Facility Well Name Sunflower (Fort Dodge) #1 **UIC Permit #** KS-01-057-003 **Month** November **Year** 2019

Submitted 12/11/2019 **Approved** 12/20/2019 **KOLAR Document ID** 1485355

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 5

Barrels per Day Maximum: 20,571

	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	1,049	1.31	294	289	-3.8	-3.1	
Monthly Maximum	10,539	18.38	530	619	0.0	1.5	
Monthly Minimum	0	0.00	158	150	-23.0	-26.6	
Monthly Total	31,481						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
619.23	140.02	1.54	-26.84

Comments:

The actual injection rate (gpm) reading showed negative values throughout the month when the injection well had no flow and was recorded as negative, but changed to 0 for the report to indicate no flow at that time.

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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		
1	07:52	0.00	0.00	290	283.0	0	1.4	35			KK		
2	07:55	0.00	0.00	290	284.0	0	1.2	35			KK		
3	07:51	0.00	0.00	291	284.0	0	1.4	35			KK		
4	07:36	0.00	0.00	290	285.0	0	1.2	35			CS		
5	08:15	0.00	0.00	292	285.0	0	1.1	35			KK		
6	08:28	0.00	0.00	292	286.0	0	1.3	35			KK		
7	08:13	0.00	0.00	293	286.0	0	1.0	35			KK		
8	07:57	0.00	0.00	293	286.0	0	1.3	35			CS		
9	05:13	0.00	0.00	294	287.0	0	1.4	35			DA		
10	03:08	7,195.38	18.38	306	299.0	-21	-22.6	29			MH		
11	06:23	8,281.60	2.17	293	284.0	-23	-26.6	28			CS		
12	08:03	4,540.67	16.86	240	232.0	-22	-24.0	29			CS		
13	08:09	10,538.52	1.90	230	223.0	-23	-26.0	29			CS		
14	06:40	925.02	0.00	530	619.0	-15	-15.2	29			CS		
15	06:54	0.00	0.00	490	477.0	-6	-5.4	32			CS		
16	05:09	0.00	0.00	450	440.0	-2	-0.8	33			DA		
17	09:11	0.00	0.00	390	382.0	-1	0.8	34			DA		
18	07:45	0.00	0.00	345	337.0	0	1.3	34			CS		
19	07:38	0.00	0.00	306	296.0	0	1.3	34			DA		
20	07:49	0.00	0.00	270	260.9	0	1.4	34			CG		
21	07:42	0.00	0.00	240	230.0	0	1.0	35			DA		
22	07:40	0.00	0.00	226	216.0	0	1.2	35			DA		
23	06:33	0.00	0.00	212	204.0	0	1.4	35			CG		
24	07:21	0.00	0.00	198	189.0	0	1.3	35			CG		
25	07:53	0.00	0.00	182	174.5	0	1.3	35			CS		
26	07:48	0.00	0.00	170	161.1	0	1.5	35			CG		
27	07:51	0.00	0.00	158	150.0	0	0.9	35			CG		
28	07:42	0.00	0.00	348	340.0	0	1.2	35			LF		
29	09:01	0.00	0.00	310	304.0	0	1.4	35			LF		
30	08:20	0.00	0.00	286	278.0	0	1.5	35			MH		
31													

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Weekly Injectate Samples

Kansas Lab Certificate Number E-10150

Week	**Temperature**		**pH**		**Chloride**				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	59.50	11/12/2019	7.36	11/12/2019	580.0	11/12/2019	11/12/2019		
2									
3									
4									
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 11/12/2019
Kansas Lab Certificate Number E-10150
Lab Name Servi-Tech Lab

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

Constituent	Value	Units
Ammonia	ND	mg/l
Calcium	760.000	mg/l
Chloride	580.000	mg/l
Conductivity	6,190.000	Mmhos
Magnesium	170.000	mg/l
Sodium	540.000	mg/l
Sulfate	2,700.000	mg/l
Total Alkalinity as CaCO3	700.000	mg/l (as CaCO3)
Total Dissolved Solids	5,580.000	mg/l
Total Hardness as CaCO3	2,600.000	mg/l (as CaCO3)
Total Suspended Solids	ND	mg/l