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

Submitted 02/20/2019 **Approved** 03/10/2019 **KOLAR Document ID** 1445731

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	21,136	14.68	98	97	5.1	4.2	
Monthly Maximum	22,366	15.52	114	113	13.0	12.2	
Monthly Minimum	18,153	12.60	75	73	2.0	1.0	
Monthly Total	655,223						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
113.62	73.31	13.05	0.51

Comments:

CHS Refinery #1 01/2019

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	20,873.83	14.50	100	99.2	4	7.5	4			TB		
2	07:00	19,915.74	13.83	98	97.7	3	7.5	4			RM		
3	07:00	21,084.64	14.64	98	97.8	4	2.8	4			RM		
4	07:00	21,136.38	14.67	98	96.9	6	1.9	4			TB		
5	07:00	21,231.45	14.74	99	97.8	2	1.2	4			ZB		
6	07:00	21,197.31	14.71	98	96.3	2	1.3	4			ZB		
7	07:00	21,265.88	14.76	98	96.7	5	4.3	5			AS		
8	07:00	21,730.17	15.10	98	97.4	6	5.2	5			AS		
9	07:00	21,488.17	14.93	97	95.0	2	1.5	5			TB		
10	07:00	21,229.40	14.74	102	103.7	4	3.6	5			ZB		
11	07:00	18,196.38	12.64	114	113.4	3	2.3	4			AS		
12	07:00	19,553.00	13.57	96	95.2	13	12.1	5			AS		
13	07:00	21,730.50	15.10	100	99.2	2	3.1	4			AS		
14	07:00	20,922.26	14.52	98	96.1	3	2.6	4			JC		
15	07:00	21,153.67	14.69	98	94.7	4	4.0	4			JC		
16	07:00	21,606.12	15.00	96	95.4	3	1.7	4			AS		
17	07:00	21,612.76	15.00	96	95.1	8	7.0	4			AS		
18	07:00	22,271.19	15.48	98	94.1	4	2.9	4			JC		
19	07:00	22,086.02	15.33	110	110.5	2	2.2	4			JC		
20	07:00	21,023.88	14.60	102	102.6	3	2.1	3			JC		
21	07:00	20,889.05	14.50	96	95.9	2	2.3	4			RM		
22	07:00	21,895.76	15.21	95	95.6	4	1.8	4			BF		
23	07:00	21,678.93	15.05	100	101.7	2	1.7	4			JC		
24	07:00	18,450.79	12.81	100	99.5	2	1.1	2			JC		
25	07:00	18,152.86	12.60	102	101.4	7	1.0	3			BF		
26	07:00	22,293.79	15.48	94	94.1	13	12.2	4			BF		
27	07:00	22,365.95	15.52	82	83.4	3	1.9	4			BF		
28	07:00	21,880.24	15.19	75	73.4	5	4.0	4			TB		
29	07:00	21,667.29	15.05	99	97.5	13	10.9	4			ZB		
30	07:00	22,363.57	15.52	98	97.1	11	9.0	4			BF		
31	07:00	22,275.79	15.48	96	95.6	13	9.0	4			RM		

CHS Refinery #1 01/2019

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	70.00	01/01/2019	7.03	01/01/2019	882.0	01/01/2019	01/22/2019		
2	75.00	01/08/2019	7.50	01/08/2019	687.0	01/08/2019	01/22/2019		
3	71.00	01/15/2019	7.00	01/15/2019	741.0	01/15/2019	02/11/2019		
4	79.00	01/22/2019	6.60	01/22/2019	827.0	01/22/2019	02/11/2019		
5	80.30	01/29/2019	7.50	01/29/2019	883.0	01/29/2019	02/11/2019		

No monthly injectate samples required.