



April 18, 2012

BAY LAKES ECOWATER
RANDY VODA
801 23RD STREET
TWO RIVERS WI 54241

Re: Description: WATER TREATMENT DEVICE - SITE SPECIFIC/COMMERCIAL
Manufacturer: BAY LAKES ECOWATER
Product Name: CARLSVILLE ROADHOUSE
Model Number(s): ECOWATER NITRATE REDUCTION SYSTEM EWS 040Q
Product File No: 20120162

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of April 2017.

This approval is contingent upon compliance with the following stipulation(s):

- These devices have undergone sufficient testing to document the device's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.
- The finished installation must undergo a final inspection prior to the treated water being used for consumptive purposes. The Plumbing Consultant having jurisdiction in this area is Thomas Braun. Mr. Braun can be reached via the following:

Phone: 715-340-5387
E-mail: Thomas.braun@wi.gov

If the treated water is used for consumptive purposes prior to passing the final inspection, then this approval may be rendered null and void and the device ordered removed. The Plumbing Consultant shall provide a written indication of the results of the final inspection to the system owner.

When the final inspection has been passed, the Plumbing Consultant will notify the Wisconsin Department of Natural Resources (WDNR) Field Staff having authority over the well. The WDNR will then monitor the quality of the treated water to its satisfaction. Monitoring advice, which the WDNR is free to accept or reject, is provided elsewhere in this letter. The WDNR Field Staff having authority over this well is Amy Lesik. Ms. Lesik can be contacted via the following:

Phone: 715-839-2906
E-mail: amyl.lesik@wi.gov

- The suggested monitoring interval for this installation is quarterly. As a minimum, the following tests should be performed:

1. nitrate
2. nitrite

The samples should be collected at a time of day when the device is under stress and at a time most remote from the last regeneration cycle as possible. Because this device is reportedly being installed on a PEX water supply system, concerns relating to decreased alkalinity and subsequent corrosion are not applicable. However, there is a small amount of copper piping installed downstream of the anion exchange devices, immediately adjacent to the water heater, that should be carefully monitored and preferably replaced.

- The anion exchange, nitrate reduction device being installed is the EWS 040Q Nitrate Reduction System. The system is comprised of four 10 x 40 inch mineral tanks operated from a single controller. While three tanks are working, the remaining tank is regenerating. Three treatment tanks remain in line at all times. Each tank is sized to provide a 25% reserve capacity.
- A flow control shall be installed to preclude the nitrate reduction device from exceeding its maximum rated service flow rate (i.e. 4 gpm). If all four tanks are operating, this will provide a total service flow rate of 16 gpm.
- No bypass piping shall be installed on this nitrate reduction device. However, the proposed locking bypass valve is acceptable.
- Any wall hydrant that is not served by the nitrate treatment device must have one, or more, of the following:
 1. The handles of the hydrant shall be removed;
 2. The hydrant shall be capped and sealed using solder; or
 3. Signage shall be posted immediately above the hydrant indicating the water is unfit for human consumption
- All water distribution piping shall be marked as required by Table 82.40-1a.
- If this approved device is modified, or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

A copy of the approved plans, specifications and this letter shall be on-site during construction and open to inspection by authorized representatives of the Department, which may include local inspectors. All permits required by the state or the local municipality shall be obtained prior to commencement of construction/installation/operation.

In granting this approval the Division of Safety & Buildings reserves the right to require changes or additions should conditions arise making them necessary for code compliance. As per state stats 101.12(2), nothing in this review shall relieve the designer of the responsibility for designing a safe building, structure, or component.

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Inquiries concerning this correspondence may be made to me at the telephone number listed below, or at the address on this letterhead.

Sincerely,

Glen W. Schlueter
Engineering Consultant
Safety and Buildings Division
Department of Safety and Professional Services
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(608) 267-9566 **Fax**
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7:30AM – 4:30PM CT **Work Hours**
GWS:gws