1.0	"	33.1		92.6	58-146			
m,p-Xylene	61.3	2.0	"	66.5		92.1	57-144			
o-Xylene	31.0	1.0	"	32.7		94.8	53-146			
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.2	37-154			
Surrogate: Toluene-d8	12.6		"	13.3		94.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	45-146			

Matrix Spike (1711387-MS1)

Source: 1711373-01

Prepared & Analyzed: 12/01/17

Benzene	20.9	1.0	ug/l	33.3	ND	62.8	34-141			
Toluene	26.6	1.0	"	33.3	ND	79.8	27-151			
Ethylbenzene	30.0	1.0	"	33.1	ND	90.7	29-160			
m,p-Xylene	60.3	2.0	"	66.5	ND	90.6	20-166			
o-Xylene	30.3	1.0	"	32.7	ND	92.8	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.3		96.5	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.6	45-146			

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DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

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 1711387 - EPA 5030 Water MS

Matrix Spike Dup (1711387-MSD1)		Source: 1711373-01			Prepared & Analyzed: 12/01/17					
Benzene	20.6	1.0	ug/l	33.3	ND	61.8	34-141	1.64	32	
Toluene	26.1	1.0	"	33.3	ND	78.4	27-151	1.78	25	
Ethylbenzene	31.5	1.0	"	33.1	ND	95.1	29-160	4.75	50	
m,p-Xylene	64.2	2.0	"	66.5	ND	96.4	20-166	6.23	36	
o-Xylene	31.7	1.0	"	32.7	ND	97.0	33-159	4.42	26	
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.3		96.5	37-154			
Surrogate: Toluene-d8	12.5		"	13.3		94.1	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

Summit Scientific

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DCP Operating Company
370 17th Street #2500
Denver CO, 80202

Project: Tampa Compressor Station
Project Number: [none]
Project Manager: Steve Weathers

Reported:
12/05/17 10:19

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