

March 23rd, 2011

HELLENBRAND INCORPORATED
JILL MCDONALD
404 MORAVIAN VALLEY ROAD
WAUNAKEE WI 53597

Re: Description: WATER TREATMENT DEVICE- AERATOR
Manufacturer: HELLENBRAND INCORPORATED
Product Name: ARSENIC CURTAIN (POE/COMMERCIAL)
Model Number(s): AC-10, AC-12, AC-13, AC-14, AC-16, AC-18, AC-21, AC-24, AC-30, AC-36,
AC-42, AC-48, AC-54, AC-60 AND AC-66 (POE/COMMERCIAL)
Product File No: 20100466

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, 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 March 2016.

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

- This product has undergone sufficient testing to document the product'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.
- If these approved devices are 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.
- The minimum ratio of dissolved arsenic to dissolved iron is 14.2 µg/l dissolved arsenic to 1.0 mg/l dissolved iron.

If the naturally occurring dissolved iron concentration is too low, then this approval includes the provision for synthetic supplementation of the naturally occurring dissolved iron concentration using ferric chloride. The ferric chloride must conform to NSF Standard 60 and/or AWWA B407 standards. The maximum concentration of ferric chloride that may be used is 200 mg/l; however the minimum amount of ferric chloride required to attain the ratio described above shall be used. The specific source of the ferric chloride and standard it conforms to shall be clearly identified at each installation.

The ferric chloride shall be introduced into the potable water supply system via a Department of Commerce approved positive displacement chemical feed pump.

- If one or more devices are installed on a non-transient non-community water supply (NTNC) or a transient non-community water supply (TNC), then a site specific installation approval and final inspection are required.

A NTNC system is a system that regularly serves at least 25 of the same people for six months of the year. Examples of NTNC systems include, but are not limited to, schools, daycares and factories.

A TNC system is a system that serves at least 25 people at least 60 days of the year but does not serve the same 25 people over six months of the year. Examples of TNC systems include, but are not limited to, restaurants, motels, taverns, parks and campgrounds.

The site specific installation approval and final inspection are both performed by this department.

The site specific installation approval will occur prior to the device(s) being put in service, is the responsibility of the installer and is initiated using the following forms:

<http://commerce.wi.gov/SB/docs/SB-FormPlumbing6154App.pdf>

<http://commerce.wi.gov/SB/docs/SB-PlumbingProdRevCommInfo0310.pdf>

The final inspection will occur prior to the device(s) being put in service and be performed by the Plumbing Consultant having jurisdiction in a given locale:

<http://commerce.wi.gov/SB/SB-PlumbingConsultantsMap.html>

When the final inspection has been completed, this department will notify the Wisconsin Department of Natural Resources (WDNR). The WDNR will then monitor the performance of the device(s) to its satisfaction. A suggested frequency and overall duration of monitoring is provided elsewhere in this letter.

If these devices are installed and put in service prior to obtaining a site specific installation approval and final inspection, then any pertinent approval for such devices is immediately rendered null and void and the devices may be ordered removed.

- This department suggests the performance of these devices be monitored on a quarterly basis. Further, if eight consecutive quarterly samples indicate satisfactory performance, then it is suggested that the monitoring of that specific installation end.

The department suggests that performance samples be collected during peak use periods and at a time most remote from the last regeneration cycle as possible.

Based on testing data submitted to and reviewed by the department, this approval recognizes that these plumbing products will reduce the concentration of contaminants as specified on pages 1 through 3 of this letter.

**HEALTH EFFECTING INORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20100466
TABLE 1 OF 1**

Service Flow Rates: AC-10 = 6.1 liters per minute (lpm) [1.6 gallons per minute (gpm)]
AC-12 = 9.1 lpm (2.4 gpm)
AC-13 = 10.6 lpm (2.8 gpm)
AC-14 = 12.9 lpm (3.4 gpm)
AC-16 = 15.1 lpm (4.0 gpm)
AC-18 = 22.7 lpm (5.0 gpm)
AC-21 = 26.5 lpm (7.0 gpm)
AC-24 = 34.1 lpm (9.0 gpm)
AC-30 = 56.8 lpm (15.0 gpm)
AC-36 = 79.5 lpm (21.0 gpm)
AC-42 = 110 lpm (29.0 gpm)
AC-48 = 144 lpm (38.0 gpm)
AC-54 = 182 lpm (48.0 gpm)
AC-60 = 223 lpm (59.0 gpm)
AC-66 = 269 lpm (71.0 gpm)

Tested Contaminant	Tested Influent Concentration (mg/l) ¹
Total Dissolved Arsenic (As ⁺⁵ + As ⁺³)	≤ 0.342

Other conditions: the contaminant reduction capabilities displayed for table 1 of 1 were generated by field testing conducted in a number of locations within the WDNR Arsenic Advisory Area. To qualify for total dissolved arsenic reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.010 mg/l.

¹ = milligrams per liter (mg/l) are equivalent to parts per million (ppm)

± = plus or minus

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.

Sincerely,

Glen W. Schlueter
Engineering Consultant-Plumbing Product Reviewer
Bureau of Integrated Services
Safety and Buildings Division
Department of Commerce
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