Facility Well Name CHS Refinery #1 **UIC Permit #** KS-01-113-008 **Month** October **Year** 2023

Submitted 11/20/2023 **Approved** 11/28/2023 **KOLAR Document ID** 1738240

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	11,302	7.85	95	92	4.1	5.7	
Monthly Maximum	18,346	12.74	106	102	15.0	13.8	
Monthly Minimum	0	0.00	80	78	2.0	1.3	
Monthly Total	350,351						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
126.20	51.43	14.18	1.53

Comments:

The annulus pressure went below the required 60 psig on 10/24 due to operators blocking in the annulus during acidization of the disposal well. Thus, no wastewater was directed to the disposal well during this time. Once the acid workover was complete, the annulus was pressured back up before wastewater was reinroduced to the disposal well.

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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	07:00	12,687.76	8.81	92	89.7	2	5.7	10			NB		
2	07:00	12,979.88	9.02	95	91.4	2	5.8	10			MB		
3	07:00	13,323.76	9.26	90	89.2	5	6.1	9			MB		
4	07:00	12,587.31	8.74	94	89.1	4	6.1	10			NB		
5	07:00	13,251.10	9.19	94	92.5	4	5.9	10			NB		
6	07:00	9,692.90	6.74	100	96.6	4	6.3	10			MB		
7	07:00	11,706.52	8.12	96	92.4	3	6.2	10			BD		
8	07:00	11,162.05	7.76	96	96.4	4	5.3	9			BD		
9	07:00	13,177.38	9.14	96	92.1	4	6.3	10			MH		
10	07:00	12,235.19	8.50	100	97.1	4	6.3	9			MH		
11	07:00	6,932.90	4.81	90	89.9	3	6.7	4			MB		
12	07:00	7,143.43	4.95	90	89.0	3	5.4	4			MB		
13	07:00	7,596.33	5.29	94	91.2	3	5.4	5			CG		
14	07:00	7,399.19	5.14	94	90.5	2	5.2	3			CG		
15	07:00	7,351.19	5.10	93	89.3	2	4.9	4			MH		
16	07:00	7,320.00	5.10	96	91.5	2	5.3	3			BD		
17	07:00	7,497.26	5.21	98	93.3	2	5.6	4			BD		
18	07:00	8,179.88	5.69	106	101.8	3	5.5	7			CG		
19	07:00	13,456.12	9.33	104	98.3	2	1.3	8			CG		
20	07:00	15,408.69	10.69	105	99.2	3	5.8	7			MH		
21	07:00	16,300.12	11.31	104	101.4	4	6.4	8			TY		
22	07:00	16,484.90	11.45	102	98.3	3	6.2	9			NB		
23	07:00	16,482.17	11.45	94	90.0	15	13.4	9			NB		
24	07:00	0.00	0.00	98	98.1	15	13.7	9			MW		
25	07:00	0.00	0.00	102	98.7	15	13.8	4			NB		
26	07:00	11,345.83	7.88	98	92.1	2	1.7	6			NB		
27	07:00	18,345.60	12.74	97	93.8	2	2.1	10			MW		
28	07:00	15,685.71	10.90	90	91.8	2	2.3	11			MW		
29	07:00	13,976.90	9.71	85	83.6	3	1.9	8			MW		
30	07:00	15,329.14	10.64	80	77.8	2	1.9	8			NB		
31	07:00	15,311.31	10.64	80	79.0	2	1.6	6			MB		

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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	93.20	10/03/2023	7.28	10/03/2023	849.0	10/03/2023	11/02/2023		
2	92.30	10/10/2023	7.02	10/10/2023	882.0	10/10/2023	11/09/2023		
3	86.00	10/17/2023	6.90	10/17/2023	1,100.0	10/17/2023	11/09/2023		
4	78.00	10/24/2023	7.04	10/24/2023	877.0	10/24/2023	11/10/2023		
5	88.60	10/31/2023	6.71	10/31/2023	811.0	10/31/2023	11/13/2023		

No monthly injectate samples required.