Facility Well Name CHS Refinery #4 **UIC Permit #** KS-01-113-011 **Month** December **Year** 2023

Submitted 01/23/2024 **Approved** 02/01/2024 **KOLAR Document ID** 1747506

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 31

Barrels per Day Maximum: 34,286

	Injection Volume Barrels per Day	Injection Rate Barrels per Minute	Annulus Pressure psig min 60 Gauge psig	Annulus Pressure Cont. Record psig	Injection Pressure Gauge psig	Injection Pressure Cont. Record psig	Amount Added to Seal Pot
Monthly Average	11,582	8.04	95	94	10.3	6.7	
Monthly Maximum	12,956	9.00	104	104	14.0	10.6	
Monthly Minimum	9,222	6.40	90	90	4.0	3.2	
Monthly Total	359,054						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
114.08	69.55	13.99	0.00

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	12,321.26	8.55	94	90.5	13	9.8	2			BD		
2	07:00	11,661.26	8.10	96	93.7	4	3.6	6			BD		
3	07:00	12,782.05	8.88	98	93.9	6	4.0	8			BD		
4	07:00	12,823.88	8.90	96	94.7	8	3.2	7			MH		
5	07:00	12,825.95	8.90	97	95.1	8	3.8	7			MH		
6	07:00	12,840.00	8.93	96	94.4	11	7.2	5			MD		
7	07:00	12,853.02	8.93	92	93.1	11	7.4	6			WK		
8	07:00	12,879.76	8.95	92	95.2	9	5.4	7			CG		
9	07:00	12,882.17	8.95	98	97.6	10	5.9	7			MH		
10	07:00	12,884.24	8.95	92	91.3	10	5.9	7			CG		
11	07:00	12,905.14	8.95	102	101.7	9	4.7	8			TY		
12	07:00	12,914.74	8.98	94	93.2	10	6.9	8			TY		
13	07:00	12,920.90	8.98	96	94.6	10	6.1	8			MH		
14	07:00	12,933.60	8.98	97	95.2	10	6.1	8			MH		
15	07:00	12,897.26	8.95	98	93.2	10	5.9	8			BD		
16	07:00	12,904.12	8.95	96	93.5	8	4.6	7			BD		
17	07:00	12,920.57	8.98	104	104.4	8	4.6	2			TY		
18	07:00	12,925.71	8.98	95	94.6	9	4.9	8			NB		
19	07:00	12,956.24	9.00	95	94.9	14	10.6	4			NB		
20	07:00	9,775.55	6.79	94	93.4	14	9.9	4			NB		
21	07:00	9,221.83	6.40	92	92.4	14	8.9	7			NB		
22	07:00	9,416.24	6.55	95	92.5	12	9.0	7			MW		
23	07:00	9,576.00	6.64	90	90.2	13	9.5	6			MW		
24	07:00	9,637.71	6.69	90	91.8	14	10.6	6			MW		
25	07:00	9,654.52	6.71	92	90.0	10	8.2	2			BD		
26	07:00	9,679.55	6.71	94	92.4	8	4.0	2			BD		
27	07:00	9,758.05	6.79	95	93.8	12	7.8	1			CG		
28	07:00	9,790.62	6.81	95	93.8	11	6.7	1			CG		
29	07:00	9,769.02	6.79	96	92.7	11	7.4	1			BD		
30	07:00	9,803.31	6.81	96	94.1	11	7.3	3			BD		
31	07:00	9,939.76	6.90	98	97.3	10	7.0	3			MB		

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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	82.40	12/05/2023	7.11	12/05/2023	914.0	12/05/2023	12/21/2023		
2	82.30	12/12/2023	7.36	12/12/2023	727.0	12/12/2023	12/21/2023		
3	63.00	12/19/2023	7.29	12/19/2023	604.0	12/19/2023	01/03/2024		
4	74.00	12/26/2023	7.10	12/26/2023	603.0	12/26/2023	01/05/2024		
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 12/19/2023
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	3.300	mg/l
Benzene	0.050	mg/l
Calcium	442.000	mg/l
Conductivity	4.670	Mmhos
Ethylbenzene	0.009	mg/l
Iron	4.540	mg/l
Magnesium	41.800	mg/l
Oil & Grease	ND	mg/l
Sodium	367.000	mg/l
Sulfate	560.000	mg/l
Toluene	0.054	mg/l
Total Alkalinity as CaCO3	681.000	mg/l
Total Dissolved Solids	2,350.000	mg/l
Total Hardness as CaCO3	1,280.000	mg/l
Total Suspended Solids	21.500	mg/l
Xylene	0.083	mg/l