

## DOMESTIC WATER STERILIZATION

To obtain occupancy permits for new buildings, as well as for additions or reworking of water systems in existing buildings, builders must prove to Inspectors that the water is safe to drink. The industry refers to the piping that supplies potable water as the domestic water system. The domestic water system must be thoroughly cleaned and the water needs to be tested and proven safe to drink, before the building can be occupied. The cleaning and testing should be done by an independent party to achieve full safety certification, and this is an important role that Arc Water Treatment is particularly qualified to perform. Similar to independent certification of elevators and sprinkler systems, the safety of the water piped to each drinking fountain, coffee machine, and sink is paramount to ensuring tenants that a building is safe to occupy. Arc Water Treatment offers to sterilize and certify the safety of the domestic water systems, and does this daily for Mechanical and Plumbing Contractors. Our Service Technicians are all fully Certified by the State of Maryland to take water samples, and handle them properly for analysis by an independent laboratory, which is also fully certified to assess the safety of the water for drinking purposes. The procedure involves injecting a strong solution of chlorine into the new piping at the source, and ensuring the chlorine reaches every fixture on the system. Our highly trained Technicians have test chemicals to verify the chlorine will sterilize all parts of the domestic water system, and must remain in contact of all parts for at least three hours, as prescribed by the American Water Works Association C651 Plumbing Code. They then fully flush the system, testing again at every fixture to ensure only city water remains in the system. After flushing, a sample of the water is taken, treated with a Thiosulfate pill to ensure test validity, sealed and documented for the lab with a "chain of custody" form.

The independent laboratory tests this certified sample primarily for the presence of fecal coliform, and provides a Certificate of Analysis to document whether the sample is within EPA standards for drinking water. Arc Water Treatment then forwards the results, stamped with the seal of our Professional Engineer, to the contractor who needs this independent certification that the water is safe to drink, often as the final step to obtaining the occupancy permit. The sterilizing program is particularly active this time of year for contractors completing modernizations or building of new schools. It is vital that the water in the schools be certified as safe to drink before students are allowed in the buildings, and Arc Water Treatment works closely with many plumbers and mechanical contractors to get this done on time.