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

Submitted 10/13/2021 **Approved** 10/22/2021 **KOLAR Document ID** 1594554

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 30

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	15,649	10.87	99	94	2.9	1.9	
Monthly Maximum	22,511	15.64	162	106	12.0	11.0	
Monthly Minimum	7,851	5.45	89	86	1.0	0.8	
Monthly Total	469,475						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
116.22	0.00	13.91	0.00

Comments:

Injection pressure and annulus pressure continuous recorders calibrated on 9/24/21.

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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	15,507.10	10.76	108	104.6	12	10.6	10			TY		
2	07:00	21,809.83	15.14	108	105.8	3	1.8	12			TY		
3	07:00	18,973.71	13.17	102	98.9	3	1.9	11			MB		
4	07:00	17,920.12	12.45	100	98.6	3	1.8	12			MB		
5	07:00	16,833.60	11.69	94	91.0	2	1.1	7			MB		
6	07:00	19,358.74	13.45	100	97.8	3	2.3	10			BF		
7	07:00	17,088.69	11.86	100	98.2	3	1.7	10			BF		
8	07:00	20,363.31	14.14	98	92.8	2	1.4	11			MB		
9	07:00	18,829.38	13.07	98	96.5	2	1.3	11			MB		
10	07:00	18,150.17	12.60	94	92.4	2	1.3	11			BF		
11	07:00	15,184.45	10.55	90	89.8	2	1.2	11			MW		
12	07:00	17,607.76	12.24	100	97.4	2	1.3	10			MW		
13	07:00	10,481.48	7.29	93	90.2	2	0.9	9			AS		
14	07:00	7,995.10	5.55	90	87.1	2	1.4	4			AS		
15	07:00	8,019.76	5.57	91	90.0	2	1.2	4			MW		
16	07:00	7,851.43	5.45	90	90.6	2	1.0	4			MW		
17	07:00	10,055.31	6.98	90	86.4	2	0.8	4			MH		
18	07:00	19,130.40	13.29	107	104.9	2	1.5	10			MH		
19	07:00	13,857.60	9.62	100	97.5	2	1.1	9			AS		
20	07:00	17,906.40	12.43	102	99.6	3	1.5	9			TY		
21	07:00	16,974.86	11.79	90	88.7	2	1.2	8			TY		
22	07:00	12,970.29	9.00	93	91.2	1	0.9	7			MH		
23	07:00	12,715.88	8.83	96	92.6	2	1.0	8			MH		
24	07:00	13,744.45	9.55	89	92.0	1	0.8	7			TY		
25	07:00	15,495.76	10.76	91	89.5	2	0.9	7			TY		
26	07:00	22,511.31	15.64	98	94.6	12	11.0	8			TY		
27	07:00	19,604.24	13.62	100	94.0	3	1.5	8			MB		
28	07:00	9,766.62	6.79	90	88.5	2	1.0	7			MB		
29	07:00	10,387.55	7.21	96	88.8	2	0.8	4			JC		
30	07:00	22,379.67	15.55	162	103.3	3	1.8	9			JC		
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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	102.00	09/07/2021	6.84	09/07/2021	516.0	09/07/2021	09/28/2021		
2	83.20	09/14/2021	7.20	09/14/2021	1,810.0	09/14/2021	09/29/2021		
3	89.20	09/21/2021	7.23	09/21/2021	678.0	09/21/2021	09/30/2021		
4	82.00	09/28/2021	7.34	09/28/2021	944.0	09/28/2021	10/05/2021		
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No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 3
Date Sample Collected 09/14/2021
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	21.000	mg/l
Benzene	0.015	mg/l
Calcium	554.000	mg/l
Conductivity	7.000	Mmhos
Ethylbenzene	0.003	mg/l
Iron	1.420	mg/l
Magnesium	50.700	mg/l
Oil & Grease	6.500	mg/l
Sodium	1,180.000	mg/l
Sulfate	966.000	mg/l
Toluene	0.017	mg/l
Total Alkalinity as CaCO3	645.000	mg/l
Total Dissolved Solids	5,100.000	mg/l
Total Suspended Solids	14.000	mg/l
Xylene	0.048	mg/l