INTEGRATED WATER SYSTEM SOLUTIONS

APU & Modular System Applications For Arsenic Reduction

AdEdge Water Technologies, LLC.'s Bayoxide® E33 media is the industry standard for arsenic reduction. It reduces up to 99% of total arsenic in water, including both arsenic (III) and arsenic (V). It is also effective in reducing heavy metals such as lead, antimony and others. This revolutionary iron-based granular adsorption media shows consistently higher capacities than other commercially available adsorption media. The product has been utilized in more than 12 U.S. EPA arsenic demonstration projects and hundreds of public water systems throughout the world.

AdEdge's product is ideal for integrated water system solutions, commercial installations, remediation, and residential POE systems to meet the EPA's arsenic standard of 10 ppb. Developed in the mid-1990s, this granular ferric oxide-based (GFO) product has been successfully used more than any other product in large-scale drinking water applications since 1999. It has become the premier product of choice for commercial drinking water treatment systems for reliable, cost-effective and proven reduction of arsenic.

TECHNICAL SPECIFICATIONS

E33 provides cost-effective, centralized arsenic treatment with a typical life of 6-48 months before replacement in most cases. The media exhibits high operating capacity across a wide range of pH, influent arsenic concentrations and flow rates. It is simple to apply in standard pressure vessels with flow rates ranging from 10-600 gpm. Once the media is exhausted, E33 can be discarded as a non-hazardous waste; specific state requirements should be consulted.

Physical Properties	E33 Media
Matrix	Iron Oxide Composite
Physical Form	Dry Granular Media
Color	Amber
Particle Size Distribution	10x35 or 14x18 mesh
Moisture Content	< 15% by weight
Packaged	Dry

FEATURES & BENEFITS OF SYSTEMS WITH E33

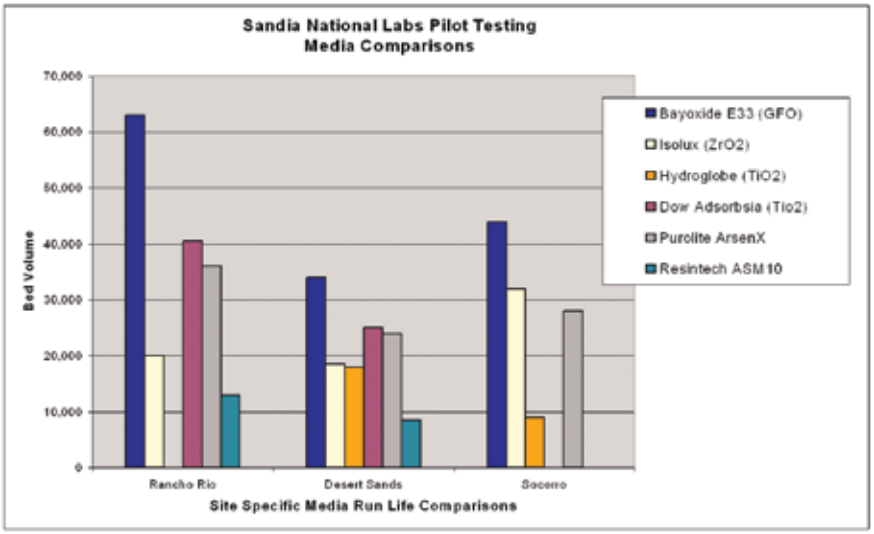
- Removal of up to 99% of total arsenic in water, including As (III) & As (V), with no wasting of water
- NSF 61 product listing (see AdEdge for listing site/ product details)
- Effective over broad water chemistry
- Spent media discarded as non-hazardous solid waste
- Simple commercial applications for arsenic removal
- Reliable performance and low maintenance
- Adaptable add-on to water softening or other existing equipment
- 2-2.5 times lighter than other iron-based media—easily backwashable, and arsenic is not released or discharged in backwash water
- Effective for reducing antimony, lead and other heavy metals
- Imparts no harmful chemicals into the treated product water
- No salt, chemicals or regeneration needed

ARSENIC REDUCTION
DATA SHEET

WATER QUALITY & APPLICATION NOTES:

1. Typical arsenic concentrations in U.S. < 50 ppb; Consult AdEdge for applications above 100 ppb; Capacity for As (V) > As (III)
2. Actual bed volumes based on water quality
3. Reference U.S. EPA TCLP protocol
4. Water > 8.3 pH may require pH adjustment for best results; CO_2 gas, HCl or H_2SO_4 may be used; Consult AdEdge
5. For all applications, complete the AdEdge Site Profile sheet to pre-qualify site for proper use
6. Pre-treat for sulfides, organics, or tannins if present prior to adsorption.

PERFORMANCE VERIFIED THROUGH THIRD-PARTY TESTING



Pilot testing by Sandia National Laboratories at three different sites in New Mexico—Rancho Rio, Desert Sands and Socorro—compared the success rates of different media. Said former New Mexico Senator Pete Domenici: "The results show that one material provides significantly better treatment than the others."

Pictured: Use of E33 media in typical Adsorption Package Units (APU) and in Modular System installations.

NOTES:

- Media life based on gallon usage and water profile; will vary by individual site based on water quality and usage.
- AdEdge recommends effluent testing and monitoring program to determine media breakthrough.