Facility Well Name Kansas Ethanol #5 **UIC Permit #** KS-01-159-007 **Month** October **Year** 2019

Submitted 11/12/2019 **Approved** 11/18/2019 **KOLAR Document ID** 1482214

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 31

Barrels per Day Maximum: 13,714

			Annulus Pressure psig min 60		Injection Pressure		
	Injection Volume Barrels per Day	Injection Rate Barrels per Minute	Gauge psig	Cont. Record psig	Gauge psig	Cont. Record psig	Amount Added to Seal Pot
Monthly Average	5,131	3.70	69	71	-22.2	-18.6	
Monthly Maximum	9,048	6.21	77	80	-8.0	-6.4	
Monthly Minimum	2,286	3.05	61	63	-28.0	-21.2	
Monthly Total	159,071						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
83.00	62.90	-5.80	-23.90

Comments:

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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	Conduc-tivity	
1	08:00	8,404.76	6.21	70	72.8	-9	-6.5	13	N/A		BF	1,366.00	
2	08:30	9,047.62	6.21	69	71.4	-9	-6.7	13	N/A		BF	1,348.00	
3	08:00	8,309.52	6.19	66	68.7	-8	-6.4	13	N/A		BF	1,260.00	
4	08:30	2,285.71	4.05	66	67.8	-23	-19.6	13	N/A		BF	1,318.00	
5	10:30	6,142.86	3.93	65	67.6	-24	-18.6	13	N/A		JD	1,541.00	
6	09:30	5,523.81	4.02	64	66.6	-25	-19.1	13	N/A		JD	1,522.00	
7	09:00	5,166.67	3.57	64	65.5	-24	-20.4	13	N/A		BF	1,438.00	
8	08:00	4,738.10	3.57	64	65.5	-23	-20.2	12	N/A		BF	1,390.00	
9	08:00	5,166.67	3.57	64	66.0	-23	-19.8	12	N/A		BF	1,444.00	
10	08:00	5,214.29	3.62	64	66.6	-23	-19.2	12	N/A		BF	1,388.00	
11	08:45	5,380.95	3.62	62	63.0	-23	-20.3	12	N/A		BF	1,342.00	
12	08:35	5,190.48	3.57	62	63.5	-23	-19.9	12	N/A		DW	1,481.00	
13	08:05	5,047.62	3.60	62	64.4	-23	-19.5	12	N/A		DW	1,427.00	
14	10:15	4,547.62	3.57	62	64.7	-23	-19.4	12	N/A		LM	1,388.00	
15	11:00	5,238.10	3.64	62	65.2	-22	-18.9	12	N/A		AJR	1,404.00	
16	09:30	4,761.90	3.62	62	63.7	-23	-19.5	12	N/A		BF	1,538.00	
17	08:30	4,952.38	3.60	61	63.2	-23	-19.6	12	N/A		BF	1,347.00	
18	08:00	5,071.43	3.57	77	79.8	-23	-19.3	12	N/A		BF	1,455.00	
19	09:10	5,380.95	3.52	77	80.1	-23	-19.3	12	N/A		PH	1,432.00	
20	09:05	4,142.86	3.62	76	78.7	-22	-19.2	12	N/A		PH	1,544.00	
21	08:30	4,452.38	3.10	75	77.9	-24	-20.6	12	N/A		AR	1,533.00	
22	10:15	4,785.71	3.10	75	76.8	-25	-21.1	12	N/A		BF	1,558.00	
23	01:00	4,809.52	3.10	75	78.4	-24	-20.5	12	N/A		AJR	1,591.00	
24	08:30	3,571.43	3.07	74	76.5	-24	-21.2	12	N/A		BF	1,501.00	
25	08:30	4,428.57	3.07	74	76.6	-24	-20.7	11	N/A		BF	1,504.00	
26	08:30	4,404.76	3.07	74	77.3	-24	-20.1	11	N/A		DW	1,542.00	
27	08:15	4,380.95	3.05	74	78.5	-28	-19.8	12	N/A		DW	1,442.00	
28	09:30	4,619.05	3.05	74	76.8	-24	-20.3	11	N/A		BF	1,416.00	
29	10:15	5,380.95	3.05	73	75.9	-24	-20.7	11	N/A		BF	1,510.00	
30	09:30	4,214.29	3.05	73	75.6	-24	-20.5	11	N/A		BF	1,538.00	
31	09:15	4,309.52	3.05	72	74.3	-24	-20.9	11	N/A		BF	1,444.00	

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Weekly Injectate Samples

Kansas Lab Certificate Number E-10152

Week	Temperature		pH		Chloride				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	68.50	10/02/2019	8.19	10/02/2019	222.0	10/02/2019	10/07/2019		
2	65.70	10/09/2019	7.57	10/09/2019	345.0	10/09/2019	10/14/2019		
3	66.60	10/16/2019	7.80	10/16/2019	340.0	10/16/2019	10/17/2019		
4	60.30	10/23/2019	7.94	10/23/2019	320.0	10/23/2019	10/28/2019		
5	59.60	10/30/2019	8.03	10/30/2019	300.0	10/30/2019	11/04/2019		

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 10/16/2019
Kansas Lab Certificate Number E-10152
Lab Name SDK Laboratories (Hutchinson)

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

Constituent	Value	Units
Calcium	272.000	mg/l
Iron	0.169	mg/l
Magnesium	51.300	mg/l
Sulfate	406.000	mg/l
Total Alkalinity as CaCO3	526.000	mg/l
Total Dissolved Solids	1,810.000	mg/l
Total Hardness as CaCO3	890.000	mg/l