



State of Delaware
Department of Natural Resources & Environmental Control
Division of Water Resources
Ground Water Discharges Section

Innovative and Alternative System Approval

ISSUED TO: ANUA
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FOR: Platinum Submerged Aerated Filter

APPROVAL DATE: 9/25/12

In accordance with the Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems (Regulations), an application dated July 26, 2012, was submitted by ANUA for approval of the Platinum Submerged Aerated Filter as an Innovative & Alternative On-Site Wastewater Treatment Unit

Based on the review of the application, the Department hereby grants approval of the use of the Platinum advanced treatment unit as an Innovative & Alternative On-Site Wastewater Treatment Unit subject to the conditions, limitations, and requirements set forth herein:

1. Product Description

Wastewater from the home flows into the primary chamber. Initial settlement and separation of gross solids occurs. A sludge layer is formed at the bottom of the tank which should be removed periodically. The settled effluent passes forward for treatment in the biological zone.

The media in the biological zone provides a large surface area allowing natural growth of microorganisms (biomass). Oxygen is supplied to the zone through dedicated air diffusers at the base. The microorganisms require oxygen to develop and in turn reduce the levels of biological oxygen demand (BOD) and Total Suspended solids (TSS) in the effluent.

Further settlement occurs reducing the levels of suspended solids. Settled solids are returned via an automatic sludge return (air lift) system to the primary settlement chamber for storage.

2. Claim

Approval is based on third party testing submitted by the Manufacturer indicating the specified model will routinely provide an effluent quality not exceeding 30 mg/l of BOD and 30 mg/l of TSS and a minimum 50% reduction in Total Nitrogen (TN) assuming influent loading does not exceed the treatment capabilities of the units.

4. Platinum Unit Specifications

Model #	Treatment Capacity (gpd)	Avg. Organic Load (lbs/day)	Design Organic Load (lbs/day)	Reactor Tank Dilution Volume (gal)	Air Requirements (cfm)
APG6	480	0.86	1.29	465	2.1
APG8	640	1.15	1.72	580	2.8
APG10	800	1.43	2.15	736	3.5
APG12	955	1.72	2.58	870	4.2

3. Use and Design Criteria

- a. The Platinum unit may be installed for new and replacement systems with conventional and innovative and alternative disposal systems.
- b. An on-site wastewater treatment and disposal system permit application incorporating a Platinum unit shall be designed in accordance with the Regulations, and manufacturer's specifications. The design shall be completed by a DNREC Class C Design Engineer unless otherwise approved by the Department. The permit application shall include proper unit specifications.

- c. The designer must assure that the treatment unit has above grade access. The media shall also have above grade access. The design also must ensure that the control panel and blower are accessible.
- d. The Platinum unit shall not be installed within areas subject to traffic loads unless specially designed on a case by case basis in accordance with the Regulations.
- e. The manufacturer is responsible for providing the Department a list of all local distributors and their associated contact information. This list must be kept current and shall be submitted to the Department on a yearly basis.

4. Installation Procedures

- a. The Platinum unit shall be installed by a DNREC Class E System Contractor under the supervision of a manufacturer's representative, or by a DNREC Class E System Contractor who has been certified for unit installation. Proof of certification shall be provided in writing to the Department.
- b. Start up of the system and initial operational checks shall be conducted by the Class E System Contractor (trained by the manufacturer), Design Engineer, and a Ground Water Discharges Section (Large System Branch) representative. If the Class E System Contractor is not certified, a manufacturer's representative shall perform the operational checks of the system at start up. If the manufacturer's representative can not be on site at the time of start up, they must provide final start up approval to the Department in writing.

5. Operation and Maintenance

- a. The Platinum shall be operated and maintained in accordance with the manufacturer's specifications.
- b. The manufacturer or manufacturer's representative shall comply will all Department mandated requirements as specified in permit conditions. This shall include operation and maintenance requirements.

6. Sampling and Approval

The Department reserves the right to sample any unit at any time.

7. General Conditions

- a. Use of the system for wastes other than residential shall be on a case by case.
- b. In the event that the product fails to perform as claimed by the applicant, and it is found that the system is installed and working as designed, and there is not toxicity in the waste; the use of the units for new installations shall cease. Use of the units shall not resume until such time the applicant and the Department have reached an acceptable agreement for resolving the situations.
- c. Any changes that deviate from the specifications as submitted with this approval shall be approved by the Department prior to use.