Facility Well Name Koch Fertilizer #2 **UIC Permit #** KS-01-057-001 **Month** January **Year** 2022

Submitted 02/25/2022 **Approved** 02/28/2022 **KOLAR Document ID** 1628764

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 24

Barrels per Day Maximum: 20,143

			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	7,172	4.60	156	154	-24.3	-22.5	0
Monthly Maximum	13,423	9.81	183	180	0.0	0.0	0
Monthly Minimum	0	0.00	121	120	-28.0	-26.6	0
Monthly Total	222,330						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
183.30	121.00	0.60	-28.00

Comments:

On January 8th, one of two pH probes on the injection flow failed and tripped the well offline. A grab sample at the time indicated 7.3 pH. Injection flow was started again. Approximately 1 hour later, another grab sample indicated 10.3 pH. The injection flow was manually stopped and maintenance was called out to replace both pH probes. KFDC recirculated wastwater and adjusted the pH. After approximately 3 hours, the probes were replaced, pH was adjusted back within limits, and injection flow resumed without issue.

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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	10:18	0.00	0.00	177	174.0	-12	-11.3	21		0	LB		
2	09:06	580.88	8.52	121	120.0	-28	-25.7	20		0	LB		
3	10:17	4,800.38	0.00	157	155.0	-26	-24.1	16		0	LB		
4	08:44	0.00	0.00	178	175.0	-21	-21.1	20		0	JB		
5	12:50	0.00	0.00	181	178.0	-2	-4.4	20		0	JB		
6	08:45	29.74	0.00	181	178.0	0	0.0	20		0	JB		
7	09:45	7,727.64	6.57	143	141.0	-28	-25.7	12		0	JB		
8	08:15	10,585.02	9.81	140	138.0	-28	-25.0	12		0	JB		
9	08:15	11,840.33	9.02	145	142.0	-27	-26.1	13		0	NH		
10	09:04	13,423.05	0.00	154	150.0	-28	-26.6	15		0	NH		
11	09:11	11,815.02	8.60	147	145.0	-27	-25.6	13		0	NH		
12	11:20	11,563.14	7.95	150	147.0	-26	-25.7	15		0	CS		
13	09:30	12,205.57	9.07	152	150.0	-26	-25.3	15		0	CS		
14	10:10	11,959.31	8.26	153	151.0	-26	-25.1	15		0	CS		
15	10:10	11,313.69	9.05	143	141.0	-27	-25.7	12		0	CS		
16	09:10	10,957.52	6.90	144	142.0	-28	-25.5	13		0	LB		
17	09:50	11,184.45	7.86	149	146.0	-27	-25.6	16		0	LB		
18	10:30	12,437.43	8.24	149	147.0	-27	-25.3	15		0	LB		
19	09:30	11,935.07	0.00	152	150.0	-28	-26.0	15		0	LB		
20	09:00	200.29	0.00	168	165.0	-28	-24.0	18		0	JB		
21	08:45	0.00	0.00	172	169.0	-26	-21.5	19		0	JB		
22	11:30	0.00	0.00	180	177.0	-25	-19.2	20		0	JB		
23	11:30	0.00	0.00	182	179.0	-24	-17.0	20		0	JB		
24	08:40	0.00	0.00	183	180.0	-16	-15.1	20		0	NH		
25	08:15	9,416.17	6.79	149	147.0	-28	-25.9	15		0	NH		
26	08:20	10,336.14	7.74	147	145.0	-28	-25.8	13		0	NH		
27	10:06	10,458.00	7.12	145	143.0	-27	-25.8	13		0	NH		
28	09:30	11,808.21	7.12	146	144.0	-28	-26.1	13		0	CS		
29	10:40	10,839.88	6.98	146	144.0	-27	-25.8	13		0	CS		
30	09:45	10,061.26	6.98	147	145.0	-26	-25.8	13		0	CS		
31	09:35	4,851.86	0.00	166	163.0	-28	-24.6	18		0	CS		

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Weekly Injectate Samples

Kansas Lab Certificate Number E-10116

Week	Temperature		pH		Chloride			Nitrate	Orthophosphate
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed	mg/l	mg/l
1	73.30	01/03/2022	7.52	01/03/2022	262.0	01/03/2022	01/10/2022	70.00000	1.20000
2	79.40	01/10/2022	9.15	01/10/2022	246.0	01/10/2022	01/13/2022	66.40000	0.66000
3	76.80	01/17/2022	7.03	01/17/2022	361.0	01/17/2022	01/19/2022	59.50000	1.60000
4	78.10	01/24/2022	7.23	01/24/2022	314.0	01/24/2022	02/01/2022	60.00000	1.50000
5	73.60	01/31/2022	6.31	01/31/2022	269.0	01/31/2022	02/02/2022	95.10000	1.20000

Monthly Injectate Samples

Date Sample Collected 01/03/2022

Kansas Lab Certificate Number 10116

Constituent	Value	Units
Chromium	0.0536	mg/l

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Quarterly Injectate Samples

Quarter 1
Date Sample Collected 01/03/2022
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	357.000	mg/l
Conductivity	4,700.000	Mmhos
Iron	0.115	mg/l
Magnesium	108.000	mg/l
Sodium	871.000	mg/l
Specific Gravity	1.010	N/A
Sulfate	1,610.000	mg/l
Total Alkalinity as CaCO3	366.000	mg/l
Total Dissolved Solids	3,780.000	mg/l
Total Hardness as CaCO3	1,340.000	mg/l
Zinc	0.729	mg/l