Facility Well Name Sunflower (Fort Dodge) #1 **UIC Permit #** KS-01-057-003 **Month** July **Year** 2023

Submitted 08/28/2023 **Approved** 09/01/2023 **KOLAR Document ID** 1725851

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 29

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	8,705	5.63	293	290	-23.0	-23.1	
Monthly Maximum	11,928	19.07	622	619	-1.0	-0.1	
Monthly Minimum	0	0.00	208	203	-26.0	-26.9	
Monthly Total	269,842						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
607.5	140.08	-0.08	-26.25

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.
The annulus pressure reading on 07/08 was flagged indicating a maximum of 500 psig. Requesting an update to flag at a higher pressure (600 psig) and working to reduce the annulus pressure below 600 psig. Sunflower is investigating the reading on the minimum Injection Pressure.
Samples taken on 07/11 and 07/18 have missing information. Temperature and pH were done when samples taken but not recorded.

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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	03:20	11,732.76	2.38	310	308.7	-24	-26.1	24			SM		
2	01:16	8,854.40	2.55	311	309.0	-25	-26.0	24			YK		
3	03:42	10,719.81	2.83	311	309.0	-25	-25.9	24			BM		
4	01:23	8,865.12	2.88	312	310.0	-26	-26.0	24			TK		
5	08:42	2,765.12	0.00	232	227.0	-14	-13.2	27			LF		
6	04:25	0.00	0.00	345	341.0	-6	-5.4	28			CS		
7	07:58	0.00	0.00	416	415.0	-1	-0.1	28			KK		
8	08:03	1,937.29	0.00	622	619.0	-17	-16.1	26			KK		
9	01:05	5,374.00	2.48	289	285.0	-24	-26.1	24			SM		
10	02:51	7,274.79	2.64	298	294.0	-26	-26.1	24			TK		
11	01:19	8,029.93	2.43	265	260.0	-26	-26.1	24			CG		
12	01:07	9,268.12	19.07	296	291.0	-26	-22.1	24			SM		
13	05:18	11,793.69	17.10	257	252.0	-23	-23.1	29			SM		
14	01:16	8,194.90	2.60	252	250.0	-24	-25.8	24			SM		
15	01:17	10,125.10	2.55	234	232.0	-26	-26.0	24			SM		
16	01:14	10,054.79	2.43	357	358.0	-25	-26.1	24			SM		
17	01:03	10,092.67	2.33	346	343.0	-26	-26.0	24			CG		
18	06:28	11,229.10	2.29	319	314.0	-26	-25.9	24			BM		
19	01:03	7,598.81	2.40	322	319.0	-26	-25.9	24			SM		
20	01:42	8,158.71	19.02	328	325.0	-24	-22.5	24			SM		
21	03:05	10,794.76	2.43	282	279.0	-25	-26.1	24			SM		
22	01:22	9,329.07	2.57	273	269.0	-25	-26.1	24			LF		
23	01:12	10,812.62	15.98	258	256.0	-24	-23.7	24			CG		
24	01:19	10,684.57	18.74	276	273.0	-23	-22.6	24			SM		
25	01:22	10,954.57	2.40	249	245.0	-26	-26.0	24			BM		
26	03:14	11,928.40	2.12	208	214.0	-25	-26.0	24			SM		
27	01:07	9,587.26	2.55	235	232.0	-25	-26.0	24			SM		
28	01:17	11,087.21	2.38	221	217.8	-25	-26.1	24			SM		
29	01:05	10,967.95	15.98	211	208.0	-24	-23.5	24			CG		
30	01:10	10,632.50	18.81	231	228.0	-24	-22.6	24			TK		
31	01:19	10,994.07	2.45	209	203.0	-26	-26.9	24			CG		

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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	65.40	07/03/2023	7.50	07/03/2023	600.0	07/03/2023	07/05/2023		
2					948.0	07/11/2023	07/12/2023		
3					565.0	07/18/2023	07/19/2023		
4	66.70	07/26/2023	7.35	07/26/2023	1,000.0	07/26/2023	07/26/2023		
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 3
Date Sample Collected 07/03/2023
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	877.000	mg/l
Chloride	600.000	mg/l
Conductivity	6,410.000	Mmhos
Magnesium	190.000	mg/l
Sodium	610.000	mg/l
Sulfate	2,600.000	mg/l
Total Alkalinity as CaCO3	720.000	mg/l
Total Dissolved Solids	5,590.000	mg/l
Total Hardness as CaCO3	3,000.000	mg/l
Total Suspended Solids	14.000	mg/l