Facility Well Name CHS Refinery #3 **UIC Permit #** KS-01-113-010 **Month** October **Year** 2021

Submitted 11/17/2021 **Approved** 11/29/2021 **KOLAR Document ID** 1599487

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 31

Barrels per Day Maximum: 51,429

			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	2,012	1.40	94	92	6.2	8.0	
Monthly Maximum	3,709	2.57	102	103	16.0	11.4	
Monthly Minimum	381	0.26	90	87	2.0	4.5	
Monthly Total	62,365						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
109.14	0.00	11.46	0.00

Comments:

On 10/26, an electrical DCS card went bad, which resulted in a loss of continuous recorder readings. The well was immediately blocked in until a new card could be installed by instrumentation technicians. It is important to note that even though the annulus pressure continuous recorder read zero, there was still sufficient pressure on the annulus during the outage.

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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	787.55	0.55	94	87.4	14	9.7	8			MB		
2	07:00	2,162.74	1.50	95	89.5	3	10.2	7			MB		
3	07:00	956.57	0.67	92	88.7	7	9.8	7			MB		
4	07:00	1,425.60	1.00	90	89.1	8	9.2	7			MW		
5	07:00	1,748.24	1.21	90	90.9	5	9.1	7			MW		
6	07:00	1,613.14	1.12	95	89.4	5	9.0	7			MB		
7	07:00	2,422.29	1.69	90	88.8	5	8.9	7			MB		
8	07:00	3,266.05	2.26	94	93.6	3	9.6	9			BF		
9	07:00	2,548.81	1.76	97	96.8	3	11.4	10			BF		
10	07:00	2,557.71	1.79	98	95.2	3	8.6	9			MW		
11	07:00	3,241.38	2.26	90	88.5	4	8.2	8			MH		
12	07:00	2,247.76	1.57	93	92.3	4	8.2	8			MH		
13	07:00	3,601.38	2.50	95	92.9	11	8.2	8			MW		
14	07:00	1,625.48	1.12	90	88.3	4	7.5	8			MW		
15	07:00	2,912.90	2.02	90	88.1	3	7.3	7			MH		
16	07:00	1,975.19	1.38	92	88.7	3	7.1	6			MH		
17	07:00	1,644.33	1.14	95	93.0	4	7.1	6			MH		
18	07:00	2,540.57	1.76	96	96.9	4	7.2	6			JC		
19	07:00	2,226.52	1.55	100	96.4	2	7.2	6			JC		
20	07:00	1,838.74	1.29	98	96.4	2	7.2	6			MH		
21	07:00	1,514.05	1.05	90	88.4	4	7.0	6			MH		
22	07:00	2,409.60	1.67	90	90.1	7	4.5	5			TY		
23	07:00	3,709.38	2.57	98	98.4	8	4.9	7			TY		
24	07:00	2,162.05	1.50	102	102.6	12	7.9	8			TY		
25	07:00	3,068.57	2.14	90	90.4	4	5.2	7			MB		
26	07:00	1,320.00	0.93	90	88.8	4	6.1	5			MB		
27	07:00	380.57	0.26	98	95.3	13	7.4	6			JC		
28	07:00	1,653.60	1.14	96	98.3	16	8.5	4			JC		
29	07:00	912.00	0.64	90	90.5	9	8.9	4			MB		
30	07:00	1,130.74	0.79	90	89.0	11	8.4	4			MB		
31	07:00	761.83	0.52	92	89.4	7	8.6	4			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	82.00	10/05/2021	7.51	10/05/2021	221.0	10/05/2021	10/25/2021		
2	81.40	10/12/2021	7.43	10/12/2021	270.0	10/12/2021	10/25/2021		
3	70.00	10/19/2021	7.36	10/19/2021	263.0	10/19/2021	11/09/2021		
4	74.40	10/26/2021	8.01	10/26/2021	290.0	10/26/2021	11/09/2021		
5									

No monthly injectate samples required.