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| Ohio EPA Policy | Design Criteria; Experimental Wastewater Treatment Systems | |
| DSW-0400.003 Removed | Statutory reference: Rule reference: | Ohio EPA, Division of Surface Water Revision 0, August 1, 1988 Removed, April 30, 2003 |
| THIS POLICY DOES NOT HAVE THE FORCE OF LAW Pursuant to Section 3745.30 of the Revised Code, this policy was reviewed and removed. | | |

This policy does not meet the definition of policy contained in Section 3745.30 of the Ohio Revised Code. Ohio EPA is removing this document from the Division of Surface Water Policy Manual and is considering addressing this topic in a future rulemaking.

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NUMBER: DSW-0400.003
ISSUED: 8-1-88
STATUS: FINAL
DIVISION: DSW
PAGE: 1 OF 3

Design Criteria; Experimental Wastewater Treatment Systems

PURPOSE: To provide the procedures to follow when a wastewater treatment system is proposed that does not have an established performance record in the state of Ohio.

BACKGROUND: An experimental system is any treatment process, treatment unit, or piece of equipment that does not have an established performance record in the state of Ohio. Usually, an established performance record means at least three separate installations operating at near design capacity for at least three years without any major failure of that process, unit or equipment to perform as designed; or at least five separate installations operating at least one half of design capacity for at least five years without any major failure of that process, unit or equipment.

POLICY: Not more than five separate installations of any one experimental system should be approved by the Ohio EPA as long as the system is still considered experimental.

Prior to submittal of plans, it is advisable that the applicant have his engineer contact the appropriate district office to discuss the feasibility of using the proposed experimental system for the proposed installation. In addition to the requirement in Recommended Standards of Sewage Works (Ten States) Section 43.2, of the engineer shall supply:

1. The criteria that will be used to design the experimental system.
2. Manufacturer's literature that explains or supports the design, operation, maintenance, or reliability of the environmental system.
3. A list of other similar installations with the name, address, and other phone numbers of the appropriate regulatory agencies and up-to-date performance when available.
4. If there are special operation or maintenance requirements that would be required for this system, these requirements should be specified in writing. This could include extra operation attention, aeration rates, MLVSS, sludge age, automatic control settings, winter operations, etc.
5. Proposed staffing level, manhours, and process sampling frequency.

The submittal of plans shall contain separate letters from each of the following parties:

- the engineer;
- the developer;
- the proposed final owner (i.e., county sewer district); and
- when appropriate, the manufacturer

NUMBER: DSW-0400.03
ISSUED: 8-1-88
STATUS: FINAL
DIVISION: DSW
PAGE: 2 OF 3

Each party shall acknowledge that this is an experimental installation and provide assurance that, to the best of their knowledge, this system will work satisfactorily at this site. The plans shall include provisions for adding a proven system (i.e. sand filters, extended aeration) in the event the experimental system fails to perform as proposed.

Since similar processes might be proposed throughout the state, all new processes should be discussed during the regularly scheduled group leaders meetings. If it is decided that more in-depth discussions are needed, a committee of appropriate district and central office staff should be established to review that process. The reviewer should actively consult with district staff, central office staff, and the design engineer during the review.

Since this review process can be time consuming, the consultant, developer, etc., should be notified as early as possible of the fact that the permit to install review period might take two to six months longer than usual.

The permit to install should contain a condition requiring periodic reports concerning the operation, maintenance, and performance of the system. These reports shall include the performance of the system and any problems encountered since the last report. These reports shall be submitted to the appropriate district and/or central office staff as specified in the permit.

A NPDES permit shall be issued for all experimental systems with a discharge regardless of the size of the system. The permit may require extra monitoring and reporting as is deemed appropriate. The extra monitoring might include any process control that the engineer or manufacturer had indicated as important. The requirements to report process control data will generally be included in Part II of the permit. This will eliminate the need for special STORET codes. If, on a short term basis, failure of the experimental equipment is not likely to adversely affect the quality of the discharge (i.e., mechanical barscreen), then the treatment plant should receive a NPDES permit containing the usual requirements.

An experimental system should be inspected frequently (at least twice a year) by the district until the system has demonstrated its reliability.

The manufacturer shall agree, in writing, not to indicate that the system has received the approval of the Ohio EPA or the state of Ohio until the Ohio EPA no longer considers the system to be experimental and has accepted it as proven technology. He can indicate that it is being used in Ohio on an experimental; level and its performance to date.

After the system has been operating under design conditions for three years or in continuous operation for five years, the engineer or manufacturer may ask for the removal of the experimental designation. At that time, the Ohio EPA shall designate the system as either acceptable technology or an unacceptable technology. The Ohio EPA can take this action independently at any other time.

NUMBER: DSW-0400.03
ISSUED: 8-1-88
STATUS: FINAL
DIVISION: DSW
PAGE: 3 OF 3

If all parties, except the Ohio EPA, agree that the experimental system will meet the appropriate standards, the Ohio EPA will require that a bond be established prior to issuance of the permit to install, to replace the experimental system with a proven system. This bond shall be large enough to cover the design and installation of the replacement system by parties acceptable to the Ohio EPA and the current owner of the treatment system.