

**DCP CR20 & HWY 85 PIPELINE RELEASE SITE  
FORM 19 INITIAL SUMMARY REPORT**

**ATTACHMENTS**

**Tables**

- 1 Summary of Soil Analytical Data

**Figures**

- 1 Site Location Map
- 2 Site Map – Excavation Extent and Soil Sample Locations
- 3 Site Overview Map – Monitoring Well Locations

**Appendices**

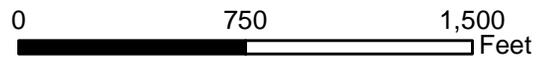
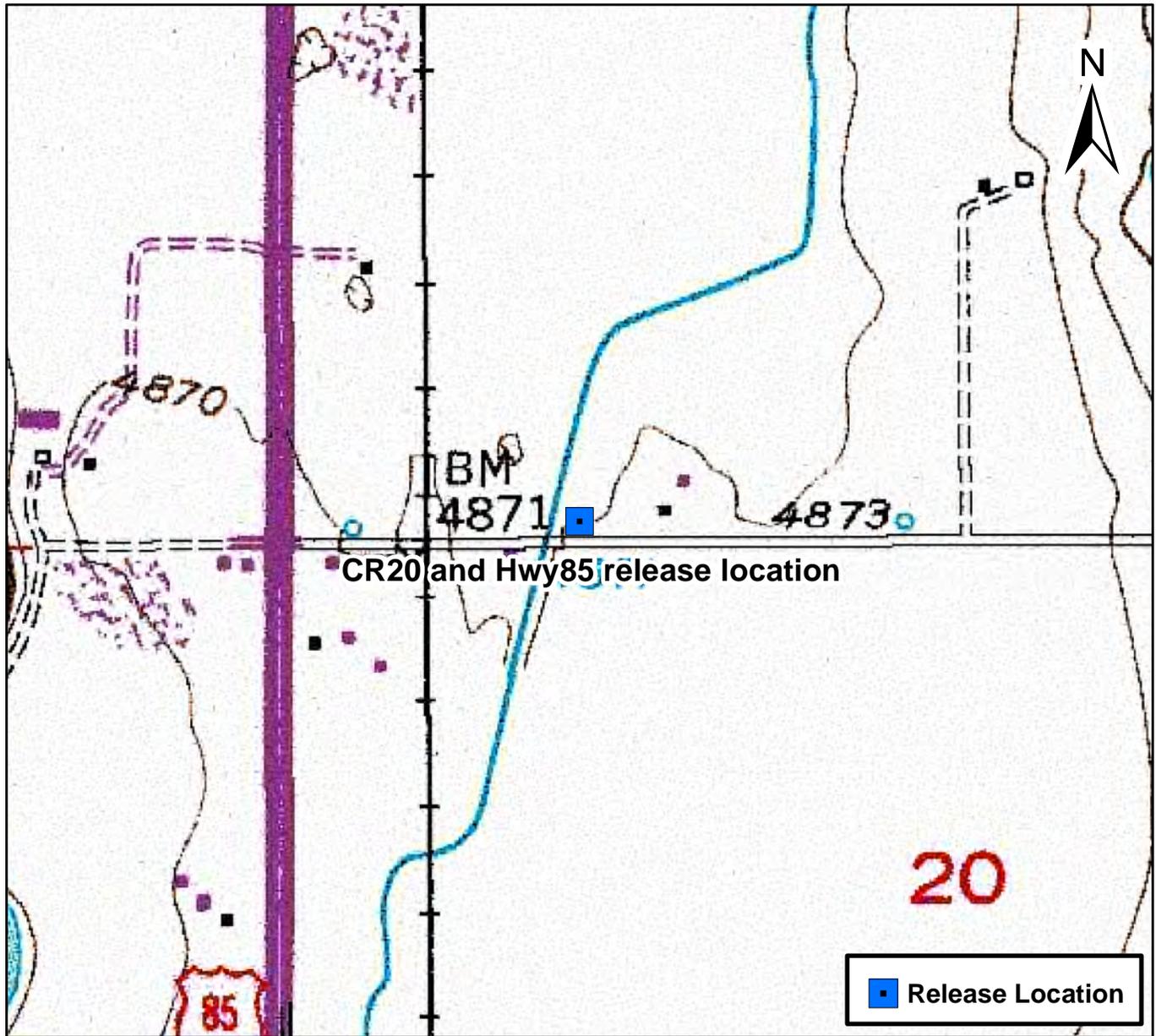
- A** Laboratory Analytical Report
  - Summit Scientific R307199 (Samples Collected 7/23/13)
  - Summit Scientific R309148 (Samples Collected 9/20/13)
  - Summit Scientific 1405156 (Samples Collected 5/28/14)
  - Summit Scientific 1504246 (Samples Collected 4/24/15)
  
- B** Boring Logs

**TABLE 1  
DCP MIDSTREAM  
CR20 HWY 85 PIPELINE RELEASE SITE  
SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (Feet bgs)	PID Readings (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH <sup>(2)</sup> (mg/kg)	Comments
SS01 @ 10	7/23/2013	10	NA	<b>1.1</b>	0.76	3.9	24	<b>1,740</b>	
SS02 @ 8	7/23/2013	8	NA	<b>5.7</b>	0.74	0.039	0.53	<50	
SS03 @ 8	7/23/2013	8	NA	<0.0050	<0.0050	<0.0050	<0.0050	<50	
SS04 @ 8	7/23/2013	8	NA	0.018	0.046	<0.0050	0.70	<50	
BH01 @ 3	7/23/2013	3	NA	<0.0050	<0.0050	<0.0050	<0.0050	<50	
BH02 @ 3	7/23/2013	3	NA	<0.0050	<0.0050	<0.0050	<0.0050	<50	
BH03 @ 3	7/23/2013	3	NA	<0.0050	<0.0050	<0.0050	<0.0050	<50	
BH04 @ 4.5	9/20/2013	4.5	NA	<0.0050	<0.0050	<0.0050	<0.0050	<50	BH04 sample location unknown
BH04 @ 8	9/20/2013	8	NA	<0.0050	<0.0050	<0.0050	<0.0050	<50	BH04 sample location unknown
BH04 @ 16	9/20/2013	16	NA	0.015	<0.0050	<0.0050	<0.0050	<50	BH04 sample location unknown
SS05 @ 13.5	7/23/2013	13.5	NA	<0.0050	<0.0050	<0.0050	0.0054	<50	
SP01 - comp	7/23/2013	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	<50	
SS01 @ 12' (conf)	5/28/2014	12	NA	<b>3.1</b>	0.0076	0.82	1.2	<b>1,593</b>	
SS02 @ 8' (conf)	5/28/2014	8	NA	<0.0020	<0.0020	<0.0020	<0.010	<50	
BH05 @ 14'	4/24/2015	14	0.2	<0.0050	<0.0050	<0.0050	<0.0050	<50	
BH06 @ 14'	4/24/2015	14	1.0	<0.0050	<0.0050	<0.0050	<0.0050	<50	
<b>COGCC Standards for Soil (mg/kg) <sup>(1)</sup></b>				<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>500</b>	

Notes:

- 1). Standards for Soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.
  - 2). TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.
- GRO - Gasoline range organics.                      DRO - Diesel range organics.                      NA - Data not available  
mg/kg= Milligrams per kilogram.                      bgs - Below ground surface.  
ppm - Parts per million                                      NS - Not Sampled  
Bold values indicate an exceedance of the COGCC soil standards for the Site.



### Figure 1

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

Drawn By: DBA  
 Date: 06/04/2014





Google earth



PROJECT NO:	CR20-85
DRAWN BY:	GEL
DATE:	07/23/2013

**CR20-85 Diagram**  
DCP Midstream  
Weld County, CO



6899 Pecos St., Unit C  
Denver CO 80221

LEGEND	
	Approximate Excavation Area
	Soil Sample Location

Figure 2  
Site Map  
Excavation Extent and  
Soil Sample Locations



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



**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  
 - Monitoring Well  
 Locations

Figure  
 3

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 26, 2013

Mike Lindstrom  
Tasman Geosciences  
6899 Pecos Street  
Denver, CO 80221  
RE: CR20-85

Enclosed are the results of analyses for samples received by Summit Scientific on 07/23/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV  
Laboratory Director

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@10	R307199-01	Soil	07/23/13 07:08	07/23/13 17:00
SS02@8	R307199-02	Soil	07/23/13 07:12	07/23/13 17:00
SS03@8	R307199-03	Soil	07/23/13 07:18	07/23/13 17:00
SS04@8	R307199-04	Soil	07/23/13 07:21	07/23/13 17:00
BH01@3	R307199-05	Soil	07/23/13 08:00	07/23/13 17:00
BH02@3	R307199-06	Soil	07/23/13 08:02	07/23/13 17:00
BH03@3	R307199-07	Soil	07/23/13 08:04	07/23/13 17:00
SS05@13.5	R307199-08	Soil	07/23/13 09:35	07/23/13 17:00
SP01-comp	R307199-09	Soil	07/23/13 09:20	07/23/13 17:00

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

Reported:  
07/26/13 10:32

R307199

For: DCP Midstream \*

Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-574-9333 Fax

Page 1 of 1

Client: Tasman Geosciences  
Address: 6899 Pecos Street, Suite C  
City/State/Zip: Denver CO 80221  
Phone: 720-633-7827 Fax:  
Sample Name: Frank Leodema  
Project Manager: Mike Lindstrom  
E-Mail:  
Project Name: CR20-85  
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:	Special Instructions	
				HCl	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)			Other (Specify)
SS01010	7-26-13	0706	1		X								
SS0208		0712	1										
SS0308		0718	1										
SS0408		0721	1										
SH0103		0800	1										
SH0203		0802	1										
SH0303		0804	1										
SH0503.5		0935	1										
SP01-0ump		0920	1										

Retinquished by: <u>[Signature]</u>	Date/Time: <u>7/23/13 1700</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/23/13 1700</u>	Turn Aaround Time (Check): <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> Standard	Notes:
Retinquished by:	Date/Time:	Received by:	Date/Time:		
Retinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Upon Receipt: <u>6°C</u>

[Signature]



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**SS01@10**  
**R307199-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 07:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>1500</b>	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 07:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		119 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 07:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1.1</b>	0.050	mg/kg	10	3072415	07/24/13	07/25/13	EPA 8260B	
<b>Toluene</b>	<b>0.76</b>	0.0050	"	1	"	"	07/25/13	"	
<b>Ethylbenzene</b>	<b>3.9</b>	0.050	"	10	"	"	07/25/13	"	
<b>Xylenes (total)</b>	<b>24</b>	0.050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>240</b>	5.0	"	"	"	"	"	"	

Date Sampled: **07/23/13 07:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		85.0 %	23-173		"	"	07/25/13	"	
<i>Surrogate: Toluene-d8</i>		481 %	20-170		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		141 %	21-167		"	"	"	"	

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**SS02@8**  
**R307199-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 07:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 07:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		71.5 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 07:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>5.7</b>	0.050	mg/kg	10	3072415	07/24/13	07/25/13	EPA 8260B	
<b>Toluene</b>	<b>0.74</b>	0.0050	"	1	"	"	07/25/13	"	
<b>Ethylbenzene</b>	<b>0.039</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.53</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>8.0</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/13 07:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**SS03@8**  
**R307199-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 07:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 07:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		66.1 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 07:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3072415	07/24/13	07/25/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/13 07:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		125 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

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6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**SS04@8**  
**R307199-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 07:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 07:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		66.3 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 07:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.018</b>	0.0050	mg/kg	1	3072415	07/24/13	07/25/13	EPA 8260B	
<b>Toluene</b>	<b>0.046</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.70</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.7</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/13 07:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

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6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**BH01@3**  
**R307199-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		66.4 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3072415	07/24/13	07/25/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/13 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**BH02@3**  
**R307199-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 08:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 08:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		77.2 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 08:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3072415	07/24/13	07/25/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/13 08:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**BH03@3**  
**R307199-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		77.3 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3072415	07/24/13	07/25/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/13 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**SS05@13.5**  
**R307199-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/23/13 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: **07/23/13 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		77.6 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/13 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3072415	07/24/13	07/25/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.0054</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/13 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

Reported:  
07/26/13 10:32

**SP01-comp  
R307199-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 07/23/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3072416	07/24/13	07/25/13	8015M	

Date Sampled: 07/23/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		76.1 %	30-150		"	"	"	"	

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

Date Sampled: 07/23/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3072415	07/24/13	07/25/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 07/23/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		86.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 3072416 - EPA 3550A**

**Blank (3072416-BLK1)**

Prepared: 07/24/13 Analyzed: 07/25/13

C10-C28 (DRO) ND 50 mg/kg

**LCS (3072416-BS1)**

Prepared: 07/24/13 Analyzed: 07/25/13

C10-C28 (DRO) 535 50 mg/kg 501 107 73-134

**LCS Dup (3072416-BSD1)**

Prepared: 07/24/13 Analyzed: 07/25/13

C10-C28 (DRO) 543 50 mg/kg 501 108 73-134 1.47 11

**Matrix Spike (3072416-MS1)**

**Source: R307198-01**

Prepared: 07/24/13 Analyzed: 07/25/13

C10-C28 (DRO) 856 50 mg/kg 501 312 109 50-148

**Matrix Spike Dup (3072416-MSD1)**

**Source: R307198-01**

Prepared: 07/24/13 Analyzed: 07/25/13

C10-C28 (DRO) 832 50 mg/kg 501 312 104 50-148 2.79 13

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

Reported:  
07/26/13 10:32

**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		

**Batch 3072415 - EPA 5030 Soil MS**

**Blank (3072415-BLK1)**

Prepared: 07/24/13 Analyzed: 07/25/13

Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0437		"	0.0397	110	23-173				
Surrogate: Toluene-d8	0.0385		"	0.0400	96.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400	105	21-167				

**LCS (3072415-BS1)**

Prepared: 07/24/13 Analyzed: 07/25/13

Benzene	0.0968	0.0050	mg/kg	0.100	96.8	58-130				
Toluene	0.103	0.0050	"	0.100	103	61-134				
Ethylbenzene	0.129	0.0050	"	0.100	129	74-139				
m,p-Xylene	0.247	0.010	"	0.200	124	73-137				
o-Xylene	0.124	0.0050	"	0.100	124	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0397	104	23-173				
Surrogate: Toluene-d8	0.0357		"	0.0400	89.3	20-170				
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400	105	21-167				

**LCS Dup (3072415-BSD1)**

Prepared: 07/24/13 Analyzed: 07/25/13

Benzene	0.100	0.0050	mg/kg	0.100	100	58-130	3.65	13		
Toluene	0.116	0.0050	"	0.100	116	61-134	12.0	16		
Ethylbenzene	0.129	0.0050	"	0.100	129	74-139	0.628	12		
m,p-Xylene	0.244	0.010	"	0.200	122	73-137	1.40	14		
o-Xylene	0.126	0.0050	"	0.100	126	73-141	0.960	12		
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0397	114	23-173				
Surrogate: Toluene-d8	0.0410		"	0.0400	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400	107	21-167				

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

Reported:  
07/26/13 10:32

**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 3072415 - EPA 5030 Soil MS**

**Matrix Spike (3072415-MS1)**

Source: R307198-01

Prepared: 07/24/13

Analyzed: 07/25/13

Benzene	0.104	0.0050	mg/kg	0.100	ND	104	30-131		
Toluene	0.121	0.0050	"	0.100	ND	121	30-134		
Ethylbenzene	0.130	0.0050	"	0.100	ND	130	22-153		
m,p-Xylene	0.247	0.010	"	0.200	ND	123	10-159		
o-Xylene	0.126	0.0050	"	0.100	ND	126	31-151		
Surrogate: 1,2-Dichloroethane-d4	0.0462		"	0.0397		116	23-173		
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170		
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	21-167		

**Matrix Spike Dup (3072415-MSD1)**

Source: R307198-01

Prepared: 07/24/13

Analyzed: 07/25/13

Benzene	0.103	0.0050	mg/kg	0.100	ND	103	30-131	1.13	34
Toluene	0.122	0.0050	"	0.100	ND	122	30-134	1.11	30
Ethylbenzene	0.131	0.0050	"	0.100	ND	131	22-153	0.849	24
m,p-Xylene	0.252	0.010	"	0.200	ND	126	10-159	2.18	68
o-Xylene	0.127	0.0050	"	0.100	ND	127	31-151	1.45	38
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0397		108	23-173		
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170		
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167		

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Mike Lindstrom

**Reported:**  
07/26/13 10:32

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

September 26, 2013

Ryan Nicholson  
Tasman Geosciences  
6899 Pecos Street  
Denver, CO 80221  
RE: CR20-85

Enclosed are the results of analyses for samples received by Summit Scientific on 09/20/13 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV  
Laboratory Director

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

**Reported:**  
09/26/13 11:06

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH04@4.5	R309148-01	Soil	09/20/13 08:50	09/20/13 16:45
BH04@8	R309148-02	Soil	09/20/13 10:05	09/20/13 16:45
BH04@16	R309148-03	Soil	09/20/13 10:25	09/20/13 16:45

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

Reported:  
09/26/13 11:06

**BH04@4.5**  
**R309148-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/20/13 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3092315	09/23/13	09/23/13	8015M	

Date Sampled: **09/20/13 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		87.6 %	30-150		"	"	"	"	

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

Date Sampled: **09/20/13 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3092314	09/23/13	09/24/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/20/13 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

Reported:  
09/26/13 11:06

**BH04@8**  
**R309148-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/20/13 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3092315	09/23/13	09/24/13	8015M	

Date Sampled: **09/20/13 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		89.0 %	30-150		"	"	"	"	

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

Date Sampled: **09/20/13 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3092314	09/23/13	09/24/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/20/13 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

**Reported:**  
09/26/13 11:06

**BH04@16**  
**R309148-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/20/13 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3092315	09/23/13	09/24/13	8015M	

Date Sampled: **09/20/13 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		88.0 %	30-150		"	"	"	"	

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

Date Sampled: **09/20/13 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.015</b>	0.0020	mg/kg	1	3092314	09/23/13	09/24/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/20/13 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

**Reported:**  
09/26/13 11:06

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 3092315 - EPA 3550A**

**Blank (3092315-BLK1)**

Prepared & Analyzed: 09/23/13

C10-C28 (DRO)                      ND                      50    mg/kg

**LCS (3092315-BS1)**

Prepared & Analyzed: 09/23/13

C10-C28 (DRO)                      518                      50    mg/kg                      501                      103                      73-134

**LCS Dup (3092315-BSD1)**

Prepared & Analyzed: 09/23/13

C10-C28 (DRO)                      515                      50    mg/kg                      501                      103                      73-134                      0.503                      11

**Matrix Spike (3092315-MS1)**

**Source: R309148-01**

Prepared & Analyzed: 09/23/13

C10-C28 (DRO)                      518                      50    mg/kg                      501                      ND                      103                      50-148

**Matrix Spike Dup (3092315-MSD1)**

**Source: R309148-01**

Prepared & Analyzed: 09/23/13

C10-C28 (DRO)                      525                      50    mg/kg                      501                      ND                      105                      50-148                      1.19                      13

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

Reported:  
09/26/13 11:06

**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		

**Batch 3092314 - EPA 5030 Soil MS**

**Blank (3092314-BLK1)**

Prepared: 09/23/13 Analyzed: 09/24/13

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0439		"	0.0397	111	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0431		"	0.0400	108	21-167				

**LCS (3092314-BS1)**

Prepared: 09/23/13 Analyzed: 09/24/13

Benzene	0.0867	0.0020	mg/kg	0.100	86.7	58-130				
Toluene	0.104	0.0050	"	0.100	104	61-134				
Ethylbenzene	0.125	0.0050	"	0.100	125	74-139				
m,p-Xylene	0.230	0.010	"	0.200	115	73-137				
o-Xylene	0.123	0.0050	"	0.100	123	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0397	106	23-173				
Surrogate: Toluene-d8	0.0395		"	0.0400	98.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400	106	21-167				

**LCS Dup (3092314-BSD1)**

Prepared: 09/23/13 Analyzed: 09/24/13

Benzene	0.0890	0.0020	mg/kg	0.100	89.0	58-130	2.56	13		
Toluene	0.106	0.0050	"	0.100	106	61-134	1.72	16		
Ethylbenzene	0.127	0.0050	"	0.100	127	74-139	1.59	12		
m,p-Xylene	0.235	0.010	"	0.200	117	73-137	2.12	14		
o-Xylene	0.125	0.0050	"	0.100	125	73-141	2.06	12		
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0397	107	23-173				
Surrogate: Toluene-d8	0.0395		"	0.0400	98.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0400	104	21-167				

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

Reported:  
09/26/13 11:06

**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 3092314 - EPA 5030 Soil MS**

<b>Matrix Spike (3092314-MS1)</b>	<b>Source: R309160-01</b>			Prepared: 09/23/13		Analyzed: 09/24/13				
Benzene	0.0882	0.0020	mg/kg	0.100	ND	88.2	30-131			
Toluene	0.106	0.0050	"	0.100	0.00444	101	30-134			
Ethylbenzene	0.126	0.0050	"	0.100	0.00315	123	22-153			
m,p-Xylene	0.232	0.010	"	0.200	0.0110	110	10-159			
o-Xylene	0.124	0.0050	"	0.100	0.00651	118	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0434</i>		<i>"</i>	<i>0.0397</i>		<i>109</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0412</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

<b>Matrix Spike Dup (3092314-MSD1)</b>	<b>Source: R309160-01</b>			Prepared: 09/23/13		Analyzed: 09/24/13				
Benzene	0.0892	0.0020	mg/kg	0.100	ND	89.2	30-131	1.22	34	
Toluene	0.106	0.0050	"	0.100	0.00444	101	30-134	0.397	30	
Ethylbenzene	0.128	0.0050	"	0.100	0.00315	125	22-153	1.56	24	
m,p-Xylene	0.236	0.010	"	0.200	0.0110	113	10-159	1.94	68	
o-Xylene	0.125	0.0050	"	0.100	0.00651	119	31-151	0.865	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0440</i>		<i>"</i>	<i>0.0397</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0414</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>21-167</i>			

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: CR20-85

Project Number: [none]  
Project Manager: Ryan Nicholson

**Reported:**  
09/26/13 11:06

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 04, 2014

Travis Johansen  
Tasman Geosciences  
6899 Pecos Street  
Denver, CO 80221  
RE: CR20-85

Enclosed are the results of analyses for samples received by Summit Scientific on 05/28/14 17:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury  
President / Laboratory Manager



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/14 16:06

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@12' (conf)	1405156-01	Soil	05/28/14 09:12	05/28/14 17:20
SS02@8' (conf)	1405156-02	Soil	05/28/14 09:35	05/28/14 17:20
GW01	1405156-03	Water	05/28/14 10:55	05/28/14 17:20

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: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/14 16:06

**SS01@12' (conf)**  
**1405156-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/28/14 09:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>1500</b>	50	mg/kg	1	1405171	05/29/14	05/29/14	8015M	

Date Sampled: **05/28/14 09:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		104 %	30-150		"	"	"	"	

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

Date Sampled: **05/28/14 09:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>3.1</b>	1.0	mg/kg	100	1405170	05/29/14	05/29/14	EPA 8260B	
<b>Benzene</b>	<b>0.0076</b>	0.0020	"	1	"	"	"	"	
<b>Toluene</b>	<b>0.12</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.82</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1.2</b>	0.10	"	10	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>93</b>	5.0	"	"	"	"	"	"	

Date Sampled: **05/28/14 09:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		93.5 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %	21-167		"	"	"	"	

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: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/14 16:06

**SS02@8' (conf)**  
**1405156-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/28/14 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1405171	05/29/14	05/29/14	8015M	

Date Sampled: **05/28/14 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		115 %	30-150		"	"	"	"	

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

Date Sampled: **05/28/14 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>0.022</b>	0.010	mg/kg	1	1405170	05/29/14	05/29/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>2.3</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/28/14 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	21-167		"	"	"	"	

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: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/14 16:06

**GW01**  
**1405156-03 (Water)**

**Summit Scientific**

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

Date Sampled: **05/28/14 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>61</b>	1.0	ug/l	1	1405191	05/30/14	06/03/14	EPA 8260B	
<b>Toluene</b>	<b>1000</b>	100	"	100	"	"	06/02/14	"	
<b>Ethylbenzene</b>	<b>1400</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>8300</b>	100	"	"	"	"	"	"	

Date Sampled: **05/28/14 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		215 %	37-154		"	"	06/03/14	"	S-02
<i>Surrogate: Toluene-d8</i>		1330 %	45-149		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		349 %	45-146		"	"	"	"	S-02

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: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/14 16:06

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1405171 - EPA 3550A**

**Blank (1405171-BLK1)**

Prepared & Analyzed: 05/29/14

C10-C28 (DRO) ND 50 mg/kg

**LCS (1405171-BS1)**

Prepared & Analyzed: 05/29/14

C10-C28 (DRO) 523 50 mg/kg 490 107 73-134

**Matrix Spike (1405171-MS1)**

**Source: 1405157-04**

Prepared & Analyzed: 05/29/14

C10-C28 (DRO) 571 50 mg/kg 499 ND 114 50-148

**Matrix Spike Dup (1405171-MSD1)**

**Source: 1405157-04**

Prepared & Analyzed: 05/29/14

C10-C28 (DRO) 554 50 mg/kg 500 ND 111 50-148 3.01 13

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: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/14 16:06

**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 1405170 - EPA 5030 Soil MS**

**Blank (1405170-BLK1)**

Prepared & Analyzed: 05/29/14

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0389</i>		<i>"</i>	<i>0.0397</i>		<i>98.1</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0445</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>21-167</i>			

**LCS (1405170-BS1)**

Prepared & Analyzed: 05/29/14

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0901	0.0020	"	0.0978		92.1	58-130			
Toluene	0.0909	0.0050	"	0.0978		92.9	61-134			
Ethylbenzene	0.0912	0.0050	"	0.0971		93.9	74-139			
m,p-Xylene	0.192	0.010	"	0.195		98.1	73-137			
o-Xylene	0.0997	0.0050	"	0.0963		104	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0397</i>		<i>"</i>	<i>0.0388</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0391</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0478</i>		<i>"</i>	<i>0.0391</i>		<i>122</i>	<i>21-167</i>			

**Matrix Spike (1405170-MS1)**

Source: 1405157-04

Prepared & Analyzed: 05/29/14

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0773	0.0020	"	0.0969	ND	79.8	30-131			
Toluene	0.0867	0.0050	"	0.0969	ND	89.5	30-134			
Ethylbenzene	0.0896	0.0050	"	0.0961	ND	93.2	22-153			
m,p-Xylene	0.177	0.010	"	0.193	ND	91.4	10-159			
o-Xylene	0.0829	0.0050	"	0.0953	ND	87.0	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0344</i>		<i>"</i>	<i>0.0385</i>		<i>89.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0377</i>		<i>"</i>	<i>0.0388</i>		<i>97.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0375</i>		<i>"</i>	<i>0.0388</i>		<i>96.8</i>	<i>21-167</i>			

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/14 16:06

**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 1405170 - EPA 5030 Soil MS**

**Matrix Spike Dup (1405170-MSD1)**

Source: 1405157-04

Prepared & Analyzed: 05/29/14

Naphthalene	ND	0.010	mg/kg	ND	ND		10-158		42	
Benzene	0.0869	0.0020	"	0.0971	ND	89.5	30-131	11.6	34	
Toluene	0.0976	0.0050	"	0.0971	ND	101	30-134	11.9	30	
Ethylbenzene	0.0863	0.0050	"	0.0963	ND	89.6	22-153	3.68	24	
m,p-Xylene	0.172	0.010	"	0.194	ND	88.8	10-159	2.74	68	
o-Xylene	0.0622	0.0050	"	0.0955	ND	65.1	31-151	28.6	38	
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0385		106	23-173			
Surrogate: Toluene-d8	0.0421		"	0.0388		108	20-170			
Surrogate: 4-Bromofluorobenzene	0.0311		"	0.0388		80.1	21-167			

**Batch 1405191 - EPA 5030 Water MS**

**Blank (1405191-BLK1)**

Prepared & Analyzed: 06/01/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.2		110	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		95.9	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2	45-146			

**LCS (1405191-BS1)**

Prepared & Analyzed: 06/01/14

Benzene	51.6	1.0	ug/l	50.0		103	51-132			
Toluene	51.5	1.0	"	50.0		103	51-138			
Ethylbenzene	52.3	1.0	"	50.0		105	58-146			
m,p-Xylene	103	2.0	"	100		103	57-144			
o-Xylene	51.5	1.0	"	50.0		103	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2		105	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/14 16:06

**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 1405191 - EPA 5030 Water MS**

<b>Matrix Spike (1405191-MS1)</b>	<b>Source: 1405124-01</b>			<b>Prepared &amp; Analyzed: 06/01/14</b>								
Benzene	55.1	1.0	ug/l	50.0	ND	110	34-141					
Toluene	54.4	1.0	"	50.0	ND	109	27-151					
Ethylbenzene	53.8	1.0	"	50.0	ND	108	29-160					
m,p-Xylene	105	2.0	"	100	ND	105	20-166					
o-Xylene	53.0	1.0	"	50.0	ND	106	33-159					
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>14.0</i>		<i>"</i>	<i>13.2</i>		<i>106</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>13.3</i>		<i>"</i>	<i>13.3</i>		<i>100</i>	<i>45-146</i>					

<b>Matrix Spike Dup (1405191-MSD1)</b>	<b>Source: 1405124-01</b>			<b>Prepared &amp; Analyzed: 06/01/14</b>								
Benzene	55.1	1.0	ug/l	50.0	ND	110	34-141	0.0181	32			
Toluene	54.7	1.0	"	50.0	ND	109	27-151	0.568	25			
Ethylbenzene	55.2	1.0	"	50.0	ND	110	29-160	2.60	50			
m,p-Xylene	108	2.0	"	100	ND	108	20-166	2.76	36			
o-Xylene	54.7	1.0	"	50.0	ND	109	33-159	3.19	26			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.6</i>		<i>"</i>	<i>13.2</i>		<i>103</i>	<i>37-154</i>					
<i>Surrogate: Toluene-d8</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>98.6</i>	<i>45-149</i>					
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>100</i>	<i>45-146</i>					

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: CR20-85

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/14 16:06

### Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 04, 2015

Travis Johansen  
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 04/24/15 15:50. 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: Travis Johansen

**Reported:**  
05/04/15 08:57

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH05@14'	1504246-01	Soil	04/24/15 10:05	04/24/15 15:50
BH06@14'	1504246-02	Soil	04/24/15 11:15	04/24/15 15:50

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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: Travis Johansen

Reported:  
05/04/15 08:57

# Summit Scientific

1504246

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

Page 1 of 1

Client: Tasman / DCP

Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: Eric Siegel

Project Manager: Travis Johansen  
E-Mail: \_\_\_\_\_  
Project Name: CR20 + Hwy 85 Release  
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)	8260 BTEX / GRO	8260B-GBTEXN	8015 DRO			
BH05e 14'	4/24/15	10:05	1			X						X	X				
BH06e 14'	4/24/15	11:15	1			X						X	X				
Relinquished by: <u>E. A. Siegel</u>		Date/Time: <u>4/24/15</u>		Received by: <u>MS</u>		Date/Time: <u>4/24/15 1515</u>		Turn Around Time (Check)				Notes:					
								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"/>				on ice					
Relinquished by: <u>MS</u>		Date/Time: <u>4/24/15 1550</u>		Received by: <u>MS</u>		Date/Time: <u>4/24/15 15</u>		Sample Integrity:									
								Temperature Upon Receipt: <u>8.0°C</u>									
								Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									

www.s2scientific.com



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20 + Hwy 85 Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
05/04/15 08:57

Sample Receipt Checklist

S2 Work Order: 1504240

Client: Tasman

Client Project ID: CR 20 + Hwy 85 Release

Shipped Via: pu  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: \_\_\_\_\_

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

Cooler ID					
Temp (°C)		<u>8.0</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, H2SO4, NaOH, etc.			<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.				

Paul Shrewsbury  
Custodian Printed Name

[Signature]  
Signature or Initials of Custodian

4-27-15  
Date/Time

[Signature]



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20 + Hwy 85 Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
05/04/15 08:57

**BH05@14'**  
**1504246-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/24/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504280	04/28/15	05/01/15	8015M	

Date Sampled: **04/24/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		99.6 %	30-150		"	"	"	"	

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

Date Sampled: **04/24/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504295	04/29/15	05/01/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/24/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20 + Hwy 85 Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
05/04/15 08:57

**BH06@14'**  
**1504246-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/24/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504280	04/28/15	05/01/15	8015M	

Date Sampled: **04/24/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

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

Date Sampled: **04/24/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504295	04/29/15	05/01/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/24/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20 + Hwy 85 Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
05/04/15 08:57

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1504280 - EPA 3550A**

**Blank (1504280-BLK1)**

Prepared: 04/28/15 Analyzed: 05/01/15

C10-C28 (DRO)	ND	50	mg/kg								
Surrogate: <i>o</i> -Terphenyl	13.0		"	12.2		107	30-150				

**LCS (1504280-BS1)**

Prepared: 04/28/15 Analyzed: 05/01/15

C10-C28 (DRO)	441	50	mg/kg	501		88.0	73-134				
Surrogate: <i>o</i> -Terphenyl	13.6		"	12.2		111	30-150				

**Matrix Spike (1504280-MS1)**

Source: 1504231-01

Prepared: 04/28/15 Analyzed: 05/01/15

C10-C28 (DRO)	506	50	mg/kg	500	165	68.3	50-148				
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.2		113	30-150				

**Matrix Spike Dup (1504280-MSD1)**

Source: 1504231-01

Prepared: 04/28/15 Analyzed: 05/01/15

C10-C28 (DRO)	588	50	mg/kg	490	165	86.4	50-148	15.0	13		QM-07
Surrogate: <i>o</i> -Terphenyl	13.8		"	11.9		115	30-150				

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20 + Hwy 85 Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
05/04/15 08:57

**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 1504295 - EPA 5030 Soil MS**

**Blank (1504295-BLK1)**

Prepared: 04/29/15 Analyzed: 05/01/15

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0454		"	0.0396		115	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0423		"	0.0400		106	21-167			

**LCS (1504295-BS1)**

Prepared: 04/29/15 Analyzed: 05/01/15

Benzene	0.0886	0.0020	mg/kg	0.100		88.6	58-130			
Toluene	0.0880	0.0050	"	0.100		88.0	61-134			
Ethylbenzene	0.0949	0.0050	"	0.0992		95.7	74-139			
m,p-Xylene	0.185	0.010	"	0.200		92.8	73-137			
o-Xylene	0.0968	0.0050	"	0.0984		98.4	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0444		"	0.0396		112	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	21-167			

**Matrix Spike (1504295-MS1)**

Source: 1504246-01

Prepared: 04/29/15 Analyzed: 05/01/15

Benzene	0.0892	0.0020	mg/kg	0.100	ND	89.2	30-131			
Toluene	0.0890	0.0050	"	0.100	ND	89.0	30-134			
Ethylbenzene	0.0956	0.0050	"	0.0992	ND	96.4	22-153			
m,p-Xylene	0.188	0.010	"	0.200	ND	94.0	10-159			
o-Xylene	0.0988	0.0050	"	0.0984	ND	100	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0448		"	0.0396		113	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167			

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20 + Hwy 85 Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
05/04/15 08:57

**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 1504295 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (1504295-MSD1)</b>	<b>Source: 1504246-01</b>			Prepared: 04/29/15	Analyzed: 05/01/15					
Benzene	0.0881	0.0020	mg/kg	0.100	ND	88.1	30-131	1.22	34	
Toluene	0.0884	0.0050	"	0.100	ND	88.4	30-134	0.643	30	
Ethylbenzene	0.0958	0.0050	"	0.0992	ND	96.5	22-153	0.157	24	
m,p-Xylene	0.187	0.010	"	0.200	ND	93.7	10-159	0.256	68	
o-Xylene	0.0994	0.0050	"	0.0984	ND	101	31-151	0.605	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0471</i>		<i>"</i>	<i>0.0396</i>		<i>119</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: CR20 + Hwy 85 Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
05/04/15 08:57

### 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

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Boring/Well ID #: <b>BH05</b>	SITE NAME: <b>CR20 + Hwy 85</b>	CLIENT NAME: <b>DCP</b>
Date Started: <b>4/24/15</b>	Location: <b>Weld Co.</b>	
Date Completed: <b>4/24/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>TJ</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Recovery (%)	PID (ppm)	Laboratory Sample	USCS	Description	
1	flush vent.							
2								
3								
4								
5								
6								
7								
8								
9	sand			NR				
10		Meow Core	60%	0.1			Brown, f-c sand. loose, dry.	
11					0.1	SW	As above, high density, tan	
12								
13					NR			
14		MC	75%	0.0				
15					0.2	BH05@14' 10:05	SW	lt brown, f-c sand w/ fine Ss/SA gravel, med-high density, dry
16					0.4			wet at ~15.5'
17					NR			
18		MC	75	0.2			SW	Wet, f-c sand w/ gravel, as above
19					0.2			
20					0.3			
21							TD = 20'	
22								
23								
24								
25								

Boring/Well ID #: <b>BH06</b>		SITE NAME: <b>CREW + Hwy 85</b>		CLIENT NAME: <b>DCP</b>				
Date Started: <b>4/24/15</b>		Location: <b>weld co</b>						
Date Completed: <b>4/24/15</b>		TOC Elevation:		DTW:				
Type of Drill: <b>DPT</b>		Geologist: <b>ES</b>						
Bit Size: <b>2"</b>		Project Manager: <b>TJ</b>						
Drilling Company: <b>Tasman</b>								
Depth (feet)	Well Completion	Sample Type	Recovery (%)	PID (ppm)	Laboratory Sample	USCS	Description	
1	flush							
2								
3								
4		vent.						Hydrovac - NR
5								
6								
7								
8	sand							
9								
10		Macro Core	67%		NR			U Brown, sandy (fin) clay, dry, mod stiff, med plast. calcite traces SW Lt brown, fc sand w/ fine gravel, dry, med density
11					0.2			
12					0.2			
13		MC	90		NR			SW Lt brown, fc sand, dry, med density
14					0.7			
15					0.9	BH06 @ 14'		
16					1.0	11:15		
17					1.4			Moist at 15' wet at 16'
18	MC	60		NR			SW Lt brown, fc sand w/ fine gravel, wet, med density	
19				0.2				
20				0.7				
21							TD = 20'	
22								
23								
24								
25								

