



COLORADO

Department of Public
Health & Environment

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April 14, 2016

Mr. Mike Stoll, Director of Sales & Marketing - Industrial Division
Netafim Irrigation Inc.
5470 East Home Ave.
Fresno, CA 93727

Subject: Netafim Bioline®, Proprietary Distribution Product - Acceptance
For Use in Colorado On-site Wastewater Treatment Systems

Dear Mr. Stoll:

Pursuant to section 43.13 of the On-site Wastewater Treatment System Regulation 5 CCR 1002-43 (Regulation 43), the Water Quality Control Division (Division) has reviewed drawings and specifications for the Netafim Irrigation, Bioline® proprietary distribution product noted below.

The products noted below are accepted as proprietary distribution products for use as a component of an on-site wastewater treatment system (OWTS) subject to the design criteria in Table 1. This acceptance is not intended as an endorsement or third-party certification of the product.

This acceptance addresses the following models:

- Netafim Bioline® with 0.4, 0.6 or 0.9 GPH drip emitters at intervals of 12", 18" or 24" for effluent distribution

This acceptance applies only to OWTS with design capacity less than 2,000 gallons per day (gpd). **Review and approval for the design of any OWTS proposing to use this technology will be reviewed by the local public health agency.** As individual local public health agency regulations may be more stringent than Regulation 43, the Division cannot ensure the acceptance of a treatment technology within any given jurisdiction.

Any modifications to the physical attributes or characteristics of this technology must be submitted to this office for review and acceptance by the Division prior to sale in Colorado. The Division will review modifications, any additional third party verification reports and issue a revised acceptance letter, or denial, as appropriate.



Table 1. Design Criteria for Netafim Bioline® as a Distribution Product

Design Criteria
<ol style="list-style-type: none">1. A septic tank consistent with section 43.9(A) and 43.9(B) must precede the distribution media. An effluent screen consistent with section 43.3(44) and 43.9(I) installed prior to the distribution media is recommended, but not required unless a local requirement. Pretreatment for non-residential kitchens must include adequate separate grease separator tank(s) prior to the primary septic tank(s) as required in section 43.9(J) of Regulation 43.2. The design of an OWTS utilizing the Netafim Bioline® for distribution shall adhere to the following criteria:<ol style="list-style-type: none">a. The required design flow shall be determined based on daily flow requirements defined in local OWTS regulations consistent with section 43.6(A) of Regulation 43.b. The total soil treatment area square footage required shall be determined consistent with the requirements of the Netafim "Wastewater Reuse and Drip Dispersal Design Guide" (dated 11/12). Per this document, reduced loading rates may be appropriate when limiting layers are noted within 24" below the distribution piping. Adjustment Factors noted in Table 10-2 and 10-3 of Regulation 43 may not be applied for a sizing modification of the soil treatment area.c. Effluent must be applied to the Netafim Bioline® through the use of the pressurized laterals per the requirements within the Netafim "Wastewater Reuse and Drip Dispersal Design Guide" (dated 11/12). Therefore, all systems utilizing the Netafim Bioline® must be designed by a professional engineer.d. To ensure that the emitters within the piping remain "pressure compensating," system pressures throughout the distribution piping must be 7 - 50 psi.e. The design and installation of the Netafim Bioline® must meet the requirements within the Netafim "Wastewater Reuse and Drip Dispersal Design Guide" (dated 11/12).f. All accessory components including but not limited to the 130 micron filter, air/vacuum relief valves, flushing valves, alternating valves, etc. shall be designed, installed and maintained per the requirements within the Netafim "Wastewater Reuse and Drip Dispersal Design Guide" (dated 11/12).g. The Netafim Bioline® is designed to accept TL1 effluent or better.h. Timed dosing of the system is required unless it is site-specifically prohibited by the manufacturer.i. The minimum depth for the Netafim Bioline® is 6 inches; the maximum depth is 4 feet. However the preferred depth for the maximum nutrient removal is 6 to 12 inches. Design considerations to address climate and cold weather issues are provided within the Netafim "Wastewater Reuse and Drip Dispersal Design Guide" (dated 11/12).3. Vertical separation distances for the soil treatment area as defined in section 43.7 of Regulation 43 shall be measured from the invert of the Netafim Bioline®. Horizontal separation distances for the soil treatment area as defined in section 43.7 of Regulation 43 shall be measured from the nearest pipe to the specific feature.

4. In addition to these design criteria, other provisions of Regulation 43 and local regulations also apply to a specific design as well as good OWTS design practice. The Division does not approve manufacturer design manuals. Manufacturer provisions shall not be applicable if those provisions are not consistent with Regulation 43, these design criteria, and the regulations adopted by the local board of health for the design location. Local public health agencies will review proposed designs to confirm consistency with Regulation 43, these design criteria, the local board of health regulations adopted pursuant to Regulation 43, and good OWTS design practice.
5. Reductions in soil treatment area size shall be as described in section 43.10(C)(4) of Regulation 43. Use of the distribution product in a design claiming a higher level treatment designation is dependent on a separate treatment product prior to the distribution product and the rating identified in the acceptance for the treatment product. Reductions in soil treatment area size or separation distances based on higher level treatment may not be applied unless the local public health agency has a maintenance oversight program in place as described in section 43.14(D) of Regulation 43. In locations where the local public health agency has not adopted a maintenance oversight program, the distribution system may be used but only with soil treatment area size and separation distances consistent with treatment level TL1 requirements. When higher level treatment is used and increased soil application rates allowed for in Regulation 43 are proposed, the manufacturer must also provide acceptance of the increased application rates.
6. Design flow for single-family residential designs may vary based on the regulations adopted by the local board of health for the design location. Design flow values and strengths for multi-family and commercial systems shall be consistent with section 43.6(A)(4). Therefore, all design criteria in this acceptance are based on total gallons per day and the assumption of residential strength wastewater.
7. Design shall provide access at grade to any components as described in section 43.9(E) and (F) in addition to any additional access ports as provided for in the engineered drawings.

The owner of the OWTS is responsible for arranging proper design, operation, and maintenance of the OWTS facility.

If you have any questions regarding the Division's review or findings, please contact me at (303) 692-2366 or chuck.cousino@state.co.us.

Sincerely,

Charles J. Cousino, REHS
On-site Wastewater Treatment System Coordinator
Engineering Section | Water Quality Control Division
Colorado Department of Public Health and Environment

cc: Files