





Box Elder 31-21, 41-21 Tank
Battery
(Well API # 05-001-06750)
"Box Elder Farms 41-21"



N01@2.7
B: ND
T: ND
E: ND
X: ND
TPH: ND
1,2,4-Tri: ND
1,3,5-Tri: ND
Naph: ND

B01@4.4
B: ND
T: 0.013 mg/kg
E: 0.015 mg/kg
X: 0.071 mg/kg
TPH: 1303.8 mg/kg
1,2,4-Tri: 0.085 mg/kg
1,3,5-Tri: 0.025 mg/kg
Naph: 0.0086 mg/kg

W01@2.7
PID only

E01@2.7
PID only

S01@2.7
PID only

30 ft



Laboratory Results Summary Table - Soil

			Organic Compounds in Soils (mg/kg)							
COGCC Allowable Concentration (Soil) -->			500	1.2/0.0026(M)	490/0.69(M)	5.8/0.78(M)	58/9.9(M)	30/0.0081(R)	27/0.0087(R)	2/0.0038(R)
Location	Sample Date	Sample ID	TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons)	Benzene	Toluene	Ethylbenzene	Xylenes (sum of o-, m- and p- isomers = total xylenes)	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene
Box Elder Farms 41-21 - Wellhead	3/8/2021	B01@4.4	1303.8	<0.0020	0.013	0.015	0.071	0.085	0.025	0.0086
Box Elder Farms 41-21 - Wellhead	3/8/2021	N01@2.7'	<50	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038

Legend:

COGCC - Colorado Oil and Gas Conservation Commission

Orange Highlight - COGCC Table 915-1 TPH, BTEX, organic, metal exceedance

Yellow Highlight - COGCC Table 915-1 inorganic exceedance

Grey Highlight - below laboratory detection limit

Light Blue Highlight - exceedance of protection of groundwater soil screening level concentrations risk based (R) or MCL based (M)

MCL - maximum contaminant level

NA - not analyzed

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

Attachment A

Laboratory Analytical Report

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 09, 2021

Maggie Graham

Apex Companies

176 Cole Blvd. Suite 250

Lakewood, CO 80101

RE: Box Elder Farms 31-21,41-21/Tank Battery

Work Order # 2103125

Enclosed are the results of analyses for samples received by Summit Scientific on 03/08/21 16:19. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Box Elder Farms 31-21,41-21/Tank Battery

Project Number: [none]
Project Manager: Maggie Graham

Reported:
03/09/21 06:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@4.4	2103125-01	Soil	03/08/21 13:43	03/08/21 16:19
N01@2.7'	2103125-02	Soil	03/08/21 13:47	03/08/21 16:19

Summit Scientific

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Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

2103125

Client: APEX Companies Project Manager: Maggie Graham Page 1 of 1
 Address: 1746 Cole Blvd. Ste. 250 E-Mail: DenverRemediation@apexcos.onmicrosoft.com
 City/State/Zip: Lakewood, CO 80401
 Phone: 720-501-5065; 907-538-7699 Project Name: Box Elder Farms BI-21, 41-21/Tank Bottoms
 Sampler Name: Jeff Griggs Project Number: ~~202000042000~~ TBI

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other									
1	B01@4.4	03/08/2021	1343	2			X			X											
2	N01@2.7	03/08/2021	1347	2			X			X											
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>03/08/2021 1619</u>	Received by: <u>[Signature]</u>	Date/Time: <u>03/08/2021 1619</u>	Turn Around Time (Check) Same Day <u>X</u> 72 hours <u>—</u> 24 hours <u>—</u> Standard <u>—</u> 48 hours <u>—</u> Sample Integrity: Temperature Upon Receipt: <u>62</u> Samples Intact: <u>Yes</u> No	Notes: <u>Call Maggie with Questions</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order 2103125

Client: APEX Client Project ID: Box Elder Farms B1-21, 41-21/

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

☒ ☐ ☐ ☐ ☐

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

Temp (°C)	-2
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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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rush
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.				

PS

Custodian Printed Name or Initials

Signature of Custodian

3/8/21

Date/Time



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

Project: Box Elder Farms 31-21,41-21/Tank Battery

Project Number: [none]
Project Manager: Maggie Graham

Reported:
03/09/21 06:36

B01@4.4
2103125-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/21 13:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEC0163	03/08/21	03/08/21	EPA 8260B	
Toluene	0.013	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.015	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.071	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.085	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.025	0.0050	"	"	"	"	"	"	
Naphthalene	0.0086	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3.8	0.50	"	"	"	"	"	"	

Date Sampled: **03/08/21 13:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/21 13:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1300	50	mg/kg	1	BEC0164	03/08/21	03/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/21 13:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		90.2 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Box Elder Farms 31-21,41-21/Tank Battery

Project Number: [none]
Project Manager: Maggie Graham

Reported:
03/09/21 06:36

N01@2.7'
2103125-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/21 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEC0163	03/08/21	03/08/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/08/21 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/21 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0164	03/08/21	03/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/21 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		47.1 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Box Elder Farms 31-21,41-21/Tank Battery

Project Number: [none]
Project Manager: Maggie Graham

Reported:
03/09/21 06:36

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 BEC0163 - EPA 5030 Soil MS

Blank (BEC0163-BLK1)

Prepared & Analyzed: 03/08/21

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0415		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0421		"	0.0400		105	20-170			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	21-167			

LCS (BEC0163-BS1)

Prepared & Analyzed: 03/08/21

Benzene	0.0734	0.0020	mg/kg	0.100		73.4	70-130			
Toluene	0.109	0.0050	"	0.100		109	70-130			
Ethylbenzene	0.101	0.0050	"	0.100		101	70-130			
m,p-Xylene	0.201	0.010	"	0.200		101	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0425		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0423		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400		104	21-167			

Matrix Spike (BEC0163-MS1)

Source: 2103125-01

Prepared & Analyzed: 03/08/21

Benzene	0.0763	0.0020	mg/kg	0.100	ND	76.3	70-130			
Toluene	0.125	0.0050	"	0.100	0.0127	112	70-130			
Ethylbenzene	0.117	0.0050	"	0.100	0.0146	102	70-130			
m,p-Xylene	0.246	0.010	"	0.200	0.0429	102	70-130			
o-Xylene	0.135	0.0050	"	0.100	0.0283	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0445		"	0.0400		111	23-173			
Surrogate: Toluene-d8	0.0428		"	0.0400		107	20-170			
Surrogate: 4-Bromofluorobenzene	0.0450		"	0.0400		112	21-167			

Summit Scientific

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

Project: Box Elder Farms 31-21,41-21/Tank Battery

Project Number: [none]
Project Manager: Maggie Graham

Reported:
03/09/21 06:36

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 BEC0163 - EPA 5030 Soil MS

Matrix Spike Dup (BEC0163-MSD1)	Source: 2103125-01			Prepared & Analyzed: 03/08/21						
Benzene	0.0746	0.0020	mg/kg	0.100	ND	74.6	70-130	2.19	30	
Toluene	0.124	0.0050	"	0.100	0.0127	111	70-130	0.676	30	
Ethylbenzene	0.116	0.0050	"	0.100	0.0146	101	70-130	0.722	30	
m,p-Xylene	0.248	0.010	"	0.200	0.0429	102	70-130	0.693	30	
o-Xylene	0.134	0.0050	"	0.100	0.0283	106	70-130	0.156	30	
Surrogate: 1,2-Dichloroethane-d4	0.0445		"	0.0400		111	23-173			
Surrogate: Toluene-d8	0.0425		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0448		"	0.0400		112	21-167			

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

Project: Box Elder Farms 31-21,41-21/Tank Battery

Project Number: [none]
Project Manager: Maggie Graham

Reported:
03/09/21 06:36

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEC0164 - EPA 3550A

Blank (BEC0164-BLK1)

Prepared: 03/08/21 Analyzed: 03/09/21

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

LCS (BEC0164-BS1)

Prepared: 03/08/21 Analyzed: 03/09/21

C10-C28 (DRO)	389	50	mg/kg	500	77.8	70-130
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Matrix Spike (BEC0164-MS1)

Source: 2103125-01

Prepared: 03/08/21 Analyzed: 03/09/21

C10-C28 (DRO)	1200	50	mg/kg	500	1290	NR	70-130			QM-07
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Matrix Spike Dup (BEC0164-MSD1)

Source: 2103125-01

Prepared: 03/08/21 Analyzed: 03/09/21

C10-C28 (DRO)	1290	50	mg/kg	500	1290	0.887	70-130	7.17	20	QM-07
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Apex Companies
176 Cole Blvd. Suite 250
Lakewood CO, 80101

Project: Box Elder Farms 31-21,41-21/Tank Battery

Project Number: [none]
Project Manager: Maggie Graham

Reported:
03/09/21 06:36

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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