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

Submitted 08/12/2019 **Approved** 09/01/2019 **KOLAR Document ID** 1468170

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 10

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	1,588	1.13	225	215	-22.1	-22.4	
Monthly Maximum	10,709	19.21	342	340	-16.0	-15.0	
Monthly Minimum	0	0.00	150	141	-24.0	-26.4	
Monthly Total	49,216						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
465.91	140.00	-11.62	-26.40

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	07:58	0.00	0.00	218	205.9	-17	-16.6	36			DA		
2	08:00	0.00	0.00	216	206.0	-16	-16.2	36			DA		
3	08:02	0.00	0.00	216	205.5	-16	-15.7	36			CG		
4	07:44	0.00	0.00	216	205.0	-16	-15.4	36			CG		
5	07:54	0.00	0.00	216	206.0	-16	-15.0	36			CG		
6	08:40	1,490.17	2.79	250	242.0	-24	-26.2	34			CG		
7	06:53	5,791.38	1.76	262	254.0	-24	-26.3	30			CS		
8	04:17	3,471.05	1.62	219	208.0	-24	-26.1	30			DA		
9	08:10	4,550.67	1.74	230	221.0	-24	-26.1	30			CS		
10	04:18	3,392.52	1.88	230	210.0	-24	-26.2	29			CS		
11	04:10	5,531.31	1.60	340	340.0	-24	-26.4	30			DA		
12	06:59	5,858.45	1.83	307	298.0	-24	-26.2	33			DA		
13	06:46	75.64	0.00	342	332.0	-24	-25.8	35			DA		
14	06:42	0.00	0.00	169	159.0	-24	-25.4	35			DA		
15	06:59	0.00	0.00	285	275.0	-24	-24.8	35			DA		
16	07:31	0.00	0.00	218	206.0	-24	-24.3	36			DA		
17	07:53	0.00	0.00	156	146.0	-24	-23.8	35			DA		
18	07:32	0.00	0.00	337	335.0	-24	-23.4	36			DA		
19	07:16	0.00	0.00	195	184.0	-24	-23.0	36			DA		
20	08:02	0.00	0.00	239	229.0	-24	-22.6	36			KK		
21	07:30	0.00	0.00	154	144.0	-24	-22.4	36			KK		
22	08:16	0.00	0.00	150	141.0	-23	-22.3	36			CG		
23	08:24	0.00	0.00	220	209.0	-22	-22.0	36			KK		
24	08:05	0.00	0.00	191	181.0	-22	-21.5	36			KK		
25	07:50	0.00	0.00	215	196.0	-22	-21.0	36			KK		
26	07:46	0.00	0.00	190	177.0	-22	-20.7	36			CS		
27	08:58	0.00	0.00	190	185.0	-21	-20.3	36			LF		
28	08:57	0.00	0.00	202	191.0	-21	-19.8	36			LF		
29	07:18	0.00	0.00	199	189.0	-21	-19.6	36			MH		
30	08:34	10,708.60	2.52	191	181.0	-24	-26.2	30			CG		
31	04:33	8,346.07	19.21	205	199.0	-22	-22.8	30			CS		

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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	72.00	07/08/2019	7.50	07/08/2019	620.0		07/09/2019		
2									
3									
4									
5									

No monthly injectate samples required.

Quarterly Injectate Samples

Quarter 3
Date Sample Collected 07/08/2019
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	<0.200	mg/l
Calcium	920.000	mg/l
Chloride	620.000	mg/l
Conductivity	6,940.000	Mmhos
Magnesium	200.000	mg/l
Sodium	654.000	mg/l
Sulfate	2,600.000	mg/l
Total Alkalinity as CaCO3	870.000	mg/l (as CaCO3)
Total Dissolved Solids	6,140.000	mg/l
Total Hardness as CaCO3	3,100.000	mg/l (as CaCO3)
Total Suspended Solids	<10.000	mg/l