

SECTION UC-175
DISINFECTION OF WATER MAIN

PART 1 - GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish the necessary labor, equipment, and material to disinfect sections of water main and fittings as applicable to this project.

1.02 RELATED SECTION

Section UC-170 - Cleaning and Testing of Main

1.03 QUALITY ASSURANCE

- A. Disinfection shall be performed in strict accordance with these specifications and with AWWA Standard C651, "Disinfection of Water Mains", latest edition, except as otherwise modified herein.

PART 2 - PRODUCTS

2.01 Liquid Chlorine, available from local sources.

2.02 Calcium hypochlorite, HTH, Perchloron, or approved equal.

PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor shall clean, flush and disinfect every piece of pipe, fitting and valve in accordance with these specifications and to the satisfaction of the Department.
- B. Liquid chlorine is available locally and shall be purchased by the Contractor.

3.02 DISINFECTION

- A. The pipelines shall be disinfected after they have been pressure tested and while still full of water, as specified in Section UC-170.
- B. A suitable chlorinator shall be used to inject chlorine into the lines. All connections required for the introduction of chlorine into the water lines shall be made by the Contractor. Chlorine and water shall be introduced at one end and shall be allowed to flow slowly through the lines to the other end where it shall be removed and disposed of at the Contractor's expense. Several points of introduction and removal of chlorine solution may have to be employed to get an even distribution through the entire section being disinfected.

- C. The quantity of chlorine introduced shall be such as to insure a concentration of at least 50 parts per million in the water flowing from the line.
- D. The chlorine solution shall be allowed to stand in the line for at least 24 hours or longer, if required, to destroy all harmful bacteria. At the end of the required time, the concentration of chlorine in all parts of the section shall be at least 25 ppm.
- E. All valves and appurtenances in the section shall be operated at least once during the above period. After the required period, the treated water shall be thoroughly flushed from the section and the system filled with potable water.
- F. The Contractor shall be responsible for coordination with Dade County Department of Health, who shall collect and test samples from main. The Contractor shall provide assistance to the Dept. of Health for the collection of samples. The samples shall be taken from each main or section of main to be placed in service where designated by the Dept. of Health. The samples must be approved by the Department of Health before the main is placed in service.
- G. The Contractor shall be responsible for any rechlorination and retesting that may be required until the Department of Health's approval is obtained. The Contractor shall be responsible for the disposal of all water flushed from the system and shall safeguard all adjoining properties from damage from flooding. The Contractor shall exercise due care in the protection of private property from water damage due to his operations. In addition, the Contractor shall assume complete liability for any damage which was directly or in-directly caused by his operations.
- H. All of the connections shall be disinfected by the Contractor.
- I. The inside of each pipe and fitting laid by the Contractor in connecting to existing mains which are isolated from the main line by valves shall be swabbed with calcium hypochlorite, HTH, Perchloron, or approved equal, mixed in solution with water. The quantity of hypochlorite shall in all cases be subject to the approval of the Department, whose representative shall be present at all times while this phase of the work is in progress.
- J. Wherever practicable, water from the existing mains flowing through the disinfected connections shall be used in disinfecting the main line in order that the hypochlorite may be removed to the greatest extent possible. In other cases, the water from the disinfected connections shall be removed by allowing it to flow into the main line as it is being drained.

END OF SECTION