

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Water Supply and Wastewater Management

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TITLE: Experimental Onlot Wastewater Technology Verification Program

EFFECTIVE DATE: July 3, 2004

AUTHORITY: Act 537 of 1966, the Pennsylvania Sewage Facilities Act (as amended), Title 25 Pa. Code Chapter 73

POLICY: It is the policy of the Department of Environmental Protection (DEP) to evaluate concepts or technologies new to Pennsylvania that are applicable to onlot wastewater disposal. It is necessary that such evaluations be consistently applied and impartially conducted by a nationally recognized independent third party, following nationally recognized protocols.

APPLICABILITY: This policy will assist DEP staff and local Sewage Enforcement Officers (SEOs) in determining the expected performance of new onlot wastewater technologies for the purpose of design, permitting and operation. It will also assist technology manufacturers in determining whether test data collected elsewhere may be utilized to support technology approval in Pennsylvania.

DISCLAIMER: The policies and procedures outlined in this guidance are intended to supplement existing guidance. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the rules in these policies that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

PAGE LENGTH: 4 pages

LOCATION: Volume 17, Tab 12

DEFINITION: See Title 25 Pa. Code, Chapters 71, 72 and 73

I. Introduction

- A. Title 25 Pa. Code Chapter 73, Section 73.1 defines *experimental sewage system* as a method of onlot sewage treatment and disposal not described in Title 25 which is proposed for the purpose of testing and observation.
- B. Section 73.71 provides that experimental sewage systems may be used in a number of cases including the evaluation of new concepts or technologies applicable to onlot disposal.
- C. Section 73.71 (e) further provides that monitoring, observation, testing or other requirements which are deemed necessary to verify the success of the experiment shall be required.
- D. The prior practice of addressing monitoring, observation and testing requirements for experimental technologies case-by-case has resulted in inconsistencies, inappropriate use of experimental technologies and a delay in making promising technologies available for general use.
- E. This policy is intended to provide guidelines for testing and verifying the performance of experimental technologies that are applicable to onlot collection, treatment and disposal.

II. Scope

This policy extends to all commercially ready proprietary and non-proprietary components of an experimental onlot sewage system that are reproducible from one location to another. This includes components applicable to individual and community onlot systems designed to treat no more than 10,000 gallons per day of wastewater from residential, commercial or institutional establishments as listed in Title 25 Pa. Code Chapter 73, Section 73.17, but excluding industrial waste.

This policy will not affect any component testing or approval as currently described in Chapter 73. Treatment tanks (e.g. various filters and denitrification units) and the components of absorption areas (e.g. gravelless technologies, drip irrigation systems, repair technologies) not described in Chapter 73 are the target of this policy. The technology performance verification information gathered under this policy will also be appropriate for use in making small flow treatment facility design, permit and operation decisions.

III. Roles and Responsibilities

- A. Verification Organization - One or more verification organizations acceptable to DEP will be selected to oversee the technology verification process from application through field verification. To be acceptable to DEP, an organization shall be accredited by the American National Standards Institute (ANSI) as an independent third party certification organization, and demonstrate to the satisfaction of DEP, through experience and national recognition by other regulatory agencies, that they are capable of implementing this guidance. The National Sanitation Foundation International (NSF) has initially been selected for this role because it is accredited by ANSI as a third party certification

organization; has extensive experience verifying and certifying experimental onlot technologies; has developed appropriate testing protocols and standards; has a network of qualified test centers and testing organizations; and is recognized nationally by regulatory agencies, manufacturers and the general public. In the following section, NSF is identified as the verification organization.

- B. Testing Organization - One or more independent 3rd party testing organizations will be qualified by NSF to develop and implement technology-specific test plans.
- C. Technology Manufacturers - Manufacturers will be required to submit a complete application for technology performance verification to NSF; provide field-ready versions of the technology and assist with installation at a qualified test center; and provide necessary funding for test center and field verification testing.
- D. DEP - The entire technology verification process will be coordinated with DEP. DEP will determine how technologies that complete field verification may be used in Pennsylvania.

IV. Description of the Experimental Onlot Technology Verification Process

- A. All requests for technology verification will be submitted to the NSF and DEP on forms acceptable to NSF. Any existing performance verification data that the manufacturer wishes be considered to supplement or supplant required testing must be submitted along with the verification application, in a format acceptable to NSF.
- B. Technologies accepted for performance verification will be required to complete appropriate testing at a test center qualified by NSF. The applicant will be provided an opportunity to identify the preferred test center, subject to the approval of NSF and DEP. Testing will be conducted by an NSF qualified independent third party testing organization, following a protocol developed by or in cooperation with ANSI and/or the U.S. Environmental Protection Agency. If no technology appropriate protocol exists, the applicant will bear financial responsibility for development of a protocol. The testing organization will be responsible for developing and implementing a technology specific, site-specific test plan in accord with the appropriate testing protocol.
- C. NSF will develop a final report, appropriate for national distribution, on the results of test center verification including but not limited to the verified performance of the technology, operation and maintenance requirements necessary to ensure verified performance, and general requirements for field testing of the technology.
- D. Based on test center test results, DEP in cooperation with NSF will determine whether a technology should proceed to field-testing.
- E. Technologies selected for field verification will normally be tested at 12 representative sites across the state of Pennsylvania. This number may increase for technologies that are intended for use at more than one type of establishment (e.g. residential, commercial, institutional, seasonal, etc.) where sewage strength varies significantly. Representative sites will be selected based on the intended use of the technology, and the extremes of flow and waste strength that may be expected at these establishments.

- F. NSF or an NSF qualified testing organization will develop a technology specific field test plan. Implementation of the test plan, including all sample collection, will be by an NSF qualified testing organization. The length of testing will generally be 12 months, but may vary depending on the type of component and recommendations in the technology specific testing protocol.
- G. The applicant shall submit existing field test data that they wish to have considered, in a format acceptable to NSF. NSF and DEP will determine the acceptability of such data. This data will normally only supplement and not replace required Pennsylvania field verification.
- H. NSF will provide to DEP all data collected, field notes, interim reports and a final report appropriate for national distribution. Based on this information, DEP will determine whether the continued use of the technology in Pennsylvania is appropriate. If an affirmative determination is made, DEP will initiate the promulgation of amendments to Chapter 73 to include the new technology.
- I. NSF will conduct annual audits of all facilities and production locations of the tested components to ensure component integrity after such components are approved by DEP for general use in Pennsylvania. Retesting and reevaluation will be conducted at least once every 7 years.