Facility Well Name Holly Frontier #1 **UIC Permit #** KS-01-115-001 **Month** February **Year** 2019

Submitted 03/26/2019 **Approved** 04/09/2019 **KOLAR Document ID** 1455229

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 28

Barrels per Day Maximum: 6,167

	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	1,284	0.86	129	128	-26.7	-26.1	
Monthly Maximum	1,603	1.36	192	189	-19.0	-18.1	
Monthly Minimum	1,114	0.31	94	92	-28.0	-26.7	
Monthly Total	35,950						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
191.60	86.20	17.80	26.70

Comments:

pH sample caught on 2/20/19 was outside of permit limits with a reading of 4.2. This was caused by a pH probe malfunction upstream of the well located at the Belco Scrubber. The pH probe was giving a false reading, thus causing pH adjustment to not take place. The probe was replaced 2/21/19 and pH levels returned within permit limits.

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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	07:30	1,162.26	0.69	114	114.0	-27	-26.1	15			SW		
2	08:49	1,132.88	0.83	117	115.0	-27	-26.1	15			GAO		
3	09:04	1,126.90	0.88	119	117.0	-26	-26.1	15			GAO		
4	15:37	1,114.07	0.98	112	112.0	-27	-26.3	15			RTM		
5	07:40	1,175.98	0.67	112	111.0	-27	-26.4	15			SW		
6	10:45	1,189.81	0.52	112	111.0	-27	-26.2	15			SW		
7	07:40	1,201.52	1.07	109	107.0	-27	-26.5	14			SW		
8	07:20	1,191.17	0.76	108	108.0	-27	-26.4	14			SW		
9	08:58	1,190.69	0.71	110	108.0	-27	-26.5	14			TN		
10	10:21	1,197.19	1.07	112	110.0	-27	-26.4	14			TN		
11	07:56	1,205.10	1.07	112	111.0	-27	-26.4	14			CM		
12	08:10	1,203.36	1.14	112	110.0	-27	-26.3	14			CM		
13	10:50	1,203.90	0.50	112	113.0	-27	-26.3	15			CM		
14	08:15	1,212.98	0.81	114	113.0	-27	-26.3	15			CM		
15	07:30	1,223.19	0.79	110	110.0	-27	-26.4	15			CM		
16	08:55	1,225.71	0.76	110	109.0	-27	-26.7	14			RTM		
17	09:34	1,237.55	0.43	110	109.0	-27	-26.6	14			RTM		
18	08:15	1,243.52	0.45	108	108.0	-28	-26.6	14			RTM		
19	07:35	1,182.64	0.31	102	101.0	-27	-26.5	14			SW		
20	10:45	1,468.57	1.21	98	96.0	-19	-18.1	16			SW		
21	07:15	1,560.36	0.95	94	92.0	-27	-26.2	17			SW		
22	07:20	1,456.57	1.29	188	187.0	-27	-26.3	15			SW		
23	09:03	1,436.48	0.83	192	187.0	-26	-26.1	15			TN		
24	08:07	1,417.36	1.36	190	189.0	-27	-26.4	15			TN		
25	07:52	1,420.74	0.69	182	184.0	-27	-26.3	15			CM		
26	07:35	1,426.62	1.14	186	185.0	-27	-26.3	15			RTM		
27	10:50	1,539.95	1.12	186	186.0	-27	-26.4	14			CM		
28	07:51	1,602.67	1.00	182	186.0	-27	-26.2	15			CM		
29													
30													
31													

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Weekly Injectate Samples

Kansas Lab Certificate Number E-10146

Week	**Temperature**		**pH**		**Chloride**				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	58.00	02/06/2019	8.40	02/06/2019	80.0	02/06/2019	02/13/2019		
2	62.00	02/13/2019	8.20	02/13/2019	77.0	02/13/2019	02/18/2019		
3	93.00	02/20/2019	4.20	02/20/2019	133.0	02/20/2019	02/25/2019		
4	90.00	02/27/2019	8.90	02/27/2019	70.0	02/27/2019	03/02/2019		
5									

No monthly injectate samples required.