

ORRC Meeting #6

As recommended by the Technical Subcommittee, Meeting #6, 4/4/19

On-Site Rule Revision Issue:

WAC 246-272A-0110

**Proprietary treatment products—Certification and registration.
NSF 245 replacing ETV proprietary nitrogen testing**

Problem Statement

WAC 246-272A-0110 currently requires that proprietary products use the EPA Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction/EPA Environmental Technology Verification Program (ETV) test for nitrogen abatement capabilities. This original ETV testing protocol included a one year duration. **NSF 245: Nitrogen Reduction** is the formal outcome and result from all the data that EPA collected from ETV protocol testing results from years of data collection. The EPA archived the ETV protocol in 2013, as NSF 245 took its place as the national standard for testing for products intending to reduce nitrogen loading. The NSF 245 testing is conducted over a 6 month period. Some facts:

- The NSF 245 testing is accepted in several states.
- The testing is at least, if not more stringent than the ETV.
- The cost of one NSF 245 test is \$87,000.

Recommendation [from DOH and Technical Advisory Group (TAG)]

- Adopt NSF 245 as the requirement for nitrogen reduction testing for proprietary products.
- Require no additional field testing after installation. The manufacturer is still responsible for the first two years of O&M&M just like currently.

Rule Language Changes

WAC 246-272A-0110 **RED** = Deletion **BLUE** = Addition

Proprietary treatment products—Certification and registration.

(1) Manufacturers shall register their proprietary treatment products with the department before the local health officer may permit their use.

(2) To qualify for product registration, manufacturers desiring to sell or distribute proprietary treatment products in Washington state shall:

(a) Verify product performance through testing using the testing protocol established in Table I and register their product with the department using the process described in WAC 246-272A-0120;

(b) Report test results of influent and effluent sampling obtained throughout the testing period (including normal and stress loading phases) for evaluation of constituent reduction according to Table II;

(c) Demonstrate product performance according to Table III. All thirty-day averages and geometric means obtained throughout the test period must meet the identified threshold values to qualify for registration at that threshold level; and

(d) For registration at levels A, B, and C verify bacteriological reduction according to WAC 246-272A-0130.

(3) Manufacturers verifying product performance through testing according to the following standards or protocols shall have product testing conducted by a testing facility accredited by ANSI:

(a) **ANSI/NSF/ANSI** Standard 40—Residential Wastewater Treatment Systems;

(b) NSF Standard 41: Non-Liquid Saturated Treatment Systems;

(c) NSF Protocol P157 Electrical Incinerating Toilets - Health and Sanitation; ~~or~~

(d) **NSF/ANSI 245: Nitrogen Reduction**; or

(e) Protocol for bacteriological reduction described in WAC 246-272A-0130.

Comment [SJJ(1)]: This may change later if new NSF standard 385? is released

~~(4) Manufacturers verifying product performance through testing according to the following standards or protocols shall have product testing conducted by a testing facility meeting the requirements established by the Testing Organization and Verification Organization, consistent with the test protocol and plan:~~

~~(a) EPA/NSF—Protocol for the Verification of Wastewater Treatment Technologies; or~~

~~(b) EPA Environmental Technology Verification Program protocol for the Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction.~~

(54) Treatment levels used in these rules are not intended to be applied as field compliance standards. Their intended use is for establishing treatment product performance in a product testing setting under established protocols by qualified testing entities.

TABLE I

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Testing Requirements for Proprietary Treatment Products	
Treatment Component/Sequence Category	Required Testing Protocol
Category 1 Designed to treat sewage with strength typical of a residential source when septic tank effluent is anticipated to be equal to or less than treatment level E.	ANSI/NSF 40—Residential Wastewater Treatment Systems (protocols dated between July 1996 and the effective date of these rules)
Category 2 Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment level E. (Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.)	EPA/NSF Protocol for the Verification of Wastewater Treatment Technologies/ EPA Environmental Technology Verification (April 2001)
Category 3 Black water component of residential sewage (such as composting and incinerating toilets).	NSF/ANSI Standard 41: Non-Liquid Saturated Treatment Systems (September 1999) NSF Protocol P157 Electrical Incinerating Toilets - Health and Sanitation (April 2000)
Total Nitrogen Reduction in Categories 1 & 2 (Above)	Protocol for the Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction/EPA Environmental Technology Verification Program (November, 2000) NSF/ANSI 245: Nitrogen Reduction (January 2018)

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Supporting Information

Attached are charts showing the differences in the tests:

1. Wastewater treatment systems – Nitrogen reduction
2. NSF/ANSI Standard 245 Residential Wastewater Treatment Systems – Nitrogen Reduction versus EPA Protocol for the Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction



NSF ANSI 245 versus
EPA ETV Protocol.pdf



NSF ANSI Standard
245-2007 Forward.pdf