

**TOWN OF JAMESTOWN
TOWN COUNCIL MEETING
for
TOWN, WATER AND SEWER MATTERS**

Monday, November 7, 2016

A regular meeting of the Jamestown Town Council sitting as the Board of Water and Sewer Commissioners was called to order at the Jamestown Town Hall, Council Chambers, 93 Narragansett Avenue at 7:19 PM by Commission President Kristine S Trocki.

The following members were present:

Mary E. Meagher, Vice-President
Blake A. Dickinson
Thomas T. Tighe
Michael G. White

Also present were:

Andrew Nota, Town Administrator
Peter D. Ruggiero, Esq., Town Solicitor
Michael Gray PE, Public Works Director
Christina D. Collins, Finance Director
Denise Jennings, Water and Sewer Clerk

AWARDS, PRESENTATIONS AND ACKNOWLEDGMENTS

(None)

READING AND APPROVAL OF MINUTES

1) 10/03/16 (regular meeting)

Motion was made by Commissioner Dickinson, seconded by Commissioner White to accept the 10/03/16 regular meeting minutes. So unanimously voted.

OPEN FORUM

1) Scheduled requests to address:

(None)

2) Non-Scheduled requests to address:

(None)

REPORT OF TOWN OFFICIALS

1) **Pumping Report:**

The Public Works Director reported the following:

- Rainfall-received 5 inches of rain during the month of October.
- North Reservoir was @ 22MG, usable storage-60MG. During the month of October the reservoir

only dropped 1 million gallons. The Public Works Director noted that in 1993, the reservoir was at its lowest level @ 9 MG

- South Pond is @ 4MG, usable storage-6MG

2) **Town project reports: (See Project Update Report dated October 2016)**

Treatment Plant:

The Public Works Director reported the following:

- In response to the Town being issued a violation by the RIDOH for an exceedance of a residual concentration of chlorine dioxide at the treatment plant, he has submitted a long term plan to the RIDOH, some of which has already been implemented.
- He has met with Water Treatment Facility staff regarding this matter and they are aware of what they are responsible for to make sure that a situation like this does not happen again.
- He is working with the Town's process controls engineers on implementing meters. These meters can detect exceedances and will automatically shut down the system and staff will receive notification to respond to the plant.

Transfer Pumping/Reservoir:

The Public Works Director reported the following:

- Has been transferring water as the flow allows and is due to the recent rainfall.
- Staff has deployed one of the three reels (for the emergency line to NK) at Fort Getty to test the piping. Staff will test the remaining reels when highway staff is available, prior to the winter weather.

Wastewater Treatment Facility:

The Public Works Director reported that RIDEM has completed their annual inspection and assessment at the Wastewater Treatment Facility. RIDEM noted that they are encouraging the Town to have a laborer on staff to adhere to the staffing plan as outlined in the 2009 operations and maintenance manual. The Public Works Director reported that previously, Water employees assisted with staffing at the Wastewater Treatment Facility, but this is currently not the case.

LETTERS AND COMMUNICATIONS

- 1) Copy of report in response to RI Department of Health Violation: Chlorine Dioxide Maximum Residual Disinfectant Level Violations (see attached report)

Previously discussed.

UNFINISHED BUSINESS

(None)

NEW BUSINESS

(None)

TOWN BUSINESS

(None)

ADJOURNMENT

There being no further business before the Commission, motion was made by Commissioner White, seconded by Commissioner Meagher to adjourn the meeting at 7:26 PM. So unanimously voted.

Attest:



Denise Jennings
Water and Sewer Clerk

xc: Commission Members (5)
Town Administrator
Town Solicitor
Public Works Director
Town Clerk

Project Update

October 2016

WELLS

JR-1, JR-3

- JR-1 has been in operation since May. We are monitoring the groundwater elevation in the well daily to make sure the pump is submerged. Ground Water levels have recovered about a foot due to the rainfall received in October.

TREATMENT PLANT

- The Town has been issued a violation by the RIDOH for an exceedance of a residual concentration of chlorine dioxide at the treatment plant. I have attached a copy of my report that was submitted to the RIDOH regarding the event and the corrective actions that the water department have implemented. We have not received a response to the report from the RIDOH.
- The new motor starters and controls for the raw water and finish water pumps have been delivered. Over the coming months we will be working with our process control engineer and electrician to complete the project to upgrade the pumps and relocate the electrical feeds to the new building.

TRANSFER PUMPING/RESERVOIR

- We have been transferring water as flows will allow from the recent rainfall that was received. We will continue to move water from south pond until winter conditions require the pumps to be turned off for the season.
- Staff has deployed one of the three reels at Fort Getty to test the piping. The remaining reels will be tested before winter conditions.
- Pare Corporation is currently working on the permit drawings for the South Pond Dam Improvement Project.

DISTRIBUTION SYSTEM

South Pond @ 4 MG

Usable Storage, 6 Million Gallons

North Pond @ 22 MG

Usable Storage 60 Million Gallons

WASTEWATER TREATMENT PLANT

- The monthly average daily flow at the treatment plant for October was 0.145 million gallons per day. The peak daily flow was 0.266 million gallons. The permitted flow for the monthly average is 0.73 million gallons per day.
- There were no SSO's for the month of October.
- The RIDEM completed their annual inspection and assessment of the Wastewater Treatment Facility operation, mechanical upkeep, and laboratory quality assurance program. DEM noted that although the current staffing of the facility is operating and maintaining the facility and collection system at satisfactory levels, they are encouraging the Town to have a laborer on staff to adhere to the staffing plan outlined in the 2009 operations and maintenance manual.



Town of Jamestown
Public Works Department

93 Narragansett Ave ♦ Jamestown, RI 02835

Phone: (401) 423-7225
Fax: (401) 423-7226

October 12, 2016

Ms. June Swallow, P.E.
Office of Drinking Water Quality
Rhode Island Department of Health
Three Capitol Hill, Room 209
Providence, RI 02908-5097

RE: Notice of Violation
Chlorine Dioxide Maximum Residual Disinfectant Level
Jamestown Water Department

Dear Ms. Swallow:

This letter report is submitted in response to the Notice of Violation (NOV) issued by the RIDOH for the exceedances of the Chlorine Dioxide Maximum Residual Disinfectant Levels (MRDL) at the Jamestown Water Department on April 17, 2016 and May 1, 2016. The following is a response to the five corrective actions that were required in the NOV and a summary of our plan for improvements at the treatment facility to monitor levels of Chlorine Dioxide above and beyond the normal laboratory analysis that the staff performs to meet the regulatory requirements for our facility.

1. *Review of all practices and processes that may have contributed to the MRDL exceedances, along with proposed corrective actions, presented in a report to be submitted to the DWQ on or before October 14, 2016.*

Raw water from North Pond flows through a 7,500-foot long 10" transmission main to the Jamestown Water Treatment facility. The water receives pretreatment from a chemical feed system located in a building at South Pond that feeds Chlorine Dioxide directly into the main to treat the raw water prior to it entering the treatment facility at North Road. Chlorine dioxide is highly soluble in water and is effective at disinfection and improving color, odor, and taste. The pretreatment facility was constructed in 1991 and has been in full operation since that time. The dosage of chlorine dioxide is fed directly into the transmission main when water is flowing in the pipe and turned off when the flow has stopped. Attached is a figure showing the location of the pretreatment facility.

The chlorine dioxide facility is for pretreatment of the raw water to improve water quality and to assist with the effectiveness of the treatment plant to filter the water. The system was designed for a specific quantity of chemical for the volume of

water that flows to the plant and the detention time between south pond and the water treatment facility. Chlorine Dioxide is not used for disinfection of treated water that is delivered to our customers. After filtration the finished water is disinfected with a liquid chlorine at the treatment plant prior to pumping water into the distribution system.

Water samples are collected from the tap within the lab at the treatment facility as "the first customer" for the treated water that is delivered to the distribution system. The water is analyzed to determine the chlorine dioxide residual concentration as required by the RIDOH drinking water regulations. Historically residual concentrations range between 0.0 and 0.3 milligrams per liter (mg/l), well below the maximum residual detection limit (MRDL) of 0.8 mg/l as set by the EPA. Tests are performed daily and logged by staff at the water plant. The superintendent records the lab data on the required RIDOH forms for submittal to the RIDOH at the end of every month.

On September 21, 2016 I received an email from the RIDOH staff that a review of our monthly reports found that we had an exceedance of the MRDL threshold of 0.8 mg/l for chlorine dioxide on April 17, 2016 where the concentration was reported at 0.951 mg/l and on May 1, 2016 with a concentration of 1.231 mg/l.

On April 18th, the day after the first exceedance only one sample was collected which had residual concentration of 0.514 mg/l. On May 2nd after the second exceedance one sample was collected which had a residual concentration of 0.0 mg/l. The superintendent did not conduct the (3) follow-up samples and only collected the one sample at the treatment facility as he does every day. Having never been faced with this event in the past he did not fully understand the requirements of the rule for the additional sampling and did not report the exceedance to me or to the RIDOH as required. The superintendent and water department staff were aware of the 0.8 mg/L threshold and the potential impact of the residual concentrations and they took immediate steps to reduce the levels of chlorine dioxide after the May 1st event by turning off the chlorine dioxide generator at the South Pond Facility until they had determined the cause of the problem. Staff found an issue with the chemical feed pump and parts were subsequently replaced and the system was placed back on line. Since that time there has not been a problem with the system and residual concentrations are back within historical ranges. It is important to note that with the generator off, chlorine dioxide cannot be dosed into the main therefore any additional samples would have resulted in a residual concentration of 0.0 mg/l.

I have reviewed the Stage 1 Disinfectants and Disinfection Byproducts Rule with the Water Department Staff and provided them with a copy of the EPA guidance document that provides a comprehensive summary of the rule and the requirements for monitoring and compliance. They understand their responsibilities for compliance for both Non-acute and Acute violations if they were to occur. More importantly they are aware of the importance in monitoring and determining trends in chemical dosages and residual concentrations of chlorine dioxide to avoid a future exceedance at the plant. Unfortunately, not all situations can be predicted so we are working on a plan to monitor residual levels

in real time and have safe guards in place to turn-off the equipment before a violation can occur.

I am working with our process control engineer to design a system that will analyze, monitor, and control the chlorine dioxide pretreatment system. The system will include the following: At the water treatment plant an analyzer will be installed on the raw water feed into the plant to provide continuous online chlorine dioxide monitoring to measure and control the plant influent flow chlorine dioxide residual level. The SCADA System will provide for trending the residual and provide for notification and shutdown to the chlorine dioxide injection pump at the South Pond station should the residual level approach the set point i.e. 0.8 mg/L (adjustable).

At the South Pond station, a flowmeter will be installed to pace the existing chlorine dioxide metering pump to provide for adjustable injection during varying flow conditions and interlock the on off control of this metering pump with a local flow switch and start/stop command from the master SCADA computer.

We are already designing the system and hope to have it online later this fall.

2. *Submittal of chlorine dioxide data (Table 7) for July, August, and September by September 23, 2016.*

Attached are copies of Table 7 that were provided to RIDOH staff on September 22, 2016. They were also provided to the RIDOH for our third quarter report that was submitted on October 11, 2016.

3. *Review of the EPA Guidance Document entitled "Complying with the Stage 1 Disinfectants and Disinfection Byproducts Rule: Supplement A – One of the Simple Tools for Effective Performance (STEP) Guide Series – For Small Systems adding Chlorine Dioxide or Ozone"*

Water Department staff has been given a copy of the EPA Guidance Document and we have reviewed the regulatory requirements for complying with the rule.

4. *Training for personnel as to the requirements for monitoring (described below) and notification to RIDOH for MRDL exceedances.*

The Superintendent and treatment plant operator have reviewed the regulatory requirements for complying with the DBR and understand their responsibility to notify the RIDOH for any MRDL exceedances. I have contacted Don Bunker, who is the Director of Education & Training at the New England Water Works Association for possible training opportunities for our staff. Don is very familiar with our operations and our water department staff. Don worked as an environmental engineer at Fay Spofford and Thorndike where he was a consultant to the Town for almost 20 years working with the water department staff at the treatment plant. He recommended a course entitled "Evaluating Non Traditional Disinfection Options" on November 17, 2016. This course will help participants

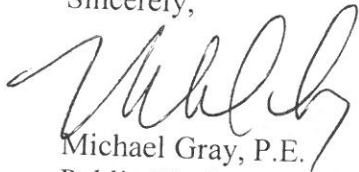
develop an understanding of the current and possible future regulations for disinfection by-products and present the use of chlorine dioxide disinfection techniques. The Superintendent will be attending this course.

5. *In the future, if the daily routine chlorine dioxide monitoring result exceeds the MRDL, the following day take three chlorine dioxide distribution system samples as close to the first customer as possible, at intervals of at least six hours, in addition to the sample required at the entrance to the distribution system in accordance with 7.5(c)(2).*

I have reviewed the Rule with the staff and our responsibilities for sampling and proper notification of any exceedance of a standard that may pose a risk to public health. In the future, staff will contact staff at RIDOH in the event there is an exceedance of the MRDL and they will perform the sampling and analysis as required. The proposed improvements that we are designing to analyze and monitor chlorine dioxide residual concentrations should provide safe guards to prevent any future exceedances of the rule.

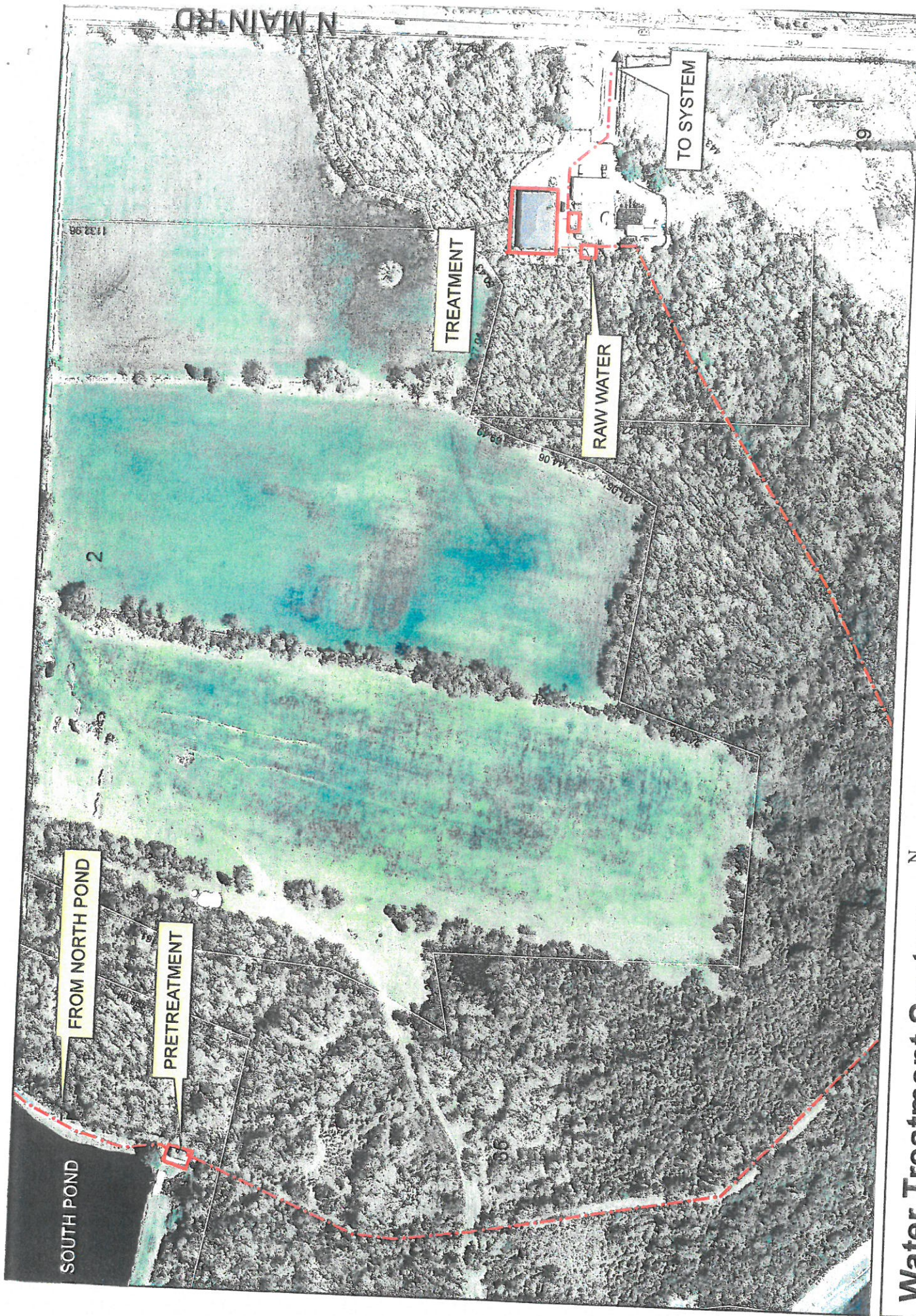
If there are any questions regarding this report or if you need additional information, please contact me at (401) 423-7225.

Sincerely,

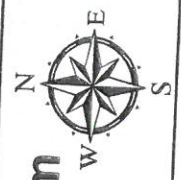


Michael Gray, P.E.
Public Works Director

Cc: Andrew Nota, Town Administrator
Angela Harvey, RIDOH
Amy Parmenter, RIDOH
Steven Boudreau, RIDOH
Paul White, Water Superintendent
Mark Robertson, Foreman/Water Operator



Water Treatment System Jamestown, RI



Legend

- Tax Parcels

1 inch = 200 feet



Feet



TABLE 7
Quarterly Report for Daily Chlorine Dioxide Sampling
for Systems Using Chlorine Dioxide
(No Chlorine Booster Station in Distribution)¹



MONTH/YEAR July 2016

PWSID # RI 1858419

SYSTEM NAME: Jamestown Water Department

FILTRATION TECHNOLOGY: Ultrafiltration

Day	Daily ClO ₂ at Entrance to Distribution (mg/L)	Next Day Follow-Up Distribution Samples				Acute or Nonacute Violation?
		ClO ₂ at First Customer at 0 Hours (mg/L)	ClO ₂ at First Customer at 6 Hours (mg/L)	ClO ₂ at First Customer at 12 Hours (mg/L)	ClO ₂ Highest Level (mg/L)	
1	0.000				0	no
2	0.000				0	no
3	0.110				0	no
4	0.000				0	no
5	0.000				0	no
6	0.000				0	no
7	0.000				0	no
8	0.000				0	no
9	0.000				0	no
10	0.000				0	no
11	0.039				0	no
12	0.000				0	no
13	0.000				0	no
14	0.000				0	no
15	0.000				0	no
16	0.000				0	no
17	0.151				0	no
18	0.000				0	no
19	0.000				0	no
20	0.000				0	no
21	0.184				0	no
22	0.000				0	no
23	0.000				0	no
24	0.000				0	no
25	0.000				0	no
26	0.000				0	no
27	0.000				0	no
28	0.000				0	no
29	0.000				0	no
30	0.000				0	no
31	0.000				0	no
Avg.	0.016				0	no
Max.	0.184					
Min.	0.0					

1. The PWS must monitor for chlorine dioxide daily at the entrance to the distribution system. Two consecutive daily samples exceeding 0.8 mg/L or failure to monitor a daily sample after exceeding 0.8 mg/L in a daily sample is a nonacute violation. A PWS exceeding the daily chlorine dioxide level of 0.8 mg/L must take a three (3) sample set in the distribution system the following day at the first customer at six (6) hour intervals. If any one of the three (3) samples taken in the distribution system exceeds 0.8 mg/L, it is an acute violation. *Include laboratory results from last quarter.*

2. The monthly reports for each quarter may be submitted together on the 10th day of the next quarter.

PREPARED BY: Paul White

DATE: 8/1/2016



TABLE 7
Quarterly Report for Daily Chlorine Dioxide Sampling
for Systems Using Chlorine Dioxide
(No Chlorine Booster Station in Distribution)¹



MONTH/YEAR Aug. 2016

PWSID # RI 1858419

SYSTEM NAME: Jamestown Water Department

FILTRATION TECHNOLOGY: Ultrafiltration

Day	Daily ClO ₂ at Entrance to Distribution (mg/L)	Next Day Follow-Up Distribution Samples				Acute or Nonacute Violation?
		ClO ₂ at First Customer at 0 Hours (mg/L)	ClO ₂ at First Customer at 6 Hours (mg/L)	ClO ₂ at First Customer at 12 Hours (mg/L)	ClO ₂ Highest Level (mg/L)	
1	0.000					
2	0.000				0	no
3	0.026				0	no
4	0.000				0	no
5	0.000				0	no
6	0.000				0	no
7	0.041				0	no
8	0.000				0	no
9	0.000				0	no
10	0.000				0	no
11	0.000				0	no
12	0.000				0	no
13	0.018				0	no
14	0.000				0	no
15	0.000				0	no
16	0.000				0	no
17	0.000				0	no
18	0.000				0	no
19	0.000				0	no
20	0.000				0	no
21	0.000				0	no
22	0.000				0	no
23	0.000				0	no
24	0.000				0	no
25	0.000				0	no
26	0.000				0	no
27	0.000				0	no
28	0.000				0	no
29	0.000				0	no
30	0.000				0	no
31	0.000				0	no
Avg.	0.003				0	no
Max.	0.041					
Min.	0.0					

1. The PWS must monitor for chlorine dioxide daily at the entrance to the distribution system. Two consecutive daily samples exceeding 0.8 mg/L or failure to monitor a daily sample after exceeding 0.8 mg/L in a daily sample is a nonacute violation. A PWS exceeding the daily chlorine dioxide level of 0.8 mg/L must take a three (3) sample set in the distribution system the following day at the first customer at six (6) hour intervals. If any one of the three (3) samples taken in the distribution system exceeds 0.8 mg/L, it is an acute violation. *Include laboratory results from last quarter.*

2. The monthly reports for each quarter may be submitted together on the 10th day of the next quarter.

PREPARED BY: Paul White

DATE: 9/1/2016



TABLE 7
Quarterly Report for Daily Chlorine Dioxide Sampling
for Systems Using Chlorine Dioxide
(No Chlorine Booster Station in Distribution)¹



Office of Drinking
Water Quality

MONTH/YEAR Sept. 2016

PWSID # RI 1858419

SYSTEM NAME: Jamestown Water Department

FILTRATION TECHNOLOGY: Ultrafiltration

Day	Daily ClO ₂ at Entrance to Distribution (mg/L)	Next Day Follow-Up Distribution Samples				Acute or Nonacute Violation?
		ClO ₂ at First Customer at 0 Hours (mg/L)	ClO ₂ at First Customer at 6 Hours (mg/L)	ClO ₂ at First Customer at 12 Hours (mg/L)	ClO ₂ Highest Level (mg/L)	
1	0.000				0	no
2	0.000				0	no
3	0.000				0	no
4	0.026				0	no
5	0.027				0	no
6	0.000				0	no
7	0.000				0	no
8	0.000				0	no
9	0.000				0	no
10	0.000				0	no
11	0.000				0	no
12	0.000				0	no
13	0.000				0	no
14	0.000				0	no
15	0.000				0	no
16	0.117				0	no
17	0.000				0	no
18	0.000				0	no
19	0.000				0	no
20	0.000				0	no
21	0.000				0	no
22	0.000				0	no
23	0.000				0	no
24	0.125				0	no
25	0.144				0	no
26	0.073				0	no
27	0.058				0	no
28	0.000				0	no
29	0.095				0	no
30	0.000				0	no
					0	no
Avg.	0.022					
Max.	0.144					
Min.	0.0					

1. The PWS must monitor for chlorine dioxide daily at the entrance to the distribution system. Two consecutive daily samples exceeding 0.8 mg/L or failure to monitor a daily sample after exceeding 0.8 mg/L in a daily sample is a nonacute violation. A PWS exceeding the daily chlorine dioxide level of 0.8 mg/L must take a three (3) sample set in the distribution system the following day at the first customer at six (6) hour intervals. If any one of the three (3) samples taken in the distribution system exceeds 0.8 mg/L, it is an acute violation. *Include laboratory results from last quarter.*