

# STATE OF CONNECTICUT

## DEPARTMENT OF PUBLIC HEALTH



Manisha Juthani, MD  
Commissioner

Ned Lamont  
Governor  
Susan Bysiewicz  
Lt. Governor

### Environmental Health and Drinking Water Branch

October 3, 2023

Jim King, President  
Eljen Corporation  
90 Meadow Road  
Windsor, CT 06095

Re: Eljen Mantis Yard Filter Proprietary Leaching System Approvals

Dear Mr. King:

This Department has reviewed your approval request and support documentation for the Eljen Corporation Mantis Yard Filter series proprietary leaching systems. The products are similar to the currently approved Mantis products. The products consist of 5 foot long “units” that can be connected end to end. The Mantis Yard Filter has independent “modules” that are equally spaced 4 inches apart along an internal 4-inch diameter perforated distribution pipe that has an invert elevation that is either 6 inches above the unit base (33 & 53) or 13.5 inches above the unit base (50 & 95). This distribution pipe provides effluent dosing 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 all the Mantis Yard Filters are 6 inches wide and vary in length and height as noted in the table below.

The installation procedure for the Mantis Yard Filter products is similar to the previously approved Mantis series products. The products are installed in a “specified sand” envelope placed around the units that includes 6 inches minimum underneath and on the sides of the units, 1 inch minimum on top of the units and 4 inches between the modules. Eljen Corporation requires that only the specified sand be used for this sand envelope unless specific approval is granted under certain conditions. The specified sand has a specific gradation requirement that is slightly more stringent than the select fill material requirements found within the Technical Standards. Eljen Corporation also mandates venting for the Mantis Yard Filter products when the leaching system has more than 18 inches of cover material. Installation instructions dated July 2022 were included in the approval application. Any changes to these instructions must be forwarded to this office for our files.

Dosing of the Mantis Yard Filter series proprietary leaching systems other than gravity distribution is also acceptable either via a conventional effluent pump system or a low-pressure distribution system designed by a professional engineer. Pressure dosing systems must set pump floats or



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control panels to deliver a maximum of 5.8 gallons per Mantis Yard Filter 33 unit per dosing cycle, 15.1 gallons per Mantis Yard Filter 50 unit per dosing cycle, 13.4 gallons per Mantis Yard Filter 53 unit per dosing cycle and 30.2 gallons per Mantis Yard Filter 95 unit per dosing cycle.

The calculated ELA credits for the Eljen Corporation Mantis Yard Filter products are as follows:

Product Name	Dimensions (W x H)	Effective Leaching Credit (SF/LF)	Center to Center Spacing (feet)
Mantis Yard Filter 33	40" x 10"	6.7	12
Mantis Yard Filter 50	36" x 17.5"	10.0	12
Mantis Yard Filter 53	72" x 10"	10.7	14
Mantis Yard Filter 95	72" x 17.5"	19.0	14

This program hereby APPROVES the Eljen Corporation Mantis Yard Filter series proprietary leaching system with the above noted ELA credit and center-to-center spacing.

No documentation was submitted indicating the Mantis Yard Filter products are designed for vehicular wheel loading applications. Please provide this office with H-20 loading supporting documentation if the Eljen Corporation Mantis Yard Filter series proprietary leaching systems are to be used for vehicular wheel loading applications.

The Eljen Corporation Mantis Yard Filter series 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,



Matthew A. Pawlik, PE, RS  
Supervising Environmental Engineer  
Environmental Engineering Program

C: Jim Vannoy, Chief, Environmental Health Section, MPH, DPH