

# Memorandum

**To:** NMED – Drinking Water Quality Bureau

**From:** Brian Ambrogi PE

**CC:** Jock Embry – President LMWC

**Date:** 1/12/2021

**File Number:** 16-600-204-00

**Re:** Disinfection Plan – La Mesa Water Cooperative Well #3 Arsenic Treatment Facility

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## **WATER SYSTEM DISINFECTION PLAN:**

Disinfection of the Well #3 Arsenic Treatment plant shall be completed in accordance with AWWA C653-20 Disinfection of Water Treatment Plants. The entire newly constructed treatment facility, treatment units, equipment and piping shall be thoroughly cleaned. Cleaning agents used shall be safe and not cause a violation of water quality health effects standards if introduced into the water system during disinfection and filling. All construction tools, equipment, and materials shall be removed and surfaces of wall, floors, and attached structures shall be thoroughly cleaned using acceptable cleaning means. All water, paint flakes, sediment, dirt and foreign material shall be removed prior to disinfection. All equipment and treatment processes that are in regular contact with disinfected water, after the initial point of disinfection, and that are not adversely affected by chlorine shall be disinfected. Acceptable materials for disinfectant chlorine solution include Liquid chlorine, sodium hypochlorite, calcium hypochlorite.

Disinfection of plant piping shall be completed in accordance with AWWA C-651-14 - Piping to be disinfected with a liquid chlorine solution. After testing the lines are to be flushed until the chlorine residual is to match the existing system or to be below 0.5 parts per million. Prior to being placed in service bacteria samples shall be taken by Owner and, if deemed unsatisfactory by laboratory testing, the disinfection process is to be repeated by the Contractor. Once all testing is completed and deemed satisfactory to the Engineer and Owner the new system and water line will be placed in service and connected to the existing system

Storage tanks shall be disinfected in accordance with AWWA C-652 by using a solution of at least 200-mg/L available chlorine applied directly to the surfaces of parts of the storage facility that would be in contact with water when the tank is full to the overflow elevation. Backwash tanks and waste tanks do not need to be disinfected

Disinfection of treatment filters shall be completed in accordance with the filter manufacturer's recommendations and as outlined in AWWA C653 section 4.4.3.

Contractor shall take two or more samples, not more than 30-minutes apart to be tested for the presence of total coliform. If none of the samples show a presence of total coliform bacteria, the unit may be placed into service. The reports showing samples are free from total coliform shall serve as the record or compliance.

Prior to disinfection of the facility, the contractor shall provide a disinfection plan and schedule to the Owner and Engineer, detailing how treatment plant, and water lines will be disinfected and sampled in accordance with AWWA standards and NMED requirements. A detailed disinfection plan beyond references to NMED and AWWA standards is not provided in the plan documents.