**Facility Well Name** Kansas Ethanol #5 **UIC Permit #** KS-01-159-007 **Month** November **Year** 2022

**Submitted** 12/12/2022 **Approved** 12/27/2022 **KOLAR Document ID** 1676426

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 30

**Barrels per Day Maximum:** 13,714

| | | | 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** | 5,467 | 3.81 | 70 | 71 | -17.6 | -15.1 | |
| **Monthly Maximum** | 7,214 | 4.60 | 72 | 76 | -12.0 | -9.7 | |
| **Monthly Minimum** | 3,333 | 2.64 | 69 | 68 | -25.0 | -21.4 | |
| **Monthly Total** | 164,000 | | | | | | |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 76.20 | 68.00 | -9.50 | -24.40 |

**Comments:**

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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 | Conduc-tivity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 08:45 | 6,833.33 | 4.38 | 71 | 71.9 | -12 | -10.2 | 11 | N/A | | BM | 2,060.00 | |
| 2 | 07:00 | 5,809.52 | 4.36 | 72 | 73.2 | -12 | -9.7 | 11 | N/A | | BF | 2,421.00 | |
| 3 | 10:45 | 7,214.29 | 4.33 | 72 | 73.4 | -12 | -10.3 | 11 | N/A | | BF | 2,360.00 | |
| 4 | 12:30 | 6,714.29 | 4.36 | 71 | 72.1 | -12 | -9.7 | 11 | N/A | | BF | 2,401.00 | |
| 5 | 09:08 | 5,285.71 | 4.33 | 71 | 72.6 | -12 | -10.2 | 11 | N/A | | JC | 2,433.00 | |
| 6 | 09:42 | 6,761.90 | 4.31 | 71 | 73.5 | -13 | -10.0 | 11 | N/A | | JC | 2,461.00 | |
| 7 | 08:30 | 5,928.57 | 4.36 | 71 | 72.9 | -14 | -11.4 | 11 | N/A | | BF | 2,380.00 | |
| 8 | 07:00 | 5,904.76 | 4.40 | 71 | 74.0 | -12 | -12.5 | 11 | N/A | | BF | 2,414.00 | |
| 9 | 07:00 | 6,404.76 | 4.43 | 72 | 75.8 | -12 | -10.3 | 11 | N/A | | BF | 2,532.00 | |
| 10 | 07:00 | 6,333.33 | 4.45 | 72 | 75.7 | -12 | -9.7 | 11 | N/A | | BF | 2,377.00 | |
| 11 | 07:00 | 6,452.38 | 4.45 | 71 | 72.9 | -13 | -10.2 | 11 | N/A | | BF | 2,488.00 | |
| 12 | 09:00 | 7,071.43 | 4.48 | 70 | 70.8 | -13 | -11.7 | 11 | N/A | | JP | 1,664.00 | |
| 13 | 09:00 | 6,547.62 | 4.55 | 70 | 69.9 | -14 | -12.3 | 11 | N/A | | JP | 2,174.00 | |
| 14 | 07:00 | 5,880.95 | 4.55 | 70 | 70.5 | -14 | -12.4 | 10 | N/A | | BF | 2,320.00 | |
| 15 | 07:00 | 6,666.67 | 4.57 | 69 | 69.0 | -15 | -13.3 | 10 | N/A | | BF | 2,110.00 | |
| 16 | 07:00 | 6,523.81 | 4.60 | 69 | 69.5 | -14 | -12.4 | 10 | N/A | | BF | 2,244.00 | |
| 17 | 07:00 | 6,619.05 | 4.60 | 69 | 68.8 | -14 | -13.1 | 10 | N/A | | BF | 2,119.00 | |
| 18 | 07:00 | 4,809.52 | 3.21 | 69 | 68.7 | -23 | -20.6 | 10 | N/A | | BF | 2,232.00 | |
| 19 | 07:00 | 5,023.81 | 3.07 | 69 | 68.1 | -24 | -20.9 | 10 | N/A | | JC | 2,215.00 | |
| 20 | 12:42 | 4,809.52 | 2.83 | 70 | 70.2 | -24 | -21.1 | 10 | N/A | | CM | 2,002.00 | |
| 21 | 08:30 | 3,333.33 | 2.79 | 69 | 69.7 | -25 | -21.4 | 10 | N/A | | BM | 2,101.00 | |
| 22 | 08:25 | 3,976.19 | 2.79 | 69 | 70.5 | -25 | -21.2 | 10 | N/A | | BM | 2,010.00 | |
| 23 | 08:23 | 3,476.19 | 2.67 | 69 | 71.1 | -25 | -20.8 | 10 | N/A | | LB | 1,708.00 | |
| 24 | 08:50 | 4,428.57 | 2.71 | 69 | 72.4 | -25 | -20.3 | 10 | N/A | | JN | 1,736.00 | |
| 25 | 09:10 | 3,880.95 | 2.64 | 69 | 70.9 | -25 | -21.4 | 10 | N/A | | DW | 1,836.00 | |
| 26 | 09:10 | 3,833.33 | 2.69 | 69 | 71.2 | -25 | -20.9 | 10 | N/A | | LH | 2,151.00 | |
| 27 | 08:30 | 3,714.29 | 3.12 | 71 | 70.0 | -25 | -20.9 | 10 | N/A | | AG | 2,150.00 | |
| 28 | 07:00 | 3,523.81 | 2.67 | 70 | 70.8 | -25 | -21.1 | 10 | N/A | | BF | 2,006.00 | |
| 29 | 07:00 | 4,380.95 | 3.14 | 70 | 71.9 | -23 | -19.2 | 10 | N/A | | BF | 2,111.00 | |
| 30 | 07:00 | 5,857.14 | 4.52 | 69 | 68.8 | -15 | -13.1 | 10 | N/A | | BF | 2,245.00 | |
| 31 | | | | | | | | | | | | | |

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# Weekly Injectate Samples

**Kansas Lab Certificate Number** E-10152

| Week | Temperature | | pH | | Chloride | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Degrees Fahrenheit | Date | Standard Units | Date | Cl concentration (mg/l) | Date Sample Collected | Date Sampl Analysed | | |
| 1 | 65.30 | 11/02/2022 | 8.06 | 11/02/2022 | 285.0 | 11/02/2022 | 11/07/2022 | | |
| 2 | 64.60 | 11/09/2022 | 8.55 | 11/09/2022 | 300.0 | 11/09/2022 | 11/14/2022 | | |
| 3 | 55.30 | 11/16/2022 | 8.24 | 11/16/2022 | 277.0 | 11/16/2022 | 11/17/2022 | | |
| 4 | 62.10 | 11/23/2022 | 8.39 | 11/23/2022 | 212.0 | 11/23/2022 | 12/01/2022 | | |
| 5 | 61.00 | 11/30/2022 | 8.21 | 11/30/2022 | 245.0 | 11/30/2022 | 12/02/2022 | | |

## No monthly injectate samples required.