

Recommended Testing Procedure Following Steel Water Tank Coating Applications

On December 30, 1985, the Department of Public Health began requiring volatile organic chemical testing of water from all newly coated potable water storage tanks. This action was taken because organic solvents contained in certain coatings were found to leach into the water following the coating application. However, as early as 1989, the National Science Foundation began certifying tank coatings to meet NSF Standard 61 for direct additives. The Department's current policy is that water utilities should use coatings that are certified to meet NSF Standard 61. As long as the certified coatings are applied according to the manufacturer's instructions, utilities are no longer required by the Department to conduct the testing described below. However, if the utility wishes to conduct the volatile organic soak test after coating a storage tank as a quality control check to verify that the applicator has applied the coating correctly, the following procedure is recommended:

Note: The Waterworks Standards specify tank coatings and all other components that come in contact with drinking water to be certified to meet NSF Standard 61. The tank must be disinfected after the coating is applied even if the coating is NSF certified.

Volatile Organic Testing

1. The Material Safety Data Sheet (MSDS) must be obtained from the manufacturer of the coating to be used. The MSDS lists all organic solvents used in the coating and should be used to determine which organic chemicals should be sampled for.
2. Following the curing period, the tank must be filled and allowed to soak for 5 days. At the end of the 5-day soak period, a sample of water must be analyzed for volatile organic chemicals using EPA Method 524.2 or 502.2. In addition, analysis should be conducted for any other organic chemicals from the MSDS that are not analyzed as part of the 524.2 or 502.2 scan.
3. Upon receipt of the test results, the water supplier should notify the Department if any regulated chemical exceeds the State maximum contaminant level, or if any unregulated chemical has been detected. The tank should remain out of service until corrective action is taken and resamples indicate that the water is of acceptable quality.
4. If test results indicate that all chemicals are within acceptable limits, the tank can be placed into service. The test results should be submitted to the Department for our files.

Disinfection

Before the tank is placed into service, it must be disinfected in accordance with AWWA Standard C652-92. After the tank is disinfected, a sample must be collected while the tank is full and analyzed for bacteriological quality. Negative results must be obtained before the tank can be placed into service.

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