Facility Well Name CHS Refinery #1 **UIC Permit #** KS-01-113-008 **Month** December **Year** 2021

Submitted 01/24/2022 **Approved** 01/28/2022 **KOLAR Document ID** 1612835

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	15,063	10.46	96	94	2.5	1.6	
Monthly Maximum	22,955	15.95	100	100	6.0	8.4	
Monthly Minimum	6,660	4.62	90	90	2.0	0.7	
Monthly Total	466,950						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
104.96	86.90	12.28	0.44

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	19,465.02	13.52	93	91.0	2	1.4	6			MW		
2	07:00	18,418.98	12.79	99	95.3	5	4.6	7			MW		
3	07:00	22,954.98	15.95	98	93.0	4	2.5	7			MW		
4	07:00	17,657.48	12.26	97	94.5	4	8.4	7			MW		
5	07:00	17,295.43	12.00	96	95.1	6	5.2	7			MW		
6	07:00	18,656.24	12.95	95	97.3	3	1.6	5			MH		
7	07:00	16,600.12	11.52	94	92.4	2	1.2	5			MH		
8	07:00	17,610.86	12.24	96	92.1	2	1.4	4			MW		
9	07:00	17,589.95	12.21	99	95.2	2	0.7	4			MW		
10	07:00	19,639.55	13.64	98	95.1	3	2.1	5			MH		
11	07:00	11,719.19	8.14	96	93.2	2	1.0	4			MH		
12	07:00	6,865.02	4.76	94	91.6	2	1.0	3			MH		
13	07:00	6,660.00	4.62	95	92.3	2	0.9	3			TY		
14	07:00	6,860.24	4.76	98	94.7	2	0.8	3			TY		
15	07:00	6,903.10	4.79	98	94.7	2	0.9	3			MH		
16	07:00	9,116.24	6.33	96	93.5	2	0.8	5			MH		
17	07:00	16,806.86	11.67	100	98.1	4	2.0	5			TY		
18	07:00	17,882.40	12.43	90	90.9	2	0.9	5			TY		
19	07:00	16,625.48	11.55	96	97.0	2	0.8	4			TY		
20	07:00	16,115.31	11.19	92	90.1	2	0.7	4			MB		
21	07:00	12,096.33	8.40	98	93.6	2	0.9	4			MB		
22	07:00	17,214.17	11.95	100	93.7	2	0.9	4			JC		
23	07:00	15,715.55	10.90	96	91.8	2	1.1	3			JC		
24	07:00	18,367.55	12.76	96	100.0	2	0.9	3			CG		
25	07:00	18,099.76	12.57	98	95.1	2	1.1	6			MB		
26	07:00	14,560.45	10.12	95	93.6	2	0.8	6			MB		
27	07:00	14,510.05	10.07	96	91.9	2	1.3	6			MB		
28	07:00	14,225.83	9.88	98	91.8	2	1.0	6			MW		
29	07:00	13,630.62	9.48	95	93.9	2	0.7	4			MB		
30	07:00	12,589.71	8.74	98	96.8	2	0.9	5			MB		
31	07:00	14,497.38	10.07	100	97.9	2	0.9	5			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	84.00	12/07/2021	7.56	12/07/2021	794.0	12/07/2021	12/15/2021		
2	76.00	12/14/2021	7.25	12/14/2021	1,050.0	12/14/2021	12/21/2021		
3	85.60	12/21/2021	6.93	12/21/2021	704.0	12/21/2021	12/29/2021		
4	86.00	12/28/2021	7.15	12/28/2021	909.0	12/28/2021	12/30/2021		
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 12/14/2021
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	55.500	mg/l
Benzene	0.061	mg/l
Calcium	470.000	mg/l
Conductivity	6.000	Mmhos
Ethylbenzene	0.004	mg/l
Iron	13.700	mg/l
Magnesium	39.600	mg/l
Oil & Grease	9.900	mg/l
Sodium	734.000	mg/l
Sulfate	993.000	mg/l
Toluene	0.048	mg/l
Total Alkalinity as CaCO3	250.000	mg/l
Total Dissolved Solids	3,490.000	mg/l
Total Suspended Solids	35.000	mg/l
Xylene	0.150	mg/l