SAFETY AND BUILDINGS DIVISION
Plumbing Product Review
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TTY: Contact Through Relay

Scott Walker, Governor
Dave Ross, Secretary

June 4, 2012

HOH WATER TECHNOLOGY INCORPORATED
MATTHEW HENRY
500 SOUTH VERMONT STREET
PALATINE IL 60067

Re: Description: ALTERNATE SYSTEM
Manufacturer: HOH WATER TECHNOLOGY INCORPORATED
Product Name: CHLORINE DIOXIDE ALTERNATE DISINFECTION METHOD
Model Number(s): NONE
Product File No: 20120099

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 alternate approval to s. SPS 382.50 (3) c based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of June 2017.

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

- The chlorine dioxide generator shall be an electrochemical process, supplied by H-O-H Water Technology Inc., which converts H-O-H Water Technology's A-25 (a single sodium chlorite precursor) to chlorine dioxide with an average conversion efficiency greater than or equal to 93%.

- The chlorine dioxide shall be injected at a point as close to the point of entry as possible.

- Dosing of the chlorine dioxide shall be fed in proportion to water flow through the use of a flow sensor installed in the water main serving the facility.

- The maximum residual chlorine dioxide concentration shall not exceed 0.8 mg/l (as ClO2) in all potable water supply systems treated with chlorine dioxide.

- The minimum residual disinfectant concentration must be greater than or equal to 0.08 mg/l (as ClO2) and/or the concentration x time (i.e. CT) value shall be greater than or equal to 0.48.

- The chlorite ion concentration must be less than or equal to 1.0 mg/l.

- The following routine daily system monitoring shall be used:

  1. The chlorine dioxide concentration shall be monitored and recorded daily at the most remote point in the hot water distribution system using the USEPA accepted DPD test method equivalent to Standard Method 4500-ClO2 D. If any sample exceeds the maximum residual disinfectant level (MRDL) additional sampling and corrective action is required.

  2. The chlorite ion concentration shall be monitored continuously and recorded daily via a ProMinent DULCOTEST chlorite ion specific electrode at the most remote point in the hot water Distribution downstream of the point of chlorine dioxide injection. If any one reading exceeds 1.0 mg/l, then additional onsite testing and corrective action is required.

- The frequency of chlorite monitoring downstream of the point of chlorine dioxide injection may not be reduced. However, if after one year of monitoring during which no individual chlorite sample taken in the distribution system has exceeded the 1.0 mg/l monitoring in the distribution system and there have been no problems in the context of the routine daily monitoring described elsewhere in this letter, then chlorite monitoring may be reduced to one 3-sample set per quarter in the context of routine monthly monitoring requirements described elsewhere in this letter.

- The following routine monthly system monitoring shall be used:

  a. Once a month, three samples shall be collected:

     1. as close to the first hot water outlet as possible (short time)
     2. in a location representative of midpoint of the hot water system as possible (medium time); and
     3. as close to the end of the hot water system as possible (maximum time).

- Water samples should be taken at a time that the hot water system is maximum demand, typically during the day.

- The water supply serving the chlorine dioxide generator shall be protected by a reduced pressure zone cross connection control device that conforms to ASSE Standard 1013 and is installed in accordance with s. SPS 382..41.

- A hose bibb shall be located within 25 feet of the chlorine dioxide generator.

- Chlorine dioxide generators shall be maintained and serviced on a minimum of a monthly basis by a factory trained H-O-H chloride dioxide service technician. A monthly report shall be provided to the customer and retained on-site.

- This alternate chlorine dioxide disinfection method shall be used only when the occupancy rate at the site of installation is less than 60% of the facilities patient capacity. For installation sites where the occupancy rate is greater than or equal to 60% the standard disinfection process described in NR 809 Wis. Adm. Code shall be used.

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.

Sincerely,

Glen W. Schlueter
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