**Facility Well Name** CHS Refinery #1 **UIC Permit #** KS-01-113-008 **Month** February **Year** 2024

**Submitted** 03/25/2024 **Approved** 03/28/2024 **KOLAR Document ID** 1769422

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 29

**Barrels per Day Maximum:** 34,286

| | | | 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** | 9,514 | 6.61 | 99 | 95 | 2.8 | 4.0 | |
| **Monthly Maximum** | 13,778 | 9.57 | 106 | 104 | 14.0 | 14.0 | |
| **Monthly Minimum** | 2,031 | 1.40 | 92 | 90 | 1.0 | 0.9 | |
| **Monthly Total** | 275,908 | | | | | | |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 110.30 | 0.08 | 16.23 | 0.75 |

**Comments:**

The continuous recorders on the injection well were calibrated on 2/5/2024 resulting in an annulus pressure reading below permit limits.

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# 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 | 07:00 | 12,185.36 | 8.45 | 96 | 92.7 | 2 | 1.7 | 7 | | | BD | | |
| 2 | 07:00 | 10,065.95 | 7.00 | 103 | 100.9 | 14 | 12.5 | 4 | | | MH | | |
| 3 | 07:00 | 13,777.81 | 9.57 | 106 | 103.8 | 2 | 1.4 | 6 | | | MH | | |
| 4 | 07:00 | 12,622.12 | 8.76 | 103 | 99.5 | 2 | 1.4 | 6 | | | MH | | |
| 5 | 07:00 | 12,992.83 | 9.02 | 96 | 92.6 | 2 | 1.5 | 6 | | | TY | | |
| 6 | 07:00 | 12,048.86 | 8.36 | 98 | 94.1 | 2 | 1.5 | 7 | | | TY | | |
| 7 | 07:00 | 8,150.07 | 5.67 | 96 | 95.5 | 2 | 1.6 | 7 | | | CG | | |
| 8 | 07:00 | 12,044.40 | 8.36 | 96 | 93.2 | 2 | 1.3 | 7 | | | CG | | |
| 9 | 07:00 | 9,597.19 | 6.67 | 94 | 90.3 | 2 | 1.2 | 3 | | | TP | | |
| 10 | 07:00 | 10,834.98 | 7.52 | 99 | 96.1 | 2 | 1.4 | 4 | | | MW | | |
| 11 | 07:00 | 9,343.50 | 6.50 | 98 | 94.3 | 2 | 1.2 | 4 | | | CG | | |
| 12 | 07:00 | 8,878.38 | 6.17 | 92 | 92.7 | 14 | 9.6 | 6 | | | TT | | |
| 13 | 07:00 | 10,997.52 | 7.64 | 98 | 93.9 | 2 | 1.1 | 5 | | | RI | | |
| 14 | 07:00 | 10,196.12 | 7.07 | 98 | 93.6 | 2 | 1.0 | 6 | | | TY | | |
| 15 | 07:00 | 7,115.38 | 4.95 | 94 | 91.3 | 1 | 1.0 | 6 | | | TY | | |
| 16 | 07:00 | 7,970.24 | 5.52 | 95 | 91.8 | 2 | 10.0 | 4 | | | MW | | |
| 17 | 07:00 | 7,655.76 | 5.31 | 99 | 96.3 | 1 | 14.0 | 4 | | | MW | | |
| 18 | 07:00 | 7,863.90 | 5.45 | 98 | 96.0 | 2 | 13.9 | 4 | | | NB | | |
| 19 | 07:00 | 8,832.62 | 6.14 | 100 | 96.5 | 2 | 0.9 | 4 | | | MB | | |
| 20 | 07:00 | 9,085.21 | 6.31 | 100 | 97.1 | 2 | 0.9 | 4 | | | MB | | |
| 21 | 07:00 | 10,240.33 | 7.12 | 102 | 98.2 | 2 | 1.2 | 4 | | | NB | | |
| 22 | 07:00 | 10,881.55 | 7.55 | 104 | 98.9 | | 13.8 | 6 | | | NB | | |
| 23 | 07:00 | 2,031.10 | 1.40 | 98 | 92.6 | | 14.0 | 4 | | | BD | | |
| 24 | 07:00 | 6,053.10 | 4.21 | 104 | 102.2 | 2 | 1.0 | 7 | | | BD | | |
| 25 | 07:00 | 7,775.33 | 5.40 | 102 | 97.9 | 2 | 1.2 | 6 | | | CG | | |
| 26 | 07:00 | 10,034.76 | 6.98 | 99 | 95.1 | 2 | 1.4 | 6 | | | MH | | |
| 27 | 07:00 | 8,694.79 | 6.05 | 97 | 93.3 | 2 | 1.3 | 6 | | | MH | | |
| 28 | 07:00 | 9,423.52 | 6.55 | 96 | 93.0 | 1 | 0.9 | 5 | | | TY | | |
| 29 | 07:00 | 8,514.93 | 5.90 | 98 | 95.7 | 2 | 1.3 | 5 | | | TY | | |
| 30 | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | |

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# Weekly Injectate Samples

**Kansas Lab Certificate Number** E-10116

| Week | Temperature | | pH | | Chloride | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Degrees Fahrenheit | Date | Standard Units | Date | Cl concentration (mg/l) | Date Sample Collected | Date Sampl Analysed | | |
| 1 | 90.30 | 02/06/2024 | 7.22 | 02/06/2024 | 705.0 | 02/06/2024 | 03/05/2024 | | |
| 2 | 82.00 | 02/13/2024 | 7.65 | 02/13/2024 | 652.0 | 02/13/2024 | 03/07/2024 | | |
| 3 | 85.40 | 02/20/2024 | 7.56 | 02/20/2024 | 702.0 | 02/20/2024 | 03/07/2024 | | |
| 4 | 78.50 | 02/27/2024 | 7.82 | 02/27/2024 | 590.0 | 02/27/2024 | 03/07/2024 | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.