



Graver Technologies

Filtration

Separation

Purification

AWARD WINNING METSORB® ARSENIC TREATMENT INSTALLATION IN ARIZONA!!

The EPA's Arsenic drinking water standard has presented significant challenges for drinking water systems throughout the U.S. Utilities, both large and small, are experiencing the daunting task of complying with a maximum contaminant level of 10 parts per billion (ppb) or face stiff fines and even the potential shutdown of wells. Smaller utilities often face the most difficult challenge due to limited manpower and budget constraints. One such utility located in Northern Yavapai County, Arizona, evaluated several treatment technologies before turning to the patented MetSorb® HMRG titanium based adsorbent media manufactured by Graver Technologies LLC, a MARMON WATER/BERKSHIRE HATHAWAY COMPANY.

The utility, a long established private water company, has been providing quality drinking water to the surrounding community for over 45 years. Today the water company supplies drinking water to nearly 640 connections from a series of groundwater wells. Upon identifying arsenic in the combined flow at a concentration in excess of 10 µg/l, The utility. investigated various treatment technologies and non-treatment options. They focused their sights on adsorbent technologies, taking advantage of the lower capital investment and the ease of operation and system maintenance associated with adsorbent technologies. Following an extensive review, the technical and operational advantages of the Metsorb® adsorbent technology over iron based media and hybrid ion exchange resins secured their decision. Metsorb® titanium based adsorbent technology became the adsorbent media of choice due to the high selectivity for arsenic, even in the presence of competing contaminants, and the physical stability of the media, allowing for a reduction in volume and frequency of backwash.

Installation and start-up of the Metsorb® treatment system was completed in early 1st Quarter of 2008. The treatment system design includes the efficiency and reliability of a lead / lag configuration, along with the benefits of source water by-pass blending to reduce operational and maintenance costs. The treatment design and operation has enabled the water company to effectively achieve regulatory compliance with the EPA's stringent arsenic standard.

Metsorb® Arsenic Treatment Performance - Year 1

SOURCE WATER		Quarter 1		Quarter 2		Quarter 3		Quarter 4		Annual Avg.	
ARSENIC	17.0 µg/l	Treated <1.0	Blended 7.0	Treated <1.0	Blended <1.0	Treated <1.0	Blended 7.0	Treated <1.0	Blended 7.0	Treated <1.0	Blended 5.5
pH	7.0 units										
Silica	21.0 mg/l										

Treated Target = < 1.0 µg/l (detection limit)

Blended Target = 7.0 µg/l

The project was so successful, that the Water Infrastructure and Finance Authority (WIFA) of Arizona awarded the utility the prestigious title of "BEST DRINKING WATER PROJECT OF THE YEAR".

METSORB™ HMRG is a highly effective granular adsorbent that removes Arsenic III & V, and a wide variety of heavy metals including Lead, Chromium⁶, Selenium, Uranium and Vanadium from aqueous sources. For more information on MetSorb® arsenic adsorbent media contact James Knoll at 410 596-9434, or by email at jknoll@gravertech.com.

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Visit us on the web at www.gravertech.com/pr_overview_metsorb.html

Graver Technologies LLC designs, develops, and manufactures an array of specialty products for critical ion exchange, separation, purification, and filtration processes. We specialize in the purification of power generation condensate, process and drinking water, and industrial fluids and gases. Graver is a member of The Marmon Group (a Berkshire Hathaway Company), an international corporation with more than \$7 billion in annual sales. Around the corner or around the world, Graver Technologies is a fast-growing company with the technical resources and financial strength that make us the perfect partner for your business.