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

Submitted 10/20/2023 **Approved** 11/01/2023 **KOLAR Document ID** 1734112

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	15,601	10.83	95	92	2.9	5.0	
Monthly Maximum	21,054	14.62	100	98	4.0	6.9	
Monthly Minimum	10,056	6.98	82	80	2.0	2.8	
Monthly Total	468,019						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
108.81	76.78	13.24	2.55

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	10,056.33	6.98	90	88.4	2	2.8	11			NB		
2	07:00	13,995.43	9.71	92	88.2	3	4.8	10			NB		
3	07:00	13,474.29	9.36	82	79.5	2	4.5	10			NB		
4	07:00	14,107.55	9.79	90	89.1	2	4.5	10			MB		
5	07:00	14,073.26	9.76	95	91.6	2	4.7	9			MB		
6	07:00	14,427.43	10.02	94	90.4	2	4.8	9			NB		
7	07:00	14,602.62	10.14	94	90.2	4	4.9	9			NB		
8	07:00	18,873.26	13.10	90	88.2	4	4.2	9			MB		
9	07:00	19,444.12	13.50	90	88.9	4	3.8	7			MB		
10	07:00	16,690.98	11.60	100	97.7	4	4.2	10			MB		
11	07:00	17,566.62	12.19	96	93.0	3	4.2	9			CG		
12	07:00	16,327.55	11.33	96	92.1	3	4.2	8			CG		
13	07:00	17,776.81	12.33	98	93.7	4	4.0	9			BD		
14	07:00	18,552.33	12.88	96	91.6	3	4.3	9			BD		
15	07:00	16,445.48	11.43	98	96.2	2	4.9	8			CG		
16	07:00	15,661.38	10.88	96	93.0	3	6.0	9			CG		
17	07:00	21,053.83	14.62	98	95.4	4	6.9	9			CG		
18	07:00	20,922.86	14.52	100	96.5	2	5.3	10			TY		
19	07:00	14,868.00	10.33	98	94.8	3	5.1	10			CG		
20	07:00	12,221.48	8.48	98	95.6	3	5.3	11			MH		
21	07:00	15,720.33	10.93	97	93.5	3	5.5	10			MH		
22	07:00	13,648.12	9.48	94	89.6	3	5.4	9			TY		
23	07:00	16,047.43	11.14	95	90.7	3	5.3	10			TY		
24	07:00	14,364.69	9.98	96	92.2	3	5.4	10			TY		
25	07:00	13,804.12	9.60	96	93.1	3	5.6	11			NB		
26	07:00	16,015.55	11.12	92	88.3	3	5.6	10			NB		
27	07:00	16,310.05	11.33	94	91.0	3	5.7	10			TY		
28	07:00	15,976.45	11.10	100	96.7	3	5.9	10			TY		
29	07:00	12,295.88	8.55	100	97.3	2	5.8	10			NB		
30	07:00	12,694.29	8.81	96	93.0	2	5.7	9			NB		
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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	101.00	09/05/2023	7.20	09/05/2023	205.0	09/05/2023	10/02/2023		
2	91.90	09/12/2023	7.03	09/12/2023	1,020.0	09/12/2023	10/02/2023		
3	98.10	09/19/2023	7.35	09/19/2023	1,010.0	09/19/2023	10/02/2023		
4	96.00	09/26/2023	7.01	09/26/2023	1,120.0	09/26/2023	10/02/2023		
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No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 3
Date Sample Collected 09/26/2023
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	2.600	mg/l
Benzene	0.055	mg/l
Calcium	287.000	mg/l
Conductivity	3.860	Mmhos
Ethylbenzene	0.006	mg/l
Iron	10.000	mg/l
Magnesium	27.300	mg/l
Oil & Grease	10.100	mg/l
Sodium	504.000	mg/l
Sulfate	1,080.000	mg/l
Toluene	0.045	mg/l
Total Alkalinity as CaCO3	440.000	mg/l
Total Dissolved Solids	2,640.000	mg/l
Total Hardness as CaCO3	829.000	mg/l
Total Suspended Solids	42.000	mg/l
Xylene	0.052	mg/l