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

Submitted 11/20/2019 **Approved** 11/27/2019 **KOLAR Document ID** 1482937

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	22,848	15.87	98	97	3.3	2.5	
Monthly Maximum	27,190	18.88	111	110	10.0	9.3	
Monthly Minimum	17,840	12.38	86	82	1.0	0.5	
Monthly Total	708,274						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
163.67	79.86	13.01	0.43

Comments:

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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	17,840.31	12.38	104	106.0	5	6.0	3			MH		
2	07:00	22,220.76	15.43	92	91.7	3	2.1	11			JC		
3	07:00	25,647.14	17.81	98	97.4	3	1.6	10			MH		
4	07:00	26,344.31	18.29	99	102.0	9	8.2	11			MH		
5	07:00	27,189.57	18.88	100	97.9	3	2.2	10			BF		
6	07:00	25,121.02	17.45	98	96.4	10	9.3	11			BF		
7	07:00	25,179.38	17.48	97	94.5	2	1.8	10			ZB		
8	07:00	22,974.14	15.95	97	93.8	3	1.6	10			ZB		
9	07:00	22,980.36	15.95	104	102.0	8	7.4	10			ZB		
10	07:00	21,902.10	15.21	105	101.8	2	1.3	7			ZB		
11	07:00	21,416.62	14.88	93	91.0	2	1.1	5			TB		
12	07:00	21,694.38	15.07	96	91.1	1	0.5	4			TB		
13	07:00	19,834.02	13.76	100	98.9	2	0.6	6			ZB		
14	07:00	20,693.67	14.38	104	102.1	2	0.8	6			AS		
15	07:00	23,755.69	16.50	102	100.2	3	2.0	10			AS		
16	07:00	25,320.07	17.60	102	101.3	4	3.0	8			ZB		
17	07:00	21,126.83	14.67	110	109.5	3	2.1	9			ZB		
18	07:00	23,838.43	16.55	111	109.4	3	2.5	9			AS		
19	07:00	25,432.10	17.67	94	93.0	2	1.0	11			AS		
20	07:00	23,625.74	16.40	96	95.5	3	2.3	10			AS		
21	07:00	25,645.81	17.81	94	91.8	3	2.2	9			JC		
22	07:00	23,140.52	16.07	86	82.3	2	0.7	6			JC		
23	07:00	22,186.07	15.40	95	94.5	3	2.1	8			AS		
24	07:00	20,845.29	14.48	90	89.7	1	0.8	8			AS		
25	07:00	22,364.93	15.52	92	90.0	2	0.7	6			JC		
26	07:00	21,059.74	14.62	100	101.1	3	2.0	9			JC		
27	07:00	21,517.07	14.95	100	106.7	3	1.9	8			JC		
28	07:00	21,285.29	14.79	88	87.7	2	1.1	2			BF		
29	07:00	20,246.69	14.07	96	93.4	3	3.2	2			RM		
30	07:00	21,753.60	15.10	98	94.6	4	3.3	2			JC		
31	07:00	24,092.50	16.74	91	88.8	2	1.6	2			MW		

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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	86.60	10/01/2019	7.16	10/01/2019	1,280.0	10/01/2019	10/09/2019		
2	81.20	10/08/2019	7.65	10/08/2019	1,370.0	10/08/2019	11/01/2019		
3	90.00	10/15/2019	7.53	10/15/2019	1,480.0	10/15/2019	11/01/2019		
4	65.00	10/22/2019	7.27	10/22/2019	1,310.0	10/22/2019	11/07/2019		
5	84.20	10/29/2019	7.25	10/29/2019	1,060.0	10/29/2019	11/14/2019		

No monthly injectate samples required.