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REVISED APPROVAL

September 16, 2015

Mr. Kurt Bihler
411 S Reedwood Dr.
Joliet, IL 60436

Dear Mr. Kurt Bihler:

The Department has reviewed your request for approval of an NSF Standard 350 certified system utilizing membrane technology. The Department is granted the ability under section 225 ILCS 225/8 (b) of the Private Sewage Disposal Licensing Act and Section 905.20(t) of the Private Sewage Disposal Code (Code) to approve alternative technology not prescriptive to the Code. The NSF testing and certification of the above systems meets the requirements of these sections. The Department will approve for general use the NSF Standard 350 certified systems that utilize membrane technology as long as they are compliant with the following design or installation requirements:

1. The designed rate of flow for each system shall be designed per section 905.20 (a) of the Code.
2. The systems will be required to be maintained and serviced per the manufactures and NSF requirements for the life of the system.
3. If the system is designed for reuse of the treated effluent within a structure it shall be compliant with the Illinois Plumbing Code, the NSF Standard 350 and any local regulations.
4. If the system is to discharge to a subsurface dispersal area it shall be designed as follows:
 - a) The loading rate of the soils on each site shall be determined by using one of the following:
 - i. Double-ring infiltrometer to determine the Ksat value. Depending on the types of soils present on the site ASTM D3385-09 shall be used to determine the Ksat value. If the area for the subsurface dispersal area is in fill a double-ring infiltrometer must be used to determine the Ksat value. The Ksat value of greater than 5 shall use 5 as the Ksat.

ii. Ksat value may be provided by the soil classifier for each soil group. When the soil information is used to size the subsurface dispersal area the least permeable value for the soil group shall be used.

b) The amount of square feet of filtered water dispersal area shall be designed utilizing one of the following formulas:

i. When utilizing estimated water use figures to determine the designed flow rate, per Section 905.20 (a) of the Code:

$$\text{Square feet of dispersal area} = \frac{\text{gallons per/day (designed rate of flow) /Ksat (in/hour)}}{10}$$

ii. When actual water usage figures are used to size the system:

$$\text{Square feet of dispersal area} = \frac{\text{gallons per/day (designed rate of flow) /Ksat (in/hour)}}{4}$$

c) The formula above provides the actual square feet of bottom surface area. The square footage remains the same for beds as it is for trenches. No reduction may be used for use of another approved technology that provides a reduction to a subsurface component.

d) These systems may be designed without separation restrictions to seasonal high water layers or bedrock.

e) The minimum distance allowed shall be 25 feet from a private well to a subsurface seepage field receiving effluent from an NSF Standard 350 certified system utilizing membrane technology; on the property it is generated. Neighboring wells shall be 75 feet.

f) The sizing of NSF 350 membrane filtered water dispersal area is unique and not subject to any minimum requirements of Section 905.60 of the Private Sewage Disposal Code.

g) A water softener shall not be connected to the system when utilizing subsurface dispersal.

5. The tanks prior to and housing the membrane shall be compliant with the minimum set back distances established for a septic tank and aerobic treatment plant as defined in Section 905.Appendix A, Illustration D of the Code.

6. Surface discharge shall be compliant with the following:

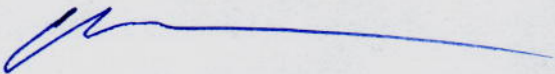
a) It is the responsibility of the property owner to be compliant with United States Environmental Protection Agency and Illinois Environmental Protection Agency requirements.

- b) The discharge shall not create a nuisance condition.
 - c) The discharge shall comply with the following minimum distances:
 - i. The discharge shall be 25 feet from the property line.
 - ii. The discharge line shall be 5 feet from the property line.
 - iii. The discharge shall be 25 feet from a cistern, well or suction line from a pump to a well, of the property from generated and 50 feet on neighboring cisterns, wells or suction lines from a pump to a well.
 - iv. The discharge shall be 10 feet from a water supply line.
 - v. The discharge shall be 25 feet from a public water supply water main.
 - d) The discharge does not require additional disinfection prior to discharge to the ground surface.
 - e) A sample port shall be provided prior to discharge.
 - f) The discharge is not subject to Section 905.100 of the Private Sewage Disposal Code.
 - g) There shall be no discharge to a roadside ditch as stipulated in Illinois Highway Code [605 ILCS5/9-123].
7. This acceptance does not waive or alter the responsibility of the applicant from obtaining or paying local fees associated with an application by the Department, agent or an ordinance-based local authority associated with an installation or construction approval.
8. This system may be used for seasonal use sites.
9. There is no minimum number of gallons for use with non-residential facilities.
10. To be compliant with the NSF 350 Standard the size and configuration of the screening tank, internal dosing tank (if needed) and the BioBarrier tank shall be determined by the manufactures.

Acceptance of this System by the Illinois Department of Public Health is limited to design and is in no way intended to guarantee the proper function of the system.

If you have any questions, contact me at (217) 524-4137 or chad.moorman@illinois.gov.

Sincerely,



Chad Moorman, LEHP
Program Manager
Private Sewage Disposal Program
Division of Environmental Health

cc: Regional Offices