Facility Well Name Redbarn #1 **UIC Permit #** KS-01-009-001 **Month** August **Year** 2019

Submitted 09/28/2019 **Approved** 10/25/2019 **KOLAR Document ID** 1473213

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 28

Barrels per Day Maximum: 35,714

	Injection Volume Barrels per Day	Injection Rate Barrels per Minute	Annulus Pressure psig min 60 Gauge psig	Annulus Pressure Cont. Record psig	Injection Pressure Gauge psig	Injection Pressure Cont. Record psig	Amount Added to Seal Pot
Monthly Average	1,815	10.49	113	115	-18.1	-20.6	0
Monthly Maximum	3,902	12.38	125	126	-10.0	-11.4	0
Monthly Minimum	0	8.98	100	100	-20.0	-23.2	0
Monthly Total	56,256						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
132.65	98.62	-3.99	-23.90

Comments:

Did not run some days. Adjusting for river discharge.

Redbarn #1 08/2019

Daily Recorder Data

Day	Time 24 hr	Injection Volume Barrels Per Day	Injection Rate Barrels Per Minute	Annulus Pressure (Gauge) psig	Annulus Pressure (Continuous Recorder) psig	Injection Pressure (Gauge) + / -	Injection Pressure (Continuous Recorder) + / -	Seal Pot Fluid Level inches	Type of Fluid Added to Seal Pot	Amount of Fluid Added to Seal Pot gallons	Initials of Collector of Field Recordings		
1	00:02	1,399.45	9.98	100	99.7	-12	-12.4	34	N/A	0	NR		
2	10:00	0.00	9.93	110	111.4	-19	-21.3	35	N/A	0	NR		
3	11:00	0.00	11.86	120	119.7	-10	-11.4	35	N/A	0	NR		
4	02:00	0.00	11.43	115	117.4	-19	-21.1	35	N/A	0	NR		
5	02:30	475.33	8.98	125	126.0	-19	-21.8	35	N/A	0	NR		
6	02:30	1,834.00	9.81	125	124.7	-19	-21.3	35	N/A	0	NR		
7	01:00	2,462.76	12.38	120	124.2	-19	-21.7	34	N/A	0	NR		
8	01:00	827.05	11.43	115	113.0	-12	-13.1	34	N/A	0	NR		
9	12:00	1,815.90	12.31	115	117.9	-20	-22.6	34	N/A	0	NR		
10	10:00	2,600.50	9.81	115	117.6	-19	-21.3	32	N/A	0	NR		
11	10:00	3,203.02	9.21	110	113.4	-19	-19.5	34	N/A	0	NR		
12	07:00	2,359.24	9.48	115	117.3	-19	-22.6	34	N/A	0	NR		
13	03:00	1,858.57	9.45	120	124.6	-20	-22.1	34	N/A	0	NR		
14	02:30	3,901.62	9.95	120	120.4	-19	-22.2	34	N/A	0	NR		
15	07:00	584.48	9.02	110	111.9	-19	-21.1	34	N/A	0	NR		
16	08:00	715.24	9.57	110	112.2	-20	-22.8	35	N/A	0	NR		
17	10:00	3,229.76	9.79	120	121.4	-17	-18.3	35	N/A	0	NR		
18	11:00	2,260.52	9.45	120	121.1	-17	-19.5	35	N/A	0	NR		
19	03:00	1,940.86	9.50	125	126.0	-19	-21.3	35	N/A	0	NR		
20	10:00	2,072.48	9.95	120	123.2	-20	-22.1	35	N/A	0	NR		
21	01:00	2,876.38	11.67	100	107.2	-14	-21.4	35	N/A	0	NR		
22	10:00	1,993.62	11.95	105	107.6	-17	-19.2	35	N/A	0	NR		
23	11:00	2,092.19	11.43	110	113.5	-20	-22.4	35	N/A	0	NR		
24	01:00	2,350.67	11.12	110	113.0	-19	-20.1	35	N/A	0	NR		
25	09:00	2,775.19	9.79	110	113.0	-19	-21.4	35	N/A	0	NR		
26	02:00	2,391.48	12.19	110	111.7	-20	-22.5	35	N/A	0	NR		
27	11:00	1,803.05	9.57	105	107.7	-20	-23.0	35	N/A	0	NR		
28	09:00	1,614.48	9.29	105	104.8	-18	-23.2	35	N/A	0	NR		
29	11:00	1,937.90	12.29	110	112.2	-19	-21.3	35	N/A	0	NR		
30	02:00	1,050.67	11.00	110	111.2	-19	-22.8	35	N/A	0	NR		
31	10:00	1,829.62	11.60	110	112.6	-19	-21.2	35	N/A	0	NR		

Redbarn #1 08/2019

Weekly Injectate Samples

Kansas Lab Certificate Number E-10146

Week	**Temperature**		**pH**		**Chloride**				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	92.14	08/07/2019	7.54	08/07/2019	204.0	08/07/2019	08/14/2019		
2	86.00	08/14/2019	7.24	08/14/2019	809.0	08/14/2019	08/20/2019		
3	73.14	08/21/2019	7.03	08/21/2019	437.0	08/21/2019	09/04/2019		
4	79.86	08/28/2019	7.86	08/28/2019	901.0	08/28/2019	09/04/2019		
5									

No monthly injectate samples required.

Redbarn #1 08/2019

Quarterly Injectate Samples

Quarter 3
Date Sample Collected 08/28/2019
Kansas Lab Certificate Number E-10116
Lab Name Pace Analytical-Lenexa

These samples shall be representative of injection activity and shall therefore be collected on days of injection.

Constituent	Value	Units
Ammonia	6.700	mg/l
Biological Oxygen Demand (BOD)	120.000	mg/l
Calcium	857.000	mg/l
Conductivity	2,290.000	Mmhos
Magnesium	134.000	mg/l
Oil and Grease	12.200	mg/l
Sodium	352.000	mg/l
Total Alkalinity as CaCO3	791.000	mg/l (as CaCO3)
Total Dissolved Solids	1,080.000	mg/l
Total Suspended Solids	196.000	mg/l