

**DCP GREELEY GAS PLANT SITE
ADDITIONAL INVESTIGATION - SEPTEMBER 4 AND 6, 2019
FORM 27 SUPPLEMENTAL MONITORING SUMMARY REPORT**

ATTACHMENTS

Tables

- 1 Summary of Soil Analytical Results – September 4, 2019
- 2 Summary of Groundwater Elevation Data – September 6, 2019
- 3 Summary of BTEX Concentrations in Surface Water and Groundwater – September 4 and 6, 2019

Figures

- 1 Site Location Map
- 2 Site Overview Map with Monitoring Well Locations
- 3 Surface Water and Groundwater Analytical Results Map – September 4 and 6, 2019

Appendices

- A Laboratory Analytical Report
 - Origins Laboratory Job #: Y909040
 - Origins Laboratory Job #: Y909080
- B Well Boring and Construction Logs (MW09 and MW10)

TABLE 1
DCP MIDSTREAM - GREELEY GAS PLANT
SOIL SAMPLE CONFIRMATION ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	PID Reading (PPM)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH (mg/kg) ²	Comments
COGCC standards for Soil (mg/kg)⁽¹⁾			0.17	85	100	175	500	
MW09 @ 6.0'	9/4/2019	54.1	<0.0500	<0.0500	<0.0500	<0.0500	<50.0	
MW09 @ 14-14.5'	9/4/2019	1.0	<0.0500	<0.0500	<0.0500	<0.0500	<50.0	
MW10 @ 6.0'	9/4/2019	77.7	<0.0500	<0.0500	<0.0500	<0.0500	<50.0	
MW10 @ 14-14.5'	9/4/2019	0.0	<0.0500	<0.0500	<0.0500	<0.0500	<50.0	

1). Standards for Soil are referenced from the 2 CCR 404-1, Table 910-1, effective January 30, 2015.

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.

PID - Photoionization Detector

ppm - Parts per million

**TABLE 2
SUMMARY OF GROUNDWATER ELEVATION DATA
DCP GREELEY GAS PLANT
WELD COUNTY, COLORADO**

Location	Date	Depth to Groundwater (feet)	Depth to Product (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)	Change in Groundwater Elevation Since Previous Event ¹ (feet)
MW09	9/6/2019	10.75	NM	--	13.90	4,680.86	4,670.11	NA
MW10	9/6/2019	9.78	NM	--	13.75	4,679.97	4,670.19	NA

Notes:

1- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring event from the measurement collected during the most recent monitoring event.

amsl = feet above mean sea level

TOC = top of casing

Groundwater elevation = (TOC Elevation - Measured Depth to Water)

NA = Not Applicable

TABLE 3
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
DCP GREELEY GAS PLANT
WELD COUNTY, COLORADO

Location Identification	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Comments
COGCC Standards (µg/L)		5	560	700	1,400	
MW09	9/6/2019	<4.00	<4.00	<4.00	<4.00	
MW10	9/6/2019	<1.00	<1.00	<1.00	<1.00	
SW01	9/4/2019	<1.00	<1.00	<1.00	<1.00	

Notes:

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

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

µg/L = micrograms per liter.

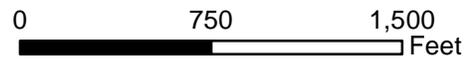
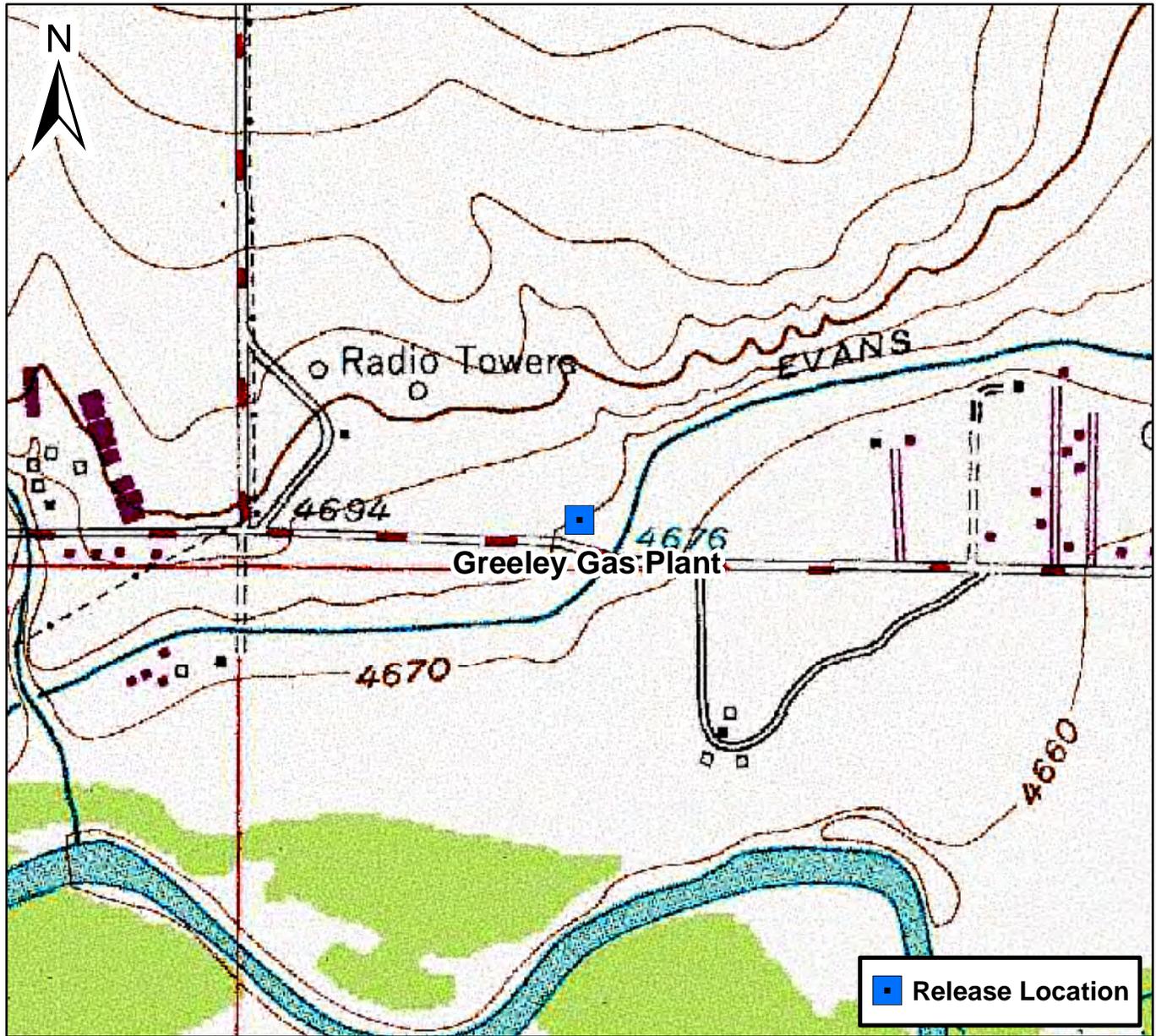


Figure 1

Site Location Map
 Greeley Gas Plant
 SESW S25 T5N R66W
 Weld County, Colorado

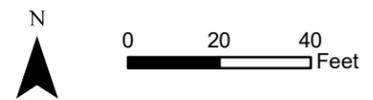




Legend

- ◆ Monitoring Well Location
(Collected via Trimble GPS)
- ▲ Surface Water Sample Location
(Approximate)

Notes:
GPS - Global Positioning System



Imagery Source: Google Earth; 2016 Google

DATE:	October 2019
DESIGNED BY:	B. Humphrey
DRAWN BY:	L. Martin



TASMAN Tasman Geosciences, Inc
6855 W. 119th Ave
Broomfield, CO 80020

**DCP Midstream
Greeley Gas Plant**
SESW Section 25, Township 5 North, Range 66 West
Weld County, Colorado

Site Overview
Map

Figure
2



DATE: October 2019

DESIGNED BY: B. Humphrey

DRAWN BY: L. Martin



**DCP Midstream
Greeley Gas Plant**
SESW Section 25, Township 5 North, Range 66 West
Weld County, Colorado

Groundwater Analytical Map
(September 4, 2019 &
September 6, 2019)

Figure
3

September 05, 2019

Tasman Geosciences

Brian Humphrey

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - DCP Greeley Gas Plant

Project Number - [none]

Attached are your analytical results for DCP Greeley Gas Plant received by Origins Laboratory, Inc. September 04, 2019. This project is associated with Origins project number Y909040-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Brian Humphrey
Project Number: [none]
Project: DCP Greeley Gas Plant

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW01	Y909040-01	Water	September 4, 2019 9:12	09/04/2019 15:05
MW10@6'	Y909040-02	Soil	September 4, 2019 12:00	09/04/2019 15:05
MW10@14-14.5'	Y909040-03	Soil	September 4, 2019 12:30	09/04/2019 15:05
MW09@6'	Y909040-04	Soil	September 4, 2019 13:15	09/04/2019 15:05
MW09@14-14.5	Y909040-05	Soil	September 4, 2019 13:30	09/04/2019 15:05

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 499040

Client: Tasman

Client Project ID: DCP-Greeley Gas Plant

Checklist Completed by: Dan Lu

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

Date/time completed: 9-4-11

Airbill #: 1003

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____

Cooler Number/Temperature: 1 / 5.4 °C 1 / _____ °C 1 / _____ °C 1 / _____ °C (Describe)

Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) ep

Date/Time Reviewed 9/5/11

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

SW01

9/4/2019 9:12:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909040-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9I0408	KDK	09/04/2019	09/05/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	75.5 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	94.5 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	82.6 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

MW10@6'

9/4/2019 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909040-02 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B910401	KDK	09/04/2019	09/04/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	73.7 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	95.8 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	88.0 %	70-130			"	"	"	"	

Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B910402	KDK	09/04/2019	09/04/2019	U
Surrogate: o-Terphenyl	88.4 %	50-150			"	"	"	"	

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

MW10@14-14.5'
9/4/2019 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909040-03 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B910401	KDK	09/04/2019	09/04/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	74.9 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	97.0 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	85.5 %	70-130			"	"	"	"	

Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B910402	KDK	09/04/2019	09/04/2019	U
Surrogate: o-Terphenyl	86.8 %	50-150			"	"	"	"	

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

MW09@6'

9/4/2019 1:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909040-04 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B910411	KDK	09/04/2019	09/04/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	70-130			"	"	"	"	

Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B910402	KDK	09/04/2019	09/04/2019	U
Surrogate: o-Terphenyl	71.2 %	50-150			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

MW09@14-14.5

9/4/2019 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909040-05 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B910411	KDK	09/04/2019	09/04/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.3 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	70-130			"	"	"	"	

Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B910402	KDK	09/04/2019	09/04/2019	U
Surrogate: o-Terphenyl	90.2 %	50-150			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9I0401 - EPA 5030 (soil)										
Blank (B9I0401-BLK1)										
					Prepared: 09/04/2019 Analyzed: 09/04/2019					
Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.093		"	0.125		74.6	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		85.5	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0401 - EPA 5030 (soil)

LCS (B9I0401-BS1)

Prepared: 09/04/2019 Analyzed: 09/04/2019

Benzene	0.105	0.00200	mg/kg	0.100		105	70-130			
Toluene	0.115	0.00200	"	0.100		115	70-130			
Ethylbenzene	0.0969	0.00200	"	0.100		96.9	70-130			
m,p-Xylene	0.191	0.00400	"	0.200		95.4	70-130			
o-Xylene	0.0934	0.00200	"	0.100		93.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.091		"	0.125		72.9	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		86.6	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0401 - EPA 5030 (soil)

Matrix Spike (B9I0401-MS1)	Source: Y909025-01			Prepared: 09/04/2019 Analyzed: 09/04/2019						
Benzene	0.101	0.00200	mg/kg	0.100	ND	101	70-130			
Toluene	0.110	0.00200	"	0.100	ND	110	70-130			
Ethylbenzene	0.0953	0.00200	"	0.100	ND	95.3	70-130			
m,p-Xylene	0.186	0.00400	"	0.200	ND	93.0	70-130			
o-Xylene	0.0900	0.00200	"	0.100	ND	90.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.088		"	0.125		70.0	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		86.4	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0401 - EPA 5030 (soil)

Matrix Spike Dup (B9I0401-MSD1)	Source: Y909025-01			Prepared: 09/04/2019 Analyzed: 09/04/2019						
Benzene	0.0995	0.00200	mg/kg	0.100	ND	99.5	70-130	1.69	20	
Toluene	0.108	0.00200	"	0.100	ND	108	70-130	2.46	20	
Ethylbenzene	0.0942	0.00200	"	0.100	ND	94.2	70-130	1.16	20	
m,p-Xylene	0.182	0.00400	"	0.200	ND	91.1	70-130	2.03	20	
o-Xylene	0.0865	0.00200	"	0.100	ND	86.5	70-130	4.03	20	
Surrogate: 1,2-Dichloroethane-d4	0.090		"	0.125		72.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		88.4	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B910402 - EPA 3580										
Blank (B910402-BLK1)										
					Prepared: 09/04/2019 Analyzed: 09/04/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	54		"	50.0		108	50-150			

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B910402 - EPA 3580

LCS (B910402-BS1)

Prepared: 09/04/2019 Analyzed: 09/04/2019

Diesel (C10-C28)	1000	50.0	mg/kg	1000		100	70-130			
Surrogate: o-Terphenyl	60		"	50.0		120	50-150			

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0402 - EPA 3580

Matrix Spike (B9I0402-MS1)	Source: Y909026-01			Prepared: 09/04/2019 Analyzed: 09/04/2019						
Diesel (C10-C28)	864	50.0	mg/kg	1000	ND	86.4	70-130			
Surrogate: o-Terphenyl	47		"	50.0		94.1	50-150			

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B910402 - EPA 3580										
Matrix Spike Dup (B910402-MSD1)		Source: Y909026-01			Prepared: 09/04/2019 Analyzed: 09/04/2019					
Diesel (C10-C28)	895	50.0	mg/kg	1000	ND	89.5	70-130	3.49	35	
Surrogate: o-Terphenyl	52		"	50.0		104	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B910408 - EPA 5030B (Water)

Blank (B910408-BLK1)

Prepared: 09/04/2019 Analyzed: 09/05/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	47		"	62.5	74.6		70-130			
Surrogate: Toluene-d8	60		"	62.5	96.1		70-130			
Surrogate: 4-Bromofluorobenzene	53		"	62.5	84.0		70-130			

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B910408 - EPA 5030B (Water)

LCS (B910408-BS1)

Prepared: 09/04/2019 Analyzed: 09/05/2019

Benzene	54.1	1.00	ug/L	50.0		108	70-130			
Toluene	62.6	1.00	"	50.0		125	70-130			
Ethylbenzene	56.0	1.00	"	50.0		112	70-130			
m,p-Xylene	110	2.00	"	100		110	70-130			
o-Xylene	55.8	1.00	"	50.0		112	70-130			
Surrogate: 1,2-Dichloroethane-d4	44		"	62.5		70.9	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	54		"	62.5		86.5	70-130			

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0408 - EPA 5030B (Water)

Matrix Spike (B9I0408-MS1)	Source: Y909030-01			Prepared: 09/04/2019 Analyzed: 09/05/2019						
Benzene	54.2	1.00	ug/L	50.0	ND	108	70-130			
Toluene	63.1	1.00	"	50.0	ND	126	70-130			
Ethylbenzene	56.6	1.00	"	50.0	ND	113	70-130			
m,p-Xylene	108	2.00	"	100	ND	108	70-130			
o-Xylene	53.6	1.00	"	50.0	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	44		"	62.5		71.0	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	53		"	62.5		85.0	70-130			

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B910408 - EPA 5030B (Water)

Matrix Spike Dup (B910408-MSD1)	Source: Y909030-01			Prepared: 09/04/2019 Analyzed: 09/05/2019						
Benzene	50.8	1.00	ug/L	50.0	ND	102	70-130	6.34	20	
Toluene	55.4	1.00	"	50.0	ND	111	70-130	12.9	20	
Ethylbenzene	48.2	1.00	"	50.0	ND	96.4	70-130	16.1	20	
m,p-Xylene	92.0	2.00	"	100	ND	92.0	70-130	16.3	20	
o-Xylene	44.9	1.00	"	50.0	ND	89.8	70-130	17.7	20	
Surrogate: 1,2-Dichloroethane-d4	45		"	62.5		72.1	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.1	70-130			
Surrogate: 4-Bromofluorobenzene	54		"	62.5		85.7	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0411 - EPA 5030 (soil)

Blank (B9I0411-BLK1)

Prepared: 09/04/2019 Analyzed: 09/04/2019

Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0411 - EPA 5030 (soil)

LCS (B9I0411-BS1)

Prepared: 09/04/2019 Analyzed: 09/04/2019

Benzene	0.102	0.00200	mg/kg	0.100		102	70-130			
Toluene	0.101	0.00200	"	0.100		101	70-130			
Ethylbenzene	0.104	0.00200	"	0.100		104	70-130			
m,p-Xylene	0.205	0.00400	"	0.200		103	70-130			
o-Xylene	0.102	0.00200	"	0.100		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.9	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.3	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0411 - EPA 5030 (soil)

Matrix Spike (B9I0411-MS1)	Source: Y909040-04			Prepared: 09/04/2019 Analyzed: 09/04/2019						
Benzene	0.106	0.00200	mg/kg	0.100	ND	106	70-130			
Toluene	0.107	0.00200	"	0.100	ND	107	70-130			
Ethylbenzene	0.109	0.00200	"	0.100	ND	109	70-130			
m,p-Xylene	0.216	0.00400	"	0.200	0.00700	105	70-130			
o-Xylene	0.106	0.00200	"	0.100	ND	106	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.12</i>		<i>"</i>	<i>0.125</i>		<i>97.4</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.12</i>		<i>"</i>	<i>0.125</i>		<i>99.3</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.12</i>		<i>"</i>	<i>0.125</i>		<i>96.4</i>	<i>70-130</i>			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0411 - EPA 5030 (soil)

Matrix Spike Dup (B9I0411-MSD1)	Source: Y909040-04			Prepared: 09/04/2019 Analyzed: 09/04/2019						
Benzene	0.106	0.00200	mg/kg	0.100	ND	106	70-130	0.245	20	
Toluene	0.107	0.00200	"	0.100	ND	107	70-130	0.243	20	
Ethylbenzene	0.109	0.00200	"	0.100	ND	109	70-130	0.423	20	
m,p-Xylene	0.217	0.00400	"	0.200	0.00700	105	70-130	0.0739	20	
o-Xylene	0.106	0.00200	"	0.100	ND	106	70-130	0.245	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.8	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Brian Humphrey
Project Number: [none]
Project: DCP Greeley Gas Plant

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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.

September 09, 2019

Tasman Geosciences

Brian Humphrey

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - DCP Greeley Gas Plant

Project Number - [none]

Attached are your analytical results for DCP Greeley Gas Plant received by Origins Laboratory, Inc. September 06, 2019. This project is associated with Origins project number Y909080-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Brian Humphrey
Project Number: [none]
Project: DCP Greeley Gas Plant

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW09	Y909080-01	Water	September 6, 2019 9:30	09/06/2019 11:20
MW10	Y909080-02	Water	September 6, 2019 10:09	09/06/2019 11:20

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

www.originslaboratory.com

page 1 of 1

ORIGINS
 LABORATORY, INC

150500

Client: TASMAN GEO
 Address: 6855 W. 119TH AVE
BROOMFIELD, CO 80020
 Telephone Number: _____
 Email Address: bhumphrey@tasmangeo.com

Project Manager: B. HUMPHREY
 Project Name: GREELEY GAS PLANT
 Project Number: _____
 Samples Collected By: J. MATIS

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Sample #	Other			
MW09	9/16/19	0930	3	X				X						1
MW10	9/16/19	1009	3	X				X						2
														3
														4
														5
														6
														7
														8
														9
														10
Relinquished By: <u>[Signature]</u>	Date: 9/16/19	Time: 1120												Turnaround Time: <u>24 HR</u>
Relinquished By: _____	Date: _____	Time: _____												Same Day <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/>

Date Results Needed

5.8

Origins Laboratory, Inc.

Jefe Pellegrini

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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 7909080

Client: Tasman

Client Project ID: DCP - Greeley GP.

Checklist Completed by: Dan Lee

Shipped Via: HP

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 9-6-19

Airbill #: PP

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____ (Describe)

Cooler Number/Temperature: 15.2 °C / _____ °C / _____ °C / _____ °C

Thermometer ID: 603

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) DL

Date/Time Reviewed 9/9/19

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

MW09

9/6/2019 9:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909080-01 (Water)

BTEX by EPA 8260D

Benzene	ND	4.00	ug/L	4	B910605	KDK	09/06/2019	09/06/2019	U
Toluene	ND	4.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	4.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	4.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130				"	"	"	
Surrogate: Toluene-d8	98.9 %	70-130				"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130				"	"	"	

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

MW10

9/6/2019 10:09:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909080-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B910605	KDK	09/06/2019	09/07/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130				"	"	"	
Surrogate: Toluene-d8	99.6 %	70-130				"	"	"	
Surrogate: 4-Bromofluorobenzene	99.9 %	70-130				"	"	"	

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B910605 - EPA 5030B (Water)

Blank (B910605-BLK1)

Prepared: 09/06/2019 Analyzed: 09/06/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0605 - EPA 5030B (Water)

LCS (B9I0605-BS1)

Prepared: 09/06/2019 Analyzed: 09/06/2019

Benzene	48.1	1.00	ug/L	50.0		96.2	70-130			
Toluene	48.8	1.00	"	50.0		97.7	70-130			
Ethylbenzene	47.6	1.00	"	50.0		95.2	70-130			
m,p-Xylene	96.7	2.00	"	100		96.7	70-130			
o-Xylene	49.1	1.00	"	50.0		98.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.9	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		100	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0605 - EPA 5030B (Water)

Matrix Spike (B9I0605-MS1)	Source: Y909075-01			Prepared: 09/06/2019 Analyzed: 09/06/2019						
Benzene	49.3	1.00	ug/L	50.0	ND	98.7	70-130			
Toluene	50.3	1.00	"	50.0	ND	101	70-130			
Ethylbenzene	49.3	1.00	"	50.0	0.080	98.4	70-130			
m,p-Xylene	100	2.00	"	100	0.240	100	70-130			
o-Xylene	51.1	1.00	"	50.0	ND	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.0	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Brian Humphrey
 Project Number: [none]
 Project: DCP Greeley Gas Plant

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B910605 - EPA 5030B (Water)

Matrix Spike Dup (B910605-MSD1)	Source: Y909075-01			Prepared: 09/06/2019 Analyzed: 09/06/2019						
Benzene	48.5	1.00	ug/L	50.0	ND	97.0	70-130	1.70	20	
Toluene	50.1	1.00	"	50.0	ND	100	70-130	0.458	20	
Ethylbenzene	49.2	1.00	"	50.0	0.080	98.2	70-130	0.203	20	
m,p-Xylene	100	2.00	"	100	0.240	99.8	70-130	0.200	20	
o-Xylene	50.7	1.00	"	50.0	ND	101	70-130	0.904	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.9	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.1	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Brian Humphrey
Project Number: [none]
Project: DCP Greeley Gas Plant

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President



Borehole Logging Form

SITE NAME: *Greeley Gas Pt* CLIENT NAME: *DCP*

Date Started: *9/4/19*

Location: *MW09*

Date Completed: *9/4/19*

TOC Elevation: *NA*

DTW: *10.79*

Type of Drill: *7700 DT GeoProbe*

Geologist: *B. Gabel*

Bit Size: *3"*

Project Manager: *B. Humphrey*

Drilling Company: *Vista Geo*

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description	
1							0-10 Hydrovac / UltraV / Clear; Log off cuttings	
2				13.8			1' Hard Anquit	
3							0-6" : Dirt / Rose	
4					29.1		2' : 2.5yr 3/3 Silty sand poorly graded, non plastic loose, no odor	
5								
6					54.1	Y0506'		4' : 7.5yr 2.5/1 Silty clay increased plasticity Slight odor
7								
8					47.4			6' : 7.5yr 2.5/1 Silty sand Non plastic, Slight odor
9					11.6 ^{18.2}			loose
10					2.1			3' : As above, some gravel
11					0.0			
12					3.2			8'-15' : Sand with gravel poorly graded, non plastic subangular to sub rounded loose, slight odor - less with depth, black discoloration
13					6.2			2.5yr 7/3 (pink)
14					1.0	Y05014-14.5		
15					0.0			
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

TD: *14'*

Sand: *14' - 7'*

concrete/casing: *1' - 0'*



Borehole Logging Form

SITE NAME: <u>Greeny GP</u>		CLIENT NAME: <u>DCP</u>
Date Started: <u>9-4-19</u>	Location: <u>NW10</u>	
Date Completed: <u>9-4-19</u>	TOC Elevation: <u>NA</u>	DTW: <u>9.80'</u>
Type of Drill: <u>Geoprobe 3720DT</u>	Geologist: <u>J WATTS</u>	
Bit Size: <u>5"</u>	Project Manager: <u>B. HUMPHREY</u>	
Drilling Company: <u>VISTA GEO</u>		

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description	
1							0-10' - Hydrovac / Utility LOCATES. LOGGED OFF CUTTINGS	
2		100	24.7					
3		%					0-6" - DIET / GSE 7.5 YR G/S LIGHT BROWN / NON PLASTIC MIX OF GRAVELS / SANDS, AN GRADERS, LOOSE; DRY, NO OIL NO DISCOLORATION	
4			254				6'-8' SILTY / SANDY / CLAY 7.5 YR (S/S) DIC. BRN SLT. PLASTIC SUBGRADES. PARTLY GRADED LOOSE; DRY, NO OIL / DISCOLORATE	
5								
6					77.7	YES @ 6'		
7								
8					54.2			10' Plasticity increase & color Δ to 7.5 YR (S/S) DIC. BRN
9								
10					7.5			6'-8' SAND w/ SOME GRAVEL 7.5 YR (S/S) BROWN, NON PLASTIC, SUBGRADES; PROPERLY GRADED; LOOSE; DRY, SOME FINE STAINING; SLIGHT OIL;
11				100%	0.7			
12					0.1			
13					0.1			8'-10' SAND. SAME AS ABOVE. SLIGHTLY LESS GRAVEL. WET @ 9.5-10', SATURATED BELOW
14								
15				0.0	YES @ 14.5-15'		10-15' SAND w/ GRAVEL 7.5 YR FLS (PINK); 100% FINE GRAVEL HIGH PLASTIC - SATURATED; SUBGRADES TO SUBGRADES; LOOSE; NO SOME ORGANIC STAINING; NO OIL;	
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

11 TD: 14' SAND: 14-7 CONCRETE / CEMENT 1-0' FIRMNESS ESTABLISH
 SCREEN 14-9' BENT: 7-8'