



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E) ADEQ LTF #73957

1. Proprietary Treatment Product Name, Model, and Description

Product Name: PuraSys SBR

Models: PS1-4 through PS1-14

Description: The PuraSys SBR PS1 series is a Sequencing Batch Reactor (SBR) system. It consists of a reactor compartment working side by side with the pretreatment tank (septic tank). The reactor is equipped with circulation pump, disposal pump, an aerator, electric controller panel and related piping and wiring. The controller fills the reactor and adjusts aeration to each batch. Nitrification and denitrification happens in the same chamber. The system uses a step-fill sequencing batch reactor process. It fills the reactor several times during each cycle. At the beginning of each cycle, effluent is brought from the pretreatment to the reactor. It is then aerated for nitrification to occur. Effluent is then brought again from the pretreatment chamber to the reactor, bringing with it an anoxic carbon source, ideal for denitrification. In this way, the step-fill SBR can attain high level of nitrogen reduction without the need for an outside source of carbon. The system can treat influent BOD, TSS and TN to 4 mg/l, 5 mg/l and 18mg/l. The system is used for treating typical sewage.

This listing is applicable for design flows that are less than 3,000 gpd.

2. Manufacturer Information

Name: Anua

Address: P. O. Box 77457

City/State/Zip: Greensboro, NC

Phone: 336-547-9338

Fax: 336-547-8559

Website: www.anuainternational.com

Main Office

1110 West Washington Street • Phoenix, AZ 85007
(602) 771-2300

Southern Regional Office

400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

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3. Recognized Treatment Performance

Parameter	Averaging Time	Parameter Value for Averaging Time
5-Day Biochemical Oxygen Demand (BOD ₅), mg/l	30-day arithmetic mean	4
Total Suspended Solids (TSS), mg/l	30-day arithmetic mean	5
Total nitrogen as nitrogen(TN), mg/l	five-month arithmetic mean	18
Total coliform, colony forming units/100ml	95th percentile	300,000

4. Product Applicability and Limitations for Use for a Recognized General Permit Technology

Applicability: This listing is for only the PuraSys SBR PS1-4 through PS1-14 and is listed as Sequencing Batch Reactor SBR) treatment technology specified in A.A.C. R18-9-E315. This product shall be used in conjunction with a septic tank for pretreatment. The septic tank portion of the treatment system may be the first compartment of a two-compartment tank or a separate tank.

Limitations:

- A. The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).
- B. The product shall conform to the following:

Maximum Design Flow (gallons per day) per R18-9-A309(B)(3)	Manufacturer's Model Number (Stand-alone Pretreatment Tank) Pump or Gravity Disposal
400	PS1-4
500	PS1-5
600	PS1-6
700	PS1-7
800	PS1-8
900	PS1-9
1,000	PS1-10
1,100	PS1-11
1,200	PS1-12

1,300	PS1-13
1,400	PS1-14
1,600	PS1-8 (2)
1,800	PS1-9 (2) PS1-6 (3)
2,000	PS1-10 (2)
2,100	PS1-7 (3)
2,200	PS1-11 (2)
2,400	PS1-12 (2) PS1-8 (3)
2,600	PS1-13 (2)
2,700	PS1-9 (3)
2,800	PS1-14 (2)
3,000	PS1-10 (3)

- C.** This listing EXCLUDES appurtenances which are considered to be an alarm, control panel, control, switch, timer, wiring, other electrical devices, and installation components; which are subject to both the manufacturer specifications and any more restrictive requirement in 18 A.A.C. 9, Article 3.
- D.** This listing is for the treatment of wastewater that meets the definition of typical sewage in R18-9-101(42).
- E.** The manufacturer recommends inspection of PuraSys SBR PS1 series every 6 months of service in addition to the routine maintenance.
- F.** The requirement of R18-9-A312(B)(4)(e) has been met by providing twenty four hour emergency storage of wastewater within the unit itself and the pretreatment system.
- G.** ADEQ does not approve design or operation manuals for proprietary products. However, "If manufactured components are used, an applicant shall design, install, and operate the on-site wastewater treatment facility following the manufacturer's specifications" as per R18-9-A312(F)(2).

5. Alternative Criteria and Exceptions for Use under the Recognized General Permit Technology

Alternative:	None
Exception:	When the wastewater does not meet the definition of typical sewage as defined in R18-9-101(42), a Manufacturer’s Design Review Report shall be submitted for review and approval along with the Notice of Intent to Discharge. This Design Review Report shall specify component capacities, control settings, and supplemental installation & operational practices.

6. Documents Used as the Basis for this Proprietary Treatment Product Listing Notice

Application for Treatment Product Listing:	07/05/2018
3 rd Party Test data:	NSF/ANSI Standard 245 – Wastewater Treatment Systems-Nitrogen Reduction, July 2011
Installation Instructions:	TAB 9: Installer Instructions and Supporting Material Including any Installation Restrictions, May 31, 2018.
Manufacturer’s Warranty:	TAB 3: Product Warranty, May 31, 2018
Manufacturer’s Specifications:	TAB 6: Details/Calculations, Technical Specifications, and Installation Requirements of the System, May 31, 2018.
Manufacturer’s Design Calculations & Drawings:	TAB 11: Design Manual, May 31, 2018.
Operation & Maintenance Manual:	TAB 8: O & M Manual, May 31, 2018.

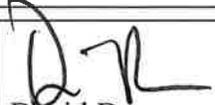
NOTE 1 – This document is an integral part of this Proprietary Treatment Product Listing Notice and is included in the Arizona Department of Environmental Quality website at:

Proprietary Product List

7. Terms and Conditions for this Proprietary Treatment Product Listing Notice

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| <p>A. This Notice of Proprietary Treatment Product Listing shall remain in effect until any of the following occurs:</p> <ol style="list-style-type: none"> 1. Applicable provisions of the Arizona Administrative Code, Title 18, Chapter 9, Article 3 are revised; 2. Documents used for the basis of this listing are altered or modified; 3. Manufacturer claims which are relied upon for this listing are later determined to contain an error or omission; 4. The manufacturer requests termination of this listing; 5. A listing error or omission is identified; or 6. The manufacturer and ADEQ mutually agree to reissue this notification to incorporate correction or update for any reason. |
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- B. This Notice of Proprietary Treatment Product Listing does not apply when the:
 - 1. Listed proprietary treatment product is modified or operated in a manner that conflicts with Arizona law or the documents used for the basis of this listing action in Section 6.
 - 2. Listed proprietary treatment products are used in a manner that cannot achieve the performance in Section 3 above.
- C. This Notice of Proprietary Treatment Product Listing applies solely to the product specified in Section 1 above.
- D. The manufacturer is responsible for notifying ADEQ of changes to the contact information at the following address:
 - Attention: Product Listing Supervisor
 - Engineering Review Desk,
 - 1110 West Washington Street
 - Phoenix, AZ 85007.
- E. The listing by ADEQ of any proprietary product or service is not an endorsement by ADEQ or the State of Arizona. ADEQ does not endorse, represent, guarantee, warranty or defend the use of any product which is authorized for use pursuant to A.A.C. R18-9-A309(E). Product providers are a direct source unrelated to ADEQ or the State of Arizona. Use of any listed product is at the user's risk and the State assumes no liability.

Signature:  David Dunaway	Date Signed: 11/29/18
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Title: Manager, Groundwater Protection and Reuse Value Stream, WQD

ADEQ LTF # - 73957

Reviewer: Mohamed Hegazy, Ph.D., P.E., Environmental Engineering Associate

