



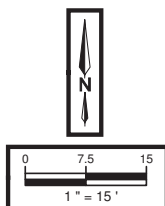
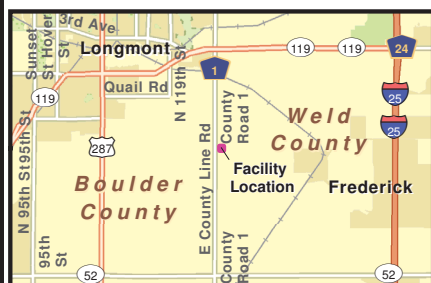
Crestone Peak Resources
Ross F Unit-62N68W 19NWNW
COGCC Location ID: 322909
Site Diagram

Legal Description: NWNW, Sec 19, T2N R68W
County: Weld
Land Use: Non-cropland
Topography: 0-1% Slopes
Run-Off Risk: Low
Soil Type: Hum clay loam
Receiving Waters: Unnamed ditch

- Soil Sample - With Lab Analysis (3/5/2019)
- Soil Sample - Field Screening Analysis (3/5/2019)
- Excavation Extent (3/5/2019)
- Former Crude Oil Tank
- Former Produced Water Vessel
- Former Secondary Containment



Sample ID	Latitude NAD83	Longitude NAD83
S01@3	40.128327	-105.052402
E01@3	40.128347	-105.052362
N01@3	40.128374	-105.052393
W01@3	40.128358	-105.052430
B01@5	40.128349	-105.052396



		SOIL SAMPLE RESULTS						
		Organic Compounds (mg/kg)					(mmhos/cm)	(pH Units)
		COGCC Allowable Concentration (dall) -->	500	0.17	85	100	175	4
Sample Date	Sample ID	TPH (total volatile and extractable petroleum hydrocarbons) (TPH-GRO + TPH-DRO)	Benzene	Toluene	Ethylbenzene	Xylenes - total	EC (4.4 mhos/cm or P2 background)	EC (calculation)
								pH
3/5/19	B01@5	0.77	<0.0020	<0.0050	<0.0050	<0.010		
3/5/19	E01@3	<50	<0.0020	<0.0050	<0.0050	<0.010	0.422	0.260

Spatial data collected for this project was acquired using a GPS with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. To accurately reflect field conditions, illustrated data may have been manually corrected in order to fit with the aerial imagery reference points and other collected data points.



Laboratory Results Summary Table - Soil

			Organics (mg/kg)					(mmhos/cm)	Units	(pH Units)
COGCC Allowable Concentration (Soil) -->			500	0.17	85	100	175	4	12	(6-9)
Location	Sample Date	Sample ID	TPH (total volatile and extractable petroleum hydrocarbons) (TPH-GRO + TPH-DRO)	Benzene	Toluene	Ethylbenzene	Xylenes - total	EC (Specific Conductance) (<4 mmhos/cm or 2x background)	SAR (Sodium Adsorption Ratio) (calculation)	pH
Ross F Unit 1	3/5/19	B01@5	0.77	<0.0020	<0.0050	<0.0050	<0.010			
Ross F Unit 1	3/5/19	E01@3	<50	<0.0020	<0.0050	<0.0050	<0.010	0.422	0.260	7.48

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 07, 2019

Maggie Graham

Apex Companies

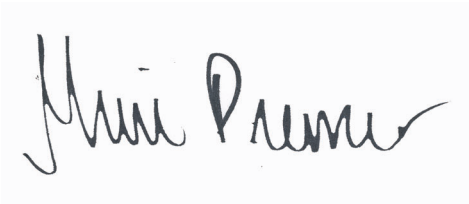
176 Cole Blvd. Suite 250

Lakewood, CO 80101

RE: CPR - Ross F Unit-62W68W19WWNW

Enclosed are the results of analyses for samples received by Summit Scientific on 03/05/19 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier". The signature is written in a cursive, flowing style with a large initial "M" and a long, sweeping underline.

Muri Premier For Paul Shrewsbury

President



Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW

Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@5	1903021-01	Soil	03/05/19 09:35	03/05/19 16:00
E01@3	1903021-03	Soil	03/05/19 11:35	03/05/19 16:00

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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.

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Page 1 of 1

Project Number: 125.1403.01 - 322409

www.s2scientific.com

Sample Receipt Checklist

S2 Work Order 1903021

Client: APEX/COGCC

Client Project ID: Ross F Unit-62W 68W 19W0NW

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other U.D. Airbill #: _____

Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: _____
(Describe)

Temp (°C)	<u>6.1</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

UP
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

3.5.19 1645
Date/Time



Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

B01@5
1903021-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/19 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1903046	03/05/19	03/06/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.77	0.50	"	"	"	"	"	"	

Date Sampled: **03/05/19 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		82.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/19 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1903047	03/05/19	03/05/19	EPA 8015M	

Date Sampled: **03/05/19 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

Summit Scientific

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

E01@3
1903021-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1903046	03/05/19	03/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/05/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		85.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1903047	03/05/19	03/05/19	EPA 8015M	

Date Sampled: **03/05/19 11:35**

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

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **03/05/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	7700	11.8	mg/kg dry	1	1903051	03/05/19	03/05/19	EPA 6020B	
Magnesium	1860	5.88	"	"	"	"	"	"	
Sodium	96.5	5.88	"	"	"	"	"	"	

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

E01@3
1903021-03 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Calculated Analysis

Date Sampled: **03/05/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.260	0.100	units	1	1903053	03/06/19	03/06/19	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/05/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.0		%	1	1903050	03/05/19	03/06/19	Calculation	
pH	7.48		pH Units	"	1903049	"	03/05/19	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **03/05/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.422	0.0100	mmhos/cm	1	1903048	03/05/19	03/05/19	EPA 120.1	

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1903046 - EPA 5030 Soil MS

Blank (1903046-BLK1)

Prepared: 03/05/19 Analyzed: 03/06/19

Benzene	ND	0.0020	mg/kg						
Toluene	ND	0.0050	"						
Ethylbenzene	ND	0.0050	"						
Xylenes (total)	ND	0.010	"						
Gasoline Range Hydrocarbons	ND	0.50	"						
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0400		95.2	23-173		
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170		
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	21-167		

LCS (1903046-BS1)

Prepared: 03/05/19 Analyzed: 03/06/19

Benzene	0.0974	0.0020	mg/kg	0.100		97.4	70-130		
Toluene	0.104	0.0050	"	0.100		104	70-130		
Ethylbenzene	0.105	0.0050	"	0.100		105	70-130		
m,p-Xylene	0.225	0.010	"	0.200		113	70-130		
o-Xylene	0.102	0.0050	"	0.100		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	0.0378		"	0.0400		94.5	23-173		
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170		
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	21-167		

Matrix Spike (1903046-MS1)

Source: 1903020-01

Prepared: 03/05/19 Analyzed: 03/06/19

Benzene	0.0983	0.0020	mg/kg	0.100	ND	98.3	70-130		
Toluene	0.104	0.0050	"	0.100	ND	104	70-130		
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130		
m,p-Xylene	0.230	0.010	"	0.200	0.00309	113	70-130		
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130		
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.6	23-173		
Surrogate: Toluene-d8	0.0393		"	0.0400		98.3	20-170		
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	21-167		

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1903046 - EPA 5030 Soil MS

Matrix Spike Dup (1903046-MSD1)		Source: 1903020-01			Prepared: 03/05/19 Analyzed: 03/06/19					
Benzene	0.0961	0.0020	mg/kg	0.100	ND	96.1	70-130	2.22	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	1.66	30	
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	0.365	30	
m,p-Xylene	0.226	0.010	"	0.200	0.00309	111	70-130	1.61	30	
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130	0.674	30	
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.5	23-173			
Surrogate: Toluene-d8	0.0384		"	0.0400		95.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.5	21-167			

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1903047 - EPA 3550A

Blank (1903047-BLK1)

Prepared: 03/05/19 Analyzed: 03/06/19

C10-C28 (DRO) ND 50 mg/kg

LCS (1903047-BS1)

Prepared: 03/05/19 Analyzed: 03/06/19

C10-C28 (DRO) 433 50 mg/kg 500 86.7 70-130

Matrix Spike (1903047-MS1)

Source: 1903020-01

Prepared: 03/05/19 Analyzed: 03/06/19

C10-C28 (DRO) 425 50 mg/kg 500 23.2 80.3 70-130

Matrix Spike Dup (1903047-MSD1)

Source: 1903020-01

Prepared: 03/05/19 Analyzed: 03/06/19

C10-C28 (DRO) 426 50 mg/kg 500 23.2 80.5 70-130 0.234 20

Summit Scientific

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 1903051 - General Preparation

Blank (1903051-BLK1)

Prepared & Analyzed: 03/05/19

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (1903051-BS1)

Prepared & Analyzed: 03/05/19

Calcium	537	10.0	mg/kg wet	500	107	70-130
Magnesium	527	5.00	"	500	105	70-130
Sodium	514	5.00	"	500	103	70-130

Duplicate (1903051-DUP1)

Source: 1903021-03

Prepared & Analyzed: 03/05/19

Calcium	7170	11.8	mg/kg dry	7700	7.21	20
Magnesium	1670	5.88	"	1860	10.5	20
Sodium	98.9	5.88	"	96.5	2.47	20

Matrix Spike (1903051-MS1)

Source: 1903021-03

Prepared & Analyzed: 03/05/19

Calcium	8330	11.8	mg/kg dry	588	7700	107	70-130
Magnesium	2330	5.88	"	588	1860	80.4	70-130
Sodium	637	5.88	"	588	96.5	91.9	70-130

Matrix Spike Dup (1903051-MSD1)

Source: 1903021-03

Prepared & Analyzed: 03/05/19

Calcium	8420	11.8	mg/kg dry	588	7700	122	70-130	1.09	25
Magnesium	2320	5.88	"	588	1860	77.8	70-130	0.655	25
Sodium	584	5.88	"	588	96.5	82.9	70-130	8.76	25

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch 1903049 - General Preparation

LCS (1903049-BS1)

Prepared & Analyzed: 03/05/19

pH	9.26		pH Units	9.23	100	95-105
----	------	--	----------	------	-----	--------

Duplicate (1903049-DUP1)

Source: 1903021-03

Prepared & Analyzed: 03/05/19

pH	7.52		pH Units	7.48		0.533	20
----	------	--	----------	------	--	-------	----

Batch 1903050 - General Preparation

Duplicate (1903050-DUP1)

Source: 1903021-03

Prepared: 03/05/19 Analyzed: 03/06/19

% Solids	81.4		%	85.0		4.33	20
----------	------	--	---	------	--	------	----

Summit Scientific

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW
Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 1903048 - General Preparation

Blank (1903048-BLK1)

Prepared & Analyzed: 03/05/19

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1903048-BS1)

Prepared & Analyzed: 03/05/19

Specific Conductance (EC) 0.760 0.0100 mmhos/cm 0.750 101 90-110

Duplicate (1903048-DUP1)

Source: 1903021-03

Prepared & Analyzed: 03/05/19

Specific Conductance (EC) 0.417 0.0100 mmhos/cm 0.422 1.09 20

Summit Scientific

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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: CPR - Ross F Unit-62W68W19WWNW

Project Number: 125.1903.01-322909
Project Manager: Maggie Graham

Reported:
03/07/19 16:47

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