

Bay Area WTP

Monthly Operations Report



December, 2019

Water Systems Serial Number:

0465



Ryan Goebel

Water Plant Superintendent

Title

F-1

Classification



Mike Wagar

Operations Supervisor

Title

F-2

Classification

Bay Area Water Treatment Plant

Monthly Operations Report

Supply Name: Bay Area Water System
 WSSN: 0465

Ryan Goebel
 Operator-in-charge

December, 2019
 Month, Year

F-1
 Certification of Operator-in-charge

F-1
 Water Plant Classification

Bay
 County

Treatment Rate and Membrane Data

Treatment Rate, Approved Rated Plant Capacity	17.4	Millions of Gallons per Day
Treatment Rate, Maximum	7.5	Millions of Gallons per Day
Maximum Approved Transmembrane Pressure	22	PSI
Maximum Operating Transmembrane Pressure	22	PSI

Chemical Data

Sodium Hypochlorite on hand:	4,398	Gallons	Estimated Supply:	70.1	days
Caustic Soda on hand:	1,130	Gallons	Estimated Supply:	83.9	days
Corrosion Inhibitor on hand:	1,165	Gallons	Estimated Supply:	54.9	days
Hydrofluosilicic Acid on hand:	1,640	Gallons	Estimated Supply:	95.0	days
Aluminum Chlorohydrate on hand:	303	Gallons	Estimated Supply:	57.7	days
Sulfuric Acid on hand:	840	Gallons	Estimated Supply:	204.2	days
Sodium Bisulfite on hand:	1,163	Gallons	Estimated Supply:	157.8	days
Citric Acid on hand:	1,457	Gallons	Estimated Supply:	162.0	days
Cost of All Chemicals per Million Gallons:	70.89	Dollars			
Estimated Electrical Cost per Million Gallons:	94.98	Dollars			
Estimated Natural Gas Cost per Million Gallons:	14.52	Dollars			

Remarks

Number of periods of filter confluence turbidity samples > 0.3 NTU 0

Percent of membrane period confluence samples > 0.3 NTU: 0.00%

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month?
 If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet. No

Did POE disinfectant residual fall below 0.2 ppm during the month?
 If yes, indicate date(s) and duration on a separate sheet. No

Was minimum C*T credit achieved for the entire month?
 If no, indicate on a separate sheet the date(s) not achieved. Yes

Was continuous POE chlorine residual monitoring equipment off-line during the month?
 If yes, date(s) and duration will be indicated on the rule page. Yes



Notes

Plant lost all power at 12:20 am on Dec 5. High service was restored at 4:45 am and Finished water analyzer was back online at 5 am. A Tap grab sample was collected at 4:55 am and showed 1.23mg/l CL2. All power was restored just after 9 am.

Bay Area WTP Monthly Operating Report

Date	Flows									
	Raw Water (MG)			Clarified (MG)	Wasted (MG)	Sludge (MG)	Treated (MG)	Finished Water Pumped (MG)		
	North	South	Total	Total	Total	Total	Total	N. Euclid	Lauria Road	Total
	FIT-1000-1	FIT-1000-2	Calculated	FIT-5520-1	FIT-5520-2	FIT-5180	FIT-4000-1	FIT-4040-1	FIT-4040-2	Calculated
12/1/2019	0.00	6.58	6.58	0.26	0.00	0.04	6.73	3.33	3.19	6.53
12/2/2019	0.00	7.06	7.06	0.23	0.00	0.06	6.48	3.16	3.07	6.23
12/3/2019	0.00	7.21	7.21	0.21	0.00	0.08	6.69	3.22	3.17	6.39
12/4/2019	0.00	7.23	7.23	0.23	0.00	0.09	6.88	3.35	3.28	6.62
12/5/2019	0.00	5.48	5.48	0.23	0.00	0.06	5.93	2.84	2.79	5.63
12/6/2019	0.00	7.23	7.23	0.25	0.00	0.08	7.16	3.22	3.16	6.39
12/7/2019	0.00	6.88	6.88	0.25	0.00	0.08	6.50	3.13	3.08	6.21
12/8/2019	0.00	6.08	6.08	0.24	0.00	0.08	6.49	3.19	3.13	6.32
12/9/2019	0.00	6.27	6.27	0.22	0.00	0.08	6.80	3.33	3.24	6.56
12/10/2019	0.00	6.64	6.64	0.22	0.00	0.08	6.80	3.39	3.22	6.61
12/11/2019	0.00	7.68	7.68	0.26	0.00	0.08	7.49	3.66	3.46	7.12
12/12/2019	0.00	7.25	7.25	0.24	0.00	0.08	6.13	3.00	2.96	5.96
12/13/2019	0.00	6.60	6.60	0.21	0.00	0.07	6.76	3.27	3.23	6.50
12/14/2019	0.00	7.03	7.03	0.27	0.00	0.04	6.56	3.15	3.11	6.26
12/15/2019	0.00	6.00	6.00	0.27	0.00	0.04	6.62	3.24	3.21	6.45
12/16/2019	0.00	6.17	6.17	0.26	0.00	0.04	6.53	3.13	3.10	6.23
12/17/2019	0.00	6.77	6.77	0.25	0.00	0.04	6.82	3.31	3.24	6.55
12/18/2019	0.00	6.97	6.97	0.26	0.00	0.04	6.75	3.29	3.19	6.48
12/19/2019	0.00	6.89	6.89	0.26	0.00	0.04	7.22	3.59	3.39	6.99
12/20/2019	0.00	7.02	7.02	0.25	0.00	0.04	6.65	3.18	3.11	6.29
12/21/2019	0.00	6.55	6.55	0.27	0.00	0.04	6.80	3.31	3.27	6.57
12/22/2019	0.00	6.56	6.56	0.26	0.00	0.04	6.94	3.37	3.34	6.72
12/23/2019	0.00	7.11	7.11	0.28	0.00	0.04	6.95	3.36	3.30	6.66
12/24/2019	0.00	7.28	7.28	0.25	0.00	0.04	6.62	3.26	3.18	6.43
12/25/2019	0.00	6.24	6.24	0.26	0.00	0.03	6.16	2.95	2.88	5.83
12/26/2019	0.00	5.87	5.87	0.26	0.00	0.03	6.42	3.15	3.06	6.21
12/27/2019	0.00	6.34	6.34	0.25	0.00	0.03	6.70	3.27	3.18	6.45
12/28/2019	0.00	6.21	6.21	0.27	0.00	0.03	6.70	3.25	3.19	6.44
12/29/2019	0.00	6.67	6.67	0.24	0.00	0.04	6.62	3.20	3.15	6.35
12/30/2019	0.00	6.72	6.72	0.26	0.00	0.04	6.55	3.18	3.10	6.28
12/31/2019	0.00	6.87	6.87	0.24	0.00	0.04	6.63	3.17	3.10	6.26
Total	0.00	207.47	207.47	7.70	0.00	1.60	207.06	100.45	98.07	198.52
Avg	0.00	6.69	6.69	0.25	0.00	0.05	6.68	3.24	3.16	6.40
Min	0.00	5.48	5.48	0.21	0.00	0.03	5.93	2.84	2.79	5.63
Max	0.00	7.68	7.68	0.28	0.00	0.09	7.49	3.66	3.46	7.12



Raw Water Analysis								
Date	Temp	pH	Turbidity		F	Free Cl	Bacti	
	Average	Average	Average	Maximum	Grab	Average	Positive/Negative	
	°C		NTU		mg/L	mg/L	Total Coliform	E. coli
	TIT-1000	AIT-1000-2	AIT-1000-1		Lab	AIT-1035-2	Lab	
12/1/2019	7.89	7.92	1.32	5.32	0.08	0.42	Negative	Negative
12/2/2019	7.98	7.92	5.20	19.94	0.07	0.22	Negative	Negative
12/3/2019	7.98	7.90	13.33	100.06	0.08	0.18	Negative	Negative
12/4/2019	7.77	7.90	12.99	62.22	0.07	0.30	Negative	Negative
12/5/2019	7.47	7.89	4.48	40.62	0.08	0.48	Negative	Negative
12/6/2019	8.05	7.89	1.89	11.30	0.08	0.52	Negative	Negative
12/7/2019	8.12	7.88	2.52	4.74	0.08	0.58	Negative	Negative
12/8/2019	8.31	7.89	2.84	13.87	0.08	0.49	Negative	Negative
12/9/2019	8.27	7.90	2.36	7.16	0.08	0.49	Negative	Negative
12/10/2019	8.30	7.90	1.21	11.10	0.08	0.52	Negative	Negative
12/11/2019	8.29	7.91	0.60	2.27	0.08	0.47	Negative	Negative
12/12/2019	8.19	7.92	0.64	6.52	0.09	0.45	Negative	Negative
12/13/2019	8.05	7.92	0.45	1.97	0.10	0.46	Negative	Negative
12/14/2019	8.15	7.91	0.41	1.09	0.10	0.45	Negative	Negative
12/15/2019	8.19	7.91	0.47	4.32	0.10	0.46	Negative	Negative
12/16/2019	8.12	7.91	0.35	3.61	0.09	0.45	Negative	Negative
12/17/2019	8.10	7.91	0.27	0.53	0.09	0.45	Negative	Negative
12/18/2019	8.04	7.91	0.27	0.89	0.10	0.46	Negative	Negative
12/19/2019	7.87	7.92	0.34	2.80	0.10	0.44	Negative	Negative
12/20/2019	7.45	7.91	0.33	1.56	0.10	0.44	Negative	Negative
12/21/2019	7.01	7.90	0.32	0.90	0.10	0.46	Negative	Negative
12/22/2019	6.88	7.90	0.37	1.19	0.09	0.49	Negative	Negative
12/23/2019	6.84	7.90	0.32	0.88	0.09	0.50	Negative	Negative
12/24/2019	6.92	7.90	0.32	2.46	0.10	0.48	Negative	Negative
12/25/2019	7.24	7.91	0.28	1.57	0.09	0.47	Negative	Negative
12/26/2019	7.21	7.91	0.31	0.83	0.08	0.44	Negative	Negative
12/27/2019	7.56	7.90	0.27	0.78	0.08	0.47	Negative	Negative
12/28/2019	7.55	7.90	0.30	0.58	0.08	0.48	Negative	Negative
12/29/2019	7.56	7.89	0.32	0.86	0.07	0.51	Negative	Negative
12/30/2019	7.70	7.90	0.29	1.04	0.07	0.51	Negative	Negative
12/31/2019	7.54	7.90	1.34	7.62	0.09	0.41	Negative	Negative
Avg	7.8	7.90	1.83	10.34	0.09	0.45	NA	NA
Min	6.8	7.88	0.27	0.53	0.07	0.18	NA	NA
Max	8.3	7.92	13.33	100.06	0.10	0.58	NA	NA



Finished Water Analysis																		
Date	Temp	pH	Phosphate	Fluoride		Free Cl ₂	Alkalinity (as CaCO ₃)		Chloride	Sulfate	Calcium (as CaCO ₃)	Dissolved Oxygen	Conductivity	Langelier Saturation Index	Chloride: Sulfate Mass Ratio	Larson-Skold Index	Bacti	
	Average	Average	Average	Tap	Dist	Average	Carbonate	Bicarbonate	Grab	Grab	Grab	Grab	Grab				Positive/Negative	
	°C		mg/L	mg/L		mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	uS/cm				Total Coliform	E. coli
	AIT-4040-1	AIT-4050-2	AIT-4040-5	Lab		AIT-4050-1	Lab		Lab	Lab	Lab	Lab	Lab	Calculated	Lab			
12/1/2019	7.2	7.52	3.36	0.75		1.20	0	80	10	11	68	11.7	225	-1.01	0.91	0.39	Negative	Negative
12/2/2019	7.1	7.52	3.38	0.76	0.81	1.20	0	76	12	11	88	11.8	225	-0.93	1.07	0.45	Negative	Negative
12/3/2019	6.8	7.51	3.46	0.76		1.19	0	76	12	11	88	11.8	225	-0.94	1.07	0.45	Negative	Negative
12/4/2019	6.6	7.52	3.44	0.72		1.18	0	81	11	9	84	11.6	235	-0.93	1.19	0.37	Negative	Negative
12/5/2019	6.4	7.56	3.32	0.74		1.22	0	85	11	8	98	11.5	236	-0.81	1.40	0.35	Negative	Negative
12/6/2019	6.8	7.52	3.42	0.73		1.22	0	86	11	9	86	13.4	232	-0.89	1.23	0.36	Negative	Negative
12/7/2019	6.8	7.51	3.43	0.79		1.22	0	77	10	9	80	12.6	229	-0.98	1.14	0.38	Negative	Negative
12/8/2019	7.0	7.50	3.42	0.76		1.23	0	75	12	12	80	11.8	229	-0.99	0.98	0.48	Negative	Negative
12/9/2019	6.9	7.49	3.43	0.78	0.75	1.22	0	75	10	11	82	9.8	226	-1.00	0.93	0.42	Negative	Negative
12/10/2019	6.9	7.51	3.42	0.79		1.22	0	77	9	11	76	10.3	226	-1.00	0.81	0.38	Negative	Negative
12/11/2019	6.9	7.50	3.42	0.77		1.23	0	75	9	9	72	11.1	225	-1.04	1.03	0.37	Negative	Negative
12/12/2019	6.8	7.50	3.42	0.77		1.22	0	78	10	11	74	11.9	227	-1.02	0.91	0.40	Negative	Negative
12/13/2019	6.8	7.50	3.41	0.79		1.21	0	77	8	10	70	11.5	218	-1.04	0.75	0.33	Negative	Negative
12/14/2019	6.9	7.49	3.41	0.79		1.22	0	78	9	10	82	12.8	221	-0.98	0.90	0.36	Negative	Negative
12/15/2019	7.1	7.50	3.41	0.80		1.23	0	74	9	10	72	11.5	224	-1.04	0.89	0.38	Negative	Negative
12/16/2019	7.0	7.49	3.41	0.79	0.75	1.22	0	78	8	11	70	11.9	222	-1.05	0.75	0.36	Negative	Negative
12/17/2019	6.8	7.49	3.40	0.75		1.15	0	76	10	10	74	12.9	221	-1.03	0.95	0.39	Negative	Negative
12/18/2019	6.7	7.51	3.41	0.80		1.03	0	76	10	10	74	12.6	222	-1.02	0.95	0.39	Negative	Negative
12/19/2019	6.7	7.50	3.40	0.76		1.01	0	77	9	9	72	12.8	223	-1.04	1.00	0.35	Negative	Negative
12/20/2019	6.4	7.50	3.39	0.76		1.02	0	76	10	10	70	12.5	223	-1.06	1.00	0.40	Negative	Negative
12/21/2019	6.1	7.50	3.39	0.75		1.03	0	75	10	10	74	12.4	225	-1.06	1.00	0.40	Negative	Negative
12/22/2019	5.9	7.49	3.40	0.75		1.02	0	76	10	10	76	12.4	224	-1.04	1.00	0.40	Negative	Negative
12/23/2019	5.9	7.49	3.40	0.74	0.70	1.02	0	76	9	10	74	13.2	221	-1.06	0.90	0.37	Negative	Negative
12/24/2019	6.0	7.49	3.40	0.73		1.02	0	76	9	10	74	13.0	222	-1.06	0.90	0.37	Negative	Negative
12/25/2019	6.3	7.49	3.40	0.73		1.01	0	80	10	10	68	13.3	220	-1.07	1.00	0.38	Negative	Negative
12/26/2019	6.2	7.48	3.40	0.77		1.01	0	78	10	10	68	13.1	219	-1.09	0.99	0.38	Negative	Negative
12/27/2019	6.4	7.53	3.40	0.72		1.01	0	78	10	10	68	12.4	224	-1.03	1.00	0.39	Negative	Negative
12/28/2019	6.3	7.58	3.40	0.74		1.01	0	78	10	10	70	12.5	219	-0.97	1.03	0.39	Negative	Negative
12/29/2019	6.3	7.57	3.40	0.75		1.01	0	80	10	10	68	12.9	220	-0.98	1.00	0.38	Negative	Negative
12/30/2019	6.4	7.58	3.39	0.75	0.63	1.01	0	77	9	10	70	13.1	220	-0.98	0.92	0.37	Negative	Negative
12/31/2019	6.2	7.59	3.39	0.80		1.01	0	74	9	8	76	12.2	222	-0.95	1.18	0.36	Negative	Negative
Avg	6.6	7.51	3.40	0.76	0.73	1.12	0	77	10	10	76	12.2	224	-1.00	0.99	0.39	NA	NA
Min	5.9	7.48	3.32	0.72	0.63	1.01	0	74	8	8	68	9.8	218	-1.09	0.75	0.33	NA	NA
Max	7.2	7.59	3.46	0.80	0.81	1.23	0	86	12	12	98	13.4	236	-0.81	1.40	0.48	NA	NA



Turbidity										
Date	Raw Water		Clarified Water	Membrane Feed Water	Combined Membrane Filtrate					Finished Water
	Avg	Max	Avg	Avg	Avg	Max	# Samples	# > 0.3	% Exceeded	Avg
	NTU									
	AIT-1000-1	AIT-5030-1	AIT-1035-3	AIT-4000-1					Calculated	
12/1/2019	1.32	5.32	0.84	1.37	0.020	0.020	96	0	0.0	0.014
12/2/2019	5.20	19.94	0.68	2.79	0.020	0.020	96	0	0.0	0.014
12/3/2019	13.33	100.06	0.85	6.93	0.020	0.020	96	0	0.0	0.014
12/4/2019	12.99	62.22	1.22	11.51	0.020	0.021	96	0	0.0	0.015
12/5/2019	4.48	40.62	0.96	9.90	0.019	0.023	96	0	0.0	0.016
12/6/2019	1.89	11.30	0.72	5.02	0.020	0.021	96	0	0.0	0.015
12/7/2019	2.52	4.74	0.55	3.45	0.020	0.020	96	0	0.0	0.015
12/8/2019	2.84	13.87	0.60	3.40	0.020	0.020	96	0	0.0	0.015
12/9/2019	2.36	7.16	0.82	3.01	0.020	0.021	96	0	0.0	0.015
12/10/2019	1.21	11.10	0.70	2.22	0.020	0.020	96	0	0.0	0.015
12/11/2019	0.60	2.27	0.93	1.37	0.020	0.020	96	0	0.0	0.015
12/12/2019	0.64	6.52	0.83	0.94	0.020	0.020	96	0	0.0	0.015
12/13/2019	0.45	1.97	0.80	0.67	0.020	0.021	96	0	0.0	0.014
12/14/2019	0.41	1.09	0.82	0.53	0.020	0.020	96	0	0.0	0.014
12/15/2019	0.47	4.32	0.83	0.53	0.020	0.020	96	0	0.0	0.015
12/16/2019	0.35	3.61	0.91	0.48	0.021	0.022	96	0	0.0	0.014
12/17/2019	0.27	0.53	0.88	0.37	0.022	0.022	96	0	0.0	0.016
12/18/2019	0.27	0.89	1.16	0.32	0.022	0.022	96	0	0.0	0.016
12/19/2019	0.34	2.80	0.88	0.30	0.022	0.022	96	0	0.0	0.016
12/20/2019	0.33	1.56	0.87	0.31	0.022	0.022	96	0	0.0	0.016
12/21/2019	0.32	0.90	0.92	0.31	0.022	0.022	96	0	0.0	0.016
12/22/2019	0.37	1.19	0.91	0.38	0.022	0.022	96	0	0.0	0.016
12/23/2019	0.32	0.88	0.97	0.37	0.022	0.022	96	0	0.0	0.016
12/24/2019	0.32	2.46	0.86	0.34	0.022	0.022	96	0	0.0	0.016
12/25/2019	0.28	1.57	0.94	0.31	0.022	0.022	96	0	0.0	0.016
12/26/2019	0.31	0.83	0.85	0.31	0.022	0.022	96	0	0.0	0.016
12/27/2019	0.27	0.78	0.91	0.30	0.022	0.022	96	0	0.0	0.016
12/28/2019	0.30	0.58	1.00	0.31	0.022	0.022	96	0	0.0	0.016
12/29/2019	0.32	0.86	0.89	0.33	0.022	0.022	96	0	0.0	0.016
12/30/2019	0.29	1.04	0.81	0.32	0.022	0.022	96	0	0.0	0.016
12/31/2019	1.34	7.62	1.01	0.65	0.022	0.022	96	0	0.0	0.016
Avg	1.83	10.34	0.87	1.91	0.021	0.021	96	0	0.0	0.015
Min	0.27	0.53	0.55	0.30	0.019	0.020	96	0	0.0	0.014
Max	13.33	100.06	1.22	11.51	0.022	0.023	96	0	0.0	0.016



Note: % Exceeded are 4 hr compliance periods where the average of samples are greater than 0.3 NTU

Date	Membrane Integrity																							
	Membrane 1			Membrane 2			Membrane 3			Membrane 4			Membrane 5			Membrane 6			Membrane 7			Membrane 8		
	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail
12/1/2019	14.5	14.0	PASS	14.3	13.8	PASS	14.8	14.4	PASS	14.3	13.9	PASS	14.5	13.9	PASS	14.4	14.0	PASS	14.7	14.3	PASS	14.3	13.7	PASS
12/2/2019	14.8	14.3	PASS	14.3	13.8	PASS	14.6	14.1	PASS	14.6	14.3	PASS	14.4	13.8	PASS	14.4	14.0	PASS	15.0	14.8	PASS	14.3	13.8	PASS
12/3/2019	14.8	14.3	PASS	14.3	13.8	PASS	14.6	14.1	PASS	14.3	14.0	PASS	14.6	14.0	PASS	14.3	14.0	PASS	14.7	14.3	PASS	14.3	13.7	PASS
12/4/2019	14.7	14.2	PASS	14.3	13.8	PASS	14.5	14.0	PASS	14.6	14.3	PASS	14.6	14.0	PASS	14.3	14.0	PASS	14.7	14.3	PASS	14.4	13.9	PASS
12/5/2019	14.8	14.3	PASS	14.4	13.8	PASS	14.6	14.0	PASS	14.3	13.9	PASS	14.5	13.9	PASS	14.4	14.0	PASS	14.7	14.3	PASS	14.3	13.8	PASS
12/6/2019	13.8	13.0	PASS	14.4	13.8	PASS	14.5	14.0	PASS	14.3	13.9	PASS	14.5	13.9	PASS	14.4	14.0	PASS	14.9	14.4	PASS	14.2	13.5	PASS
12/7/2019	14.6	14.1	PASS	14.3	13.7	PASS	14.6	14.1	PASS	14.3	13.9	PASS	14.4	13.9	PASS	14.3	13.9	PASS	14.5	14.0	PASS	14.2	13.7	PASS
12/8/2019	14.8	14.3	PASS	14.3	13.8	PASS	14.7	14.2	PASS	14.4	13.9	PASS	14.6	14.0	PASS	14.4	14.0	PASS	14.6	14.2	PASS	14.3	13.7	PASS
12/9/2019	14.7	14.3	PASS	14.3	13.8	PASS	14.5	14.0	PASS	14.3	13.9	PASS	14.6	14.1	PASS	14.3	13.9	PASS	14.5	14.0	PASS	14.3	13.7	PASS
12/10/2019	14.6	14.1	PASS	14.3	13.8	PASS	14.5	14.0	PASS	14.3	13.9	PASS	14.4	13.9	PASS	14.3	14.0	PASS	14.4	14.0	PASS	14.3	13.7	PASS
12/11/2019	14.8	14.3	PASS	14.4	13.8	PASS	14.7	14.3	PASS	14.3	13.9	PASS	14.4	13.9	PASS	14.3	13.9	PASS	14.6	14.1	PASS	14.4	13.8	PASS
12/12/2019	14.5	14.0	PASS	14.3	13.8	PASS	14.7	14.3	PASS	14.3	13.8	PASS	14.4	13.9	PASS	14.3	13.9	PASS	14.6	14.2	PASS	14.3	13.7	PASS
12/13/2019	14.5	14.0	PASS	14.3	13.7	PASS	14.7	14.2	PASS	14.3	13.9	PASS	14.6	14.1	PASS	14.4	14.0	PASS	14.4	13.9	PASS	14.3	13.7	PASS
12/14/2019	14.7	14.2	PASS	14.3	13.7	PASS	14.7	14.2	PASS	14.3	13.9	PASS	14.6	14.0	PASS	14.4	14.0	PASS	14.5	14.0	PASS	14.3	13.8	PASS
12/15/2019	14.7	14.2	PASS	14.3	13.7	PASS	14.5	14.0	PASS	14.3	13.9	PASS	14.4	13.8	PASS	14.4	14.0	PASS	14.5	14.0	PASS	14.3	13.6	PASS
12/16/2019	14.8	14.3	PASS	14.3	13.7	PASS	14.6	14.1	PASS	14.3	13.9	PASS	14.6	14.1	PASS	14.4	14.0	PASS	14.7	14.4	PASS	14.2	13.7	PASS
12/17/2019	14.7	14.2	PASS	14.3	13.7	PASS	14.5	14.0	PASS	14.2	13.8	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.4	13.9	PASS	14.3	13.7	PASS
12/18/2019	14.7	14.2	PASS	14.3	13.7	PASS	14.5	14.0	PASS	14.6	14.3	PASS	14.4	13.8	PASS	14.7	14.5	PASS	14.6	14.2	PASS	14.2	13.6	PASS
12/19/2019	14.7	14.3	PASS	14.3	13.7	PASS	14.7	14.2	PASS	14.6	14.3	PASS	14.6	14.1	PASS	14.4	14.0	PASS	14.5	14.0	PASS	14.3	13.7	PASS
12/20/2019	14.7	14.2	PASS	14.3	13.7	PASS	14.7	14.3	PASS	14.5	14.2	PASS	14.7	14.2	PASS	14.4	14.0	PASS	14.6	14.2	PASS	14.2	13.6	PASS
12/21/2019	14.7	14.2	PASS	14.3	13.7	PASS	14.7	14.3	PASS	14.6	14.3	PASS	14.6	14.0	PASS	14.6	14.4	PASS	14.4	14.0	PASS	14.3	13.7	PASS
12/22/2019	14.7	14.2	PASS	14.3	13.7	PASS	14.8	14.3	PASS	14.2	13.8	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.6	14.2	PASS	14.3	13.7	PASS
12/23/2019	15.0	14.6	PASS	14.3	13.8	PASS	14.7	14.1	PASS	14.3	13.9	PASS	14.3	13.7	PASS	14.3	13.9	PASS	14.6	14.1	PASS	14.3	13.7	PASS
12/24/2019	14.7	14.2	PASS	14.4	13.9	PASS	14.6	14.1	PASS	14.3	13.9	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.5	14.0	PASS	14.3	13.7	PASS
12/25/2019	14.7	14.2	PASS	14.7	14.3	PASS	14.7	14.2	PASS	14.3	13.9	PASS	14.5	13.9	PASS	14.4	14.0	PASS	14.5	14.0	PASS	14.3	13.7	PASS
12/26/2019	14.9	14.4	PASS	14.8	14.4	PASS	14.7	14.2	PASS	14.4	13.9	PASS	14.6	14.1	PASS	14.4	14.1	PASS	14.6	14.1	PASS	14.3	13.7	PASS
12/27/2019	14.6	14.1	PASS	14.3	13.8	PASS	14.4	13.9	PASS	14.3	13.9	PASS	14.3	13.8	PASS	14.4	14.0	PASS	14.4	13.9	PASS	14.3	13.7	PASS
12/28/2019	14.8	14.3	PASS	14.3	13.8	PASS	14.6	14.1	PASS	14.3	13.9	PASS	15.2	15.0	PASS	14.3	14.0	PASS	14.4	13.9	PASS	14.3	13.7	PASS
12/29/2019	14.6	14.1	PASS	14.3	13.7	PASS	14.7	14.3	PASS	14.3	13.8	PASS	14.7	14.1	PASS	14.3	14.0	PASS	14.4	13.9	PASS	14.3	13.7	PASS
12/30/2019	14.8	14.4	PASS	14.4	13.9	PASS	14.4	13.8	PASS	14.3	13.9	PASS	14.3	13.6	PASS	14.3	14.0	PASS	14.4	13.9	PASS	14.3	13.7	PASS
12/31/2019	14.8	14.4	PASS	14.3	13.7	PASS	14.8	14.3	PASS	14.3	13.9	PASS	14.6	14.0	PASS	14.4	14.0	PASS	14.6	14.2	PASS	14.3	13.7	PASS

Integrity test performed every 24-hours



Treatment Chemical Dosages											
Date	Treated Water	Sodium Hypochlorite					Phosphoric Acid		Hydrofluorosilicic Acid		
		Raw Water	Membrane Feed Water	Dose pre-FW Tanks	Treated Water	Post FW Tanks	Dose pre-FW Tanks	Post FW Tanks	Raw Water	Dose pre-FW Tanks	Post FW Tanks
	Volume	Free Cl ₂					PO4		F		
	MG	mg/L					mg/L		mg/L		
	FIT-4000-1	AIT-1035-2	AIT-1035-4	Added	AIT-4030-1	AIT-4050-1	Added	AIT-4040-5	Lab	Added	Lab
12/1/2019	6.7	0.42	0.35	1.01	1.31	1.20	3.38	3.36	0.08	0.60	0.75
12/2/2019	6.5	0.22	0.29	1.15	1.30	1.20	3.38	3.38	0.07	0.60	0.76
12/3/2019	6.7	0.18	0.18	1.12	1.31	1.19	3.35	3.46	0.08	0.59	0.76
12/4/2019	6.9	0.30	0.13	1.18	1.33	1.18	3.34	3.44	0.07	0.58	0.72
12/5/2019	5.9	0.48	0.21	1.06	1.32	1.22	3.34	3.32	0.08	0.58	0.74
12/6/2019	7.2	0.52	0.34	0.98	1.32	1.22	3.34	3.42	0.08	0.58	0.73
12/7/2019	6.5	0.58	0.40	0.94	1.33	1.22	3.34	3.43	0.08	0.60	0.79
12/8/2019	6.5	0.49	0.42	0.91	1.33	1.23	3.34	3.42	0.08	0.59	0.76
12/9/2019	6.8	0.49	0.40	0.94	1.32	1.22	3.34	3.43	0.08	0.59	0.78
12/10/2019	6.8	0.52	0.41	0.91	1.32	1.22	3.34	3.42	0.08	0.59	0.79
12/11/2019	7.5	0.47	0.42	0.94	1.32	1.23	3.34	3.42	0.08	0.59	0.77
12/12/2019	6.1	0.45	0.40	0.92	1.31	1.22	3.34	3.42	0.09	0.59	0.77
12/13/2019	6.8	0.46	0.39	0.92	1.30	1.21	3.34	3.41	0.10	0.59	0.79
12/14/2019	6.6	0.45	0.39	0.92	1.32	1.22	3.34	3.41	0.10	0.59	0.79
12/15/2019	6.6	0.46	0.38	0.78	1.33	1.23	3.34	3.41	0.10	0.59	0.80
12/16/2019	6.5	0.45	0.38	0.78	1.31	1.22	3.34	3.41	0.09	0.59	0.79
12/17/2019	6.8	0.45	0.38	0.63	1.19	1.15	3.34	3.40	0.09	0.59	0.75
12/18/2019	6.7	0.46	0.38	0.56	1.08	1.03	3.34	3.41	0.10	0.59	0.80
12/19/2019	7.2	0.44	0.38	0.61	1.09	1.01	3.34	3.40	0.10	0.59	0.76
12/20/2019	6.7	0.44	0.37	0.61	1.10	1.02	3.34	3.39	0.10	0.58	0.76
12/21/2019	6.8	0.46	0.38	0.57	1.11	1.03	3.34	3.39	0.10	0.58	0.75
12/22/2019	6.9	0.49	0.39	0.55	1.10	1.02	3.34	3.40	0.09	0.58	0.75
12/23/2019	6.9	0.50	0.41	0.55	1.09	1.02	3.34	3.40	0.09	0.58	0.74
12/24/2019	6.6	0.48	0.41	0.53	1.09	1.02	3.34	3.40	0.10	0.59	0.73
12/25/2019	6.2	0.47	0.40	0.55	1.09	1.01	3.34	3.40	0.09	0.60	0.73
12/26/2019	6.4	0.44	0.39	0.57	1.08	1.01	3.34	3.40	0.08	0.60	0.77
12/27/2019	6.7	0.47	0.38	0.55	1.08	1.01	3.34	3.40	0.08	0.61	0.72
12/28/2019	6.7	0.48	0.40	0.55	1.08	1.01	3.34	3.40	0.08	0.64	0.74
12/29/2019	6.6	0.51	0.41	0.54	1.08	1.01	3.34	3.40	0.07	0.64	0.75
12/30/2019	6.5	0.51	0.42	0.54	1.08	1.01	3.34	3.39	0.07	0.65	0.75
12/31/2019	6.6	0.41	0.40	0.59	1.08	1.01	3.34	3.39	0.09	0.64	0.80
Avg	6.7	0.45	0.37	0.77	1.21	1.12	3.34	3.40	0.09	0.60	0.76
Min	5.9	0.18	0.13	0.53	1.08	1.01	3.34	3.32	0.07	0.58	0.72
Max	7.5	0.58	0.42	1.18	1.33	1.23	3.38	3.46	0.10	0.65	0.80



Date	Disinfection CT													
	Pipeline CT				FW Tank CT						Compliance			
	Whitestone	Travel Time	Residual	CT	FW Tank 1	FW Tank 2	Plant	Contact Time	Free Cl ₂	CT	Total CT	Temp	CT	CT
	Flow	Min	RW	Achieved	Min Level	Min Level	Flow	Min	Min	Achieved	Achieved	Avg	Required	Met
	MGD	Minutes	mg/L	mg-min/L	ft	ft	MGD	Minutes	mg/L	mg-min/L	mg-min/L	°C	mg-min/L	Y/N
Entry	Calculated	AIT-1035-2	Calculated	LIT-4005-1	LIT-4005-2	Calculated	Calculated	Calculated	Calculated	Calculated	TIT-1000	Calculated	Calculated	
12/1/2019	53.0	2,358	0.42	995	28.9	23.3	6.5	547	1.17	642.71	1,638.12	7.9	8.00	Y
12/2/2019	46.0	2,721	0.22	585	28.9	23.4	6.2	575	1.19	683.32	1,268.81	8.0	8.00	Y
12/3/2019	42.0	2,979	0.18	524	28.9	23.4	6.4	561	1.17	658.86	1,182.83	8.0	8.00	Y
12/4/2019	42.2	2,966	0.30	893	29.0	23.9	6.6	547	1.16	635.20	1,528.39	7.8	8.00	Y
12/5/2019	38.8	3,224	0.48	1552	13.0	12.5	5.6	310	0.66	203.00	1,754.76	7.5	8.00	Y
12/6/2019	42.4	2,952	0.52	1534	22.8	22.3	6.4	484	1.21	585.39	2,119.24	8.0	8.00	Y
12/7/2019	55.4	2,256	0.58	1310	28.8	22.9	6.2	571	1.20	686.30	1,996.30	8.1	8.00	Y
12/8/2019	54.3	2,303	0.49	1133	28.8	24.7	6.3	581	1.22	706.12	1,839.18	8.3	8.00	Y
12/9/2019	43.8	2,854	0.49	1396	28.9	24.3	6.6	555	1.20	667.69	2,063.58	8.3	8.00	Y
12/10/2019	39.8	3,144	0.52	1642	28.8	23.3	6.6	541	1.21	653.72	2,296.06	8.3	8.00	Y
12/11/2019	41.0	3,048	0.47	1443	28.8	22.3	7.1	492	1.22	598.43	2,041.85	8.3	8.00	Y
12/12/2019	41.1	3,041	0.45	1375	28.8	24.8	6.0	617	1.20	741.94	2,116.82	8.2	8.00	Y
12/13/2019	42.5	2,945	0.46	1350	28.8	23.3	6.5	549	1.20	660.44	2,010.25	8.0	8.00	Y
12/14/2019	55.3	2,261	0.45	1011	28.8	24.4	6.3	582	1.20	695.97	1,706.77	8.2	8.00	Y
12/15/2019	51.3	2,438	0.46	1128	28.8	23.5	6.4	556	1.22	680.11	1,807.68	8.2	8.00	Y
12/16/2019	43.7	2,864	0.45	1297	28.8	23.9	6.2	581	1.20	693.94	1,990.80	8.1	8.00	Y
12/17/2019	42.5	2,940	0.45	1310	28.9	24.7	6.5	561	1.06	593.12	1,902.63	8.1	8.00	Y
12/18/2019	43.2	2,895	0.46	1323	28.9	24.2	6.5	561	0.99	554.59	1,877.23	8.0	8.00	Y
12/19/2019	39.3	3,179	0.44	1410	28.9	23.8	7.0	517	0.98	507.75	1,917.49	7.9	8.00	Y
12/20/2019	40.7	3,071	0.44	1338	28.5	17.9	6.3	506	0.99	500.20	1,838.11	7.5	8.00	Y
12/21/2019	55.6	2,250	0.46	1045	28.9	23.2	6.6	542	1.01	547.66	1,592.76	7.0	8.00	Y
12/22/2019	56.0	2,232	0.49	1097	28.9	23.8	6.7	537	1.00	538.57	1,635.70	6.9	8.00	Y
12/23/2019	47.6	2,627	0.50	1313	28.8	23.8	6.7	542	0.98	532.54	1,845.31	6.8	8.00	Y
12/24/2019	40.2	3,109	0.48	1481	28.8	22.8	6.4	549	1.00	547.15	2,028.46	6.9	8.00	Y
12/25/2019	35.9	3,489	0.47	1625	28.8	23.9	5.8	619	0.99	611.97	2,236.82	7.2	8.00	Y
12/26/2019	34.8	3,591	0.44	1591	28.8	24.4	6.2	587	0.98	572.81	2,163.51	7.2	8.00	Y
12/27/2019	41.5	3,017	0.47	1429	28.9	23.8	6.4	560	1.00	561.24	1,989.77	7.6	8.00	Y
12/28/2019	55.2	2,265	0.48	1090	28.9	23.1	6.4	552	1.00	550.12	1,640.45	7.5	8.00	Y
12/29/2019	50.8	2,463	0.51	1248	28.9	23.9	6.3	569	0.99	563.18	1,811.13	7.6	8.00	Y
12/30/2019	40.4	3,093	0.51	1566	28.8	24.5	6.3	581	0.99	574.53	2,140.48	7.7	8.00	Y
12/31/2019	37.8	3,309	0.41	1,365	28.8	24.1	6.3	579	0.99	572.45	1,937.03	7.5	8.00	Y
Avg	45.0	2,835	0.45	1,271	28.1	23.2	6.4	549	1.08	597.45	1,868.33	7.8	8.00	NA
Min	34.8	2,232	0.18	524	13.0	12.5	5.6	310	0.66	203.00	1,182.83	6.8	8.00	NA
Max	56.0	3,591	0.58	1,642	29.0	24.8	7.1	619	1.22	741.94	2,296.06	8.3	8.00	NA



Notes:

Pipeline volume factor in SMMWSC to RW tank: 125,090 MG-min/day

Distribution System Monitoring

Chlorine Residual at Bacteriological Monitoring Stations (mg/L Free Cl₂)

WSSN:	0072		0390			0400			0470							0485				0517	0518		2180	
	Akron		Bangor Twp.			Bangor Monitor Dist.			Bay City							Bay County				Beaver Rd	Beaver Twp		Essexville	
Date	1	3	4	5	6	7	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	29	30	32
12/1/2019																								
12/2/2019																								1.12
12/3/2019	0.47	0.91	0.73	0.67	1.13				0.76	0.43	0.60	0.83	0.39	0.95	0.61	0.89	0.84	0.95	0.77	0.79		0.39		
12/4/2019																								
12/5/2019						1.02	1.01		0.89	0.47	0.80	0.81	0.27	1.02	0.67									
12/6/2019																								
12/7/2019																								
12/8/2019																								
12/9/2019																								1.13
12/10/2019		0.54	0.24													0.76	0.96	1.03	0.77	0.72		0.45		
12/11/2019									0.80	0.64	0.67	0.83	0.45	0.99	0.79						1.07			
12/12/2019								0.98																
12/13/2019																								
12/14/2019																								
12/15/2019																								
12/16/2019																								1.13
12/17/2019		0.66	0.61	0.77	1.12				0.75	0.53	0.58	0.93	0.40	1.01	0.81									
12/18/2019																								
12/19/2019									0.75	0.45	0.60	0.66	0.41	0.89	0.73									
12/20/2019																								
12/21/2019																								
12/22/2019																								
12/23/2019																								0.96
12/24/2019																								
12/25/2019																								
12/26/2019									0.68	0.45		0.76	0.36	0.81										
12/27/2019																								
12/28/2019																								
12/29/2019																								
12/30/2019									0.70	0.66	0.56		0.56	0.91	0.81									0.85
12/31/2019																								
Average	0.47			0.74				1.00						0.68						0.85		1.07		1.04
Min	0.47			0.24				0.98						0.27						0.72		1.07		0.85
Max	0.47			1.13				1.02						1.02						1.03		1.07		1.13



MONITORING STATION ADDRESSES

- | | | |
|--|---|---|
| 1. Sample station at corner of 5758 M-25 & F | 11. Number 1 Fire Station, 1401 Center Ave | 19. Dore's M-84 Party Store, 6183 WS Saginaw Rd |
| 3. Bangor Fire Station, 3921 Wheeler | 12. Number 2 Fire Station, 1000 Fremont Ave | 20. Pump Station #13, 6000 WS Saginaw Rd |
| 4. BCDWS Admin. Bldg. 3933 Patterson Rd. | 13. Skizak's Sport Shop, 807 Salzburg Ave | 22. Duce's Char House, 432 N. Tuscola Rd |
| 5. 7-11, 3543 S. Old Kawkawlin Rd. | 14. Number 4 Fire Station, 212 S. Dean St | 24. Little Learners Daycare, 1694 Cass Ave. |
| 6. Admiral Petroleum, 314 S Euclid Ave. | 15. Number 5 Fire Station, 1209 Smith St | 26. Wieland Contracting, 2443 S Mackinaw Rd |
| 7. Sequin Lumber, 3881 Euclid Ave | 16. Bay City Hall, 301 Washington Ave | 29. Sample Station, 2515 S. 11 Mile Rd |
| 9. B's Boutique, 2981 Midland Rd | 17. Skipper Buds Marina, 1809 S Water St | 30. Sample Station, 340 W. Beaver Rd |
| 10. Little Caesars, 3475 E North Union Rd | 18. Bay Valley Animal Hospital 6015 WS Saginaw Rd | 32. Essexville City Hall, 1107 Woodside Ave |

Distribution System Monitoring

Chlorine Residual at Bacteriological Monitoring Stations (mg/L Free Cl2)

WSSN: Date	2465 Fraser Twp.		2960 Hampton Twp.			3565 Kawkawlin Twp.			3570 Kawkawlin Met.		4280 Merritt Twp.		4440 Monitor Twp.			5330 City Pinconning		5335 Pinconning Twp.		5540 Portsmouth	7125 Williams Twp.			7134 Wisner
	34	35	37	38	39	40	41	42	43	45	46	48	49	52	55	58	59	61	63	65	68	69	70	72
12/1/2019																								
12/2/2019																								
12/3/2019			0.68	0.94	0.74						0.63									0.76	0.75	0.86	0.64	0.66
12/4/2019																								
12/5/2019	0.78	0.97				1.06	0.77		0.86				1.01	0.87	0.80	0.76		0.80	0.72					
12/6/2019																								
12/7/2019																								
12/8/2019																								
12/9/2019			0.62	0.87	0.73																			
12/10/2019											0.21										0.39	0.72	0.57	
12/11/2019																								
12/12/2019								1.05	0.83				0.98	0.81	0.61		0.70							
12/13/2019																								
12/14/2019																								
12/15/2019																								
12/16/2019																								
12/17/2019			0.67	0.76	0.70																			
12/18/2019																								
12/19/2019																								
12/20/2019																								
12/21/2019																								
12/22/2019																								
12/23/2019			0.71																					
12/24/2019																								
12/25/2019																								
12/26/2019																								
12/27/2019																								
12/28/2019																								
12/29/2019																								
12/30/2019																								
12/31/2019																								
Average	0.88		0.74			0.96			0.85		0.42		0.85			0.73		0.76		0.76		0.66		0.66
Min	0.78		0.62			0.77			0.83		0.21		0.61			0.70		0.72		0.76		0.39		0.66
Max	0.97		0.94			1.06			0.86		0.63		1.01			0.76		0.80		0.76		0.86		0.66



MONITORING STATION ADDRESSES

- 34. Fraser Elevated Tank, 2949 1/2 N. Huron Rd
- 35. Lloyd's Cabinet, 1947 N Huron Rd
- 37. Hampton DPW, 950 Wagner Rd.
- 38. Bay County Golf Course, 584 W Hampton Rd.
- 39. Sewer Lift Station, 902 Nebobish Rd.
- 40. Bay Co. Road Commission, 2600 E Beaver Rd
- 41. Parish Rd. Elevated Tank, 1770 E. Parish Rd
- 42. Linwood Tile, 205 S Huron Rd

- 43. Kawkawlin Party Store, 105 Grove St
- 45. Kawkawlin Restaurant, 103 S Huron Rd
- 46. John's Bar, 1476 S Tuscola Rd
- 48. Tool Shed Bar, 12 W Munger Rd
- 49. Wilder Rd Party Store, 2951 E Wilder Rd
- 52. Monitor Twp. Elevated Tank, 1611 E. Midland Rd
- 55. Auburn Fertilizer, 4640 S 7 Mile Rd
- 58. Pinconning City Hall, 208 S Manitou St

- 59. Marathon Gas Station, 511 S Mabel St
- 61. Pinconning Meter Pit, 3005 N Huron Rd
- 63. Master Meter Pit, 2865 Pinconning Rd
- 65. Ike's Welding, 50 N Finn Rd
- 68. Williams Township Hall, 1080 W Midland Rd
- 69. Pump Station, 490 W. Salzburg & 9 Mile Rd
- 70. 11 Mile Elevated Tank, 5003 S. 11 Mile Rd
- 72. Lindy's Sales, 9051 M-25

Distribution System Bacteriological							
Water Supplier Bacteriological Analysis Report							
MICHIGAN DEPARTMENT OF PUBLIC HEALTH Bureau of Environmental Health Water Supplier Bacteriological Analysis Report				Name of Water Supply Bay Area Water Treatment Plant December, 2019			
COUNTY	COMMUNITY	WSSN NUMBER	DISTRIBUTION SYSTEM SAMPLES				
			avg free cl2 mg/L	NUMBER REQUIRED	NUMBER COLLECTED	NUMBER POSITIVE	NUMBER REPEAT SAMPLES
Tuscola	Akron	0072	0.47	1	1	0	0
BAY	Bangor Township	0390	0.74	10	10	0	0
BAY	Bangor-Monitor Dist.	0400	1.00	3	3	0	0
BAY	Bay City	0470	0.68	40	46	0	0
BAY	Bay County (Frankl./Monitor/Portsm.)	0485	0.85	10	10	0	0
BAY	Beaver Road Area	0517	1.07	1	1	0	0
BAY	Beaver Township	0518	0.42	2	2	0	0
BAY	Essexville	2180	1.04	4	5	0	0
BAY	Fraser Township	2465	0.88	2	2	0	0
BAY	Hampton Township	2960	0.74	10	10	0	0
BAY	Kawkawlin Township	3565	0.96	3	3	0	0
BAY	Kawkawlin Metro Dist.	3570	0.85	2	2	0	0
BAY	Merritt Township	4280	0.42	2	2	0	0
BAY	Monitor Township	4440	0.85	6	6	0	0
BAY	City of Pinconning	5330	0.73	2	2	0	0
BAY	Pinconning Township	5335	0.76	2	2	0	0
BAY	Portsmouth Township	5540	0.76	1	1	0	0
BAY	Williams Township	7125	0.66	6	6	0	0
Tuscola	Wisner	7134	0.66	1	1	0	0
Average Free Cl2 Residual of All Distribution Sites			0.76	mg/L			
1. Total distribution samples			115				
2. Total distribution samples with detectable free cl2 residual			115				
3. Total distribution samples with no detectable free cl2 residual			0				
4. Total distribution samples with no detectable free cl2 residual and HPC was <500			0				
5. Total distribution samples with no detectable free cl2 residual and HPC was >500			0				
6. Percent of distribution samples with no detectable free cl2 residual			0.00%				
7. Percent shown line #6 in previous monthly report			0.00%				

