



March 19, 2020

Olsson Associates

Trent Watne

1525 Raleigh St, Suite 400

Denver CO 80204

Project Name - PDC - Morales

Project Number - 019-2253

Attached are your analytical results for PDC - Morales received by Origins Laboratory, Inc. March 11, 2020. This project is associated with Origins project number Y003187-01.

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



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

Olsson Associates
1525 Raleigh St, Suite 400
Denver CO 80204

Trent Watne
Project Number: 019-2253
Project: PDC - Morales

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Morales0248601	Y003187-01	Water	March 11, 2020 10:00	03/11/2020 11:10

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Olsson Associates
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 Denver CO 80204

Trent Watne
 Project Number: 019-2253
 Project: PDC - Morales

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y003187

Client: Olsson

Client Project ID: PDC - Morales

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 3/11/2020

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 12.1 °C _____ / _____ °C _____ / _____ °C (Describe) _____ °C

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"/>		<u>Some Day</u>
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: Jm (Project Manager)

3-12-20
 Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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Trent Watne
 Project Number: 019-2253
 Project: PDC - Morales

Morales0248601
 3/11/2020 10:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
 Y003187-01 (Water)

Anions by EPA 300.0

Bromide	1.07	0.200	mg/L	1	1979524	JLD1	03/11/2020	03/13/2020	
Chloride	109	4.00	"	20	"	JLD1	"	"	
Fluoride	2.28	0.100	"	1	"	JLD1	"	"	
Nitrate	ND	0.100	"	"	"	JLD1	"	"	U
Nitrite	ND	0.100	"	"	"	JLD1	"	"	U
Sulfate	0.540	0.400	"	"	"	JLD1	"	"	

Bacterial Activity Reaction Tests

Iron Related Bacteria	~35000		CFU/mL	1	11111	DJL	"	03/11/2020	
Slime Forming Bacteria	~67000		"	"	"	DJL	"	"	
Sulfate Reducing Bacteria	~27000		"	"	"	DJL	"	"	

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0C1106	ZZZ	03/11/2020	03/13/2020	Ua
Toluene	ND	1.00	"	"	"	ZZZ	"	"	Ua
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	Ua
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	95.7 %	70-130				"	"	"	
Surrogate: Toluene-d8	94.7 %	70-130				"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130				"	"	"	

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Trent Watne
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Morales0248601
3/11/2020 10:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Pace Analytical
Y003187-01 (Water)

Dissolved Gasses by RSK 175

Ethane	8110	10.0	ug/L	1	11111		03/11/2020	03/17/2020	
Methane	26000	10.0	"	"	"		"	"	
n-Propane	4910	20.0	"	"	"		"	"	

Dissolved Metals by 200.8

Barium	48.5	4.00	ug/L	1	1979975	SKJ	03/13/2020	03/17/2020	
Boron	393	150	"	10	"	SKJ	"	"	
Calcium	1700	200	"	1	"	SKJ	"	"	
Iron	212	100	"	"	"	SKJ	"	"	
Magnesium	394	30.0	"	"	"	SKJ	"	"	
Manganese	17.0	5.00	"	"	"	SKJ	"	"	
Potassium	1680	300	"	"	"	SKJ	"	"	
Selenium	ND	5.00	"	"	"	SKJ	"	03/18/2020	U
Sodium	308000	2500	"	10	"	SKJ	"	03/17/2020	
Strontium	74.5	10.0	"	1	"	SKJ	"	03/18/2020	

DRO by 8015C

Diesel Range Organics	ND	200	ug/L	1	1980390	RXC1	03/16/2020	03/17/2020	U
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Surrogate: o-Terphenyl 83 % 40-109 " " "

GRO by 8015C

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Morales0248601

3/11/2020 10:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
Y003187-01 (Water)

GRO by 8015C

Gasoline Range Organics	0.468	0.100	mg/L	1	1980395	RXY1	03/11/2020	03/16/2020	
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<i>Surrogate: Bromofluorobenzene</i>	92 %	75-127			"	"	"	"	
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Nitrate/Nitrite by EPA 353.2

Nitrogen, Nitrate/Nitrite	ND	0.0200	mg/L	1	1979103	AXH3	"	03/16/2020	U
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pH in Water by EPA 9040C

pH	8.47		pH Units	1	B0C1115	DJL	03/11/2020	03/11/2020	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	1310	5.00	uS/cm	"	B0C1114	DJL	03/11/2020	03/11/2020	
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TDS by SM2540C

Total Dissolved Solids	740	14.3	mg/L	1	1981052	KLP1	03/11/2020	03/17/2020	
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Total Alkalinity by SM 2320B

Alkalinity, Total as CaCO3	538	4.00	mg/L	1	1980127	RXB5	"	03/13/2020	
Bicarbonate alkalinity (CaCO3)	491	4.00	"	"	"	RXB5	"	"	
Carbonate alkalinity (CaCO3)	46.2	4.00	"	"	"	RXB5	"	"	

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Morales0248601

3/11/2020 10:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
Y003187-01 (Water)

Total Phosphorus by EPA 365.4

Phosphorus, Total as P	0.124	0.0500	mg/L	1	1980652	KLP1	03/16/2020	03/17/2020	
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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 B0C1106 - EPA 5030B (Water)

Blank (B0C1106-BLK1)

Prepared: 03/11/2020 Analyzed: 03/13/2020

Benzene	ND	1.00	ug/L							Ua
Toluene	ND	1.00	"							Ua
Ethylbenzene	ND	1.00	"							Ua
Xylenes, total	ND	1.00	"							Ua
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>57</i>		<i>"</i>	<i>62.5</i>	<i>91.8</i>	<i>70-130</i>				
<i>Surrogate: Toluene-d8</i>	<i>59</i>		<i>"</i>	<i>62.5</i>	<i>94.2</i>	<i>70-130</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>65</i>		<i>"</i>	<i>62.5</i>	<i>103</i>	<i>70-130</i>				

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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 B0C1106 - EPA 5030B (Water)

LCS (B0C1106-BS1)

Prepared: 03/11/2020 Analyzed: 03/13/2020

Benzene	47.3	1.00	ug/L	50.0		94.6	70-130			
Toluene	46.4	1.00	"	50.0		92.7	70-130			
Ethylbenzene	50.1	1.00	"	50.0		100	70-130			
m,p-Xylene	95.4	2.00	"	100		95.4	70-130			
o-Xylene	44.6	1.00	"	50.0		89.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	50		"	62.5		80.3	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	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 B0C1106 - EPA 5030B (Water)

Matrix Spike (B0C1106-MS1)	Source: Y003157-07			Prepared: 03/11/2020 Analyzed: 03/13/2020						
Benzene	50.3	1.00	ug/L	50.0	0.530	99.6	70-130			
Toluene	52.6	1.00	"	50.0	ND	105	70-130			
Ethylbenzene	57.8	1.00	"	50.0	0.330	115	70-130			
m,p-Xylene	104	2.00	"	100	0.570	103	70-130			
o-Xylene	50.1	1.00	"	50.0	0.150	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.8	70-130			
Surrogate: Toluene-d8	66		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	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 B0C1106 - EPA 5030B (Water)

Matrix Spike Dup (B0C1106-MSD1)	Source: Y003157-07			Prepared: 03/11/2020 Analyzed: 03/13/2020						
Benzene	43.6	1.00	ug/L	50.0	0.530	86.1	70-130	14.4	20	
Toluene	45.4	1.00	"	50.0	ND	90.8	70-130	14.6	20	
Ethylbenzene	50.1	1.00	"	50.0	0.330	99.6	70-130	14.2	20	
m,p-Xylene	89.7	2.00	"	100	0.570	89.1	70-130	14.6	20	
o-Xylene	44.2	1.00	"	50.0	0.150	88.1	70-130	12.5	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.4	70-130			
Surrogate: Toluene-d8	67		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.3	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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Classical Chemistry Parameters - 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 B0C1114 - NO PREP

Blank (B0C1114-BLK1)

Prepared: 03/11/2020 Analyzed: 03/11/2020

Specific Conductance (EC) 2.10 5.00 uS/cm

Duplicate (B0C1114-DUP1)

Source: Y003187-01

Prepared: 03/11/2020 Analyzed: 03/11/2020

Specific Conductance (EC) 1310 5.00 uS/cm 1310 0.0459 10

Batch B0C1115 - NO PREP

Duplicate (B0C1115-DUP1)

Source: Y003187-01

Prepared: 03/11/2020 Analyzed: 03/11/2020

pH 8.47 pH Units 8.47 0.00 200

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Anions by EPA 300.0 - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1979524 -

BLANK (1204522828-BLK)

Prepared: Analyzed: 03/12/2020

Bromide	ND	0.200	mg/L				-			U
Sulfate	ND	0.400	"				-			U
Nitrite	ND	0.100	"				-			U
Nitrate	ND	0.100	"				-			U
Chloride	ND	0.200	"				-			U
Fluoride	ND	0.100	"				-			U

LCS (1204522829-BKS)

Prepared: Analyzed: 03/12/2020

Chloride	4.78	0.200	mg/L	5.00		95.7	90-110			
Sulfate	9.73	0.400	"	10.0		97.3	90-110			
Nitrite	2.44	0.100	"	2.50		97.6	90-110			
Fluoride	2.44	0.100	"	2.50		97.7	90-110			
Bromide	1.22	0.200	"	1.25		97.8	90-110			
Nitrate	2.42	0.100	"	2.50		96.9	90-110			

DUP (1204522832 D)

Source: 506702005

Prepared: Analyzed: 03/12/2020

Bromide	ND	0.200	mg/L		0.156		0-20	4.19	20	U
Chloride	24.5	2.00	"		24.4		0-20	0.262	20	
Fluoride	0.481	0.100	"		0.484		0-20	0.622	20	
Nitrate	7.42	1.00	"		7.36		0-20	0.704	20	
Nitrite	ND	0.100	"		<0.0330		0-20	0	20	U
Sulfate	119	4.00	"		119		0-20	0.0353	20	

PS (1204522833 S)

Source: 506702005

Prepared: Analyzed: 03/13/2020

Sulfate	226	4.00	mg/L	10.0		107	90-110			
Bromide	1.39	0.200	"	1.25		98.7	90-110			
Chloride	76.1	2.00	"	5.00		103	90-110			

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Anions by EPA 300.0 - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1979524 -

PS (1204522833 S)

Source: 506702005

Prepared: Analyzed: 03/12/2020

Fluoride	2.96	0.100	mg/L	2.50		98.9	90-110			
Nitrite	2.46	0.100	"	2.50		98.5	90-110			
Nitrate	32.6	1.00	"	2.50		101	90-110			

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Dissolved Metals by 200.8 - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1979975 -

FLTB (1204522800-BLK)

Prepared: 03/13/2020 Analyzed: 03/17/2020

Manganese	ND	5.00	ug/L				-			U
Barium	ND	4.00	"				-			U
Boron	ND	15.0	"				-			U
Calcium	ND	200	"				-			U
Magnesium	ND	30.0	"				-			U
Potassium	ND	300	"				-			U
Selenium	ND	5.00	"				-			U
Sodium	ND	250	"				-			U
Strontium	ND	10.0	"				-			U
Iron	ND	100	"				-			U

BLANK (1204523971-BLK)

Prepared: 03/13/2020 Analyzed: 03/17/2020

Boron	ND	15.0	ug/L				-			U
Calcium	ND	200	"				-			U
Sodium	ND	250	"				-			U
Selenium	ND	5.00	"				-			U
Iron	ND	100	"				-			U
Magnesium	ND	30.0	"				-			U
Manganese	ND	5.00	"				-			U
Potassium	ND	300	"				-			U
Barium	ND	4.00	"				-			U
Strontium	ND	10.0	"				-			U

LCS (1204523972-BKS)

Prepared: 03/13/2020 Analyzed: 03/17/2020

Sodium	2040	250	ug/L	2000		102	85-115			
Selenium	50.5	5.00	"	50.0		101	85-115			
Potassium	1990	300	"	2000		99.6	85-115			

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Dissolved Metals by 200.8 - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1979975 - EPA 200.2

LCS (1204523972-BKS)

Prepared: 03/13/2020 Analyzed: 03/17/2020

Manganese	52.2	5.00	ug/L	50.0		104	85-115			
Magnesium	2000	30.0	"	2000		99.9	85-115			
Iron	2060	100	"	2000		103	85-115			
Calcium	2050	200	"	2000		103	85-115			
Boron	103	15.0	"	100		103	85-115			
Barium	51.5	4.00	"	50.0		103	85-115			
Strontium	52.5	10.0	"	50.0		105	85-115			

DUP (1204523973 D)

Source: Y003187-01

Prepared: 03/13/2020 Analyzed: 03/17/2020

Potassium	1670	300	ug/L		1680		0-20	0.743	20	
Strontium	72.5	10.0	"		74.5		0-20	2.79	20	
Selenium	ND	5.00	"		3.17		0-20	56.3	20	U
Manganese	16.5	5.00	"		17.0		0-20	2.68	20	
Magnesium	389	30.0	"		394		0-20	1.26	20	
Iron	200	100	"		212		0-20	5.65	20	
Calcium	1680	200	"		1700		0-20	0.67	20	
Boron	388	150	"		393		0-20	1.45	20	
Barium	47.7	4.00	"		48.5		0-20	1.72	20	
Sodium	308000	2500	"		308000		0-20	0.128	20	

MS (1204523974 S)

Source: Y003187-01

Prepared: 03/13/2020 Analyzed: 03/17/2020

Sodium	317000	2500	ug/L	2000	308000	0	75-125			
Selenium	51.3	5.00	"	50.0	3.17	96.2	75-125			
Strontium	127	10.0	"	50.0	74.5	105	75-125			
Manganese	66.6	5.00	"	50.0	17.0	99.2	75-125			
Potassium	3800	300	"	2000	1680	106	75-125			
Calcium	3730	200	"	2000	1700	102	75-125			

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Olsson Associates
 1525 Raleigh St, Suite 400
 Denver CO 80204

Trent Watne
 Project Number: 019-2253
 Project: PDC - Morales

Dissolved Metals by 200.8 - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1979975 - EPA 200.2

MS (1204523974 S)	Source: Y003187-01			Prepared: 03/13/2020 Analyzed: 03/17/2020						
Iron	2170	100	ug/L	2000	212	98.1	75-125			
Boron	493	150	"	100	393	99.6	75-125			
Barium	97.0	4.00	"	50.0	48.5	96.9	75-125			
Magnesium	2290	30.0	"	2000	394	94.6	75-125			

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Jen Pellegrini, Project Manager

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Trent Watne
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 Project: PDC - Morales

DRO by 8015C - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1980390 - SW846 3535A										
BLANK (1204524886-BLK)					Prepared: 03/16/2020 Analyzed: 03/17/2020					
Diesel Range Organics	ND	200	ug/L				-			U
Surrogate: o-Terphenyl	12.8		"	20.0		64	40-109			
LCS (1204524887-BKS)					Prepared: 03/16/2020 Analyzed: 03/17/2020					
Diesel Range Organics	739	200	ug/L	1000		74	45-119			
Surrogate: o-Terphenyl	16.5		"	20.0		83	40-109			
LCSD (1204524888-BKSD)					Prepared: 03/16/2020 Analyzed: 03/17/2020					
Diesel Range Organics	686	200	ug/L	1000		69	45-119	8	27	
Surrogate: o-Terphenyl	15.5		"	20.0		78	40-109			

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Trent Watne
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 Project: PDC - Morales

GRO by 8015C - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1980395 -										
BLANK (1204524897-BLK)					Prepared: Analyzed: 03/16/2020					
Gasoline Range Organics	ND	0.100	mg/L				-			U
Surrogate: Bromofluorobenzene	0.0462		"	0.0500		92	75-127			
LCS (1204524898-BKS)					Prepared: Analyzed: 03/16/2020					
Gasoline Range Organics	0.522	0.100	mg/L	0.500		104	80-120			
Surrogate: Bromofluorobenzene	0.0517		"	0.0500		103	75-127			
PS (1204524899 S)					Source: 506898001 Prepared: Analyzed: 03/16/2020					
Gasoline Range Organics	0.516	0.100	mg/L	0.500		103	68-127			
Surrogate: Bromofluorobenzene	0.0446		"	0.0500		89	75-127			
PSD (1204524900 SD)					Source: 506898001 Prepared: Analyzed: 03/16/2020					
Gasoline Range Organics	0.512	0.100	mg/L	0.500		102	68-127	1	30	
Surrogate: Bromofluorobenzene	0.0479		"	0.0500		96	75-127			

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 Project: PDC - Morales

TDS by SM2540C - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1981052 -										
BLANK (1204526605-BLK)					Prepared: Analyzed: 03/17/2020					
Total Dissolved Solids	ND	14.3	mg/L				-			U
LCS (1204526606-BKS)					Prepared: Analyzed: 03/17/2020					
Total Dissolved Solids	307	14.3	mg/L	300		102	95-105			
DUP (1204526607 D)					Source: Y003187-01 Prepared: Analyzed: 03/17/2020					
Total Dissolved Solids	741	14.3	mg/L		740		0-5	0.193		5

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Trent Watne
 Project Number: 019-2253
 Project: PDC - Morales

Total Alkalinity by SM 2320B - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1980127 -										
LCS (1204524334-BKS)					Prepared: Analyzed: 03/13/2020					
Alkalinity, Total as CaCO3	105	4.00	mg/L	100		105	90-110			
DUP (1204524335 D)					Source: 506581002 Prepared: Analyzed: 03/13/2020					
Alkalinity, Total as CaCO3	515	4.00	mg/L		513		0-20	0.391	20	
Bicarbonate alkalinity (CaCO3)	ND	4.00	"		<1.45		0-20	0	20	U
Carbonate alkalinity (CaCO3)	48.2	4.00	"		34.2		0-20	34.1	20	
MS (1204524337 S)					Source: 506581002 Prepared: Analyzed: 03/13/2020					
Alkalinity, Total as CaCO3	620	4.00	mg/L	100	513	0	80-120			

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Trent Watne
 Project Number: 019-2253
 Project: PDC - Morales

Total Phosphorus by EPA 365.4 - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1980652 - EPA 365.4 Prep										
BLANK (1204525638-BLK)					Prepared: 03/16/2020 Analyzed: 03/17/2020					
Phosphorus, Total as P	ND	0.0500	mg/L				-			U
LCS (1204525639-BKS)					Prepared: 03/16/2020 Analyzed: 03/17/2020					
Phosphorus, Total as P	1.10	0.0500	mg/L	1.00		110	80-124			
DUP (1204525646 D)					Source: 506599002 Prepared: 03/16/2020 Analyzed: 03/17/2020					
Phosphorus, Total as P	2.33	0.0500	mg/L		2.37		0-41	1.7	41	
MS (1204525647 S)					Source: 506599002 Prepared: 03/16/2020 Analyzed: 03/17/2020					
Phosphorus, Total as P	3.32	0.0500	mg/L	1.00	2.37	95	70-136			

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Project Number: 019-2253
Project: PDC - Morales

Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

~67000 ~67000

~35000 ~35000

~27000 ~27000

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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Jen Pellegrini, Project Manager