

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax 894-2109



FOR OGCC USE ONLY

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:

Spill  Complaint  
 Inspection  NOAV

Tracking No: 400844155

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release  Plug & Abandon  Central Facility Closure  Site/Facility Closure  Other (describe): \_\_\_\_\_

**GENERAL INFORMATION**

<b>OGCC Operator Number:</b> 4680	Contact Name and Telephone
Name of Operator: <u>DCP Midstream LP</u>	Name: <u>Sam Wood</u>
Address: <u>370 17th Street, Suite 2500</u>	No: <u>(970) 590-6444</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80202</u>	Fax: _____
API/Facility No: _____	County: <u>Weld</u>
Facility Name: _____	Facility Number: _____
Well Name: _____	Well Number: _____
Location (QtrQtr, Sec, Twp, Rng, Meridian): <u>NENE S13 T2N R67W</u>	Latitude: <u>40.145030</u> Longitude: <u>-104.829973</u>

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Condensate

Site Conditions: Is location within a sensitive area (according to Rule 901e)?  Y  N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Cultivated, Irrigated

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Dacono clay loam, 0 to 1 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface water is located approximately 310' northeast of the release point, a residential building is approximately 1,230' west, and a permitted domestic monitoring well is located approximately 200' southwest.

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Refer to the attached Figure 2 and Table 1</u>	<u>Soil sampling</u>
<input type="checkbox"/> Vegetation	_____	_____
<input checked="" type="checkbox"/> Groundwater	<u>Refer to the attached Figure 2 and Table 2</u>	<u>Groundwater sampling</u>
<input type="checkbox"/> Surface water	_____	_____

**REMEDIATION WORKPLAN**

Describe initial action taken (if previously provided, refer to that form or document):

A Form 19 was previously submitted and the COGCC has issued a spill tracking number of 400844155 for the site. A topographic map of the site is included as Figure 1.

Describe how source is to be removed:

Approximately 110 cubic yards of impacted soil within the source area was excavated, transported, and disposed of at the Buffalo Ridge Waste Management Facility in Keenesburg, CO. Additionally, approximately 300 barrels of groundwater was removed from the excavation with a vacuum truck prior to backfilling activities.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Based on soil and groundwater samples that were collected between June 2 and 3, 2015 (Figure 2), impacted soils have been removed and groundwater remains the primary concern at the Site. Prior to backfilling the excavation, DCP installed two (2) horizontal perforated remediation wells within the water bearing zone of the excavation. Additionally, DCP plans to install a temporary monitoring/remediation well network at the Site consisting of 4 proposed temporary monitoring well locations illustrated on Figure 3. Based on the analytical results for the groundwater sample collected on June 3, 2015 (GW01), DCP has initiated vacuum enhanced fluid recovery (EFR) and air sparge (AS) remediation activities utilizing the horizontal remediation wells currently installed at the Site.

State of Colorado Oil and Gas Conservation Commission

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Tracking Number: 400844155
Name of Operator: DCP Midstream LP
OGCC Operator No: 4680
Received Date:
Well Name & No:
Facility Name & No.:

REMEDIATION WORKPLAN (CONT.)

OGCC Employee:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
DCP Midstream LP will gauge the proposed monitoring/remediation wells and sample the wells that have any measurable amount of groundwater on a quarterly basis to assess the dissolved phase petroleum hydrocarbon impacts in groundwater. Groundwater samples will be submitted for laboratory analysis of BTEX constituents using USEPA Method 8260.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.
The area where the excavation is located has been backfilled and compacted with clean material and the ground surface was contoured to match pre-existing conditions.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.
Is further site investigation required? [X] Y [ ] N If yes, describe:
The excavation extent and the soil and groundwater sample locations are illustrated on Figure 2. The proposed temporary monitoring well network is illustrated on Figure 3. The soil analytical results are summarized on Table 1 and the groundwater analytical result is summarized on Table 2. Laboratory analytical reports are included in Attachment A.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
E&P waste that was generated from excavation activities was transported and disposed of at the Buffalo Ridge Waste Management Facility in Keensburg, Colorado

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 6/2/2015 Date Site Investigation Completed:
Remediation Start Date: Anticipated Completion Date:
Remediation Plan Submitted: Actual Completion Date:

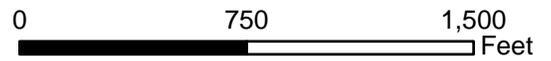
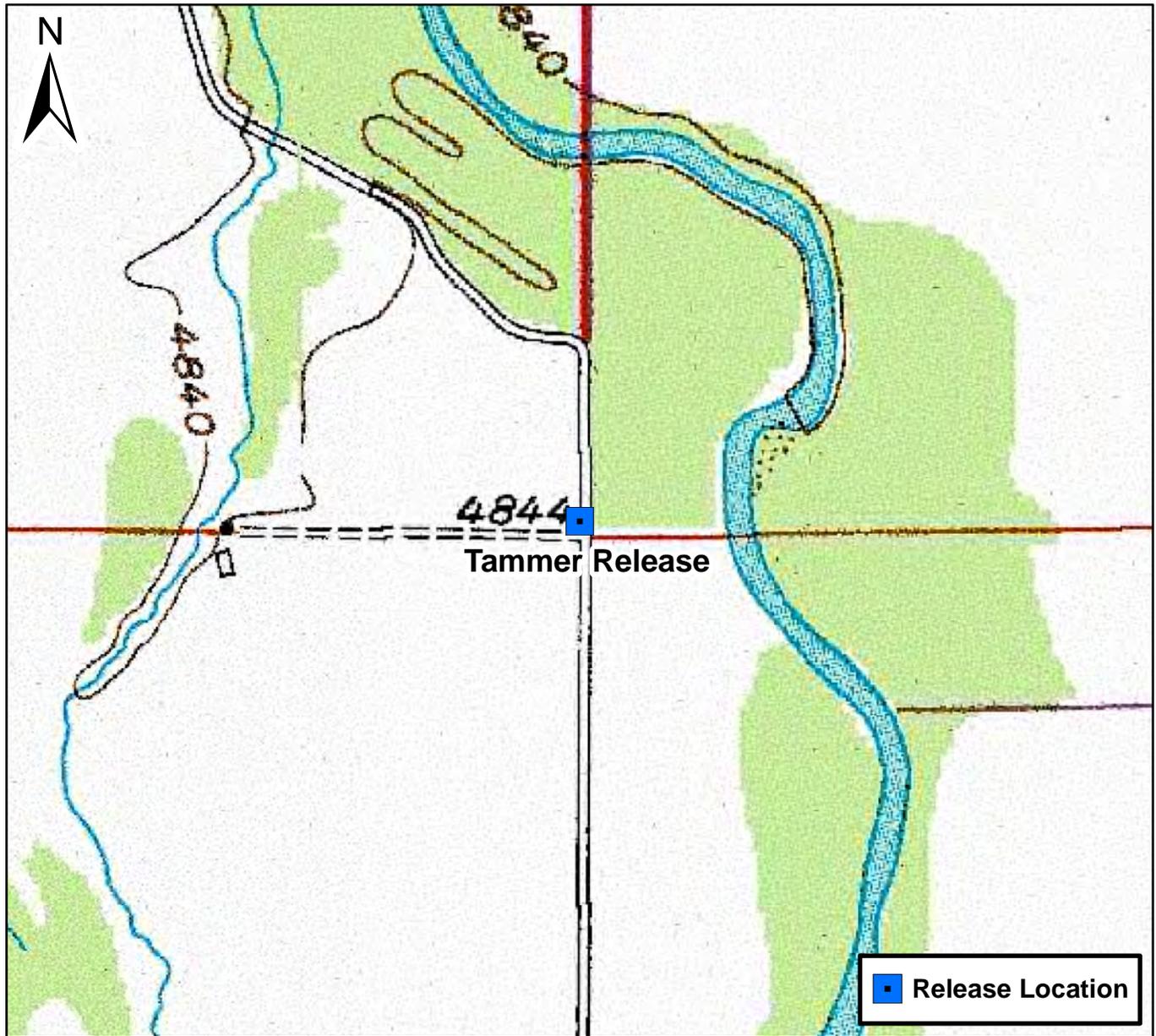
I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Stephen Weathers

Signed: [Signature] Title: Principal Env Specialist Date: 7/14/15

OGCC Approved: Title: Date:

## FIGURES



### Figure 1

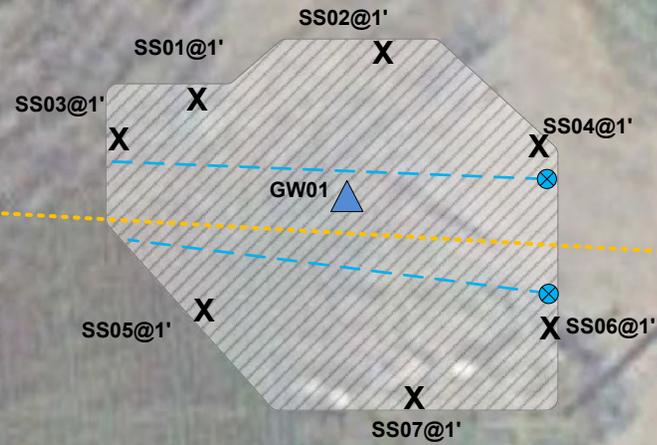
Site Location Map  
 Tammer Release  
 NENE S13 T2N R67W  
 Weld County, Colorado





Surface  
Drainage

Weld County Rd 25



Private Driveway

Imagery Source: Google Earth – 2015 Google

DRAWN BY:	BDH
DATE:	7/6/15

**Tammer Release**  
DCP Midstream  
NENE S13 T2N R67W  
Weld County, CO



**TASMAN** 6899 Pecos Street, Unit C  
GEOSCIENCES Denver, CO 80221

LEGEND	
	Approximate Excavation Area
	Horizontal Remediation Well
	Groundwater Sample Location
	Soil Sample Location
	DCP Gas Line

**FIGURE 2**  
Excavation and Sample  
Location Map  
Scale: 1" : 17'



Surface  
Drainage

Weld County Rd 25

Private Driveway

Imagery Source: Google Earth – 2015 Google

DRAWN BY: BDH

DATE: 7/6/15

**Tammer Release**  
DCP Midstream  
NENE S13 T2N R67W  
Weld County, CO

 **TASMAN** 6899 Pecos Street, Unit C  
GEOSCIENCES Denver, CO 80221

**LEGEND**

-  Approximate Excavation Area
-  Horizontal Remediation Well
-  Proposed Monitoring Well Location
-  DCP Gas Line

**FIGURE 3**  
Proposed Monitoring  
Well Location Map

Scale: 1" : 17'

## TABLES

**TABLE 1**  
**DCP MIDSTREAM - TAMMER RELEASE**  
**SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (Feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH <sup>(2)</sup> (mg/kg)
SS01 @ 1'	6/2/2015	1	<0.002	<0.005	<0.005	<0.005	<50
SS02 @ 1'	6/2/2015	1	<0.002	<0.005	<0.005	<0.005	<50
SS03 @ 1'	6/2/2015	1	<0.002	<0.005	<0.005	<0.005	<50
SS04 @ 1'	6/2/2015	1	<0.002	<0.005	<0.005	<0.005	<50
SS05 @ 1'	6/3/2015	1	<0.002	<0.005	<0.005	<0.005	<50
SS06 @ 1'	6/3/2015	1	<0.002	<0.005	<0.005	<0.005	<50
SS07 @ 1'	6/3/2015	1	<0.002	<0.005	<0.005	<0.005	<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.

mg/kg= Milligrams per kilogram.

bgs - Below ground surface.

ppm - Parts per million

**TABLE 2**  
**DCP MIDSTREAM - TAMMER RELEASE**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
GW01	6/3/2015	<b>1,300</b>	<b>4,800</b>	550	<b>5,000</b>
<b>COGCC standards for Groundwater (ug/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>

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 soil standards for the Site.

ug/L= Micrograms per liter.

**ATTACHMENT A**

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 03, 2015

Travis Johansen  
Tasman Geosciences  
6899 Pecos Street  
Denver, CO 80221  
RE: Tammer Release

Enclosed are the results of analyses for samples received by Summit Scientific on 06/02/15 18:30. 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  
President



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/03/15 06:28

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@1'	1506010-01	Soil	06/02/15 09:10	06/02/15 18:30
SS02@1'	1506010-02	Soil	06/02/15 09:15	06/02/15 18:30
SS03@1'	1506010-03	Soil	06/02/15 10:35	06/02/15 18:30
SS04@1'	1506010-04	Soil	06/02/15 11:05	06/02/15 18:30

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/03/15 06:28

# Summit Scientific 1506010

S<sub>2</sub>

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Tasman / DCP Project Manager: Travis Johansen  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Tammer Release  
Sampler Name: Eric Siegel Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested			Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRD		DRD
1	SS01e1'	6/2/15	9:10	1			X			X			X	X	X	
2	SS02e1'	↓	9:15	↓												
3	SS03e1'	↓	10:35	↓												
4	SS04e1'	↓	11:05	↓												
5																
6																
7																
8																
9																
10																
Relinquished by: <u>C. A. [Signature]</u>		Date/Time: <u>6/2/15 1544</u>		Received by: <u>[Signature]</u>		Date/Time: <u>1544</u>		Turn Around Time (Check)		Same Day <input checked="" type="checkbox"/>		72 hours <input type="checkbox"/>		Standard <input type="checkbox"/>		Notes: <u>From the field</u>
Relinquished by: <u>AD</u>		Date/Time: <u>6/2/15 1830</u>		Received by: _____		Date/Time: _____		48 hours <input type="checkbox"/>		Sample Integrity: _____		Temperature Upon Receipt: <u>4.7</u>				
Relinquished by: _____		Date/Time: _____		Received by: _____		Date/Time: _____		Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								

www.s2scientific.com



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/03/15 06:28

SS01@1'  
1506010-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 06/02/15 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506039	06/02/15	06/02/15	8015M	

Date Sampled: 06/02/15 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		96.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 06/02/15 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1506038	06/02/15	06/02/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 06/02/15 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

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6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/03/15 06:28

**SS02@1'**  
**1506010-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/02/15 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506039	06/02/15	06/03/15	8015M	

Date Sampled: **06/02/15 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		95.8 %	30-150		"	"	"	"	

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

Date Sampled: **06/02/15 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1506038	06/02/15	06/02/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/02/15 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

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6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/03/15 06:28

**SS03@1'**  
**1506010-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/02/15 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506039	06/02/15	06/03/15	8015M	

Date Sampled: **06/02/15 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		93.7 %	30-150		"	"	"	"	

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

Date Sampled: **06/02/15 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1506038	06/02/15	06/02/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/02/15 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

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Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/03/15 06:28

**SS04@1'**  
**1506010-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/02/15 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506039	06/02/15	06/03/15	8015M	

Date Sampled: **06/02/15 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		95.3 %	30-150		"	"	"	"	

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

Date Sampled: **06/02/15 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1506038	06/02/15	06/02/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/02/15 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

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6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/03/15 06:28

**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 1506039 - EPA 3550A**

**Blank (1506039-BLK1)**

Prepared: 06/02/15 Analyzed: 06/03/15

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.8		"	12.2		105	30-150				

**LCS (1506039-BS1)**

Prepared: 06/02/15 Analyzed: 06/03/15

C10-C28 (DRO)	456	50	mg/kg	501		91.0	73-134				
<i>Surrogate: o-Terphenyl</i>	13.2		"	12.2		108	30-150				

**Matrix Spike (1506039-MS1)**

**Source: 1506010-01**

Prepared: 06/02/15 Analyzed: 06/03/15

C10-C28 (DRO)	458	50	mg/kg	496	45.3	83.2	50-148				
<i>Surrogate: o-Terphenyl</i>	13.5		"	12.1		112	30-150				

**Matrix Spike Dup (1506039-MSD1)**

**Source: 1506010-01**

Prepared: 06/02/15 Analyzed: 06/03/15

C10-C28 (DRO)	489	50	mg/kg	498	45.3	89.0	50-148	6.51	13		
<i>Surrogate: o-Terphenyl</i>	13.6		"	12.1		112	30-150				

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6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/03/15 06:28

**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 1506038 - EPA 5030 Soil MS**

**Blank (1506038-BLK1)**

Prepared: 06/02/15 Analyzed: 06/03/15

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0442</i>		<i>"</i>	<i>0.0396</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0407</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

**LCS (1506038-BS1)**

Prepared: 06/02/15 Analyzed: 06/03/15

Benzene	0.108	0.0020	mg/kg	0.100		108	58-130			
Toluene	0.113	0.0050	"	0.100		113	61-134			
Ethylbenzene	0.123	0.0050	"	0.0992		124	74-139			
m,p-Xylene	0.240	0.010	"	0.200		120	73-137			
o-Xylene	0.128	0.0050	"	0.0984		130	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0445</i>		<i>"</i>	<i>0.0396</i>		<i>112</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>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

**LCS (1506038-BS2)**

Prepared: 06/02/15 Analyzed: 06/03/15

Benzene	0.112	0.0020	mg/kg	0.100		112	58-130			
Toluene	0.118	0.0050	"	0.100		118	61-134			
Ethylbenzene	0.133	0.0050	"	0.0992		134	74-139			
m,p-Xylene	0.257	0.010	"	0.200		129	73-137			
o-Xylene	0.135	0.0050	"	0.0984		137	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0430</i>		<i>"</i>	<i>0.0396</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>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</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: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/03/15 06:28

**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 1506038 - EPA 5030 Soil MS**

<b>Matrix Spike (1506038-MS1)</b>	<b>Source: 1506007-01</b>			Prepared: 06/02/15		Analyzed: 06/03/15	
Benzene	0.110	0.0020	mg/kg	0.0998	ND	110	30-131
Toluene	0.116	0.0050	"	0.0998	ND	116	30-134
Ethylbenzene	0.129	0.0050	"	0.0990	ND	131	22-153
m,p-Xylene	0.257	0.010	"	0.199	ND	129	10-159
o-Xylene	0.135	0.0050	"	0.0982	ND	138	31-151
Surrogate: 1,2-Dichloroethane-d4	0.0476		"	0.0395		120	23-173
Surrogate: Toluene-d8	0.0404		"	0.0399		101	20-170
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0399		104	21-167

<b>Matrix Spike (1506038-MS2)</b>	<b>Source: 1506007-02</b>			Prepared: 06/02/15		Analyzed: 06/03/15	
Benzene	0.109	0.0020	mg/kg	0.0992	ND	110	30-131
Toluene	0.114	0.0050	"	0.0992	ND	115	30-134
Ethylbenzene	0.127	0.0050	"	0.0984	ND	129	22-153
m,p-Xylene	0.247	0.010	"	0.198	ND	125	10-159
o-Xylene	0.129	0.0050	"	0.0976	ND	132	31-151
Surrogate: 1,2-Dichloroethane-d4	0.0457		"	0.0393		116	23-173
Surrogate: Toluene-d8	0.0402		"	0.0397		101	20-170
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0397		101	21-167

<b>Matrix Spike Dup (1506038-MSD1)</b>	<b>Source: 1506007-01</b>			Prepared: 06/02/15		Analyzed: 06/03/15			
Benzene	0.101	0.0020	mg/kg	0.0929	ND	109	30-131	8.38	34
Toluene	0.107	0.0050	"	0.0929	ND	115	30-134	7.95	30
Ethylbenzene	0.120	0.0050	"	0.0922	ND	130	22-153	7.35	24
m,p-Xylene	0.233	0.010	"	0.186	ND	126	10-159	10.0	68
o-Xylene	0.120	0.0050	"	0.0914	ND	132	31-151	11.6	38
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0368		116	23-173		
Surrogate: Toluene-d8	0.0369		"	0.0372		99.4	20-170		
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0372		103	21-167		

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release  
Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/03/15 06:28

**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 1506038 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (1506038-MSD2)</b>	<b>Source: 1506007-02</b>			Prepared: 06/02/15		Analyzed: 06/03/15				
Benzene	0.103	0.0020	mg/kg	0.0938	ND	110	30-131	6.00	34	
Toluene	0.108	0.0050	"	0.0938	ND	116	30-134	5.39	30	
Ethylbenzene	0.122	0.0050	"	0.0931	ND	131	22-153	4.01	24	
m,p-Xylene	0.239	0.010	"	0.187	ND	128	10-159	3.39	68	
o-Xylene	0.125	0.0050	"	0.0923	ND	136	31-151	2.88	38	
Surrogate: 1,2-Dichloroethane-d4	0.0423		"	0.0371		114	23-173			
Surrogate: Toluene-d8	0.0377		"	0.0375		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0375		101	21-167			

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/03/15 06:28

### 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, 2015

Travis Johansen  
Tasman Geosciences  
6899 Pecos Street  
Denver, CO 80221  
RE: Tammer Release

Enclosed are the results of analyses for samples received by Summit Scientific on 06/03/15 18:23. 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: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/15 06:17

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS05@1'	1506027-01	Soil	06/03/15 10:15	06/03/15 18:23
SS06@1'	1506027-02	Soil	06/03/15 10:50	06/03/15 18:23
SS07@1'	1506027-03	Soil	06/03/15 11:30	06/03/15 18:23
GW01	1506027-04	Water	06/03/15 11:45	06/03/15 18:23

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/15 06:17

# Summit Scientific 1506027

S2

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Tasman / DCP Midstream Project Manager: Travis Johansen  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Tammer Release  
Sampler Name: Eric Siegel Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRO	DRO	
1	SS05 e 1'	6/3/15	1015	1			X			X			X	X	X	
2	SS06 e 1'	↓	1050	1			X			X			X	X	X	
3	SS07 e 1'	↓	1130	1			X			X			X	X	X	
4	Gw01	↓	1145	3			X		X				X	X	X	
5																
6																
7																
8																
9																
10																
Relinquished by: <u>E. A. Siegel</u>		Date/Time: <u>6/3/15 1624</u>		Received by: <u>Chris Oller</u>		Date/Time: <u>6/3/15 1624</u>		Turn Around Time (Check)		Same Day <input checked="" type="checkbox"/>		72 hours <input type="checkbox"/>		Notes: <u>From field</u>		
Relinquished by: <u>AO</u>		Date/Time: <u>6/3/15 1624</u>		Received by: <u>[Signature]</u>		Date/Time: <u>6/3 1923</u>		24 hours <input type="checkbox"/>		48 hours <input type="checkbox"/>		Standard <input type="checkbox"/>				
Relinquished by: _____		Date/Time: _____		Received by: _____		Date/Time: _____		Sample Integrity:		Temperature Upon Receipt: <u>5.2</u>		Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

www.s2scientific.com



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/15 06:17

**SS05@1'**  
**1506027-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/03/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506046	06/03/15	06/03/15	8015M	

Date Sampled: **06/03/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		96.9 %	30-150		"	"	"	"	

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

Date Sampled: **06/03/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1506048	06/03/15	06/03/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/03/15 10:15**

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		99.9 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/15 06:17

**SS06@1'**  
**1506027-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/03/15 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506046	06/03/15	06/03/15	8015M	

Date Sampled: **06/03/15 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		98.1 %	30-150		"	"	"	"	

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

Date Sampled: **06/03/15 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1506048	06/03/15	06/03/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/03/15 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/15 06:17

SS07@1'  
1506027-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 06/03/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506046	06/03/15	06/03/15	8015M	

Date Sampled: 06/03/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		96.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 06/03/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1506048	06/03/15	06/03/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 06/03/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/15 06:17

**GW01**  
**1506027-04 (Water)**

**Summit Scientific**

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

Date Sampled: **06/03/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1300</b>	100	ug/l	100	1506050	06/03/15	06/03/15	EPA 8260B	
<b>Toluene</b>	<b>4800</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>550</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5000</b>	100	"	"	"	"	"	"	

Date Sampled: **06/03/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.3 %	37-154		"	"	06/03/15	"	
<i>Surrogate: Toluene-d8</i>		118 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		90.5 %	45-146		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/15 06:17

**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 1506046 - EPA 3550A**

**Blank (1506046-BLK1)**

Prepared & Analyzed: 06/03/15

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

**LCS (1506046-BS1)**

Prepared & Analyzed: 06/03/15

C10-C28 (DRO)	474	50	mg/kg	501		94.6	73-134				
<i>Surrogate: o-Terphenyl</i>	13.7		"	12.2		112	30-150				

**Matrix Spike (1506046-MS1)**

Source: 1506013-01

Prepared & Analyzed: 06/03/15

C10-C28 (DRO)	476	50	mg/kg	485	ND	98.1	50-148				
<i>Surrogate: o-Terphenyl</i>	12.5		"	11.8		106	30-150				

**Matrix Spike Dup (1506046-MSD1)**

Source: 1506013-01

Prepared & Analyzed: 06/03/15

C10-C28 (DRO)	513	50	mg/kg	464	ND	111	50-148	7.36		13	
<i>Surrogate: o-Terphenyl</i>	12.4		"	11.3		110	30-150				

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/15 06:17

**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 1506048 - EPA 5030 Soil MS**

**Blank (1506048-BLK1)**

Prepared & Analyzed: 06/03/15

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0435</i>		<i>"</i>	<i>0.0396</i>		<i>110</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

**LCS (1506048-BS1)**

Prepared & Analyzed: 06/03/15

Benzene	0.108	0.0020	mg/kg	0.100		108	58-130			
Toluene	0.115	0.0050	"	0.100		115	61-134			
Ethylbenzene	0.126	0.0050	"	0.0992		127	74-139			
m,p-Xylene	0.248	0.010	"	0.200		124	73-137			
o-Xylene	0.128	0.0050	"	0.0984		130	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0439</i>		<i>"</i>	<i>0.0396</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>21-167</i>			

**Matrix Spike (1506048-MS1)**

Source: 1506023-02

Prepared & Analyzed: 06/03/15

Benzene	0.110	0.0020	mg/kg	0.100	ND	110	30-131			
Toluene	0.117	0.0050	"	0.100	ND	117	30-134			
Ethylbenzene	0.130	0.0050	"	0.0992	ND	131	22-153			
m,p-Xylene	0.256	0.010	"	0.200	ND	128	10-159			
o-Xylene	0.134	0.0050	"	0.0984	ND	137	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0453</i>		<i>"</i>	<i>0.0396</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>99.9</i>	<i>21-167</i>			

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/15 06:17

**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 1506048 - EPA 5030 Soil MS**

Matrix Spike Dup (1506048-MSD1)	Source: 1506023-02			Prepared & Analyzed: 06/03/15						
Benzene	0.110	0.0020	mg/kg	0.100	ND	110	30-131	0.109	34	
Toluene	0.116	0.0050	"	0.100	ND	116	30-134	0.695	30	
Ethylbenzene	0.130	0.0050	"	0.0992	ND	131	22-153	0.138	24	
m,p-Xylene	0.256	0.010	"	0.200	ND	128	10-159	0.129	68	
o-Xylene	0.132	0.0050	"	0.0984	ND	134	31-151	1.96	38	
Surrogate: 1,2-Dichloroethane-d4	0.0456		"	0.0396		115	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

**Batch 1506050 - EPA 5030 Water MS**

Blank (1506050-BLK1)	Prepared & Analyzed: 06/03/15									
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.2		104	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		97.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	45-146			
LCS (1506050-BS1)	Prepared & Analyzed: 06/03/15									
Benzene	33.9	1.0	ug/l	33.3		102	51-132			
Toluene	31.1	1.0	"	33.3		93.3	51-138			
Ethylbenzene	32.7	1.0	"	33.1		99.0	58-146			
m,p-Xylene	65.6	2.0	"	66.5		98.6	57-144			
o-Xylene	34.2	1.0	"	32.8		104	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		105	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.6	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.7	45-146			

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

Reported:  
06/04/15 06:17

**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 1506050 - EPA 5030 Water MS**

<b>Matrix Spike (1506050-MS1)</b>	<b>Source: 1506021-01</b>			<b>Prepared &amp; Analyzed: 06/03/15</b>							
Benzene	33.6	1.0	ug/l	33.3	ND	101	34-141				
Toluene	30.7	1.0	"	33.3	ND	92.2	27-151				
Ethylbenzene	32.8	1.0	"	33.1	ND	99.3	29-160				
m,p-Xylene	66.2	2.0	"	66.5	ND	99.5	20-166				
o-Xylene	34.3	1.0	"	32.8	ND	105	33-159				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>14.3</i>		<i>"</i>	<i>13.2</i>		<i>108</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>96.6</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.3</i>	<i>45-146</i>				

<b>Matrix Spike Dup (1506050-MSD1)</b>	<b>Source: 1506021-01</b>			<b>Prepared &amp; Analyzed: 06/03/15</b>							
Benzene	34.1	1.0	ug/l	33.3	ND	102	34-141	1.30	32		
Toluene	30.9	1.0	"	33.3	ND	92.8	27-151	0.649	25		
Ethylbenzene	32.5	1.0	"	33.1	ND	98.3	29-160	0.949	50		
m,p-Xylene	65.3	2.0	"	66.5	ND	98.1	20-166	1.48	36		
o-Xylene	33.8	1.0	"	32.8	ND	103	33-159	1.29	26		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>15.3</i>		<i>"</i>	<i>13.2</i>		<i>116</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.8</i>		<i>"</i>	<i>13.3</i>		<i>96.0</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>98.8</i>	<i>45-146</i>				

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Denver CO, 80221

Project: Tammer Release

Project Number: [none]  
Project Manager: Travis Johansen

**Reported:**  
06/04/15 06:17

### 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