First Quarter 2016 Groundwater Monitoring Summary Report

County Road 20 and Highway 85 Release
Fort Lupton, Colorado

Prepared for:

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

Prepared by:

6899 Pecos Street, Unit C
Denver, Colorado 80221

March 28, 2016

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1. Introduction

This report summarizes the groundwater monitoring and remediation activities conducted during the first quarter 2016 at the County Road (CR) 20 and Highway (Hwy) 85 pipeline release (Site) in Fort Lupton, Colorado (Figure 1). Tasman Geosciences (Tasman) performed these activities on behalf of DCP Midstream, LP (DCP). The field activities were conducted with the purpose of monitoring groundwater flow and quality conditions. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period on February 15, 2016.

2. Site Location and Background

The Site is located in the southwestern quarter of the southwestern quarter of Section 17, Township 2 North, Range 66 West (approximate coordinates 40.130908 degrees north and -104.806673 degrees west). It is approximately 0.20 miles east on CR 20 from the intersection with Hwy 85, Ft. Lupton, Colorado.

On May 28, 2014, a petroleum hydrocarbon release was discovered following pipeline repair activities. An initial Form 19 was submitted to the Colorado Oil and Gas Conservation Commission (COGCC) on June 5, 2014.

3. Groundwater Monitoring

This section describes the field and laboratory activities performed during the first quarter 2016 groundwater monitoring event. Quarterly monitoring activities were conducted on February 15, 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 first quarter 2016, groundwater levels were measured at six (6) monitoring well locations (BH01-BH03 and BH05-BH07).

Groundwater levels were measured on the north side of the well casing to the nearest 0.01-foot using an oil-water interface probe (IP). Groundwater level data 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 first 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, average elevation change from the previous monitoring event, and the calculated average hydraulic gradient (using elevations from BH01 and BH02) at the Site are summarized in the table below.

Summary of Measured Hydraulic Parameters

	First Quarter 2016 (2/15/16)
Maximum Elevation (Well ID)	4,858.52 (BH01)
Minimum Elevation (Well ID)	4,858.39 (BH02)
Average Change from Previous Monitoring Event – All Wells	-2.47 feet
Average Hydraulic Gradient (ft/ft) / (Well IDs)	0.0019 (BH01 to BH02)

3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well, groundwater samples were collected from each of the 6 monitor wells using dedicated polyethylene bailers.

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 (^{0}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 first quarter 2016 event are included in Appendix A and the laboratory analytical report for the first quarter 2016 is included in Appendix B. Analytical results are also displayed on Figure 4.

Analytical results/observations are summarized below:

- Light non-aqueous phase liquid (LNAPL) was observed in BH07 (0.03 feet) for the first time since third quarter 2015.
- BTEX concentrations from the remaining sample locations were below COGCC standards and/or below laboratory detection limits.

4. Conclusions

Comparison of the first quarter 2016 monitoring data and historic information provides the following general observations:

- The groundwater flow direction is to the northwest, which is consistent with the previous quarter.
- After observing LNAPL in BH07 during the third quarter 2015, a measurable amount of LNAPL was again observed in BH07 during first quarter 2016.

- BTEX concentrations from the remaining sample locations were below COGCC standards and/or below laboratory detection limits
- Benzene concentration was below applicable standards in BH02 for the first sampling event since sampling began.

5. Recommendations

Based on evaluation of data from the first quarter 2016 and historic Site observations and monitoring results, recommendations for future activities include:

- Continue quarterly groundwater monitoring and sampling at the monitoring well locations illustrated on Figure 2.
- Consider re-initiating the vacuum enhanced fluid recovery (EFR) remediation program to address residual BTEX concentrations and LNAPL in downgradient well BH07.

Tables

TABLE 1
FEBRUARY 2016 MONITORING EVENT
SUMMARY OF GROUNDWATER ELEVATION DATA
DCP CR 20 AND HWY 85 RELEASE
WELD COUNTY, COLORADO

Location	Date	Depth to Groundwater (feet)	Depth to Product (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)	Change in Groundwater Elevation Since Previous Event (1) (feet)
BH01	5/14/2015	15.52			18.20	4,875.68	4,860.16	NA
BH01	9/24/2015	12.37			17.92	4,875.68	4,863.31	3.15
BH01	11/17/2015	14.69			18.10	4,875.68	4,860.99	-2.32
BH01	2/15/2016	17.16			18.14	4,875.68	4,858.52	-2.47
BH02	5/14/2015	14.47			18.42	4,874.94	4,860.47	NA
BH02	9/24/2015	11.72			18.49	4,874.94	4,863.22	2.75
BH02	11/17/2015	14.09			18.74	4,874.94	4,860.85	-2.37
BH02	2/15/2016	16.55			18.74	4,874.94	4,858.39	-2.46
BH03	5/14/2015	14.26			18.30	4,874.51	4,860.25	NA
BH03	9/24/2015	11.25			18.52	4,874.51	4,863.26	3.01
BH03	11/17/2015	13.58			18.76	4,874.51	4,860.93	-2.33
BH03	2/15/2016	16.04			18.74	4,874.51	4,858.47	-2.46
BH05	5/14/2015	14.48			19.31	4,874.67	4,860.19	NA
BH05	9/24/2015	11.40			19.00	4,874.67	4,863.27	3.08
BH05	11/17/2015	13.74			19.11	4,874.67	4,860.93	-2.34
BH05	2/15/2016	16.22			19.01	4,874.67	4,858.45	-2.48
BH06	5/14/2015	14.91			18.76	4,874.95	4,860.04	NA
BH06	9/24/2015	11.60			18.52	4,874.95	4,863.35	3.31
BH06	11/17/2015	13.97			18.76	4,874.95	4,860.98	-2.37
BH06	2/15/2016	16.47			18.70	4,874.95	4,858.48	-2.50
BH07	5/14/2015	14.87			18.70	4,874.02	4,859.15	NA
BH07	9/24/2015	10.83		Trace	18.56	4,874.04	4,863.21	4.06
BH07	11/17/2015	13.19			18.80	4,874.04	4,860.85	-2.36
BH07	2/15/2016	15.66	15.63	0.03	NM	4,874.04	4,858.40	-2.45
Average change in groundwater elevation between 11/17/15 and 2/15/16								-2.47

Notes:
1- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring event from the measurement
amsl = feet above mean sea level
TOC = top of casing
Groundwater elevation = (TOC Elevation - Measured Depth to Water)
NM = Not Measured
NA = Not Applicable

TABLE 2
FEBRUARY 2016 MONITORING EVENT
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
DCP CR 20 AND HWY 85 RELEASE
WELD COUNTY, COLORADO

Location Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
COGCC Standards (µg/L)		**5**	**560**	**700**	**1,400**	
BH01	2/15/2016	<1.0	<1.0	<1.0	<1.0	
BH02	2/15/2016	2.4	1.4	260	730	
BH03	2/15/2016	<1.0	<1.0	42	280	
BH05	2/15/2016	<1.0	<1.0	<1.0	<1.0	
BH06	2/15/2016	<1.0	<1.0	<1.0	<1.0	
BH07	2/15/2016	NS	NS	NS	NS	NAPL - 0.03 ft

Notes:

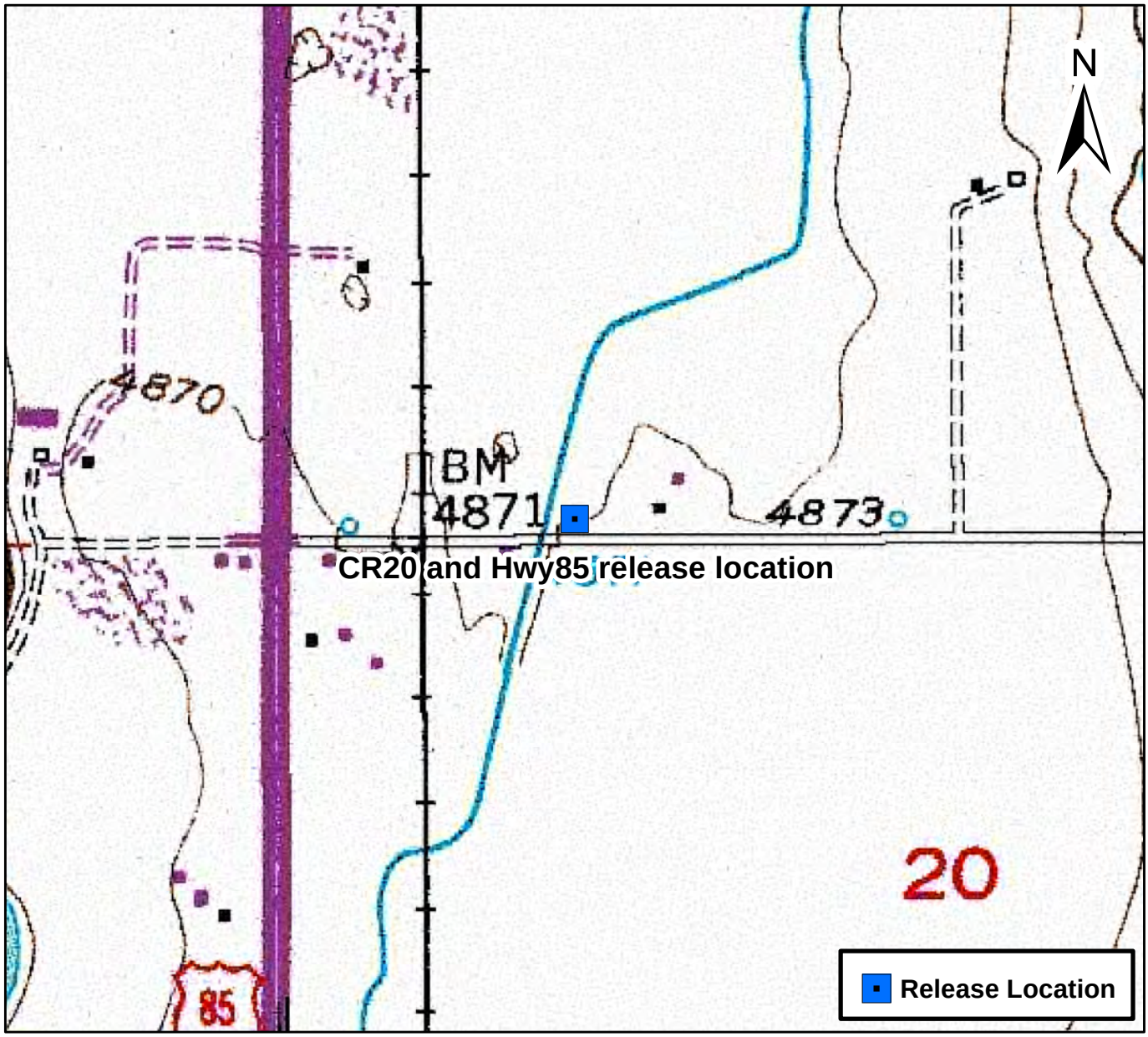
1). The environmental cleanup standards for groundwater that are applicable to this site are the Colorado Oil and Gas Conservation Commission (COGCC) standards for contaminants in groundwater according to Table 910-1 of the COGCC 900 Series Rule for E&P Waste Management.

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

NS = Not sampled.

µg/L = micrograms per liter.

Figures



0 750 1,500 Feet

Figure 1

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

Drawn By: DBA
Date: 06/04/2014

Tasman Geosciences

DATE: February 2016 DESIGNED BY: B. Humphrey DRAWN BY: D. Arnold	TASMAN GEOSCIENCES **Tasman Geosciences, Inc** **6899 Pecos Street - Unit C** **Denver, CO 80221**	**DCP Midstream** **County Road 20 and Highway 85 Release** SWSW Section 17, Township 2 North, Range 66 West Weld County, Colorado	Site Overview Map	Figure 2

DATE: February 2016 DESIGNED BY: B. Humphrey DRAWN BY: D. Arnold	TASMAN GEOSCIENCES **Tasman Geosciences, Inc** **6899 Pecos Street - Unit C** **Denver, CO 80221**	**DCP Midstream** **County Road 20 and Highway 85 Release** SWSW Section 17, Township 2 North, Range 66 West Weld County, Colorado	Groundwater Elevation Contour Map (February 15, 2016)	Figure 3

Access Road

BH02	
Compound	2/15/2016
Benzene (ug/L)	2.4
Toluene (ug/L)	1.4
Ethylbenzene (ug/L)	260
Total Xylenes (ug/L)	730

BH03	
Compound	2/15/2016
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	42
Total Xylenes (ug/L)	280

BH06	
Compound	2/15/2016
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<1.0

BH02

BH07 (0.03)

BH03

BH05

BH06

BH07	
Compound	2/15/2016
Benzene (ug/L)	NS
Toluene (ug/L)	NS
Ethylbenzene (ug/L)	NS
Total Xylenes (ug/L)	NS

BH05	
Compound	2/15/2016
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<1.0

County Road 20

BH01

BH01	
Compound	2/15/2016
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<1.0

Legend

- Monitoring Well Location
- Excavation Extent (Approximate)
- (0.03) Measured LNAPL Thickness (feet)
- NS Not Sampled

Notes:

µg/L - Micrograms per Liter
LNAPL - Light Non-Aqueous Phase Liquid

N

0 10 20 Feet

Imagery Source: Google Earth; 2015 Google

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

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

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

Groundwater Analytical Results Map
(February 15, 2016)

Figure 4

Appendix A

Historic Analytical Results

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

Location Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes L (µg/L)	Comments
COGCC Standards (µg/L)		**5**	**560**	**700**	**1,400**	
BH01	5/14/2015	<1.0	<1.0	<1.0	<1.0	
BH01	9/24/2015	<1.0	<1.0	<1.0	<1.0	
BH01	11/17/2015	<1.0	<1.0	<1.0	<1.0	
BH01	2/15/2016	<1.0	<1.0	<1.0	<1.0	
BH02	5/14/2015	**120**	5	210	**2,000**	
BH02	9/24/2015	**20**	<1.0	48	370	
BH02	11/17/2015	**14**	<1.0	72	490	
BH02	2/15/2016	2.4	1.4	260	730	
BH03	5/14/2015	**220**	130	400	**3,500**	
BH03	9/24/2015	1.8	<1.0	7.0	150	
BH03	11/17/2015	<1.0	<1.0	43	400	
BH03	2/15/2016	<1.0	<1.0	42	280	
BH05	5/14/2015	<1.0	<1.0	3	22	
BH05	9/24/2015	<1.0	<1.0	<1.0	<1.0	
BH05	11/17/2015	<1.0	<1.0	<1.0	<1.0	
BH05	2/15/2016	<1.0	<1.0	<1.0	<1.0	
BH06	5/14/2015	<1.0	<1.0	<1.0	5	
BH06	9/24/2015	<1.0	<1.0	<1.0	<1.0	
BH06	11/17/2015	<1.0	<1.0	<1.0	<1.0	
BH06	2/15/2016	<1.0	<1.0	<1.0	<1.0	
BH07	5/14/2015	**44**	310	200	**2,600**	
BH07	9/24/2015	NS	NS	NS	NS	Trace of NAPL
BH07	11/17/2015	**85**	1.1	210	**3,100**	
BH07	2/15/2016	NS	NS	NS	NS	NAPL - 0.03 ft

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 1602109

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 22, 2016

Brian Humphrey
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221

RE: CR20 + Hwy 85 Release

Enclosed are the results of analyses for samples received by Summit Scientific on 02/15/16 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Shrewsbury
President

Tasman Geosciences 6899 Pecos Street Denver CO, 80221	Project: CR20 + Hwy 85 Release Project Number: [none] Project Manager: Brian Humphrey	**Reported:** 02/22/16 08:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	1602109-01	Water	02/15/16 13:06	02/15/16 17:00
BH02	1602109-02	Water	02/15/16 12:59	02/15/16 17:00
BH03	1602109-03	Water	02/15/16 12:51	02/15/16 17:00
BH05	1602109-04	Water	02/15/16 13:02	02/15/16 17:00
BH06	1602109-05	Water	02/15/16 13:04	02/15/16 17:00

Summit Scientific

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

S2

Tasman Geosciences 6899 Pecos Street Denver CO, 80221	Project: CR20 + Hwy 85 Release Project Number: [none] Project Manager: Brian Humphrey	**Reported:** 02/22/16 08:42

1602109

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-277-9531 Fax

Page 1 of 1

Client: Tasman | DCP Midstream
Address:
City/State/Zip:
Phone: Fax:
Sampler Name: Kate F. Elliot DH

Project Manager: Brian Humphrey
E-Mail: bhumphrey@tasman-geo.com
Project Name: CR 20 + Hwy 85
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative: HCl	HNO3	None	Other (Specify)	Matrix: Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Analyze For: BTEX 8260	Special Instructions
BH01	2/15/16	1306	2	X				X				X	
BH02		1259	2	X									
BH03		1251	3	X									
BH05		1302	3	X									
BH06		1304	2	X									

Relinquished by: Date/Time: 2/15/16 1540
Received by: Date/Time: 2/15/16 1600
Relinquished by: Date/Time:
Received by: Date/Time: 2/15/16 1700
Relinquished by: Date/Time: 2/15/16 1745
Received in Lab by: Date/Time:

Turn Around Time (Check)
Same Day
24 Hours
48 Hours
72 Hours
Standard X

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

Notes: on ice

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.

Tasman Geosciences 6899 Pecos Street Denver CO, 80221	Project: CR20 + Hwy 85 Release Project Number: [none] Project Manager: Brian Humphrey	**Reported:** 02/22/16 08:42

BH01
1602109-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 13:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/15/16 13:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*98.3 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.3 %*	*45-146*		"	"	"	"	

Tasman Geosciences 6899 Pecos Street Denver CO, 80221	Project: CR20 + Hwy 85 Release Project Number: [none] Project Manager: Brian Humphrey	**Reported:** 02/22/16 08:42

BH02

1602109-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 12:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**2.4**	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	**1.4**	1.0	"	"	"	"	"	"	
Ethylbenzene	**260**	1.0	"	"	"	"	"	"	
Xylenes (total)	**730**	10	"	10	"	"	"	"	

Date Sampled: **02/15/16 12:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*99.8 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*85.4 %*	*45-146*		"	"	"	"	

Tasman Geosciences 6899 Pecos Street Denver CO, 80221	Project: CR20 + Hwy 85 Release Project Number: [none] Project Manager: Brian Humphrey	**Reported:** 02/22/16 08:42

BH03
1602109-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 12:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	**42**	1.0	"	"	"	"	"	"	
Xylenes (total)	**280**	1.0	"	"	"	"	"	"	

Date Sampled: **02/15/16 12:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*98.0 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.7 %*	*45-146*		"	"	"	"	

BH05
1602109-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 13:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/15/16 13:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*98.9 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*98.4 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.9 %*	*45-146*		"	"	"	"	

Tasman Geosciences 6899 Pecos Street Denver CO, 80221	Project: CR20 + Hwy 85 Release Project Number: [none] Project Manager: Brian Humphrey	**Reported:** 02/22/16 08:42

BH06
1602109-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 13:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/15/16 13:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*98.6 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*45-146*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1602149 - EPA 5030 Water MS										
Blank (1602149-BLK1)				Prepared & Analyzed: 02/16/16						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*14.0*		"	*13.3*		*105*	*37-154*			
Surrogate: Toluene-d8	*13.2*		"	*13.3*		*99.2*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.4*		"	*13.3*		*100*	*45-146*			
LCS (1602149-BS1)				Prepared & Analyzed: 02/16/16						
Benzene	31.1	1.0	ug/l	33.3		93.2	51-132			
Toluene	35.0	1.0	"	33.3		105	51-138			
Ethylbenzene	38.6	1.0	"	33.1		117	58-146			
m,p-Xylene	76.3	2.0	"	66.5		115	57-144			
o-Xylene	34.6	1.0	"	32.7		106	53-146			
Surrogate: 1,2-Dichloroethane-d4	*14.3*		"	*13.3*		*107*	*37-154*			
Surrogate: Toluene-d8	*13.3*		"	*13.3*		*99.5*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*12.8*		"	*13.3*		*95.6*	*45-146*			
Matrix Spike (1602149-MS1)	**Source: 1602109-03**			Prepared & Analyzed: 02/16/16						
Benzene	31.4	1.0	ug/l	33.3	ND	94.2	34-141			
Toluene	34.4	1.0	"	33.3	ND	103	27-151			
Ethylbenzene	59.0	1.0	"	33.1	42.1	51.2	29-160			
m,p-Xylene	146	2.0	"	66.5	150	NR	20-166			QM-07
o-Xylene	95.8	1.0	"	32.7	128	NR	33-159			QM-07
Surrogate: 1,2-Dichloroethane-d4	*12.8*		"	*13.3*		*96.2*	*37-154*			
Surrogate: Toluene-d8	*13.0*		"	*13.3*		*97.2*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*12.8*		"	*13.3*		*96.2*	*45-146*			

Tasman Geosciences 6899 Pecos Street Denver CO, 80221	Project: CR20 + Hwy 85 Release Project Number: [none] Project Manager: Brian Humphrey	**Reported:** 02/22/16 08:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1602149 - EPA 5030 Water MS										
Matrix Spike Dup (1602149-MSD1)	**Source: 1602109-03**			Prepared & Analyzed: 02/16/16						
Benzene	31.7	1.0	ug/l	33.3	ND	95.2	34-141	1.08	32	
Toluene	35.8	1.0	"	33.3	ND	107	27-151	3.93	25	
Ethylbenzene	59.5	1.0	"	33.1	42.1	52.6	29-160	0.776	50	
m,p-Xylene	147	2.0	"	66.5	150	NR	20-166	1.00	36	QM-07
o-Xylene	98.6	1.0	"	32.7	128	NR	33-159	2.89	26	QM-07
Surrogate: 1,2-Dichloroethane-d4	*13.4*		*"*	*13.3*		*101*	*37-154*			
Surrogate: Toluene-d8	*13.4*		*"*	*13.3*		*101*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.1*		*"*	*13.3*		*98.3*	*45-146*			

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference