Facility Well Name CHS Refinery #1 **UIC Permit #** KS-01-113-008 **Month** March **Year** 2023

Submitted 04/12/2023 **Approved** 04/25/2023 **KOLAR Document ID** 1709074

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 30

Barrels per Day Maximum: 34,286

			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	12,251	8.51	97	94	3.6	4.2	
Monthly Maximum	16,816	11.67	110	106	14.0	13.9	
Monthly Minimum	0	0.00	90	88	2.0	0.0	
Monthly Total	379,768						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
113.24	86.31	14.43	1.23

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	12,853.38	8.93	96	94.5	4	3.9	7			MD		
2	07:00	12,795.10	8.88	94	91.5	2	1.6	6			TP		
3	07:00	12,739.88	8.86	92	90.3	2	1.7	5			MH		
4	07:00	11,446.62	7.95	95	93.7	2	1.6	6			MH		
5	07:00	13,665.95	9.50	94	91.0	2	1.5	6			CG		
6	07:00	13,908.00	9.67	96	93.9	2	1.6	6			TY		
7	07:00	15,233.48	10.57	100	97.4	2	1.9	7			TY		
8	07:00	14,444.24	10.02	95	91.9	7	6.7	4			CG		
9	07:00	13,763.31	9.55	98	97.6	2	1.6	7			CG		
10	07:00	12,182.05	8.45	100	95.5	2	1.5	8			TY		
11	07:00	12,879.10	8.95	102	98.1	2	2.0	8			TY		
12	07:00	12,350.05	8.57	98	94.6	2	2.7	7			TY		
13	07:00	12,135.10	8.43	95	92.1	2	13.7	6			NB		
14	07:00	11,899.88	8.26	103	100.0	3	3.9	7			NB		
15	07:00	14,865.60	10.33	90	87.8	5	3.5	4			TY		
16	07:00	16,815.76	11.67	94	90.9	2	1.7	4			TY		
17	07:00	13,215.76	9.17	94	91.2	2	12.0	5			NB		
18	07:00	13,042.29	9.05	94	91.1	2	13.9	5			NB		
19	07:00	9,240.69	6.43	98	95.5	2	1.5	7			NB		
20	07:00	10,866.86	7.55	100	99.6	2	2.0	7			MB		
21	07:00	12,565.71	8.74	95	94.2	2	1.4	6			MB		
22	07:00	14,063.31	9.76	100	96.6	14	12.9	6			NB		
23	07:00	15,992.57	11.10	92	90.3	2	1.4	6			NB		
24	07:00	13,215.10	9.17	95	93.3	10	9.4	7			MB		
25	07:00	12,714.52	8.83	90	90.6	2	1.6	7			MB		
26	07:00	12,377.83	8.60	90	88.8	2	1.7	7			MB		
27	07:00	11,884.12	8.26	96	91.6	6	0.0	6			CG		
28	07:00	2,236.12	1.55	96	93.4	13	13.8	4			CG		
29	07:00	0.00	0.00	96	92.8	5	2.3	4			BD		
30	07:00	10,089.95	7.00	106	103.4	2	1.7	7			BD		
31	07:00	14,285.48	9.93	110	105.6	2	2.5	7			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	92.00	03/07/2023	8.42	03/07/2023	673.0	03/07/2023	03/20/2023		
2	91.40	03/14/2023	7.20	03/14/2023	823.0	03/14/2023	03/27/2023		
3	87.10	03/21/2023	7.20	03/21/2023	1,070.0	03/21/2023	03/27/2023		
4	87.60	03/28/2023	7.13	03/28/2023	1,090.0	03/28/2023	04/03/2023		
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 1
Date Sample Collected 03/07/2023
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	8.900	mg/l
Benzene	0.118	mg/l
Calcium	174.000	mg/l
Conductivity	4.320	Mmhos
Ethylbenzene	0.018	mg/l
Iron	8.890	mg/l
Magnesium	19.900	mg/l
Oil & Grease	78.400	mg/l
Sodium	613.000	mg/l
Sulfate	616.000	mg/l
Toluene	0.149	mg/l
Total Alkalinity as CaCO3	614.000	mg/l
Total Dissolved Solids	2,370.000	mg/l
Total Hardness as CaCO3	517.000	mg/l
Total Suspended Solids	117.000	mg/l
Xylene	0.250	mg/l