Facility Well Name CHS Refinery #1 **UIC Permit #** KS-01-113-008 **Month** April **Year** 2019

Submitted 05/21/2019 **Approved** 06/18/2019 **KOLAR Document ID** 1460950

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 30

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	12,026	8.35	103	102	1.8	1.0	4
Monthly Maximum	19,661	13.64	115	115	5.0	4.9	4
Monthly Minimum	6,741	4.69	94	93	1.0	0.4	4
Monthly Total	360,775						4

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
120.47	91.14	16.23	0.32

Comments:

Operator inadvertently did not record daily readings on 4/7/19. However, continuous recorder data suggests the well was compliant.

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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	18,929.93	13.14	96	94.7	2	1.4	2			AS		
2	07:00	19,661.21	13.64	96	95.9	2	0.7	2			AS		
3	07:00	17,082.90	11.86	98	93.8	1	0.5	2			JC		
4	07:00	9,899.86	6.88	98	93.2	1	0.5	2			JC		
5	07:00	13,643.79	9.48	94	93.6	2	1.2	2			AS		
6	07:00	18,029.57	12.52	94	93.1	2	1.3	2			AS		
7	07:00	13,845.64	9.62		96.0		0.6		Mineral Oil	4			
8	07:00	6,741.29	4.69	97	98.0	1	0.5	3			JC		
9	07:00	12,425.00	8.62	100	101.8	5	4.9	2			JC		
10	07:00	15,047.50	10.45	108	106.3	4	3.0	3			AS		
11	07:00	8,835.29	6.14	98	97.5	2	0.6	2			AS		
12	07:00	11,517.90	8.00	98	97.2	1	1.0	2			JC		
13	07:00	11,369.21	7.90	100	98.9	2	0.9	2			JC		
14	07:00	7,749.88	5.38	100	97.2	1	0.5	3			JC		
15	07:00	8,473.02	5.88	104	102.4	1	0.4	2			RM		
16	07:00	10,446.71	7.26	106	105.1	1	0.7	2			RM		
17	07:00	8,184.81	5.69	115	114.5	3	1.6	3			TB		
18	07:00	7,180.45	4.98	108	105.3	1	0.4	2			ZB		
19	07:00	11,379.95	7.90	102	101.6	1	0.6	2			RM		
20	07:00	8,217.76	5.71	104	103.7	1	0.5	2			RM		
21	07:00	8,550.26	5.93	110	109.2	1	0.4	2			RM		
22	07:00	9,004.98	6.26	110	109.3	2	0.8	2			TB		
23	07:00	8,484.62	5.88	104	106.0	1	0.5	2			ZB		
24	07:00	9,443.33	6.55	106	104.5	1	0.8	2			RM		
25	07:00	11,150.88	7.74	108	106.7	2	0.4	2			RM		
26	07:00	12,147.88	8.43	108	106.4	1	0.9	2			ZB		
27	07:00	13,907.60	9.67	115	112.5	2	0.7	3			ZB		
28	07:00	16,056.00	11.14	111	109.9	2	0.8	3			ZB		
29	07:00	17,273.62	12.00	114	113.9	2	0.6	4			AS		
30	07:00	16,094.02	11.17	98	97.9	3	2.6	4			AS		
31	07:00												

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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	63.00	04/02/2019	7.02	04/02/2019	661.0	04/02/2019	04/23/2019		
2	60.00	04/09/2019	7.20	04/09/2019	354.0	04/09/2019	04/23/2019		
3	64.20	04/16/2019	6.75	04/16/2019	525.0	04/16/2019	05/01/2019		
4	64.40	04/23/2019	7.48	04/23/2019	497.0	04/23/2019	05/09/2019		
5	71.00	04/30/2019	6.77	04/30/2019	599.0	04/30/2019	05/13/2019		

No monthly injectate samples required.