Facility Well Name CHS Refinery #1 **UIC Permit #** KS-01-113-008 **Month** June **Year** 2020

Submitted 07/21/2020 **Approved** 07/24/2020 **KOLAR Document ID** 1524348

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	16,461	11.43	111	107	3.0	2.2	
Monthly Maximum	20,005	13.88	126	122	9.0	8.1	
Monthly Minimum	11,139	7.74	98	93	2.0	0.9	
Monthly Total	493,824						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
129.28	85.50	12.29	0.66

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	17,767.21	12.33	106	102.2	2	0.9	12			JC		
2	07:00	19,827.76	13.76	100	98.7	2	1.0	11			JC		
3	07:00	16,821.14	11.69	115	112.1	2	1.8	14			JM		
4	07:00	17,063.12	11.86	118	110.9	2	1.1	13			JM		
5	07:00	17,718.26	12.31	110	103.9	2	1.2	12			JC		
6	07:00	18,530.60	12.86	117	120.0	3	2.1	15			JC		
7	07:00	16,849.07	11.69	120	110.6	9	8.1	14			JC		
8	07:00	14,108.36	9.79	126	122.0	2	1.5	15			RM		
9	07:00	14,755.67	10.24	112	108.3	2	1.0	12			RM		
10	07:00	15,331.45	10.64	100	99.5	2	1.7	12			JC		
11	07:00	16,480.88	11.45	98	92.8	2	0.9	10			JM		
12	07:00	17,358.31	12.05	104	100.5	2	0.9	10			RM		
13	07:00	16,883.43	11.71	104	100.7	2	1.2	11			RM		
14	07:00	18,406.24	12.79	109	106.5	7	6.8	12			RM		
15	07:00	20,004.55	13.88	111	107.9	3	2.0	13			JM		
16	07:00	17,820.86	12.38	110	107.1	4	3.7	12			MW		
17	07:00	17,756.26	12.33	110	108.9	2	1.3	13			BF		
18	07:00	17,288.00	12.00	110	108.1	2	1.1	12			BF		
19	07:00	17,220.17	11.95	105	104.2	2	1.0	13			MW		
20	07:00	11,139.19	7.74	110	108.4	3	3.0	13			MW		
21	07:00	12,359.14	8.57	120	114.9	3	1.7	14			MW		
22	07:00	17,788.00	12.36	103	99.3	2	1.0	12			MH		
23	07:00	16,965.31	11.79	108	105.3	6	5.4	13			MH		
24	07:00	15,361.71	10.67	107	105.6	2	1.2	12			MW		
25	07:00	17,151.67	11.90	118	111.7	9	7.6	13			MW		
26	07:00	16,671.95	11.57	105	101.8	3	2.6	12			JM		
27	07:00	14,502.29	10.07	115	111.3	2	1.2	13			JM		
28	07:00	15,264.38	10.60	115	110.4	2	1.1	13			JM		
29	07:00	14,165.50	9.83	120	113.0	3	1.7	13			JC		
30	07:00	14,463.55	10.05	110	106.2	2	0.9	12			JC		
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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	83.00	06/02/2020	7.29	06/02/2020	380.0	06/02/2020	06/11/2020		
2	95.00	06/09/2020	7.56	06/09/2020	478.0	06/09/2020	06/18/2020		
3	94.40	06/16/2020	7.37	06/16/2020	610.0	06/16/2020	06/26/2020		
4	98.30	06/23/2020	7.44	06/23/2020	716.0	06/23/2020	06/26/2020		
5	98.00	06/30/2020	7.46	06/30/2020	586.0	06/30/2020	07/02/2020		

No monthly injectate samples required.

Quarterly Injectate Samples

Quarter 2
Date Sample Collected 06/23/2020
Kansas Lab Certificate Number E-10116
Lab Name Pace Analytical-Lenexa

These samples shall be representative of injection activity and shall therefore be collected on days of injection.

Constituent	Value	Units
Ammonia	17.800	mg/l
Benzene	0.099	mg/l
Calcium	376.000	mg/l
Conductivity	4.000	Mmhos
Ethylbenzene	0.012	mg/l
Iron	9.170	mg/l
Magnesium	32.000	mg/l
Oil and Grease	32.500	mg/l
Sodium	460.000	mg/l
Sulfate	504.000	mg/l
Toluene	0.130	mg/l
Total Alkalinity as CaCO3	593.000	mg/l (as CaCO3)
Total Dissolved Solids	2,830.000	mg/l
Total Suspended Solids	63.000	mg/l
Xylene	0.228	mg/l