

December 16, 2019

DCP Midstream

Matt Pickett

3026 4th Ave.

Greeley, CO 80631 CO 80631

Project Name - O'Connor CND**Project Number - [none]**

Attached are your analytical results for O'Connor CND received by Origins Laboratory, Inc. December 12, 2019. This project is associated with Origins project number Y912186-01.

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



DCP Midstream

3026 4th Ave.

Greeley, CO 80631CO 80631

Matt Pickett

Project Number: [none]

Project: O'Connor CND

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CND #1	Y912186-01	Soil	December 12, 2019 11:30	12/12/2019 13:05
CND #2	Y912186-02	Soil	December 12, 2019 11:35	12/12/2019 13:05
CND #3	Y912186-03	Soil	December 12, 2019 11:40	12/12/2019 13:05

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DCP Midstream

3026 4th Ave.

Greeley, CO 80631CO

80631

Matt Pickett

Project Number: [none]

Project: O'Connor CND

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: Y912186

Client: DCP Midstream

Client Project ID: O'Connor CND

Checklist Completed by: JBE

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

Date/time completed: 12-12-19 1323

Airbill #: _____

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

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

Thermometer ID: T003

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) JP

Date/Time Reviewed 12/13/19

Origins Laboratory, Inc.

Jefe Pellegrini

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Matt Pickett

Project Number: [none]

Project: O'Connor CND

CND #1

12/12/2019 11:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y912186-01 (Soil)

BTEX by EPA 8260D

Benzene	0.003	0.002	mg/kg	1	B9L1201	ZZZ	12/12/2019	12/13/2019	
Toluene	0.004	0.002	"	"	"	ZZZ	"	"	
Ethylbenzene	ND	0.002	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.002	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4

130 %

70-130

"

"

"

Surrogate: Toluene-d8

80.2 %

70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

94.4 %

70-130

"

"

"

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1202	TEM	12/12/2019	12/12/2019	U
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Surrogate: o-Terphenyl

82.2 %

50-150

"

"

"

Origins Laboratory, Inc.



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Project Number: [none]

Project: O'Connor CND

CND #2

12/12/2019 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y912186-02 (Soil)

BTEX by EPA 8260D

Benzene	19.6	0.498	mg/kg	250	B9L1201	KDK	12/12/2019	12/13/2019
Toluene	84.4	0.498	"	"	"	KDK	"	"
Ethylbenzene	6.99	0.050	"	25	"	KDK	"	12/13/2019
Xylenes, total	72.6	0.498	"	250	"	KDK	"	12/13/2019

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"		12/13/2019
Surrogate: Toluene-d8	139 %	70-130			"	"		" S-04
Surrogate: 4-Bromofluorobenzene	98.7 %	70-130			"	"		"

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

Diesel (C10-C28)	69.2	50.0	mg/kg	1	B9L1202	TEM	12/12/2019	12/12/2019
Surrogate: o-Terphenyl	88.2 %	50-150			"	"		"

Origins Laboratory, Inc.



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Project Number: [none]

Project: O'Connor CND

CND #3

12/12/2019 11:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y912186-03 (Soil)

BTEX by EPA 8260D

Benzene	1.54	0.050	mg/kg	25	B9L1201	KDK	12/12/2019	12/13/2019
Toluene	5.58	0.050	"	"	"	KDK	"	"
Ethylbenzene	0.626	0.050	"	"	"	KDK	"	"
Xylenes, total	4.52	0.050	"	"	"	KDK	"	"

Surrogate: 1,2-Dichloroethane-d4

100 % 70-130

" " "

Surrogate: Toluene-d8

103 % 70-130

" " "

Surrogate: 4-Bromofluorobenzene

99.4 % 70-130

" " "

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1202	TEM	12/12/2019	12/12/2019	U
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Surrogate: o-Terphenyl

79.7 % 50-150

" " "

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Project Number: [none]

Project: O'Connor CND

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 B9L1201 - EPA 5030 (soil)

Blank (B9L1201-BLK1)

Prepared: 12/12/2019 Analyzed: 12/12/2019

Benzene	ND	0.002	mg/kg							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.8	70-130			

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Matt Pickett

Project Number: [none]

Project: O'Connor CND

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 B9L1201 - EPA 5030 (soil)

LCS (B9L1201-BS1)

Prepared: 12/12/2019 Analyzed: 12/12/2019

Benzene	0.101	0.002	mg/kg	0.100		101	70-130			
Toluene	0.096	0.002	"	0.100		96.5	70-130			
Ethylbenzene	0.095	0.002	"	0.100		95.2	70-130			
m,p-Xylene	0.192	0.004	"	0.200		96.2	70-130			
o-Xylene	0.094	0.002	"	0.100		94.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.3	70-130			

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Jen Pellegrini For Noelle Doyle Mathis, President

DCP Midstream

3026 4th Ave.

Greeley, CO 80631CO 80631

Matt Pickett

Project Number: [none]

Project: O'Connor CND

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 B9L1201 - EPA 5030 (soil)

Matrix Spike (B9L1201-MS1)		Source: Y912176-01			Prepared: 12/12/2019 Analyzed: 12/12/2019					
Benzene	0.113	0.002	mg/kg	0.100	ND	113	70-130			
Toluene	0.105	0.002	"	0.100	ND	105	70-130			
Ethylbenzene	0.108	0.002	"	0.100	ND	108	70-130			
m,p-Xylene	0.222	0.004	"	0.200	ND	111	70-130			
o-Xylene	0.106	0.002	"	0.100	ND	106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

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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 B9L1201 - EPA 5030 (soil)

Matrix Spike Dup (B9L1201-MSD1)		Source: Y912176-01			Prepared: 12/12/2019 Analyzed: 12/12/2019					
Benzene	0.083	0.002	mg/kg	0.100	ND	82.9	70-130	30.4	20	QR-03
Toluene	0.077	0.002	"	0.100	ND	77.1	70-130	31.0	20	QR-03
Ethylbenzene	0.074	0.002	"	0.100	ND	74.5	70-130	37.1	20	QR-03
m,p-Xylene	0.150	0.004	"	0.200	ND	75.2	70-130	38.4	20	QR-03
o-Xylene	0.076	0.002	"	0.100	ND	76.4	70-130	32.5	20	QR-03
Surrogate: 1,2-Dichloroethane-d4	0.16		"	0.125		129	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.6	70-130			

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Project: O'Connor CND

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 B9L1202 - EPA 3580

Blank (B9L1202-BLK1)

Prepared: 12/12/2019 Analyzed: 12/12/2019

Diesel (C10-C28)	ND	25.0	mg/kg							U
Surrogate: o-Terphenyl	19		"	25.0		76.7	50-150			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

DCP Midstream

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Matt Pickett

Project Number: [none]

Project: O'Connor CND

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 B9L1202 - EPA 3580

LCS (B9L1202-BS1)

Prepared: 12/12/2019 Analyzed: 12/12/2019

Diesel (C10-C28)	943	50.0	mg/kg	1000		94.3	70-130			
Surrogate: o-Terphenyl	47		"	50.0		93.0	50-150			

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Matt Pickett

Project Number: [none]

Project: O'Connor CND

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 B9L1202 - EPA 3580

Matrix Spike (B9L1202-MS1)		Source: Y912176-01			Prepared: 12/12/2019 Analyzed: 12/12/2019					
Diesel (C10-C28)	954	50.0	mg/kg	1000	ND	95.4	70-130			
Surrogate: o-Terphenyl	44		"	50.0		88.0	50-150			

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Greeley, CO 80631CO 80631

Matt Pickett

Project Number: [none]

Project: O'Connor CND

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 B9L1202 - EPA 3580

Matrix Spike Dup (B9L1202-MSD1)		Source: Y912176-01			Prepared: 12/12/2019 Analyzed: 12/12/2019					
Diesel (C10-C28)	805	50.0	mg/kg	1000	ND	80.5	70-130	16.9	35	
Surrogate: o-Terphenyl	37		"	50.0		73.9	50-150			

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Project Number: [none]

Project: O'Connor CND

Notes and Definitions

U Sample is Non-Detect.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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