

GENERAL

The scope of this document is to provide instruction for the design, installation and testing of exterior underground potable water distribution systems installed at the University of Missouri – Columbia.

The University of Missouri – Columbia owns and operates a potable water distribution system serving University buildings. It is a single interconnected system with an operating pressure which varies from approximately 55 psi to 140 psi depending on the campus location.

Equipment and materials specified under these standards are to also be applied to water service lines located inside the building, up to, and including the first building water shutoff valve installed downstream of the domestic water meter, or the fire protection backflow prevention device.

Lead Ban

Plumbing fittings and fixtures not in compliance with standards established in accordance with 42 U.S.C. 300g-6(e) (latest version) shall not be used.

Section I.

A. Purpose:

- 1) To ban the use of lead materials in the public drinking water system and plumbing connected to the public drinking water system; and
- 2) To protect University of Missouri customers from lead contamination in the University's public drinking water system.

B. Application. This applies to all premises served by the public drinking water system of the University of Missouri.

C. Ban. This ban will be reasonably interpreted by the water purveyor. It is the purveyors intent to ban the use of lead based material in the construction or modification of the University's drinking water system. The cooperation of all consumers is required to implement the lead ban.

If, in the judgment of the water purveyor or his authorized representative, lead based materials have been used in new construction or modifications after January 4, 2014 due notice shall be given to the consumer. The consumer shall immediately comply by having the lead base materials removed from the plumbing system and replaced with lead free materials. If the lead base materials are not removed from the plumbing system, the water purveyor shall have the right to discontinue water service to the premises.

331015 Water Utility Distribution General

2016 Q1

Section II. Definitions

A. The following definitions shall apply in the interpretation and enforcement of this policy.

1) "Consumer" means the owner or person in control of any premises supplied by or in any manner connected to a public water system;

2) "Lead base materials" means any material containing lead in excess of the quantities specified in Section II. A. 3;

3) "Lead free" means:

A. In General.

1) When used with respect to solder and flux, refers to solders and flux containing not more than 0.2 percent (0.2%) lead; and

2) When used with respect to pipes, pipes fittings, plumbing fittings, and fixtures, refers to pipes, pipe fittings, plumbing fittings, and fixtures containing not more than a weighted average of .25 percent (0.25%) lead.

4) "Public drinking water system" means any publicly or privately owned water system supplying water to the general public which is satisfactory for drinking, culinary and domestic purposes and meets the requirements of the Missouri Department of Natural Resources; and

5) "Water purveyor" means the owner, operator, or individual in responsible charge of a public water system.

Section III. Exemptions

A. "pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for non-potable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption; (SDWA 1417(a)(4)(A))

B. "toilets, bidets, urinals, fill valves, flush-o-meter valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger." (SDWA 1417(a)(4)(B))

Section IV. Lead Banned from Drinking Water Plumbing

A. No water service connection shall be installed or maintained to any premises where lead base materials were used in new construction or modifications of the drinking water plumbing after January 4, 2014.

B. If a premises is found to be in violation of Section IV. A., water service shall be discontinued until such time that the drinking water plumbing is lead free.

DESIGN GUIDELINES

Typical Water Chemistry:

pH = 7.4

Total Alkalinity = 290 mg/l

Total Hardness = 249 mg/l.

Buildings located on the MU campus will typically have potable water service from MU's distribution system. Internal fire protection will also be served by the MU distribution system. Usually one service line into a building will provide both needs. If a separate service line is required for fire protection, installation of a post indicator valve will be required.

Flow tests, when required, can be obtained from the system owner.

A permanent line shall be installed to facilitate flushing of the water service line. The line shall be a minimum of 2" diameter and shall flow the water to a location outside of the building. The line shall be connected after the 1st valve inside of the building.

All water connections (fire and potable) shall include the installation of testable backflow prevention assemblies as required and approved by the Missouri Department of Natural Resources and MU Construction Standards.

All potable water service shall have a water meter, installed in a readable, accessible location.

All sizing and locations for mains, services and other auxiliary equipment shall be coordinated with system owner.

All service line entrances to buildings shall be designed to be maintainable. If a building is being built on a slab, a pit allowing access to the water line must be installed. Water service lines under buildings are not acceptable.

Water service-line connections to water mains shall include a three-valve (main-tap-main) cluster which will allow for maximum valving flexibility.

SCHEDULING

Site utility tie-ins shall be coordinated with the Owner's Representative. Contactor shall notify Owner's Representative two (2) weeks in advance of desired tie-in time. Owner's Representative will give Contractor 72 hours advance notice of actual time for tie-ins.

Tie-ins to utility systems shall be made on weekends or nights, and work shall be done around-the-clock until the tie-in is completed. Line outages are to be

kept to a minimum.

REFERENCES

Requirements for the installation of water mains and services, in addition to other auxiliary equipment are found elsewhere in these Construction Guidelines.