6.10 Monitoring Locations for Compliance Samples – 07/13/2017 F

6.10.1 Entry Point Monitoring

6.10.1.1 General

This subchapter provides guidance for entry point sample location determination.

Consistent with federal and state rules, at all public water systems the entry point is located after any treatment or chemical addition and prior to the distribution system.

Where there are unanswered questions about source water quality, DNR staff may explore requiring raw water sampling, as allowed under s. NR 809.06, Wis. Adm. Code. For guidance on raw water sampling see section 6.10.2 Raw Water Samples of the Public Water Supply Operations Handbook. For assistance, consult the Monitoring Coordinator.

6.10.1.2 Authority

Chapter NR 809, Wis. Adm. Code, specifies drinking water monitoring requirements for all public water systems, consistent with the federal Safe Drinking Water Act §40 CFR 141. Chapter NR 811, Wis. Adm. Code, establishes requirements for the operation and design of community water systems. This chapter includes requirements relevant to entry point sample tap location.

6.10.1.3 Definitions

Entry point is defined in s. NR 809.04(29), Wis. Adm. Code, as follows:

“Entry point” means a location in the public water system after treatment or chemical addition, if any, but prior to the distribution system. A sample collected in the distribution system may be considered an entry point sample if the department has determined it is more representative of the water sources.

For community public water systems (MC and OTM) an entry point faucet location shall comply with the s. NR 809.04(29), Wis. Adm. Code, definition where chemical addition, water treatment or water storage is installed, per s. NR 811.37(5)(b)2., Wis. Adm. Code. It is recommended that non-community public water systems align with this portion of s. NR 811.37(5)(b)2, Wis. Adm. Code, concerning entry point location after water storage. A copy of s. NR 811.37(5)(b)2., Wis. Adm. Code, is provided here for ease of reference:
If chemical addition, water treatment, or water storage is installed, a second entry point sampling faucet shall be installed as far downstream of the chemical injection, water treatment, or water storage as practical. If necessary to obtain a water sample representing finished water quality, a water service lateral shall be brought back into the building and fitted with a sampling faucet after being connected to the finished water main outside the building.

Combined entry point is not specifically defined in ch. NR 809, Wis. Adm. Code, however multiple identical references to the concept of a “combined entry point” are included in the federal Safe Drinking Water Act, for example see §40 CFR 141.24(f)(3), included here:

If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water representative of all sources is being used).

6.10.1.4 Non-Community Systems (TN and NN)

Non-community systems, in existence before July 13, 2017, without a suitable entry point sample tap prior to the distribution system, may collect “entry point” samples at the first suitable sample tap or faucet downstream of treatment, and within the distribution system.

In such circumstances, DNR staff will include in the sanitary survey report a recommendation that the next time major work is performed on the system, that an “entry point” sample tap be installed after treatment or chemical addition, if any, and prior to the distribution system.

This allowance is made only for non-community systems in existence before July 13, 2017, the date this section of the handbook was approved.

Non-community systems newly constructed on or after July 13, 2017, are expected to install a proper entry point sample tap located after treatment or chemical addition, if any, and prior to the distribution system, as specified in state and federal rule. If DNR staff encounter a situation where this is not the case, DNR staff will identify this as a deficiency in the sanitary survey report and require corrective action before the next sample is due or within 45 days, whichever is longer.
6.10.1.5 Combined Entry Point

Consistent with the references in 40 CFR 141, if a public water system draws water from more than one source and the sources are combined before distribution, the public water system shall be sampled at an entry point to the distribution system during periods of normal operating conditions when water representative of all sources is being used.

As part of a sanitary survey, DNR staff are responsible for reviewing a “combined entry point” to ensure it is consistent with this federal code. Relevant considerations include the number of water sources and methods of operation (see criteria below). For assistance, consult the Monitoring Coordinator.

Criteria for consideration when evaluating a combined entry point as part of a sanitary survey:

- Total number of water sources as part of the combined entry point.
- Operational scheme of all water sources with combined entry point.
- Entry point after storage: representative of all combined entry point water sources.
- Active wells versus emergency wells.

6.10.1.6 Community Systems & Chemical Addition

As established in s. NR 811.37(5)(b)2., Wis. Adm. Code:

If chemical addition, water treatment, or water storage is installed, a second entry point sampling faucet shall be installed as far downstream of the chemical injection, water treatment, or water storage as practical. If necessary to obtain a water sample representing finished water quality, a water service lateral shall be brought back into the building and fitted with a sampling faucet after being connected to the finished water main outside the building.

If during a sanitary survey, DNR staff encounter a community system in existence on or before December 1, 2010, with an entry point location that does not meet the requirements of s. NR 811.37(5)(b)2, Wis. Adm. Code, staff will document it in the sanitary survey report as a non-conforming feature to be corrected with the next major construction project.

If DNR staff determine that a health risk exists due to incorrect entry point location prior to treatment, staff will document it as a significant deficiency in the sanitary survey report and require correction, per s. NR 811.01, Wis. Adm. Code. For assistance, consult the Monitoring Coordinator.