

Analytical Report

Report Summary

Client: Rhino Technologies
Chain Of Custody Number:
Samples Received: 7/22/2015 10:15:00AM
Job Number: 15062-0001
Work Order: P507070
Project Name/Location: Ferguson Site

Entire Report Reviewed By:



Tim Cain, Laboratory Manager

Date: 7/30/15

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

Rhino Technologies
PO Box 887
Durango CO, 81302

Project Name: Ferguson Site
Project Number: 15062-0001
Project Manager: Darryl A Ferguson

Reported:
30-Jul-15 08:23

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Contaminated Soil	P507070-01A	Soil	07/20/15	07/22/15	Plastic Baggie

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 Project Manager: Darryl A Ferguson

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Contaminated Soil
P507070-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Petroleum Hydrocarbons by 418.1									
Total Petroleum Hydrocarbons	ND	35.0	mg/kg	1	1531009	07/28/15	07/28/15	EPA 418.1	
Cation/Anion Analysis									
pH @22.8°C	9.15		pH Units	1	1530036	07/24/15	07/24/15	EPA 9045D	
Electrical Conductivity	878		umhos/cm	1	1531002	07/27/15	07/27/15	EPA 120.1	
Total Dissolved Solids	10500	10.0	mg/L	1	1531003	07/27/15	07/28/15	160.1/2540C	
Sodium Absorption Ratio	2.35		N/A	1	1530041	07/24/15	07/24/15	[CALC]	
Total Alkalinity as CaCO3	71.0	0.01	mg/L	1	1531013	07/29/15	07/29/15	Hach Method 8203	
Total Hardness as CaCO3	47.3	0.07	mg/L		[CALC]	07/24/15	07/24/15	[CALC]	
Bicarbonate as CaCO3	71.0	0.01	mg/L	1	1531013	07/29/15	07/29/15	Hach Method 8203	
Carbonate as CaCO3	ND	0.01	mg/L	1	1531013	07/29/15	07/29/15	Hach Method 8203	
Hydroxide as CaCO3	ND	0.01	mg/L	1	1531013	07/29/15	07/29/15	Hach Method 8203	
Nitrate-N	11.6	0.99	mg/kg	1	1531004	07/27/15	07/29/15	EPA 300.0	H3
Nitrite-N	ND	0.99	mg/kg	1	1531004	07/27/15	07/29/15	EPA 300.0	H3
Chloride	163	9.90	mg/kg	1	1531004	07/27/15	07/29/15	EPA 300.0	
Fluoride	4.39	0.99	mg/kg	1	1531004	07/27/15	07/29/15	EPA 300.0	
o-Phosphate	12.8	4.95	mg/kg	1	1531004	07/27/15	07/29/15	EPA 300.0	CCV2, H3
Sulfate	63.1	19.8	mg/kg	1	1531004	07/27/15	07/29/15	EPA 300.0	
Iron	38.1	0.01	mg/L	1	1530039	07/24/15	07/24/15	EPA 6010C	
Calcium	7.92	0.01	mg/L	1	1530039	07/24/15	07/24/15	EPA 6010C	
Magnesium	6.69	0.01	mg/L	1	1530039	07/24/15	07/24/15	EPA 6010C	
Potassium	18.6	0.01	mg/L	1	1530039	07/24/15	07/24/15	EPA 6010C	
Sodium	37.2	0.01	mg/L	1	1530039	07/24/15	07/24/15	EPA 6010C	

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Total Petroleum Hydrocarbons by 418.1 - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1531009 - 418 Freon Extraction

Blank (1531009-BLK1)

Prepared & Analyzed: 28-Jul-15

Total Petroleum Hydrocarbons ND 35.0 mg/kg

Duplicate (1531009-DUP1)

Source: P507070-01

Prepared & Analyzed: 28-Jul-15

Total Petroleum Hydrocarbons ND 35.0 mg/kg ND 30

Matrix Spike (1531009-MS1)

Source: P507070-01

Prepared & Analyzed: 28-Jul-15

Total Petroleum Hydrocarbons 1890 35.0 mg/kg 2030 ND 93.3 80-120

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Reported:
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Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1531004 - Anion Extraction EPA 300.0

Blank (1531004-BLK1)

Prepared: 27-Jul-15 Analyzed: 29-Jul-15

Nitrate-N	1.09	0.99	mg/kg							B
Nitrite-N	ND	0.99	"							
Chloride	ND	9.94	"							
Fluoride	ND	0.99	"							
o-Phosphate	ND	4.97	"							
Sulfate	ND	19.9	"							

LCS (1531004-BS1)

Prepared: 27-Jul-15 Analyzed: 29-Jul-15

Nitrate-N	52.2	1.00	mg/kg	49.9		105	90-110			
Nitrite-N	49.2	1.00	"	49.9		98.6	90-110			
Chloride	457	9.98	"	499		91.5	90-110			
Fluoride	48.0	1.00	"	49.9		96.2	90-110			
o-Phosphate	276	4.99	"	250		111	90-110			LCS1
Sulfate	488	20.0	"	499		97.7	90-110			

Matrix Spike (1531004-MS1)

Source: P507070-01

Prepared: 27-Jul-15 Analyzed: 29-Jul-15

Nitrate-N	65.5	0.99	mg/kg	49.3	11.6	109	80-120			
Nitrite-N	52.7	0.99	"	49.3	ND	107	80-120			
Chloride	640	9.87	"	493	163	96.7	80-120			
Fluoride	55.4	0.99	"	49.3	4.39	103	80-120			
o-Phosphate	255	4.93	"	247	12.8	98.0	80-120			
Sulfate	565	19.7	"	493	63.1	102	80-120			

Matrix Spike Dup (1531004-MSD1)

Source: P507070-01

Prepared: 27-Jul-15 Analyzed: 29-Jul-15

Nitrate-N	66.1	1.00	mg/kg	49.9	11.6	109	80-120	0.934	20	
Nitrite-N	54.0	1.00	"	49.9	ND	108	80-120	2.54	20	
Chloride	648	9.99	"	499	163	97.2	80-120	1.32	20	
Fluoride	54.9	1.00	"	49.9	4.39	101	80-120	0.904	20	
o-Phosphate	259	4.99	"	250	12.8	98.5	80-120	1.61	20	
Sulfate	571	20.0	"	499	63.1	102	80-120	1.07	20	

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Notes and Definitions

LCS1 The Laboratory Control Sample recovery is outside of quality control limits.

H3 Sample was prepared after regulatory hold-time exceeded for target analyte.

CCV2 CCV recovery was above quality control limits. This target analyte was detected in the sample, but the sample was not reanalyzed.

B Analyte is found in the associated blank.

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

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Client: Rhino Technologies
 Project: Ferguson Site
 Sampler: 7/20/15
 Phone: 970-946-1111
 Email(s): petrotec@msw.com
 Project Manager:

RUSH?

☐ 1d
☐ 3d

Lab Use Only		Analysis and Method										Lab Only		
Lab WO#		GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	C/A							Lab Number	Correct Cont./Prsrv (s) Y/N
Job Number														
P507070														
15062-0001														

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Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	C/A									Lab Number	Correct Cont./Prsrv (s) Y/N
Contaminated Soil	7/20/15		S	1-ziplock bag														1	✓

Relinquished by: (Signature) <u>Darryl Fey</u>	Date <u>7/22/15</u>	Time <u>10:15</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>7/22/15</u>	Time <u>10:15</u>	Lab Use Only	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	**Received on Ice Y / N T1 <u>24.0</u> T2 <u> </u> T3 <u> </u> AVG Temp °C <u>24.0</u>	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other S Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 8°C on subsequent days.

<input type="checkbox"/> Sample(s) dropped off after hours to a secure drop off area.	Chain of Custody	Notes/Billing info: <u>cc on file</u>
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