Indiana Interpretation of 410 IAC 6-8.3: Tanks Fitted with Aeration Units for Aerobic Digestion

410 IAC 6-8.3, Residential On-Site Sewage Disposal Systems, allows for the use of tanks fitted with aeration units for aerobic digestion of sewage in residential on-site systems; these units are commonly referred to as aerobic treatment units (ATU). The use of this technology is addressed in Section 60(h) as described below. Section 52(h) allows the Indiana State Department of Health (department) to permit the use of new or more efficient sewage treatment processes; the use of secondary treatment systems (STS) is addressed in the Indiana Standards for Secondary Treatment Systems.

I. Requirements for new construction

A. Section 52(b) requires that the design, construction, installation, location, maintenance and operation of all residential on-site systems comply with the provisions of 410 IAC 6-8.3.

B. An ATU must:
   1. Conform to NSF/ANSI Standard 40 Residential Wastewater Treatment Systems, for Class I plants or to standards of an equivalent third party product testing laboratory acceptable to the department that meet or exceed the NSF/ANSI standards [Section 60(h)(1)];
   2. Provide a minimum treatment capacity of 150 gallons per bedroom per day [Section];
   3. Be preceded by a septic tank [Section 60(h)(4)] which meets all of the requirements of Sections 60 and 61; and
   4. Discharge:
      a. To a soil absorption field (SAF); or
      b. Other treatment system approved by the department [Section 58(e)].

C. A SAF that receives effluent from an ATU must meet all of the requirements of 410 IAC 6-8.3, including the size of the SAF. A SAF may not be reduced in size when an ATU is included in the design of a residential on-site system [Section 60(h)(5)].

II. Requirements for repair/replacement

A. The provisions of 410 IAC 6-83 relating to system design and installation do not apply where repair/replacement is necessary due to system defect, failure or malfunction. The local board of health may use its best judgment on the design and installation of a repair/replacement system [Section 53(i)].

B. It is the determination of the department that a LHD may not apply best judgment [Section 53(i)] to waive the requirement of Section 60(h)(1) (that tanks fitted with aeration units for aerobic digestion conform to NSF/ANSI Standard 40, Residential Wastewater Treatment Systems for Class I plants or to the standards of an equivalent third party product testing laboratory acceptable to the department that meet or exceed the NSF/ANSI standards).

C. A LHD must also comply with the requirements of Indiana Standards for Secondary Treatment Systems, Section VII.C, which requires:
   1. All new components; or
   2. Documentation that each component proposed for reuse:
      a. Is watertight and in good condition (using test procedures that comply with requirements of the department); and
      b. Complies with size and product requirements in applicable sections of 410 IAC 6-8.3 and the standards of the department.
III. Provision for SAF size reduction with a secondary treatment system (STS)

The department approves secondary treatment systems (STS) for use in Indiana, under the provisions of 410 IAC 6-8.3-52(h), and the Indiana Standards for Secondary Treatment Systems. These standards allow for a reduction in the size of the SAF when an STS is included in the on-site system.

IV. Inspection and operation and maintenance (O&M)

A treatment unit allowed for in this interpretation, and a STS, require ongoing O&M to function properly. One of the requirements of NSF/ANSI Standard 40 for Class I plants is that the manufacturer of the treatment unit, or its authorized representative, include a 2-year initial service policy in the original purchase price of the treatment unit. Nonetheless, it is important that LHDs have in-place local ordinances, policies and procedures for enforcement of O&M requirements so that necessary O&M takes place regularly over the lifetime of the treatment unit.

Approved: June 1, 2009
Effective: June 1, 2009
Revised: January 14, 2011
Revised: November 19, 2012

MICHAEL METTLER, REHS, DIRECTOR
ENVIRONMENTAL PUBLIC HEALTH DIVISION