**Facility Well Name** Sunflower (Fort Dodge) #1 **UIC Permit #** KS-01-057-003 **Month** January **Year** 2024

**Submitted** 02/28/2024 **Approved** 03/04/2024 **KOLAR Document ID** 1762249

# 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** | 1,800 | 0.59 | 307 | 306 | -8.3 | -6.7 | |
| **Monthly Maximum** | 9,096 | 2.31 | 522 | 525 | 0.0 | 1.4 | |
| **Monthly Minimum** | 0 | 0.00 | 162 | 160 | -30.0 | -26.7 | |
| **Monthly Total** | 55,806 | | | | | | |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 552.30 | 140.40 | 1.80 | -26.80 |

### 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. On 01/25/2024 between 15:23 and 15:40 the pressure relief valve was being changed out. The annulus pressure was isolated during the valve replacement and will show as zero on the continuous recorder readings during that timeframe.

Sunflower (Fort Dodge) #1 01/2024

# Daily Recorder Data

| Day | Time<br>24 hr | Injection Volume<br>Barrels Per Day | Injection Rate<br>Barrels Per Minute | Annulus Pressure (Gauge)<br>psig | Annulus Pressure (Continuous Recorder)<br>psig | Injection Pressure (Gauge)<br>+ / - | Injection Pressure (Continuous Recorder)<br>+ / - | Seal Pot Fluid Level<br>inches | Type of Fluid Added to Seal Pot | Amount of Fluid Added to Seal Pot<br>gallons | Initials of Collector of Field Recordings | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 07:56 | 0.00 | 0.00 | 166 | 163.0 | 0 | 1.3 | 30 | | | TK | | |
| 2 | 08:04 | 0.00 | 0.00 | 163 | 162.5 | 0 | 1.3 | 30 | | | BM | | |
| 3 | 08:16 | 0.00 | 0.00 | 164 | 162.0 | 0 | 1.3 | 30 | | | TK | | |
| 4 | 08:36 | 0.00 | 0.00 | 163 | 161.6 | 0 | 1.3 | 30 | | | TK | | |
| 5 | 08:12 | 0.00 | 0.00 | 163 | 161.1 | 0 | 1.3 | 31 | | | CS | | |
| 6 | 08:28 | 0.00 | 0.00 | 162 | 160.8 | 0 | 1.3 | 31 | | | TK | | |
| 7 | 08:49 | 0.00 | 0.00 | 162 | 160.3 | 0 | 1.3 | 31 | | | TK | | |
| 8 | 08:08 | 0.00 | 0.00 | 163 | 160.0 | 0 | 1.4 | 30 | | | SM | | |
| 9 | 09:14 | 0.00 | 0.00 | 163 | 159.5 | 0 | 1.2 | 30 | | | LF | | |
| 10 | 08:03 | 0.00 | 0.00 | 163 | 160.9 | 0 | 1.3 | 30 | | | SM | | |
| 11 | 07:07 | 0.00 | 0.00 | 163 | 162.2 | 0 | 1.3 | 30 | | | SM | | |
| 12 | 00:41 | 4,791.26 | 1.83 | 279 | 273.6 | -30 | -26.0 | 23 | | | BM | | |
| 13 | 00:27 | 7,180.98 | 2.12 | 340 | 336.1 | -28 | -26.0 | 24 | | | BM | | |
| 14 | 04:16 | 6,892.76 | 2.10 | 317 | 314.9 | -28 | -26.4 | 23 | | | KK | | |
| 15 | 00:08 | 5,174.50 | 2.10 | 318 | 314.8 | -28 | -26.4 | 23 | | | BM | | |
| 16 | 00:01 | 4,256.43 | 2.10 | 293 | 290.8 | -28 | -26.6 | 23 | | | BM | | |
| 17 | 00:02 | 5,197.69 | 2.05 | 315 | 311.6 | -28 | -26.2 | 23 | | | CS | | |
| 18 | 00:11 | 6,766.79 | 1.88 | 291 | 290.6 | -25 | -23.4 | 23 | | | BM | | |
| 19 | 01:20 | 9,096.00 | 1.93 | 259 | 255.4 | -28 | -26.7 | 23 | | | KK | | |
| 20 | 01:00 | 3,531.74 | 2.31 | 301 | 298.9 | -28 | -26.6 | 24 | | | CS | | |
| 21 | 01:45 | 2,917.43 | 0.00 | 241 | 238.7 | 0 | -1.2 | 26 | | | BM | | |
| 22 | 00:09 | 0.00 | 0.00 | 455 | 456.2 | 0 | 1.4 | 27 | | | KK | | |
| 23 | 00:33 | 0.00 | 0.00 | 454 | 455.3 | -1 | 1.3 | 27 | | | KK | | |
| 24 | 00:10 | 0.00 | 0.00 | 412 | 411.4 | -1 | 1.3 | 27 | | | BM | | |
| 25 | 00:18 | 0.00 | 0.00 | 447 | 446.0 | -1 | 1.3 | 27 | | | BM | | |
| 26 | 01:28 | 0.00 | 0.00 | 463 | 464.2 | -1 | 1.3 | 28 | | | KK | | |
| 27 | 07:40 | 0.00 | 0.00 | 490 | 492.0 | -1 | 1.3 | 28 | | | KK | | |
| 28 | 08:08 | 0.00 | 0.00 | 507 | 509.6 | 0 | 1.3 | 28 | | | KK | | |
| 29 | 08:44 | 0.00 | 0.00 | 522 | 524.5 | 0 | 1.3 | 27 | | | LF | | |
| 30 | 08:26 | 0.00 | 0.00 | 500 | 502.4 | 0 | 1.3 | 28 | | | LF | | |
| 31 | 08:02 | 0.00 | 0.00 | 512 | 512.8 | -1 | 1.3 | 28 | | | HS | | |

Sunflower (Fort Dodge) #1 01/2024

# 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 | 60.60 | 01/11/2024 | 7.73 | 01/11/2024 | 410.0 | 01/11/2024 | 01/11/2024 | | |
| 2 | 62.20 | 01/16/2024 | 7.45 | 01/16/2024 | 470.0 | 01/16/2024 | 01/19/2024 | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.

Sunflower (Fort Dodge) #1 01/2024

# Quarterly Injectate Samples

**Quarter** 1
**Date Sample Collected** 01/11/2024
**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 | | mg/l |
| Calcium | 478.000 | mg/l |
| Chloride | 410.000 | mg/l |
| Conductivity | 4,260.000 | Mmhos |
| Magnesium | 111.000 | mg/l |
| Sodium | 420.000 | mg/l |
| Sulfate | 1,100.000 | mg/l |
| Total Alkalinity as CaCO3 | 550.000 | mg/l |
| Total Dissolved Solids | 3,070.000 | mg/l |
| Total Hardness as CaCO3 | 1,700.000 | mg/l |
| Total Suspended Solids | ND | mg/l |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |