



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

March 24, 2011

James Donlin, Vice President
Eljen Corporation
125 McKee Street
East Hartford, CT 06108

Re: Eljen Mantis 536-8 & 536-8 LowPro Proprietary Leaching System Approvals

Dear Mr. Donlin:

This Department has reviewed the documentation you submitted on Eljen Corporation's Mantis 536-8 and 536-8 LowPro proprietary leaching systems. The products are similar to the previously approved Mantis 430-10 series products. The products consist of 5 foot long "units" that can be connected end to end. Both products have eight independent "modules" that are equally spaced along an internal 4-inch diameter perforated distribution pipe that has an invert elevation that is either 12 inches above the unit base (536-8) or 6 inches above the unit base (536-8 LowPro). This distribution pipe provides effluent to each individual module via 1-inch diameter holes located at the 5, 7 & 12 o'clock positions (12 o'clock position is for increased product venting). The modules have internal plastic cusped material that is wrapped with filter fabric on the sides and top. The modules for the Mantis 536-8 are 36 inches wide and 18 inches high. The modules for the Mantis 536-8 LowPro are 36 inches wide and 12 inches high.

Although the new Mantis products are similar to the Mantis 430-10 series products, Eljen Corporation states that the new Mantis 536-8 products have significant improvements to streamline installation and provide better distribution of effluent within the trench. This program has been advised that it is Eljen Corporation's intention to ultimately phase out the usage of the Mantis 430-10 series products (both internal and top distribution) in favor of the new Mantis 536-8 products. Also, in accordance with Eljen Corporation's request, the Mantis 424-9 product series has been removed from the 2011 revision of the Technical Standards for Subsurface Sewage Disposal Systems (Technical Standards).

The installation procedures for the Mantis 536-8 products are similar to the Mantis 430-10 series products. The products are installed in a minimum 48-inch wide trench with a "specified sand" envelope placed around the units. The specified sand envelope includes 6 inches minimum underneath and on the sides of the units, 1-inch minimum on top of the units as well as 3 inches in between the modules. Eljen Corporation requires that only specified sand be used for this sand envelope unless specific approval is granted under certain conditions. The specified sand has a gradation that is slightly more stringent than the select fill specifications in the Technical Standards.



Phone:

(860) 509-7296

Telephone Device for the Deaf: (860) 509-7191

410 Capitol Avenue - MS # **51-SEW**

P.O. Box 340308 Hartford, CT 06134

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Eljen Corporation also mandates venting for the Mantis 536-8 products when the leaching system has more than 18 inches of cover material. Design and Installation Guidelines dated February 2011 were included in the approval application, and they must be consulted for more detailed installation procedures and protocols. The installation instructions note that the Mantis 536-8 and 536-8 LowPro systems are prohibited from being installed in vehicular travel areas. Any changes to the Design and Installation Guidelines must be forwarded to this office for our files.

Dosing of the Mantis 536-8 series proprietary leaching systems for non-gravity systems can be accomplished with a conventional effluent pump system, or a low pressure distribution system designed by a professional engineer that must contact the Eljen Corporation Technical Resource Department for guidance on incorporating low pressure distribution into the Mantis 536-8 and 536-8 LowPro leaching systems. Conventional dosing must set the pump activation settings to deliver a maximum of 12 gallons per Mantis 536-8 unit per dosing cycle and 6 gallons per Mantis 536-8 LowPro unit per dosing cycle as noted in the installation instructions.

The calculated ELA credits for the Eljen Corporation Mantis 536-8 products are as follows:

Product Name	Dimensions (W x H)	Effective Leaching Area (SF/LF)	Center to Center Spacing (feet)
Mantis 536-8	36" x 18"	11.0	12
Mantis 536-8 LowPro	36" x 12"	6.5	9

This Department hereby APPROVES the Eljen Corporation Mantis 536-8 series proprietary leaching systems with the above noted ELA credit and center-to-center spacing.

The Eljen Corporation Mantis 536-8 proprietary leaching system has already been incorporated into the 2011 revision of the Technical Standards. The Eljen Corporation Mantis 536-8 Low Pro proprietary leaching system will be incorporated into the next revision of the Technical Standards. This letter may be reproduced in its entirety as a means of notifying local health departments, engineers and installers of the product approval. This approval should not be construed to be an endorsement of this product, nor does it convey intellectual property rights.

Sincerely,



Robert W. Scully, P.E.
Supervising Sanitary Engineer
Environmental Engineering Program

C: Suzanne Blancaflor, MS, MPH, Chief, EHS, DPH
Code Advisory Committee
Local Directors of Health
Chief Sanitarians