

TABLE K-1  
Pro-UCL Input - Total Arsenic Concentrations  
SNG Well Areas

Louisiana Wetlands, LLC and New 90, LLC vs Energen Resources Corporation, et al.  
Franklin Oil and Gas Field  
St. Mary Parish, Louisiana

All Data (Total)				
Sample	Date	Sampler	Site/Background	TResult
EN-13	9/30/2019	ERM	Site	0.025
EN-13	9/30/2019	ICON	Site	0.0206
MW-6	6/15/2020	ERM	Site	0.0028
MW-6	6/15/2020	ICON	Site	0.00298
MW-7	6/15/2020	ERM	Site	0.064
MW-7	6/15/2020	ICON	Site	0.0604
MW-8	6/17/2020	ERM	Site	0.014
MW-8	6/17/2020	ICON	Site	0.0143
EN-1B	1/22/2019	MP&A	Bckgd	<0.005
EN-1B	1/22/2019	ICON	Bckgd	0.0161
EN-10	1/21/2019	MP&A	Bckgd	0.23
EN-10	1/21/2019	ICON	Bckgd	0.197
EN-19	10/1/2019	ERM	Bckgd	0.027
EN-19	10/1/2019	ICON	Bckgd	0.0249
EN 23	12/9/2019	ERM	Bckgd	0.011
EN 23	12/9/2019	ICON	Bckgd	0.0103
EN-28	2/18/2020	ERM	Bckgd	0.058
EN-28	2/18/2020	ICON	Bckgd	0.0565
EN-29	3/9/2020	ERM	Bckgd	0.16
EN-29	3/9/2020	ICON	Bckgd	0.167
EN-30	2/20/2020	ERM	Bckgd	0.13
EN-30	2/20/2020	ICON	Bckgd	0.119
DMW-1	6/17/2020	ERM	Bckgd	<0.0010
DMW-1	6/17/2020	ICON	Bckgd	<0.0025
MW-3	6/17/2020	ERM	Bckgd	0.046
MW-3	6/17/2020	ICON	Bckgd	0.0418
MW-4	6/16/2020	ERM	Bckgd	0.04
MW-4	6/16/2020	ICON	Bckgd	0.039
MW-5	6/16/2020	ERM	Bckgd	0.048
MW-5	6/16/2020	ICON	Bckgd	0.046

Data (Total) Averaged for Pro-UCL Input (a)			
Sample	Site/Background	TResult	D_Result (b)
EN-13	Site	0.0228	1
MW-6	Site	0.00289	1
MW-7	Site	0.0622	1
MW-8	Site	0.01415	1
EN-1B	Bckgd	0.01055	1
EN-10	Bckgd	0.2135	1
EN-19	Bckgd	0.02595	1
EN 23	Bckgd	0.01065	1
EN-28	Bckgd	0.05725	1
EN-29	Bckgd	0.1635	1
EN-30	Bckgd	0.1245	1
DMW-1	Bckgd	0.00175	0
MW-3	Bckgd	0.0439	1
MW-4	Bckgd	0.0395	1
MW-5	Bckgd	0.047	1

(a) Split sample results were averaged prior to conducting statistical comparison to meet the requirement for independence of the data. Nondetect constituents were averaged with detections using their quantitation limits.

(b) Indicator for detect/non-detect in Pro-UCL input file  
0 = non-detect  
1 = detect

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Total Arsenic T-Test Results</b>										
2											
3	<b>t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs</b>										
4											
5	User Selected Options										
6	Date/Time of Computation			ProUCL 5.18/25/2020 12:37:21 PM							
7	From File			TTest Data.xls							
8	Full Precision			OFF							
9	Confidence Coefficient			95%							
10	Substantial Difference (S)			0.000							
11	Selected Null Hypothesis			Sample 1 Mean <= Sample 2 Mean (Form 1)							
12	Alternative Hypothesis			Sample 1 Mean > the Sample 2 Mean							
13											
14											
15	<b>Sample 1 Data: TResult(site)</b>										
16	<b>Sample 2 Data: TResult(bckgd)</b>										
17											
18											
19	<b>Raw Statistics</b>										
20					Sample 1		Sample 2				
21	Number of Valid Observations				4		11				
22	Number of Distinct Observations				4		11				
23	Minimum				0.00289		0.00175				
24	Maximum				0.0622		0.214				
25	Mean				0.0255		0.0671				
26	Median				0.0185		0.0439				
27	SD				0.0258		0.0694				
28	SE of Mean				0.0129		0.0209				
29											
30	<b>Sample 1 vs Sample 2 Two-Sample t-Test</b>										
31											
32	<b>H0: Mean of Sample 1 - Mean of Sample 2 &lt;= 0</b>										
33					t-Test		Critical				
34	Method			DF		Value		t (0.05)		P-Value	
35	Pooled (Equal Variance)			13		-1.147		1.771		0.864	
36	Welch-Satterthwaite (Unequal Variance)			12.9		-1.692		1.771		0.943	
37	Pooled SD 0.062										
38	Conclusion with Alpha = 0.050										
39	Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2										
40	Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2										
41											
42											
43	<b>Test of Equality of Variances</b>										
44											
45	Variance of Sample 1				6.6474E-4						
46	Variance of Sample 2				0.00482						
47											
48	Numerator DF			Denominator DF			F-Test Value			P-Value	
49	10			3			7.246			0.130	
50	Conclusion with Alpha = 0.05										
51	Two variances appear to be equal										
52											

TABLE K-2  
 Pro-UCL Input - Dissolved Arsenic Concentrations  
 SNG Well Areas

Louisiana Wetlands, LLC and New 90, LLC vs Energen Resources Corporation, et al.  
 Franklin Oil and Gas Field  
 St. Mary Parish, Louisiana

All Data (Dissolved)				
Sample	Date	Sampler	Site/Background	DResult
EN-13	9/30/2019	ERM	Site	0.023
MW-6	6/15/2020	ERM	Site	0.0029
MW-7	6/15/2020	ERM	Site	0.061
MW-8	6/17/2020	ERM	Site	0.012
EN-1B	1/22/2019	MP&A	Bkgd	<0.005
EN-10	1/21/2019	MP&A	Bkgd	0.21
EN-19	10/1/2019	ERM	Bkgd	0.023
EN-19	10/1/2019	ICON	Bkgd	0.0237
EN 23	12/9/2019	ERM	Bkgd	0.01
EN-28	2/18/2020	ERM	Bkgd	0.056
EN-29	3/9/2020	ERM	Bkgd	0.16
EN-29	3/9/2020	ICON	Bkgd	0.186
EN-30	2/20/2020	ERM	Bkgd	0.13
DMW-1	6/17/2020	ERM	Bkgd	<0.0010
MW-3	6/17/2020	ERM	Bkgd	0.043
MW-4	6/16/2020	ERM	Bkgd	0.039
MW-5	6/16/2020	ERM	Bkgd	0.047

Data (Dissolved) Averaged for Pro-UCL Input (a)			
Sample	Site/Background	DResult	D_Dresult (b)
EN-13	Site	0.023	1
MW-6	Site	0.0029	1
MW-7	Site	0.061	1
MW-8	Site	0.012	1
EN-1B	Bkgd	0.005	0
EN-10	Bkgd	0.21	1
EN-19	Bkgd	0.02335	1
EN 23	Bkgd	0.01	1
EN-28	Bkgd	0.056	1
EN-29	Bkgd	0.173	1
EN-30	Bkgd	0.13	1
DMW-1	Bkgd	0.001	0
MW-3	Bkgd	0.043	1
MW-4	Bkgd	0.039	1
MW-5	Bkgd	0.047	1

(a) Split sample results were averaged prior to conducting statistical comparison to meet the requirement for independence of the data. Nondetect constituents were averaged with detections using their quantitation limits.

(b) Indicator for detect/non-detect in Pro-UCL input file

0 = non-detect

1 = detect

