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Questions & Answers

Point-of-Use or Point-of-Entry Treatment Strategy

What is point-of-use treatment?

Point-of-use (POU) devices treat water from a single outlet, faucet or fixture. A POU device is installed to reduce contaminants in the drinking water at one tap, such as a kitchen sink.

What is point-of-entry treatment?

Point-of-entry (POE) devices treat all the water entering a house or a building to reduce contaminants in the drinking water. A single-connection water system using one treatment device to treat all the water entering the building is considered centralized treatment, not POE treatment.

Can water systems use point-of-use or point-of-entry devices to meet drinking water standards?

No. State drinking water rules are tailored to traditional central treatment and distribution systems, and don't address the circumstances unique to POU or POE treatment. In some cases, POU and POE treatments are simply incompatible with the rules; in others, compliance is too difficult. However, individuals can use POU and POE devices to address taste or odor concerns.

How are point-of-use and point-of-entry devices incompatible with state rule?

1. **Source water monitoring** rules require sampling of each source, after treatment, and prior to entry into the distribution system. The rules intend treatment to occur at the beginning of the distribution system, not the end. It is not clear where sampling sites should be when POU or POE devices are used at each home or business. When water systems use POU or POE devices, samples taken from the distribution system are not "after treatment" or "representative" of the water consumers are drinking. Sampling after treatment increases the number of sampling sites from one per treatment plant to one per connection.
2. **Distribution system monitoring** rules require water systems to collect samples from sites that represent the water delivered to customers. To comply, a system using POU or POE devices would have to take samples from sites served by POU or POE devices, and could not use sampling stations on the distribution system. However, the Lead and Copper Rule prohibits sampling from faucets served by POU or POE treatment devices designed to remove inorganic contaminants. The rule also requires first-draw samples from faucets used for drinking or preparing food – exactly the same faucets a POU or POE device would supply.
3. **State design standards** reference National Sanitation Foundation (NSF) standard 60 for chemical treatment, and NSF standard 61 for additives, products and materials. These two standards cover every material from the well or water intake to the faucet. However, state design standards do not reference NSF standard 53, which covers POU or POE selection and installation. Instead, NSF standard 53 is in the Uniform Plumbing Code. This gap in jurisdiction raises questions about approval and oversight authorities for POU and POE devices.



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

How do point-of-use and point-of-entry devices make compliance too difficult?

1. According to national drinking water regulations, if one sampling point violates the **maximum contaminant level (MCL)** the entire water system is in violation of the MCL. This, in turn, triggers a series of other requirements including additional sampling and public notification. The regulations also require water systems to collect finished drinking water samples from treatment systems used to remove contaminants with established primary MCLs, and submit them to a certified laboratory for analysis.

Therefore, a water system using POU or POE would have to collect one water sample from each connection every month. This could add up to a large number of samples and a big expense for water suppliers. And, if a single POU or POE device malfunctions and results in a sample above the MCL, the entire system would be in violation of the MCL.

2. **Public notification** requirements assume test results represent the water provided to all consumers, so everyone receives the same message. This may not be appropriate in a POU or POE setting where some devices have failed, but others have not.
3. The **Operator Certification Program** does not address the unique responsibilities and operational issues involved in operating a POU or POE treatment unit. Other state laws may require a plumber's license for functions involving in-home treatment and plumbing devices. This adds another level of complexity to an operator's responsibility to ensure proper oversight and management of a water system.
4. At present, the Department of Health Office of Drinking Water cannot effectively **track the unique data** POU or POE devices installed in water systems would generate. Allowing POU or POE would require additional computer programming or manual tracking.

Are there other legal constraints?

Yes. If the rules permitted POU or POE devices, water systems would be responsible for ongoing sampling, operation and maintenance of devices installed in every home or business. To fulfill this responsibility, the water system would need permanent, uninterrupted legal access to private property. However, private property rights cannot be waived. The right of a homeowner or business owner to refuse entry to a private home or business for monitoring or maintaining treatment devices is a major obstacle to ensuring proper operations and maintenance.

In addition, one homeowner denying access to property for monitoring or maintenance could affect the compliance status of the entire water system. This could initiate a series of compliance actions against the water system based upon the actions of a single homeowner – a situation the water system would have little control over.

Additional Information

For more information, please call the Office of Drinking Water regional office nearest you:

Northwest Region – Kent (253) 395-6750

Southwest Region – Tumwater (360) 236-3030

Eastern Region – Spokane (509) 329-2100

