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

Submitted 02/21/2024 **Approved** 03/04/2024 **KOLAR Document ID** 1756034

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 31

Barrels per Day Maximum: 34,286

	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	12,948	8.99	98	96	2.1	2.0	
Monthly Maximum	17,469	12.14	106	104	6.0	13.9	
Monthly Minimum	8,805	6.12	92	92	1.0	0.7	
Monthly Total	401,390						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
114.69	20.00	23.13	0.00

Comments:

On January 9th, CHS had an issue with the onsite Distributed Control System (DCS) for a short period of time. This issue led to a communication issue with some "tags" back to DCS which resulted in erroneous values for some tags. Thus, the continuous recorder tag for annulus pressure was affected and resulted in an erroneous value. The annulus pressure read low from 13:58-14:04. Once the DCS system went back to normal, the values went back to normal. It is important to note that the well was operating within permit limits during this time.

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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	12,527.45	8.69	98	95.0	2	1.0	6			MH		
2	07:00	11,710.45	8.14	96	92.5	2	0.9	6			MH		
3	07:00	11,161.48	7.76	98	94.2	2	1.5	7			MB		
4	07:00	9,580.93	6.64	100	95.7	2	1.5	7			MB		
5	07:00	9,642.48	6.69	95	93.3	2	1.6	6			CG		
6	07:00	11,422.52	7.93	94	91.9	2	1.4	6			CG		
7	07:00	10,684.50	7.43	95	91.8	2	1.8	6			CG		
8	07:00	11,311.95	7.86	96	94.1	2	1.4	5			TY		
9	07:00	11,103.05	7.71	95	92.7	2	1.4	5			TP		
10	07:00	14,280.52	9.93	96	93.7	6	5.8	4			CG		
11	07:00	17,469.21	12.14	92	91.9	2	1.6	4			CG		
12	07:00	16,498.48	11.45	96	93.5	1	0.9	4			TY		
13	07:00	13,195.74	9.17	100	95.3	2	1.1	4			TY		
14	07:00	15,017.43	10.43	96	95.7	2	1.0	4			BD		
15	07:00	14,800.88	10.29	100	95.4	1	0.7	4			NB		
16	07:00	10,827.98	7.52	98	96.0	3	1.8	4			NB		
17	07:00	13,718.90	9.52	100	101.1	2	13.9	4			BD		
18	07:00	13,446.40	9.33	106	104.3	2	1.7	5			BD		
19	07:00	14,022.79	9.74	100	98.2	1	1.1	5			NB		
20	07:00	15,294.07	10.62	100	97.3	2	1.1	5			NB		
21	07:00	14,819.10	10.29	98	95.3	2	1.3	5			NB		
22	07:00	15,902.67	11.05	100	97.4	2	2.0	5			BD		
23	07:00	15,841.19	11.00	105	100.1	2	1.8	5			MB		
24	07:00	15,823.21	11.00	104	99.7	2	1.9	6			NB		
25	07:00	15,032.17	10.43	100	96.7	2	1.6	6			NB		
26	07:00	15,318.57	10.64	98	95.5	2	1.9	7			MB		
27	07:00	12,325.38	8.55	97	94.1	2	2.0	6			MH		
28	07:00	8,804.60	6.12	99	96.9	2	1.7	7			MH		
29	07:00	8,940.10	6.21	96	93.5	3	2.1	6			CG		
30	07:00	9,042.52	6.29	98	94.4	2	1.4	7			CG		
31	07:00	11,823.33	8.21	98	96.4	2	1.5	7			BD		

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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	92.20	01/02/2024	7.24	01/02/2024	712.0	01/02/2024	01/05/2024		
2	76.00	01/09/2024	7.40	01/09/2024	729.0	01/09/2024	01/31/2024		
3	81.60	01/16/2024	7.02	01/16/2024	660.0	01/16/2024	01/31/2024		
4	87.30	01/23/2024	6.81	01/23/2024	623.0	01/23/2024	01/31/2024		
5	90.50	01/30/2024	7.50	01/30/2024	558.0	01/30/2024	02/05/2024		

No monthly injectate samples required.