Facility Well Name CHS Refinery #3 **UIC Permit #** KS-01-113-010 **Month** June **Year** 2019

Submitted 07/25/2019 **Approved** 08/23/2019 **KOLAR Document ID** 1466747

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	4,404	3.06	99	100	10.5	9.7	
Monthly Maximum	6,059	4.21	114	114	18.0	17.4	
Monthly Minimum	730	0.50	88	90	1.0	0.8	
Monthly Total	132,110						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
131.77	89.34	19.25	0.48

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	5,955.64	4.14	98	99.4	17	15.8	7			AS		
2	07:00	5,729.12	3.98	102	101.6	17	16.2	8			AS		
3	07:00	5,777.17	4.02	102	104.0	18	17.4	8			JC		
4	07:00	5,562.67	3.86	102	103.6	17	16.3	9			JC		
5	07:00	4,208.71	2.93	99	101.3	5	3.6	8			AS		
6	07:00	2,332.76	1.62	100	100.8	2	1.6	7			AS		
7	07:00	2,480.88	1.71	100	98.2	1	0.8	7			JC		
8	07:00	4,191.83	2.90	100	102.8	1	1.4	8			JC		
9	07:00	3,784.48	2.62	100	102.6	4	3.4	9			JC		
10	07:00	753.24	0.52	90	91.3	2	1.1	6			RM		
11	07:00	739.71	0.52	89	91.2	2	1.2	6			RM		
12	07:00	757.57	0.52	88	90.5	1	1.0	6			JC		
13	07:00	730.43	0.50	90	91.8	1	1.1	6			JC		
14	07:00	3,497.36	2.43	95	91.8	2	1.2	6			BF		
15	07:00	5,833.02	4.05	99	100.2	18	16.9	8			ZB		
16	07:00	5,988.79	4.17	103	106.3	17	16.2	10			ZB		
17	07:00	5,984.55	4.17	100	101.7	18	16.5	9			ZB		
18	07:00	5,940.45	4.12	104	106.2	17	15.5	10			ZB		
19	07:00	5,957.90	4.14	102	101.8	18	16.5	10			RM		
20	07:00	5,908.95	4.10	98	100.1	16	15.7	9			RM		
21	07:00	5,300.40	3.69	111	110.2	2	1.1	11			ZB		
22	07:00	5,669.64	3.93	99	100.5	17	15.9	9			ZB		
23	07:00	5,329.17	3.69	97	96.2	16	14.9	9			ZB		
24	07:00	5,172.02	3.60	98	97.6	2	0.9	10			BF		
25	07:00	6,058.98	4.21	98	97.3	17	15.8	9			BF		
26	07:00	5,825.90	4.05	90	90.1	18	16.6	6			ZB		
27	07:00	5,041.45	3.50	100	101.0	15	14.4	10			ZB		
28	07:00	4,069.67	2.83	114	113.5	17	15.7	12			AS		
29	07:00	1,944.52	1.36	104	104.1	2	1.0	11			AS		
30	07:00	5,582.71	3.88	108	107.6	16	15.5	10			AS		

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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	76.00	06/04/2019	7.10	06/04/2019	813.0	06/04/2019	06/17/2019		
2	74.00	06/11/2019	7.11	06/11/2019	425.0	06/11/2019	06/24/2019		
3	90.10	06/19/2019	6.82	06/19/2019	623.0	06/19/2019	07/04/2019		
4	86.30	06/25/2019	7.24	06/25/2019	543.0	06/25/2019	07/05/2019		
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 2
Date Sample Collected 06/19/2019
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
Calcium	201.000	mg/l
Chloride	623.000	mg/l
Iron	5.400	mg/l
Magnesium	19.500	mg/l
Sulfate	535.000	mg/l
Total Dissolved Solids	2,200.000	mg/l
Total Suspended Solids	ND	mg/l
Total Alkalinity as CaCO3	136.000	mg/l (as CaCO3)
Conductivity	5.000	Mmhos
Benzene	ND	mg/l
Ethylbenzene	ND	mg/l
Toluene	ND	mg/l
Xylene (Total)	ND	mg/l
Sodium	426.000	mg/l
Oil & Grease	ND	mg/l
Ammonia	4.400	mg/l
1,2-Dichloroethene	ND	mg/l
Trichloroethene	ND	mg/l