**Facility Well Name** Kansas Ethanol #5 **UIC Permit #** KS-01-159-007 **Month** March **Year** 2019

**Submitted** 04/25/2019 **Approved** 05/01/2019 **KOLAR Document ID** 1458171

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 31

**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** | 4,056 | 2.92 | 74 | 77 | -25.3 | -20.9 | |
| **Monthly Maximum** | 4,667 | 3.21 | 76 | 79 | -25.0 | -19.6 | |
| **Monthly Minimum** | 2,429 | 0.00 | 72 | 72 | -29.0 | -22.2 | |
| **Monthly Total** | 125,738 | | | | | | |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 82.30 | 71.80 | -17.30 | -23.20 |

**Comments:**

Kansas Ethanol #5 03/2019

# 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 | 11:30 | 4,666.67 | 2.98 | 74 | 77.0 | -25 | -20.1 | 9 | | | BF | | |
| 2 | 09:00 | 3,666.67 | 3.10 | 74 | 76.0 | -29 | -21.3 | 9 | | | LH | | |
| 3 | 09:00 | 4,142.86 | 3.14 | 74 | 72.0 | -26 | -21.9 | 9 | | | LH | | |
| 4 | 08:30 | 3,880.95 | 3.02 | 72 | 73.0 | -25 | -22.1 | 9 | | | BF | | |
| 5 | 09:00 | 4,333.33 | 3.02 | 72 | 74.0 | -26 | -22.2 | 9 | | | BF | | |
| 6 | 09:30 | 4,380.95 | 3.02 | 73 | 75.0 | -26 | -21.6 | 9 | | | BF | | |
| 7 | 08:30 | 4,095.24 | 3.02 | 73 | 75.0 | -25 | -21.1 | 9 | | | BF | | |
| 8 | 08:30 | 4,214.29 | 2.95 | 74 | 77.0 | -25 | -20.4 | 9 | | | BF | | |
| 9 | 10:00 | 4,142.86 | 0.00 | 73 | 78.0 | -26 | -20.9 | 9 | | | PH | | |
| 10 | 09:10 | 2,428.57 | 2.95 | 73 | 77.0 | -25 | -20.6 | 9 | | | PH | | |
| 11 | 09:00 | 2,428.57 | 3.00 | 74 | 77.0 | -25 | -20.7 | 9 | | | BF | | |
| 12 | 09:00 | 4,166.67 | 3.00 | 75 | 78.0 | -25 | -19.6 | 9 | | | BF | | |
| 13 | 09:00 | 4,238.10 | 2.95 | 75 | 78.0 | -25 | -19.6 | 9 | | | BF | | |
| 14 | 09:00 | 4,285.71 | 2.95 | 74 | 77.0 | -25 | -20.2 | 9 | | | BF | | |
| 15 | 09:00 | 4,071.43 | 2.98 | 74 | 77.0 | -25 | -20.8 | 9 | | | BF | | |
| 16 | 09:00 | 4,309.52 | 3.02 | 74 | 78.0 | -25 | -20.4 | 9 | | | LH | | |
| 17 | 08:30 | 4,309.52 | 3.00 | 75 | 79.0 | -25 | -20.0 | 9 | | | LH | | |
| 18 | 09:00 | 4,333.33 | 3.00 | 75 | 78.0 | -25 | -20.2 | 9 | | | BF | | |
| 19 | 10:30 | 4,619.05 | 2.98 | 74 | 76.0 | -25 | -21.6 | 9 | | | BF | | |
| 20 | 08:30 | 3,904.76 | 3.00 | 74 | 76.0 | -25 | -21.6 | 9 | | | BF | | |
| 21 | 08:45 | 4,428.57 | 3.00 | 74 | 76.0 | -25 | -21.2 | 9 | | | BF | | |
| 22 | 09:45 | 4,547.62 | 3.00 | 75 | 77.0 | -25 | -21.1 | 9 | | | BF | | |
| 23 | 08:30 | 4,142.86 | 2.98 | 75 | 77.0 | -25 | -21.1 | 9 | | | ZK | | |
| 24 | 08:40 | 3,595.24 | 3.21 | 75 | 78.0 | -25 | -20.5 | 9 | | | ZK | | |
| 25 | 08:45 | 3,404.76 | 3.00 | 75 | 78.0 | -25 | -21.1 | 9 | | | BF | | |
| 26 | 10:15 | 4,523.81 | 3.00 | 75 | 77.0 | -25 | -21.1 | 9 | | | BF | | |
| 27 | 08:30 | 3,500.00 | 3.00 | 75 | 78.0 | -25 | -20.9 | 9 | | | BF | | |
| 28 | 08:45 | 4,190.48 | 3.00 | 76 | 79.0 | -25 | -20.0 | 10 | | | BF | | |
| 29 | 09:15 | 4,428.57 | 3.00 | 75 | 77.0 | -25 | -21.3 | 9 | | | BF | | |
| 30 | 11:00 | 4,261.90 | 3.07 | 76 | 74.0 | -25 | -21.5 | 10 | | | AC | | |
| 31 | 09:06 | 4,095.24 | 3.10 | 76 | 74.0 | -25 | -21.8 | 10 | | | CW | | |

# 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 | 53.70 | 03/06/2019 | 7.87 | 03/06/2019 | 325.0 | 03/06/2019 | 03/11/2019 | | |
| 2 | 59.30 | 03/13/2019 | 7.65 | 03/13/2019 | 310.0 | 03/13/2019 | 03/20/2019 | | |
| 3 | 63.20 | 03/18/2019 | 7.63 | 03/18/2019 | 360.0 | 03/18/2019 | 03/21/2019 | | |
| 4 | 63.70 | 03/26/2019 | 7.52 | 03/26/2019 | 390.0 | 03/26/2019 | 03/29/2019 | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.