

SECTION 02675

DISINFECTION OF WATER DISTRIBUTION SYSTEMS

PART1 GENERAL

1.1 REFERENCES

A. AWWA C651, latest edition – Disinfecting Water Mains.

1.2 SUBMITTALS

- A. Test Reports: Indicate results comparative to specified requirements.
- B. Certificate: Certify that cleanliness of water distribution system meets or exceeds specified requirements.

1.3 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01720.
- B. Disinfection report; record:
 - 1. Type and form and amount of disinfectant used.
 - 2. Date and time of disinfectant injection start and time of completion.
 - 3. Chlorine residual before, during and after disinfection.
 - 4. Test locations.
 - 5. Initial and 24 hour disinfectant residuals (quantity in treated water) in ppm for each outlet tested.
 - 6. Date and time of flushing start and completion.
 - 7. Disinfectant residual after flushing in ppm for each outlet tested.
- C. Bacteriological report; record:
 - 1. Date issued, project name, and testing laboratory name, address, and telephone number.
 - 2. Time and date of water sample collection.
 - 3. Name of person collecting samples.
 - 4. Test locations.
- D. Initial and 24 hour disinfectant residuals in ppm for each outlet tested.
 - 1. Coliform bacteria test results for each outlet tested.
 - 2. Certification that water conforms, or fails to conform, to bacterial standards of The State of Tennessee.
 - 3. Bacteriologist's signature and authority.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ANSI/AWWA C651-05.

1.5 QUALIFICATIONS

- A. Personnel experienced in testing potable water systems.

1.6 REGULATORY REQUIREMENTS

- A. Conform to applicable code or regulation for performing work of this Section.
- B. Provide certificate of compliance from authority having jurisdiction indicating approval of water system.

PART 2 PRODUCTS

2.1 DISINFECTION CHEMICALS

- A. Chemicals: ANSI/AWWA B300, Hypochlorite.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that piping system has been cleaned, inspected, and pressure tested.
- B. Perform scheduling and disinfection activity with startup, testing, adjusting and balancing, demonstration procedures, including coordination with related systems.

3.2 EXECUTION

- A. Adhere to the latest version, “Rules of TDEC, Division of Water Resources, Chapter 0400-45-01-.17 (8)(b), Public Water Systems.” Bacteriological samples shall be collected at approximately 2,500-foot intervals with samples near the beginning point, the end point, and at the end of each branch line.
- B. Provide and attach required equipment to perform Work of this Section.
- C. Inject treatment disinfectant into piping system sufficient to insure a chlorine dosage of at least 50 ppm in the lines. While solution is being applied, water shall be allowed to escape at ends of lines until tests indicate that a dosage of at least 50 ppm has been obtained throughout the pipe.

- D. Maintain disinfectant in system for 24 hours. A residual of at least 25 ppm should be present in pipe at end of 24 hour period.
- E. Flush, circulate and clean until required cleanliness is achieved; use municipal domestic water. A bacteriological sample will be taken and submitted for approval to the State Health Department by the WSD before lines are put into service. If samples are positive, additional samples shall be taken and lines disinfected per the WSD Bacteriological Sampling Plan. WSD will pull all samples and furnish to laboratory for testing. Disinfection testing shall not be performed on Fridays or prior to holidays.
- F. Replace permanent system devices removed for disinfection.
- G. All laboratory, equipment and labor costs to the WSD shall be invoiced to the Developer.

END OF SECTION 02675 - DISINFECTION OF WATER DISTRIBUTION SYSTEMS