

March 15, 2010

ADVANCED DRAINAGE SYSTEMS, INC.
KEVIN MILLER, P.E.
4640 TRUEMAN BLVD
HILLIARD OH 43026

Re: Description: STORMWATER TREATMENT DEVICE
Manufacturer: ADVANCED DRAINAGE SYSTEMS, INC.
Product Name: ADS WATER QUALITY UNITS
Model Number(s): 3620WQAXX (10" inlet / 10" outlet); 3620WQBXX (10" inlet / 10" outlet); 3640WQAXX (10" inlet / 10" outlet) ; 3640WQBXX (10" inlet / 10" outlet)
[SIZED AT MAX. FLOW RATE OF 2.0 CFS; 10 IN. DIA. MAX. INLET/OUTLET PIPES]
Note: First two numbers of the model indicates nominal inside diameter in inches of unit, Second two numbers of the model indicates nominal length in feet of unit, "XX" at the end of the model indicates diameter of the bypass. "00" at the end of the model number indicates there is no bypass.
Product File No: 20100041

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 JUNE 2016.**

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

- **Prior to installation of this product, plans and specifications must be submitted to the department or to an approved agent municipality for review and approval in accordance with s. Comm 82.20 (1) of the Wis. Admin. Code. Written approval for the plans and specifications shall be obtained prior to installation of the product.**
- **This product is approved for the following use:
-- Stormwater and clearwater treatment for uses so listed in Table Comm 82.70-1, for subsurface infiltration.**
- **The review undertaken by Commerce staff does not include review and/or approval of this submittal as meeting DNR specifications for ch. NR 151.**
- This product submittal has been reviewed and approved for plumbing treatment standards for subsurface infiltration and irrigation using stormwater as the source, as listed in Table Comm 82.70-1.
- When this product is installed, the installation must be in accordance with the manufacturer's printed design installation instructions, ch. Comm 82, plan approval under s. Comm 82.20, and any product approval stipulations. When there is a conflict between manufacturer's installation instructions and plan approval conditions or product approval stipulations, the plan approval conditions or product approval stipulations will take precedence.

- Installation-- Installation of this product must be in accordance with the manufacturer's printed installation instructions. A copy of the manufacturer's installation instructions must be given to the property owner, installer and submitted along with other information required by the governing agency for the installation.
- Inspection, maintenance and cleaning of this product shall be performed at intervals specified by the manufacturer in accordance with ADS Product Note 3.140 (current edition) and HDPE Water Quality Unit Specifications (undated); see also www.ads-pipe.com. In the first year of operation, quarterly inspection of the sediment and oils chambers shall be inspected. At a minimum the unit shall be cleaned when the sediment volume has reached 20%, at least annually to provide peak performance; as per ADS Quality Unit Maintenance Guidelines (undated), or in accordance with plan approval or s. Comm 82.21, whichever is more restrictive.
- Water tightness: All joints and seals shall perform to pressures up to 30 feet, in accordance with ASTM F477 and AASHTO M294.
- Labeling: The ADS series are permanently labeled as follows and located as listed below:
 Example: 3620 WQA/WQB XX
 Where: 36 = inside diameter of modified sections of corrugated HDPE pipe, N-12
 20 = the length in feet of the sectioned corrugated HDPE pipe, N-12 (also 40 ft. length)
 WQA = are units having larger outlet diameters, allowing larger flows; designed to remove up to #140 sieve particles
 WQB = are units having smaller diameter outlets, allowing smaller flows; designed to remove up to #200 sieve particles
 XX = diameter of the bypass
- This product will produce an effluent having concentration values for Oil & Grease as listed in Table ADS-2, when the influent flow and loads meet the conditions as specified.

Table ADS- 2
 Stormwater and Clearwater Treatment
 Minimum Oil Removal Efficiencies and Concentrations
 by Flow Rate an Influent Concentration
 For ADS 3620WQA/WQB and 3640WQA/WQB.....

Flow Rate	0.5 cfs	1.0 cfs	1.5 cfs	2.0 cfs
	Influent Oil Concentration			
	100 mg/L	50 mg/L	50 mg/L	50 mg/L.....
Oil Removal Efficiency +	86%	78%	72%	51%
Effluent Oil Concentration +	14 mg/L	11 mg/L	14 mg/L	24.5 mg/L.....

+ Adjusted effluent removal and concentrations reflect scaling coefficient for effluent values.

- Bypass-- In order to prevent scour and resuspension, all installations shall be maintained in such as manner that an overflow bypass is operational for infrequent high flows in excess of design capacity.
- A copy of the manufacturer's installation instructions must be given to the property owner, installer and submitted along with other information required by the governing agency for the installation.
- **Note: Information on how to access SLAMM and P8 and the average annual rainfall files for five locations in the state, as published periodically by the department, is available at: <http://dnr.wi.gov/runoff/models/index.htm> or by contacting the WDNR storm water management program at (608) 267-7694.**
- **Pollutant loading models such as DETPOND, SLAMM, P8 or equivalent methodology may be used to evaluate the efficiency of the design in reducing total suspended solids. Information on how to access these models is available at: <http://dnr.wi.gov/runoff/models/index.htm> or by contacting the WDNR storm water management program at (608) 267-7694.**

- This product submittal has been reviewed and approved for plumbing treatment standards for subsurface infiltration and irrigation using stormwater as the source, as listed in Table Comm 82.70-1. Each site-specific installation shall be submitted for review and include acceptable methods, modelin , or analysis to predict efficiency for TSS and oil & grease removal.
- **Any plumbing plans that include this device(s) and submitted to Commerce shall be accompanied by an acceptable modeling method, such as outlined in Method for Predicting the Efficiency of Proprietary Storm Water Sedimentation Devices (1006) for the specific site where the installation of this device(s) is planned. The submitted calculations, based on site-specific inputs, shall predict the removal efficiencies by concentration and percentage. For particle size distribution, in SLAMM use file: NURP.cpz.**
For a copy of this standard, see:
http://dnr.wi.gov/runoff/pdf/stormwater/techstds/prop_devices_std_v2_051408.pdf
- These devices must be installed, maintained and serviced as directed by the manufacturer to perform as advertised.
- Additional information is included as attachment(s) to this letter; see attachment A, B and C.

This approval supersedes the approval issued on 5/11/2006 under product file number 20040633.

This approval letter shall be incorporated with your previously approved plans and/or specifications approved under product file number .20040633

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,

Jean M. MacCubbin, CST
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Commerce; Safety & Buildings Div.
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