Facility Well Name CHS Refinery #3 **UIC Permit #** KS-01-113-010 **Month** March **Year** 2020

Submitted 04/14/2020 **Approved** 04/16/2020 **KOLAR Document ID** 1512699

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	3,268	2.27	99	99	5.1	4.2	
Monthly Maximum	3,871	2.69	105	106	17.0	16.2	
Monthly Minimum	2,724	1.88	88	89	2.0	0.8	
Monthly Total	101,320						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
115.04	89.14	17.99	0.56

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	3,871.43	2.69	103	103.4	8	6.7	4			ZB		
2	07:00	3,842.17	2.67	98	98.7	2	0.9	5			MH		
3	07:00	3,638.88	2.52	100	99.6	4	2.7	5			MH		
4	07:00	3,481.57	2.43	100	100.1	2	1.0	5			TB		
5	07:00	3,475.90	2.40	100	100.1	2	1.0	5			ZB		
6	07:00	3,471.24	2.40	96	95.8	6	5.5	4			MH		
7	07:00	3,513.07	2.43	98	97.8	2	0.8	4			MH		
8	07:00	2,902.79	2.02	100	100.2	2	1.1	4			MH		
9	07:00	2,756.29	1.90	100	101.2	3	1.1	3			JC		
10	07:00	2,757.10	1.90	92	95.8	2	1.1	4			JC		
11	07:00	2,727.14	1.90	98	99.9	2	1.3	4			MH		
12	07:00	2,723.50	1.88	105	104.2	2	1.0	6			MH		
13	07:00	3,201.21	2.21	98	97.7	10	9.5	5			JC		
14	07:00	3,694.83	2.57	98	94.2	11	11.1	4			JC		
15	07:00	3,655.19	2.55	98	94.3	11	11.4	4			JC		
16	07:00	3,620.02	2.52	96	96.4	2	1.0	4			BF		
17	07:00	3,592.00	2.50	99	97.7	6	5.7	4			MW		
18	07:00	3,568.52	2.48	100	101.3	8	6.4	4			MW		
19	07:00	3,544.19	2.45	105	106.1	2	1.0	5			MW		
20	07:00	3,594.55	2.50	94	93.6	12	11.4	5			BF		
21	07:00	3,748.52	2.60	88	89.3	11	10.7	4			RM		
22	07:00	3,675.10	2.55	94	92.5	14	13.6	4			RM		
23	07:00	3,649.07	2.52	98	95.9	2	1.0	4			ZB		
24	07:00	3,091.57	2.14	100	99.1	2	0.9	5			ZB		
25	07:00	2,736.71	1.90	100	99.8	2	1.4	5			RM		
26	07:00	2,734.00	1.90	104	103.3	2	1.1	6			RM		
27	07:00	2,744.26	1.90	100	101.4	2	1.2	6			ZB		
28	07:00	2,745.52	1.90	102	102.5	3	1.1	6			ZB		
29	07:00	2,748.64	1.90	95	95.1	3	1.1	5			ZB		
30	07:00	2,749.55	1.90	98	97.9	2	1.4	5			MH		
31	07:00	3,065.79	2.12	100	100.3	17	16.2	6			MH		

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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	74.30	03/03/2020	7.02	03/03/2020	988.0	03/03/2020	03/16/2020		
2	67.00	03/10/2020	7.45	03/10/2020	819.0	03/10/2020	03/16/2020		
3	71.00	03/17/2020	7.03	03/17/2020	865.0	03/17/2020	03/19/2020		
4	74.00	03/24/2020	7.99	03/24/2020	761.0	03/24/2020	04/01/2020		
5	77.70	03/31/2020	7.53	03/31/2020	617.0	03/31/2020	04/06/2020		

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 1
Date Sample Collected 03/17/2020
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
1,2 Dichloroethene	ND	mg/l
Ammonia	2.200	mg/l
Benzene	0.098	mg/l
Calcium	210.000	mg/l
Conductivity	4.000	Mmhos
Ethylbenzene	ND	mg/l
Iron	7.090	mg/l
Magnesium	21.400	mg/l
Oil and Grease	10.100	mg/l
Sodium	633.000	mg/l
Sulfate	577.000	mg/l
Toluene	0.088	mg/l
Total Alkalinity as CaCO3	289.000	mg/l (as CaCO3)
Total Dissolved Solids	2,520.000	mg/l
Total Suspended Solids	53.000	mg/l
Trichloroethene	ND	mg/l
Xylene	0.116	mg/l