

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Monday, December 3, 2018 2:54 PM
To: 'Andrea Felix'
Cc: Fields, Vanessa, EMNRD; Perrin, Charlie, EMNRD; Griswold, Jim, EMNRD; James McDaniel; Chad Snell; Jacob Ellis
Subject: RE: NEU 2207-16B 11/20/18 Inspection

SRF- 28
PCS 1826341898

Good Afternoon Andrea,

The OCD has received the laboratory analysis received on November 26, and 28 2018.

It appears that based on the laboratory data, low volume and leak detection quality of water that there is not a significant leak in the ponds primary liner.

Enduring can continue to operate the pond as describe in the approved permit with the following conditions.

- Enduring will inspect the leak detection system weekly while there is fluids in the pond.
- Enduring will keep the leak detection sump free of any liquids, and will log any volume of water in the inspection report.
- Enduring will submit to the OCD District III Office a monthly report that includes a copy of each weekly pond inspection and a summary of any accumulation/removal of fluids in the leak detection system. Please submit the first monthly report in January and include November and December inspections.

If you have any additional questions please give me a call.

Thank you,

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Andrea Felix <AFelix@enduringresources.com>
Sent: Monday, November 26, 2018 8:21 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Perrin, Charlie, EMNRD <charlie.perrin@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; James McDaniel <JMcDaniel@enduringresources.com>; Chad Snell <CSnell@enduringresources.com>; Jacob Ellis <JEllis@enduringresources.com>
Subject: [EXT] RE: NEU 2207-16B 11/20/18 Inspection

Good morning Cory,

Our HSE Supervisor has advised he expects lab results today, due to the holiday last week. As soon as we have those results we will send them your way.

Thank you,

Andrea R Felix, RWA

Regulatory Manager
Enduring Resources
200 Energy Court
Farmington, NM 87401
Office: 505-636-9741
Cell: 505-386-8205



From: Smith, Cory, EMNRD [<mailto:Cory.Smith@state.nm.us>]

Sent: Monday, November 26, 2018 7:54 AM

To: Andrea Felix <AFelix@enduringresources.com>

Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Perrin, Charlie, EMNRD <charlie.perrin@state.nm.us>;
Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; James McDaniel <JMcDaniel@enduringresources.com>; Chad Snell
<CSnell@enduringresources.com>; Jacob Ellis <JEllis@enduringresources.com>

Subject: RE: NEU 2207-16B 11/20/18 Inspection

Good Morning Andrea,

Has Enduring received the laboratory results from the water sample collected on Tuesday? If so please forward them to me.

Thank you,

Cory Smith
Environmental Specialist
Oil Conservation Division
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1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Andrea Felix <AFelix@enduringresources.com>

Sent: Tuesday, November 20, 2018 4:41 PM

To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>

Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Perrin, Charlie, EMNRD <charlie.perrin@state.nm.us>;
Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; James McDaniel <JMcDaniel@enduringresources.com>; Chad Snell
<CSnell@enduringresources.com>; Jacob Ellis <JEllis@enduringresources.com>

Subject: [EXT] RE: NEU 2207-16B 11/20/18 Inspection

Cory,

Thank you for the email follow up regarding the inspection that was conducted today. The time spent and willingness to work with or team in the field today is very much appreciated.

Our team will work with the findings listed below to ensure that our facility is compliant.

We have taken note that we are to measure the leak detection daily and record the level as part of the required inspections.

We will also see that the water sample is analyzed as soon as possible and communicate those results as soon as they are available.

Thank you,

Andrea R Felix, RWA

Regulatory Manager
Enduring Resources
200 Energy Court
Farmington, NM 87401
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Cell: 505-386-8205



From: Smith, Cory, EMNRD [<mailto:Cory.Smith@state.nm.us>]

Sent: Tuesday, November 20, 2018 4:04 PM

To: Andrea Felix <AFelix@enduringresources.com>

Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Perrin, Charlie, EMNRD <charlie.perrin@state.nm.us>;
Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; James McDaniel <JMcDaniel@enduringresources.com>; Chad Snell
<CSnell@enduringresources.com>; Jacob Ellis <JEllis@enduringresources.com>

Subject: NEU 2207-16B 11/20/18 Inspection

Andrea,

As discussed today during the OCD site visit at the NEU 2207-16B Recycling Facility Enduring collected samples for the early November release and also inspected the Leak detection system for the pond.

Enduring Personnel measured a water level inside the secondary containment at approximately 53' from the top of the leak detection port. Chad indicated that Enduring discovered the water level approximately a week earlier. The inspection records indicate that there was a water level discovered the week of 11/9/18 with a water level of approximately 53'.

Enduring was able to collect a water sample from the leak detection port as discussed onsite the sample needs to be analyzed for General Water Chemistry (TDS, ph, Cation/Anions) The water sample needs to be analyzed as soon as possible to determine if there is an integrity issue.

In the interim Enduring needs to measure the leak detection daily and record the level and start looking into options to remove any liquids in the leak detection system.

It is my understanding from our conversation that the liquids in the pond were sampled during flow back so a comparison sample is not needed, and that the pond contains a mixture of water from the well and produced water from various locations.

If you have any additional questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

Analytical Report

Report Summary

Client: Enduring Resources, LLC
Chain Of Custody Number:
Samples Received: 11/20/2018 4:28:00PM
Job Number: 17065-0017
Work Order: P811064
Project Name/Location: NEU 220716B

Report Reviewed By:



Date: 11/26/18

Walter Hinchman, Laboratory Director



Date: 11/26/18

Tim Cain, Project Manager



Envirotech Inc. certifies the test results meet all requirements of TNi unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Envirotech, Inc, currently holds the appropriate and available Utah TNi certification NM009792018-1 for the data reported.

Enduring Resources, LLC 511 16th Street, Suite 700 Denver CO, 80202	Project Name: NEU 220716B Project Number: 17065-0017 Project Manager: Chad Snell	Reported: 11/26/18 16:51
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Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Leak Detection Water	P811064-01A	Aqueous	11/20/18	11/20/18	Poly 250mL
	P811064-01B	Aqueous	11/20/18	11/20/18	Poly 250mL
	P811064-01C	Aqueous	11/20/18	11/20/18	Poly 250mL

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**Leak Detection Water
P811064-01 (Water)**

Reporting

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Wet Chem/Gravimetric

Total Dissolved Solids	1810	10.0	mg/L	1	1847030	11/21/18	11/26/18	SM2540C	
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Dissolved Metals by 6010

Calcium	52.8	1.00	mg/L	1	1847018	11/21/18	11/26/18	EPA 6010C	
Iron	ND	2.00	mg/L	1	1847018	11/21/18	11/26/18	EPA 6010C	
Magnesium	12.8	0.200	mg/L	1	1847018	11/21/18	11/26/18	EPA 6010C	
Potassium	12.2	1.00	mg/L	1	1847018	11/21/18	11/26/18	EPA 6010C	
Sodium	661	20.0	mg/L	10	1847018	11/21/18	11/26/18	EPA 6010C	

Anions by 300.0/9056A

Fluoride	0.746	0.500	mg/L	2	1847029	11/21/18	11/21/18	EPA 300.0/9056A	
Chloride	904	4.00	mg/L	2	1847029	11/21/18	11/21/18	EPA 300.0/9056A	
Nitrite-N	ND	0.500	mg/L	2	1847029	11/21/18 12:29	11/21/18 21:01	EPA 300.0/9056A	
Nitrate-N	ND	0.500	mg/L	2	1847029	11/21/18 12:29	11/21/18 21:01	EPA 300.0/9056A	
o-Phosphate-P	ND	0.500	mg/L	2	1847029	11/21/18 12:29	11/21/18 21:01	EPA 300.0/9056A	
Sulfate	51.3	4.00	mg/L	2	1847029	11/21/18	11/21/18	EPA 300.0/9056A	

Wet Chemistry

pH @25°C	6.44		pH Units	1	1847026	11/21/18 09:52	11/21/18 12:10	9040C/4500 H+B	111
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Wet Chem/Gravimetric - 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 1847030 - Wet Chemistry Preparation

Blank (1847030-BLK1)				Prepared: 11/21/18 Analyzed: 11/26/18 1						
Total Dissolved Solids	ND	10.0	mg/L							
LCS (1847030-BS1)				Prepared: 11/21/18 Analyzed: 11/26/18 1						
Total Dissolved Solids	73.0	10.0	mg/L	100		73.0	50-150			
Duplicate (1847030-DUP1)				Source: P811064-01 Prepared: 11/21/18 Analyzed: 11/26/18 1						
Total Dissolved Solids	1860	10.0	mg/L		1810			2.89	5	

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Dissolved Metals by 6010 - 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 1847018 - Metals Water Hotblock Digestion EPA 3010A/200.2

Blank (1847018-BLK1)			Prepared & Analyzed: 11/20/18 1							
Calcium	ND	1.00	mg/L							
Iron	ND	2.00	"							
Magnesium	ND	0.200	"							
Potassium	ND	1.00	"							
Sodium	ND	2.00	"							

LCS (1847018-BS1)			Prepared & Analyzed: 11/20/18 1							
Calcium	47.7	1.00	mg/L	50.0		95.4	80-120			
Iron	47.8	2.00	"	50.0		95.5	80-120			
Magnesium	49.6	0.200	"	50.0		99.3	80-120			
Potassium	4.65	1.00	"	5.00		93.1	80-120			
Sodium	47.8	2.00	"	50.0		95.7	80-120			

Matrix Spike (1847018-MS1)			Source: P811046-01		Prepared & Analyzed: 11/20/18 1					
Calcium	59.2	1.00	mg/L	50.0	7.29	104	75-125			
Iron	51.4	2.00	"	50.0	ND	103	75-125			
Magnesium	54.3	0.200	"	50.0	1.81	105	75-125			
Potassium	6.75	1.00	"	5.00	1.37	108	75-125			
Sodium	117	2.00	"	50.0	59.6	114	75-125			

Matrix Spike Dup (1847018-MSD1)			Source: P811046-01		Prepared & Analyzed: 11/20/18 1					
Calcium	59.3	1.00	mg/L	50.0	7.29	104	75-125	0.219	20	
Iron	51.6	2.00	"	50.0	ND	103	75-125	0.505	20	
Magnesium	52.9	0.200	"	50.0	1.81	102	75-125	2.57	20	
Potassium	6.75	1.00	"	5.00	1.37	108	75-125	0.0593	20	
Sodium	115	2.00	"	50.0	59.6	110	75-125	1.82	20	

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Anions by 300.0/9056A - 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 1847029 - Anion Extraction EPA 300.0/9056A

Blank (1847029-BLK1)				Prepared & Analyzed: 11/21/18 1						
Fluoride	ND	0.250	mg/L							
Chloride	ND	2.00	"							
Nitrite-N	ND	0.250	"							
Nitrate-N	ND	0.250	"							
o-Phosphate-P	ND	0.250	"							
Sulfate	ND	2.00	"							

LCS (1847029-BS1)				Prepared & Analyzed: 11/21/18 1						
Fluoride	2.61	0.250	mg/L	2.50		105	90-110			
Chloride	25.6	2.00	"	25.0		102	90-110			
Nitrite-N	2.62	0.250	"	2.50		105	90-110			
Nitrate-N	2.52	0.250	"	2.50		101	90-110			
o-Phosphate-P	12.8	0.250	"	12.5		103	90-110			
Sulfate	25.4	2.00	"	25.0		101	90-110			

Matrix Spike (1847029-MS1)				Source: P811064-01		Prepared: 11/21/18 Analyzed: 11/26/18 1				
Fluoride	5.90	0.500	mg/L	5.00	0.746	103	80-120			
Chloride	956	4.00	"	50.0	904	104	80-120			
Nitrite-N	4.81	0.500	"	5.00	ND	96.1	80-120			
Nitrate-N	4.96	0.500	"	5.00	ND	99.3	80-120			
o-Phosphate-P	17.7	0.500	"	25.0	ND	70.7	80-120			SPK1
Sulfate	103	4.00	"	50.0	51.3	104	80-120			

Matrix Spike Dup (1847029-MSD1)				Source: P811064-01		Prepared: 11/21/18 Analyzed: 11/26/18 1				
Fluoride	5.92	0.500	mg/L	5.00	0.746	104	80-120	0.338	20	
Chloride	959	4.00	"	50.0	904	110	80-120	0.315	20	
Nitrite-N	4.90	0.500	"	5.00	ND	98.0	80-120	1.98	20	
Nitrate-N	5.00	0.500	"	5.00	ND	100	80-120	0.803	20	
o-Phosphate-P	17.4	0.500	"	25.0	ND	69.7	80-120	1.50	20	SPK1
Sulfate	104	4.00	"	50.0	51.3	105	80-120	0.460	20	

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Wet Chemistry - 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 1847026 - Wet Chemistry Preparation

LCS (1847026-BS1)				Prepared: 11/21/18 0 Analyzed: 11/21/18 1						
pH	8.00		pH Units	8.00		100	98.75-101.25			
Duplicate (1847026-DUP1)				Source: P811064-01 Prepared: 11/21/18 0 Analyzed: 11/21/18 1						
pH	6.48		pH Units	6.44				0.619	20	

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Notes and Definitions

- SPK1 The spike recovery is outside of quality control limits.
- H1 Sample was received after regulatory hold-time exceeded for target analyte.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- ** Methods marked with ** are non-accredited methods.

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Water Analysis

Operator Magna Energy
 Customer EPTL
 Wellname 16B Water well pond
 Samplepoint water well

Customer Reference
 Labnumber 6976-2018112609.2
 Sampledate 11/26/2018
 Lab Report Date 11/28/2018

Analysis

Specific Gravity (74°F) 1.01
 pH, Lab Measured 7.28
 Calcium Carbonate S.I. @ 80°F (Stiff-Davis) -0.26
 Calcium Carbonate S.I. @ 140°F (Stiff-Davis) 0.55

Dissolved Gases

Hydrogen Sulfide (H2S) 0.95
 Carbon Dioxide (CO2) 14.08
 Dissolved Oxygen (O2) 0.0

Cations

	mg/l	meq/l
Sodium (Na)	5796.1	252.1
Calcium (Ca)	221.8	11.0
Magnesium (Mg)	39.5	3.3
Potassium (K)	134.4	3.4
Iron (Fe)	10.1	0.4
Barium (Ba)	0.5	0.0
Manganese (Mn)	0.4	0.0
Strontium (Sr)	25.4	0.6

Anions

	mg/l	meq/l
Chloride (Cl)	8023.0	225.7
Bicarbonate (HCO3)	283.0	4.6
Carbonate (CO3)	0.0	0.0
Hydroxyl (OH)	0.000	0.000
Sulfate (SO4)	1941.3	40.4

Zero Denotes Concentration is Below Detection Limit

TDS, Calculated (mg/l) 15865.1 Total Hardness (mg/l) CaCO3 716.4 Conductivity (mS/cm) 24.79

Temp (F)	Press. (psi)	Calcite CaCO3		Anhydrite CaSO4		Gypsum CaSO4+H2O		Barite BaSO4		Celestite SrSO4		Siderite FeCO3		Mackawenite FeS		Carr MPY	pCo2
		xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb		
70	14.7	0.6906	-0.3968	0.1246	-1975.9400	0.2098	-1410.7500	43.2165	0.7933	1.4394	16.0836	53.2043	1.0075	47.1855	2.8046	0.02	0.01
80	147	0.3673	-0.7727	0.1234	-1974.4300	0.1988	-1473.5700	33.4811	0.7878	1.4091	15.2833	31.0120	0.5035	176.8210	3.8303	0.05	0.12
90	278	0.2953	-0.8200	0.1253	-1934.6400	0.1903	-1522.5100	26.6266	0.7816	1.4027	15.1091	27.1669	0.3838	182.9390	3.8032	0.06	0.22
100	409	0.2621	-0.8207	0.1297	-1864.7300	0.1837	-1560.9700	21.6529	0.7746	1.4097	15.2940	26.2048	0.3252	176.0800	3.7719	0.06	0.32
110	539	0.2440	-0.8065	0.1370	-1769.5400	0.1891	-1507.93	17.9129	0.7667	1.4231	15.6451	26.4188	0.2904	166.4670	3.7384	0.06	0.42
120	670	0.2329	-0.7874	0.1471	-1654.1000	0.2001	-1419.5600	14.8967	0.7575	1.4336	15.9143	27.2498	0.2670	155.7640	3.7032	0.06	0.52
130	801	0.2253	-0.7678	0.1605	-1523.3300	0.2109	-1340.4500	12.4399	0.7468	1.4405	16.0889	28.4285	0.2499	144.8310	3.6662	0.05	0.62
140	932	0.2195	-0.7494	0.1777	-1381.8800	0.2214	-1269.7900	10.4273	0.7342	1.4437	16.1687	29.8040	0.2363	134.0500	3.6273	0.05	0.72
150	1063	0.2146	-0.7333	0.1994	-1234.0300	0.2315	-1206.8900	8.7698	0.7194	1.4431	16.1522	31.2934	0.2250	123.6700	3.5865	0.05	0.82
160	1194	0.2098	-0.7199	0.2265	-1083.5200	0.2411	-1151.1800	7.3980	0.7022	1.4387	16.0370	32.8081	0.2149	47.1855	3.5435	0.06	0.92
170	1324	0.2050	-0.7095	0.2602	-933.6150	0.2502	-1102.1400	6.2571	0.6822	1.4303	15.8193	34.3181	0.2059	104.2740	3.4983	0.06	1.02
180	1455	0.1998	-0.7020	0.3018	-787.0020	0.2585	-1059.4000	5.3042	0.6589	0.1998	15.4939	35.7855	0.1976	95.4297	3.4508	0.06	1.12