

TCEQ – 4J

2008 MF/RO SWTP's Static Mixers and Coagulant Addition

Site Description:

This site is at the end of the WW effluent transmission line at the Cypress 2008 MF/RO SWTP's Flow Control Vault, and after the coagulant addition and static mixers. The analysis that was performed at this site monitored the addition of coagulant, prior to the 2008 MF/RO clarifier.

Protocol:

TCEQ – 4J 2008 MF/RO SWTP's Static Mixers and Coagulant Addition (at Cypress 2008 MF/RO SWTP's Flow Control Vault)									
	5-min	15-min	2-hr	4-hr	1/day	1/day or Δ	2/week	1/week	S/30/E
Influent alkalinity level				X					
Temperature				X					
Coagulant dosage				X					
Quantity of coagulant used					X				
<i>E. coli</i> enumeration					X				X
<i>Giardia</i>					X				X
<i>Cryptosporidium</i>					X				X

Summary Table:

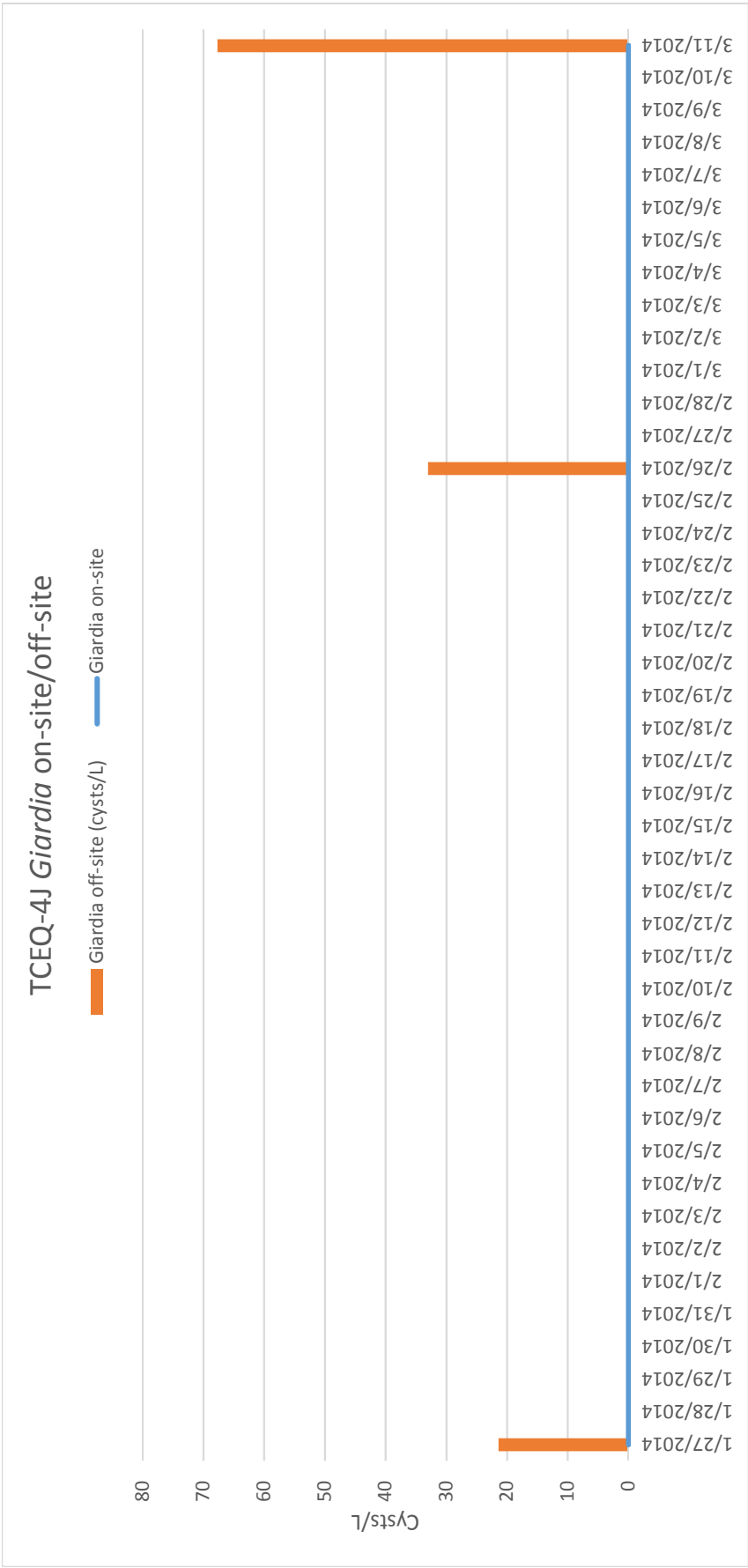
TCEQ – 4J 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

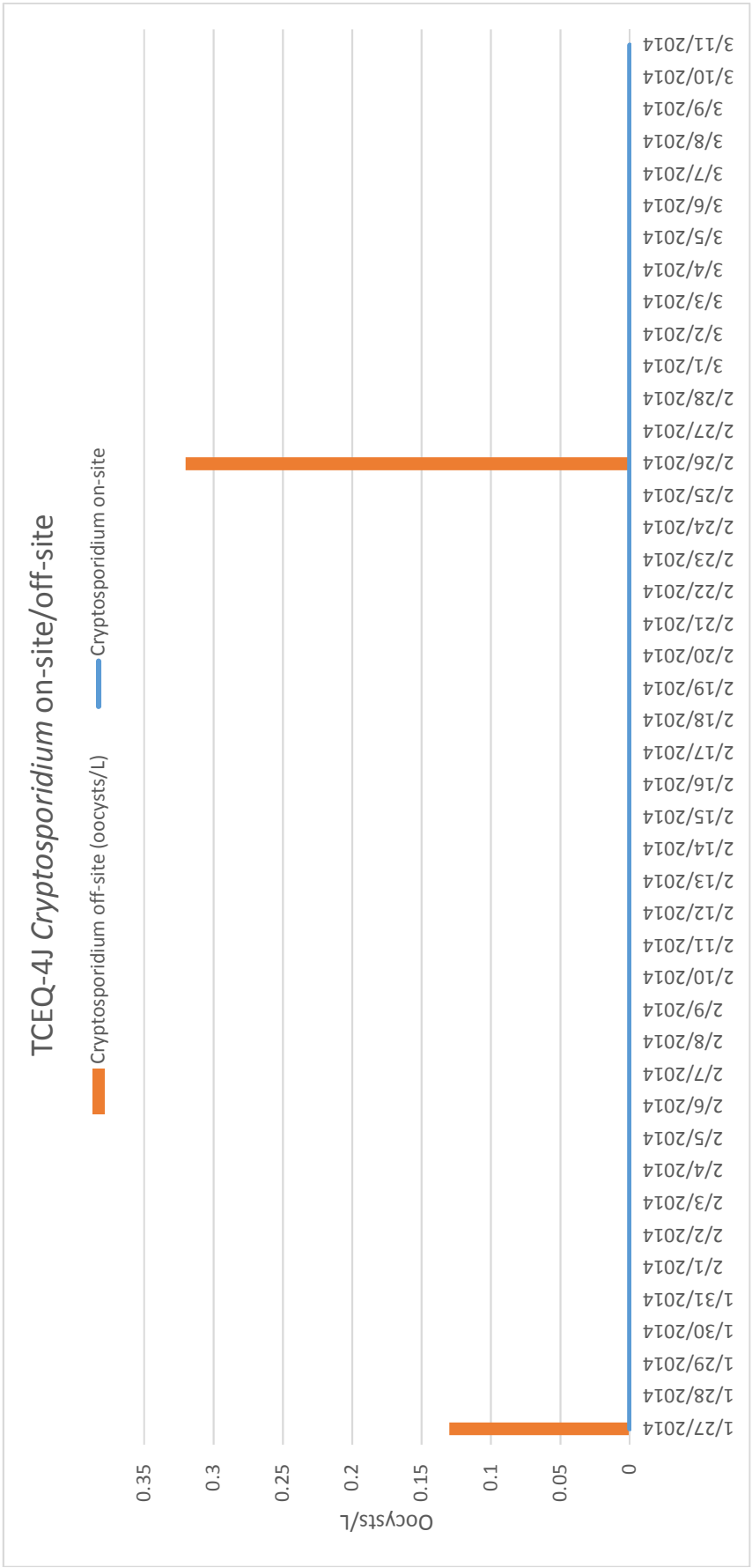
	Alkalinity	Temp	Ferric Dose	GPD Ferric	<i>E. coli</i> on-site	<i>Giardia</i> on-site	<i>Cryptosporidium</i> on-site	<i>E. coli</i> off-site	<i>Giardia</i> off-site	<i>Cryptosporidium</i> off-site
Units	ppm	°C	ppm	gal	MPN	Cysts/L	Oocysts/L	MPN	Cysts/L	Oocysts/L
Min	83	4.0	7	41	0	0	0	0	21.40	0.00
Max	167	28.9	19	104	0	0	0	0	67.65	0.32
Avg	115	12.8	12	71	0	0	0	0	40.69	0.15
95th %	139	21.2	17	95	0	0	0	0	64.19	0.30
n	261	261	261	44	44	44	44	3	3	3

Conclusions:

The Ferric Sulfate system performed well and no changes are warranted at this time.

The off-site EPA Method 1623 of analysis for Giardia and Cryptosporidium detected both protozoans in the water coming from the River Road WWTP. However, the City's on-site qPCR method did not detect any of the protozoans. The City attributes this to the qPCR method detecting at the species level and the EPA Method 1623 only being able to detect at the Genus level. The City's qPCR method is setup to look for only those species of Giardia and Cryptosporidium that have been identified as causing human infection. Therefore, it is the City's opinion that the Giardia and Cryptosporidium that was detected by the EPA Method 1623 were not species that are pathogenic to humans.





TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

4 hour data

Date	Time	TCEQ-4J		
		Alkalinity (ppm)	Temp (°C)	Ferric Dose (ppm)
1/27/2014	2:00	127	15.6	7.82
	6:00	122	12.2	8.17
	10:00	118	9.7	7.91
	14:00	120	6.7	7.85
	18:00	121	6.8	8.14
	22:00	124	7.2	8.05
1/28/2014	2:00	117	7.3	13.5
	6:00	110	7.3	13.4
	10:00	118	8.7	13.2
	14:00	114	11.2	13.4
	18:00	124	11.3	13.9
	22:00	129	8.1	13.7
1/29/2014	2:00	129	10.8	13.2
	6:00	131	6.6	13.2
	10:00	117	10.1	12.1
	14:00	120	13.4	12.5
	18:00	124	12.9	12.6
	22:00	124	11.7	12.6
1/30/2014	2:00	120	9.1	15.7
	6:00	114	8	15.8
	10:00	114	11.6	15.7
	14:00	114	15.1	15.5
	18:00	118	15.7	15.6
	22:00	120	14.5	15.6
1/31/2014	2:00	133	14.1	6.78
	6:00	123	11.3	6.82
	10:00	123	13.4	6.77
	14:00	122	15.4	6.7
	18:00	121	12.3	6.74
	22:00	124	7.9	6.75
2/1/2014	2:00	115	8.1	10.9
	6:00	105	11.9	10.9
	10:00	105	8.1	10.8
	14:00	106	14	10.9
	18:00	104	16.8	10.7
	22:00	106	8.5	10.7
2/2/2014	2:00	115	7.9	12.4
	6:00	114	10.9	12.5

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

4 hour data

Date	Time	TCEQ-4J		
		Alkalinity (ppm)	Temp (°C)	Ferric Dose (ppm)
	10:00	110	10.3	12.5
	14:00	110	8.1	12.3
	18:00	105	10.3	12.5
	22:00	104	8.3	12.5
2/3/2014	2:00	102	9.1	10.1
	6:00	91	8.3	10.1
	10:00	83	9.6	10.1
	14:00	85	9.7	10.1
	18:00	90	11.5	10.1
	22:00	85	12	10
2/4/2014	2:00	90	9.5	12.3
	6:00	86	9.5	12.4
	10:00	97	11.5	12.3
	14:00	96	11.9	13.3
	18:00	95	11.3	13.2
	22:00	112	11.7	13.2
2/5/2014	2:00	117	10.8	9.8
	6:00	114	8.9	9.89
	10:00	111	9.1	9.9
	14:00	114	9.1	9.87
	18:00	122	7.7	9.81
	22:00	125	7.5	9.92
2/6/2014	2:00	124	7.9	12.2
	6:00	118	6.9	12.1
	10:00	112	6.3	12.2
	14:00	111	5.8	12.2
	18:00	110	8.3	12.3
	22:00	114	6.2	12.2
2/7/2014	2:00	124	10.4	13.1
	6:00	123	9	13
	10:00	122	8.2	13
	14:00	122	8.7	13.1
	18:00	126	9.5	13.1
	22:00	128	9.3	13.1
2/8/2014	2:00	128	5.2	13.3
	6:00	120	9.1	13.2
	10:00	130	11.2	13.3
	14:00	122	14.8	13.1

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

4 hour data

Date	Time	TCEQ-4J		
		Alkalinity (ppm)	Temp (°C)	Ferric Dose (ppm)
	18:00	124	19	13.3
	22:00	127	8.8	13.2
2/9/2014	2:00	123	6.7	10.4
	6:00	119	12.4	10.4
	10:00	119	11.5	10.5
	14:00	120	8	10.4
	18:00	127	7.9	10.5
	22:00	130	7.6	10.4
2/10/2014	2:00	113	8.3	11
	6:00	107	7.5	11
	10:00	107	9.3	10.9
	14:00	110	8.7	11
	18:00	113	11.4	10.9
	22:00	116	8.1	10.9
2/11/2014	2:00	107	7.5	13.8
	6:00	115	7.6	13.8
	10:00	117	8.3	13.8
	14:00	122	7.5	13.8
	18:00	143	9.5	13.8
	22:00	143	9.3	13.7
2/12/2014	2:00	141	5.9	11.8
	6:00	143	5.4	11.9
	10:00	140	11.5	11.9
	14:00	142	16.2	11.9
	18:00	136	14.3	12
	22:00	132	13.3	11.9
2/13/2014	2:00	134	6.8	13.8
	6:00	134	6.3	13.8
	10:00	133	14.4	13.8
	14:00	137	16.9	13.6
	18:00	135	19.2	13.8
	22:00	137	15.2	13.7
2/14/2014	2:00	139	10.9	9.64
	6:00	128	9.6	9.62
	10:00	135	13.7	9.57
	14:00	137	20.2	9.42
	18:00	135	18.6	9.61
	22:00	134	13.9	9.52

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

4 hour data

Date	Time	TCEQ-4J		
		Alkalinity (ppm)	Temp (°C)	Ferric Dose (ppm)
2/15/2014	2:00	132	10.4	12.8
	6:00	129	8.8	12.7
	10:00	124	11.6	12.8
	14:00	122	19.6	12.7
	18:00	132	23.7	12.6
	22:00	136	24.2	12.7
2/16/2014	2:00	140	14.2	9.51
	6:00	137	12.5	9.59
	10:00	125	15.4	9.51
	14:00	125	21.2	9.46
	18:00	122	23.9	9.44
	22:00	128	22.1	9.51
2/17/2014	2:00	167	17.6	10.3
	6:00	112	16.9	10.3
	10:00	117	18.4	10.2
	14:00	117	22.3	10.2
	18:00	132	18.8	10.2
	22:00	124	17	10.2
2/18/2014	2:00	107	12.1	14.3
	6:00	100	7.8	14.4
	10:00	110	15.9	14.3
	14:00	108	22.8	14.1
	18:00	139	19.3	14.4
	22:00	146	18.5	14.3
2/19/2014	2:00	121	17.7	12.6
	6:00	117	16.6	12.7
	10:00	112	18.3	12.6
	14:00	112	22.5	12.4
	18:00	118	19.7	12.5
	22:00	119	18.6	12.6
2/20/2014	2:00	119	19.1	13.8
	6:00	125	18.8	13.8
	10:00	121	17.9	13.8
	14:00	121	20	13.7
	18:00	125	18.7	13.9
	22:00	122	17.3	13.8
2/21/2014	2:00	123	10.5	15.2
	6:00	121	7.4	15.1

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

4 hour data

Date	Time	TCEQ-4J		
		Alkalinity (ppm)	Temp (°C)	Ferric Dose (ppm)
	10:00	109	15.9	15.1
	14:00	110	21.6	15
	18:00	133	18.1	15.2
	22:00	138	17.2	15.1
2/22/2014	2:00	139	17.3	13.9
	6:00	142	11.8	13.9
	10:00	131	19.3	13.8
	14:00	131	22.7	13.7
	18:00	140	28.9	13.9
	22:00	139	28.4	13.8
2/23/2014	2:00	139	15.8	11.4
	6:00	134	12.8	11.4
	10:00	121	13.7	11.4
	14:00	117	18.7	11.2
	18:00	123	18.8	11.5
	22:00	116	11.9	11.4
2/24/2014	2:00	117	10.3	12.5
	6:00	106	13.3	12.4
	10:00	107	11.5	12.5
	14:00	110	14.9	12.3
	18:00	116	13.3	12.6
	22:00	109	15.3	12.4
2/25/2014	2:00	99	10.2	14.2
	6:00	91	12.4	14.2
	10:00	86	12.3	14.1
	14:00	93	12.4	14.3
	18:00	124	13	14.2
	22:00	112	12.9	14.1
2/26/2014	2:00	109	8	10.9
	6:00	110	6.2	10.9
	10:00	108	4.2	10.8
	14:00	103	12.2	10.9
	18:00	111	13	10.9
	22:00	108	8.1	10.9
2/27/2014	2:00	107	5.9	16.5
	6:00	99	4	16.6
	10:00	89	11.2	16.7
	14:00	94	16.8	16

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(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

4 hour data

Date	Time	TCEQ-4J		
		Alkalinity (ppm)	Temp (°C)	Ferric Dose (ppm)
	18:00	97	15.7	16
	22:00	97	14.4	16.5
2/28/2014	2:00	95	9.6	16.2
	6:00	92	9.5	16.2
	10:00	95	16.6	16.1
	14:00	98	18.9	16.1
	18:00	103	19.4	16.1
	22:00	104	18.5	16.1
3/1/2014	2:00	101	14	7.78
	6:00	101	13.9	7.79
	10:00	96	12.7	7.84
	14:00	109	19.1	7.69
	18:00	107	18	7.91
	22:00	118	10.5	7.78
3/2/2014	2:00	114	12.1	9.52
	6:00	116	11	9.62
	10:00	120	7.6	9.62
	14:00	121	8.6	9.69
	18:00	115	7.7	9.66
	22:00	112	6.2	9.74
3/3/2014	2:00	100	9.2	18
	6:00	100	7.7	17.9
	10:00	94	9.9	18
	14:00	94	9.1	17.9
	18:00	115	9.9	17.6
	22:00	102	9.4	17.8
3/4/2014	2:00	93	10.9	16.1
	6:00	93	8.5	16.2
	10:00	87	10.7	16.4
	14:00	90	15.6	16.2
	18:00	109	14.6	16.2
	22:00	115	13.1	16.1
3/5/2014	2:00	106	9.5	11.3
	6:00	108	7.7	11.4
	10:00	109	13.2	11.4
	14:00	107	15.4	11.3
	18:00	114	14.9	11.3
	22:00	116	12.9	11.3

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

4 hour data

Date	Time	TCEQ-4J		
		Alkalinity (ppm)	Temp (°C)	Ferric Dose (ppm)
3/6/2014	2:00	114	9.3	14.9
	6:00	108	9.1	15.1
	10:00	105	11.9	14.9
	14:00	105	16.2	14.9
	18:00	111	16.9	14.9
	22:00	115	15.3	15
3/7/2014	2:00	113	11.1	14.5
	6:00	114	9.2	14.4
	10:00	124	15.9	14.3
	14:00	112	18.4	14.3
	18:00	113	23.5	14.2
	22:00	107	18.2	14.3
3/8/2014	2:00	106	16.4	7.28
	6:00	106	13.5	7.31
	10:00	104	14.5	7.28
	14:00	110	14.6	7.27
	18:00	111	12.5	7.29
	22:00	112	7.9	7.32
3/9/2014	2:00	113	8.4	18.5
	6:00	118	12.6	18.4
	10:00	108	12.1	18.4
	14:00	108	16.8	18.3
	18:00	106	26.9	18.1
	22:00	109	14.9	18.5
3/10/2014	2:00	101	16.1	13
	6:00	96	14.3	12.9
	10:00	95	15.9	12.9
	14:00	100	19	12.8
	18:00	107	19.3	12.8
	22:00	96	19.3	12.9
3/11/2014	2:00	98	17.6	11.6
	6:00	91	15.1	11.6
	10:00	84	17.9	11.5

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

Daily data

Date	GPD Ferric	<i>E. coli</i> (MPN)	<i>Giardia</i> on-site	<i>Cryptosporidium</i> on-site
1/27/2014	46	0	0	0
1/28/2014	77	0	0	0
1/29/2014	76	0	0	0
1/30/2014	95	0	0	0
1/31/2014	41	0	0	0
2/1/2014	66	0	0	0
2/2/2014	77	0	0	0
2/3/2014	62	0	0	0
2/4/2014	76	0	0	0
2/5/2014	56	0	0	0
2/6/2014	69	0	0	0
2/7/2014	74	0	0	0
2/8/2014	75	0	0	0
2/9/2014	59	0	0	0
2/10/2014	62	0	0	0
2/11/2014	78	0	0	0
2/12/2014	67	0	0	0
2/13/2014	78	0	0	0
2/14/2014	54	0	0	0
2/15/2014	72	0	0	0
2/16/2014	54	0	0	0
2/17/2014	58	0	0	0
2/18/2014	81	0	0	0
2/19/2014	71	0	0	0
2/20/2014	78	0	0	0
2/21/2014	85	0	0	0
2/22/2014	78	0	0	0
2/23/2014	64	0	0	0
2/24/2014	70	0	0	0
2/25/2014	80	0	0	0
2/26/2014	61	0	0	0
2/27/2014	93	0	0	0
2/28/2014	91	0	0	0
3/1/2014	44	0	0	0
3/2/2014	54	0	0	0

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

Daily data

Date	GPD Ferric	<i>E. coli</i> (MPN)	<i>Giardia</i> on-site	<i>Cryptosporidium</i> on-site
3/3/2014	100	0	0	0
3/4/2014	91	0	0	0
3/5/2014	64	0	0	0
3/6/2014	84	0	0	0
3/7/2014	81	0	0	0
3/8/2014	41	0	0	0
3/9/2014	104	0	0	0
3/10/2014	73	0	0	0
3/11/2014	65	0	0	0

TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition

(at Cypress 2008 MF/RO SWTP's Flow Control Vault)

Start, Day 30, End data

Date	<i>E. coli</i> off-site	<i>Giardia</i> off-site (Cysts/L)	<i>Cryptosporidium</i> off-site (Oocysts/L)
	TCEQ-4J		
1/27/2014	0	21.4	0.13
2/26/2014	0	33.017	0.316
3/16/2014	0	67.653	0

TCEQ 4J Offsite Laboratory Data Summary



LAB Sample ID: 140046-008

Page 1 of 1

Client / Address: WICHITA FALLS, PO Box 1431, WICHITA FALLS TX 76307

Client No: WIC002

Purchase Order No: N/A

PWS ID: N/A

Facility ID: RO Flow Control Vault

Client Contact: Mark Sutherland,

Client Phone: 940-691-1153

SAMPLE INFORMATION:

Name of Sampler: Blair Ramon Customer Sample No.: HVF RO Flow Control Vault
Matrix: Waste Water, treated Date/Time Received: 1/28/2014 10:00:00 AM
Sample Point ID: RO Flow Control Vault Check-in Temp. (0-20C) 1.8
Sample Collection Date: 1/27/2014 Container Type: HV Envirochek
Sample Time: 5:48:00 AM
Comments: Turbidity = 3.1 NTU Calculated Results: 0.13 Oocysts / Liter (Crypto), 21.4 Cysts / Liter (Giardia). Two slides examined.

ASSAY RESULTS: 1623 EPA 821-R-01-025

Sample Preparation

Analysis Date / Time	1/29/14-1555	Filter Type	Envirochek HV
Filter Serial #	519821	Sample Vol Filtered	15.1 L
Sample Vol Examined	15.1 L	Number of Filters	1
Resuspended Conc. Vol.	10 mL	Pellet Volume	2.0 mL
Elution date	1/28/14	Elution Time	1225
Resample	No	Original Sample Date	
Analyst	kw		

Sample Results

Analyte	Crypto
No. of Crypto	2
Analyte 2	Giardia
No. of Giardia	323

Sample Q. C

OPR Crypto Results	58 %
OPR Giardia Results	69 %
Method Blank Results	0

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period. THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF BIOVIR LABORATORIES, INC.

2/14/2014

Report Date

Signature

Quality
Checked

LBarriga

Client Name: City of Wichita Falls

Report #: 312658

Sampling Point: TCEQ 1J-Wastewater Effluent

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	1.066	105.544	cysts/L	---	02/28/14 09:00	2981716
---	Cryptosporidium \$	1623	---	1.066	2.132	oocysts/L	---	02/28/14 09:00	2981716

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Sampling Point: TCEQ 4J-RO flow Control Vault

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	0.158	33.017	cysts/L	---	02/28/14 09:00	2981717
---	Cryptosporidium \$	1623	---	0.158	0.316	oocysts/L	---	02/28/14 09:00	2981717

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Sampling Point: TCEQ 10J-MF Filtrate

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	0.067	< 0.067	cysts/L	---	02/28/14 09:00	2981718
---	Cryptosporidium \$	1623	---	0.067	< 0.067	oocysts/L	---	02/28/14 09:00	2981718

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Sampling Point: TCEQ 20J-RO Permeate

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	0.010	< 0.010	cysts/L	---	02/28/14 09:00	2981719
---	Cryptosporidium \$	1623	---	0.010	< 0.010	oocysts/L	---	02/28/14 09:00	2981719

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Client Name: City of Wichita Falls

Report #: 313488

Sampling Point: Secondary Reservoir

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	0.067	< 0.067	cysts/L	---	03/13/14 09:30	2989594
---	Cryptosporidium \$	1623	---	0.067	< 0.067	oocysts/L	---	03/13/14 09:30	2989594

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Sampling Point: RO Permeate

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	0.067	< 0.067	cysts/L	---	03/13/14 09:30	2989595
---	Cryptosporidium \$	1623	---	0.067	< 0.067	oocysts/L	---	03/13/14 09:30	2989595

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Sampling Point: RO Flow Control Vault

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	2.114	67.653	cysts/L	---	03/13/14 09:30	2989596
---	Cryptosporidium \$	1623	---	2.114	< 2.114	oocysts/L	---	03/13/14 09:30	2989596

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Sampling Point: MF Filtrate

PWS ID: TX2430001

Microbiology									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
---	Giardia \$	1623	---	0.067	< 0.067	cysts/L	---	03/13/14 09:30	2989597
---	Cryptosporidium \$	1623	---	0.067	< 0.067	oocysts/L	---	03/13/14 09:30	2989597

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

\$ The state of origin does not offer certification for this parameter.

Sample Number:

063631 '14 JAN 27

PLEASE Print Below with BALLPOINT Pen or TYPEWRITER

2430001

CITY OF WICHITA FALLS

Water System ID Nbr.

Name of Water System

LO Raw Vault

WICHITA

Point of Collection

County

Submitter ID Nbr:

Submitter Phone Nbr: (940) 691-1153

SEND

Bklyv Ramon

RESULTS

4801 Big Ed Neal Dr

TO

Wichita Falls, TX 76310

City, State, Zip

TYPE OF SYSTEM ☒ Public ☐ Dairy ☐ Private ☐ Bottled ☐ School ☐ Pool

SAMPLE IS ☒ Distribution ☐ Raw ☐ River ☐ Lake ☐ Construction

WATER SOURCE ☐ Repeat ☐ Special ☐ Well ☐ Depth

Other Special Information:

ARRIVAL TEMP. 7.3°C ON ICE

Date & Time
of Collection

01 / 27 / 14
Month - Day - Year

7 : 59 AM
Time AM - PM

Collected by:

Received for
Delivery by

Month - Day - Year

Time

AM - PM

Received by:

Received by
Laboratory

1 / 27 / 14
Month - Day - Year

9 : 40
Time

AM - PM

Received by:

FREE C1 - 0

TOTAL C1 - 0

LABORATORY REPORT (Do Not Write in this Space)

~~FECAL COLIFORM ORGANISMS:~~

Test Method: ☒ Colilert ☐ MFT

Performed by:

Chenav

on

1 / 27 / 14
Month - Day - Year

at

11 : 00 AM
Time PM

Reported by:

Harp/jmc

on

1 / 28 / 14
Month - Day - Year

at

11 : 30 AM
Time PM

RESULTS:

21.0

MPN per 100 ml as Fecal Coliforms (E. Coli)

DUPLICATE

21.0

MPN/100ml as E. Coli

BLANK

21.0

MPN/100ml as E. Coli

Lot # 1308355

EXP 09/2015

Wichita Falls/Wichita County Public Health District Laboratory, CLIA #45D0672374

1700 Third Street, Wichita Falls, Texas 76301-2113

Phone: 940-761-7835 - Fax: 940-761-7878

Sample Number:

063829 '14 FEB 26

PLEASE Print Below with BALLPOINT Pen

2430001

CITY OF WICHITA FALLS

Water System ID Nbr.

Name of Water System

RO Vault

WICHITA

Point of Collection

County

Submitter Phone Nbr:

Submitter Fax Nbr:

(940)691-1153

SEND

Blair Ramon

Name

RESULTS

4801 Big Ed Neal Dr.

Street Address

TO

Wichita Falls, TX 76310

City, State, Zip

TYPE OF SYSTEM ☒ Public ☐ Individual/Private

District

SAMPLE IS ☐ Raw Effluent ☐ Raw

WATER SOURCE ☐ River ☐ Lake ☐ Both River and Lake ☐ Well: ☐ Depth

Chlorine Residual:

Free: 0

Total: 0

Other Special Information:

Arrival Temperature:

10.4° C
on ice

Date & Time
of Collection

02/26/14

6:40

AM - PM

Collected by:

Received for
Delivery by

Month - Day - Year

Time

AM - PM

Received by:

Received by
Laboratory

02/26/14

09:22

AM - PM

Received by:

LABORATORY REPORT (Do Not Write in this Space)

FECAL COLIFORM ORGANISMS:

Test Method: Colilert

Performed by:

on 02/26/14

at 10:30

AM

PM

Reported by:

on 02/27/14

at 1:50

AM

PM

RESULTS: 1.0

MPN per 100 ml as Fecal Coliforms (E. Coli)

Unsuitable for Analysis - PLEASE Resubmit. Reason:

DUPLICATE 1.0

MPN/100ml as E. Coli

Wichita Falls/Wichita County Public Health District Laboratory, CLIA #45D0672374

1700 Third Street, Wichita Falls, Texas 76301-2113

Phone: 940-761-7835 - Fax: 940-761-7878

BLANK

1.0

MPN/100ml as E. Coli

Lot #: 1308366
Exp: 09-2015

Sample Number:

063924'14 MAR 11

PLEASE Print Below with BALLPOINT Pen

2430001

CITY OF WICHITA FALLS

Water System ID Nbr.

Name of Water System

TCEQ 4J-RC Flow Control Vault

WICHITA

Point of Collection

County

Submitter Phone Nbr: 940-691-1153

Submitter Fax Nbr: 940-691-4121

SEND

Blair Ramon

RESULTS

4801 Big Ed Neal Drive

TO

Wichita Falls, TX 76310

City, State, Zip

TYPE OF SYSTEM ☒ Public ☐ Individual/Private DIST.

SAMPLE IS ☐ Raw Effluent ☐ Raw

WATER SOURCE ☐ River ☐ Lake ☐ Both River and Lake ☐ Well: ☐ Depth

Chlorine Residual: Free: ☒ Total: ☒

Other Special Information:

Arrival Temperature: 7.0°C ON ICE

Date & Time
of Collection

03/11/14
Month - Day - Year

7:15
Time

AM-PM

BR
Collected by:

Received for
Delivery by

Month - Day - Year

Time

AM - PM

Received by:

Received by
Laboratory

3/11/2014 9:40
Month - Day - Year Time

AM - PM

Received by:

JMC

LABORATORY REPORT (Do Not Write in this Space)

~~FECAL COLIFORM ORGANISMS:~~

Test Method: Colilert

Performed by: JMC

on

3/11/14
Month - Day - Year

at

10:45 AM
Time PM

Reported by: JMC

on

3/12/14
Month - Day - Year

at

11:15 AM
Time PM

RESULTS: <1.0 MPN per 100 ml as Fecal Coliforms (E. Coli)

Unsuitable for Analysis - PLEASE Resubmit. Reason:

DUPLICATE <1.0 MPN/100ml as E. Coli

Wichita Falls/Wichita County Public Health District Laboratory, CLIA #45D0672374

1700 Third Street, Wichita Falls, Texas 76301-2113

Phone: 940-761-7835 - Fax: 940-761-7878

BLANK

<1.0

MPN/100ml as E. Coli

Lot #: 1308355
Exp: 07-2015