

March 5, 1997

GMP #85

To: District Environmental Health Managers
District Health Directors
OEHS Staff

Through: Donald J. Alexander, Director
Division of Onsite Sewage and Water Services

From: Anish R. Jantrania, Ph.D., P.E.
Technical Services Engineer

Subject: Experimental Protocol for Aquarobic
Filter Bed System
Onsite - System Approval - Aquarobic Filter Bed

The Department has completed a review of the Aquarobic Filter Bed system and the Division has approved an experimental protocol to test the Aquarobic system in accordance with §2.25 of the Sewage Handling and Disposal Regulations. This GMP is intended to provide guidance on how to process applications for Aquarobic systems. The site criteria are contained in the **Experimental Protocol** document.

Conceptually, the Aquarobic Filter Bed system will provide additional wastewater treatment prior to subsurface disposal and thereby reduce the minimum site requirements necessary to treat conventional septic tank effluent. Approval of this protocol is intended to allow the demonstration of the Aquarobic Filter Bed System for the purposes of determining whether the system can overcome soil and site limitations that would prohibit the use of a conventional onsite system where percolation rates exceed 120 MPI, or the required stand-off distance to water table cannot be met, or both.

Aquarobic International Inc. applied for a variance from 2.25.A.2 of the Sewage Handling and Disposal Regulations. The request for the variance was approved and the backup requirements have been modified. In essence, a 100% repair area meeting the site and size requirements of the original Aquarobic Filter Bed System will be an acceptable backup for the sites that do not meet the requirements for a conventional system. Please refer to the February 14, 1997, variance which describes the backup requirements

and the justification for granting this variance and required conditions of the variance.

The Department's approval of this protocol is only granted for the Aquarobic Filter Bed System and is not transferable to any other product. Applications for products other than Aquarobic Filter Bed System, or for sites that exceed the scope of this waiver, are subject to the provisions of §2.25.

The process to obtain a construction permit for Aquarobic system begins with filing an application. Applications may be made to review a new site, to modify a previously issued permit, or to convert a 415 certification letter to a construction permit to allow a Aquarobic system. Please note that experimental system cannot be converted to an approval letter and that experimental construction permits cannot be valid beyond the completion of the experiment. All permits issued under this protocol must be recorded with a copy of the variance in the same manner that conditional permits are recorded. Please refer to Section IX-E of the protocol which addresses some practical matters related to experimental permits.

The waiver defines the Aquarobic system as an experimental system. The experimental protocol submitted by Aquarobic was prepared by a Mr. Daniel E. Pavon, the President of the company, and all testing associated with the protocol will be conducted under the auspices of a professional engineer. Local health departments may, at their discretion, require either formal or informal plans and specifications, as deemed appropriate for the proposed use and site conditions, prior to issuing a permit. All provisions of §2.25, except the requirements for a backup site, apply when issuing a permit. A backup site meeting the requirements of February 14, 1997, variance is required prior to permitting any site. Individual permit shall be issued by the local health department and a copy of the permit and site conditions sent to the Division of Onsite Sewage and Water Services.

When a new application is made for a construction permit and it specifically requests a Aquarobic system, an application fee shall be charged and the site shall be evaluated in the same manner as any application for a conventional septic system except that the site and soil conditions contained in the **Experimental Protocol** may be used. If the site and soil conditions meet these criteria, the site shall be deemed suitable for a Aquarobic system.

Applications to convert a 415 certification letter to a Aquarobic system shall follow the same general process, including collecting a fee; however, no soil evaluation is specifically required. A site evaluation (as opposed to soil evaluation) may be necessary to assure that conditions have not substantially changed since the letter was issued. If the site and soil conditions are

GMP #85
March 5, 1997
Page 3

unchanged and meet the criteria contain in the **Experimental Protocol** the site shall be deemed suitable for a Aquarobic system.

When an application is made to convert an existing Type I or II permit to a Aquarobic system, no application fee shall be charged as no site evaluation should be necessary. If the documented site and soil conditions indicate the site meets the criteria in the **Experimental Protocol**, the site shall be deemed suitable for a Aquarobic system.

System design, installation, and operation shall comply with the requirements described in the **Experimental Protocol**, Aquarobic design, construction and installation literature, the Sewage Handling and Disposal Regulations and standard engineering practices.

Attachments

GMP #85

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