

Participating Vendors

2005 Arsenic Treatment Technology Vendors Forum

November 2-3, 2005

Albuquerque, New Mexico

Vendor	Representative(s)	Type of Technology	Description of Technology by Vendor
ADA Technologies.	Craig Turchi	adsorbent (Amended Silicates)	Amended Silicate™ sorbents are based on a process wherein active adsorption sites are distributed onto an inert, inexpensive silicate substrate. This amendment process can be tailored for the contaminant(s) of interest. The arsenic variant utilizes a ferric hydroxide amendment and has properties similar to other iron-based materials. However, the use of the inexpensive silicate substrate allows for efficient distribution of the iron at a low cost.
Argonide Corporation	Fred Tepper	Nano iron / alumina (Alfox GR-3)	Alfox is a granular material consisting of a proprietary nano alumina/nano iron hydroxide mixture. Laboratory testing shows it has about 2 to 2.5 times the EBV v. Bayoxide E-33. It is a higher bulk density and improved attrition resistance v. E-33.
Basin Water, Inc.	Charlie Muir		

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Brimac Carbon Service Products	Symon Thomas	Adsorption media (Brimac 216)	Brimac's adsorption media is a granular bone char adsorbent with dual components: carbon and hydroxyapatite [Ca ₁₀ (PO ₄) ₆ (OH) ₂]. The carbon surface adsorbs hydrophobic, lipophilic and weakly anionic molecules while the hydroxyapatite adsorbs strongly charged molecules together with many inorganic ions (metals).
Graver Technologies HydroGlobe Division	John Schroeder	Titanium oxide (MetSorb)	HydroGlobe MetSorb G is a nonregenerable titanium based media, available in a range of mesh sizes from powder to 16/60 mesh. Compared to competitive media, MetSorb G is less sensitive to common interferences such as silicates, phosphates, pH, and sulfates. It exhibits rapid kinetics, and hence low operating cost per thousand gallons of water treated. Disposal of the material is simple as a nonhazardous waste by TCLP and California WET tests.

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EaglePicher Filtration	Peter Lenz, Kim Walsh	Adsorbent media (NXT-2) and Coagulation/filtration (NXT-CF)	The NXT-2 and NXT-CF are lanthanum hydroxide based medias for adsorption and coagulation/filtration arsenic removal, respectively. The lanthanum hydroxide provides pH stability up to pH10 and removes both As(III) and As(V) without the need for chemical pretreatment. Both medias also remove other contaminants such as phosphate, flouride, selenium and others.
Inotec	Jack Adams, Terrence Chatwin	Chemical/biological (AsTECH)	The AsTECH process uses immobilized functional groups and microorganisms to bind and remove arsenic from concentrated and dilute solutions to levels at or below detection. Arsenic is removed by chemical binding and biological transformation. Pilot-scale tests in mining waters have demonstrated arsenic removal to below detection. Additionally, the AsTECH process can be configured to simultaneously remove other metals and inorganics such as nitrates, Se, Zn, Mg, Cr, and others - also to near or below detection. Scalable to treat large flow, low capital and operational costs - operational costs are expected to be in the \$0.10 to \$0.35/1000-gallon range.

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McPhee Environmental Supply, LLC	George Armstrong, Sheri Stockhaus	ArsenXnp	McPhee Environmental Supply offers arsenic removal systems featuring AsXnp/ArsenXnp. Benefits of this technology are smaller footprint, regenerable media, high pressure capacity, no backwashing, no pH adjustment, no waste, and virtually no O&M. Systems available for POU as well as small and large municipal applications.
Mobile Process Technologies	Jim Velinsky	ArsenXnp	
Orca Water Technologies	John Crass, Mike Monacell		Orca Water Technologies presents the Kemloop 1000. The system will remove arsenic and multi-contaminants using a partially recirculating coagulation conduit combined with direct filtration.
Purolite	Francis Boodoo	Ion exchange and adsorptive medias (ArsenX-NP; A-530E; A-520E; A-300E; C100E)	Purolite's iron-impregnated anion resin, ArsenX-NP, will remove arsenic and uranium. Modifications incorporating A-530E, our perchlorate selective resin, and/or our C-100E cation resin will selectively remove perchlorate and radium as well. Brine regenerable SBA resins (A-520E and A-300E) will remove arsenic, nitrate, and uranium simultaneously.

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ResinTech, Inc.	Peter Meyers	Hybrid resin/adsorbent (ASM-10-HP)	Iron-based adsorbent monatomically dispersed in the gel phase of a strong base anion resin. Arsenic removal first occurs by ion exchange, and then arsenic is adsorbed into the iron. The hybrid resin has very rapid kinetics and is significantly more robust than competitive granular medias.
SolmeteX, Inc.	Owen Boyd	ArsenXnp	ArsenX is a hybrid polymeric media impregnated with iron nanoparticles. Media has excellent capacity, flow dynamics, and is regenerable.

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Virotec International Limited	Will Caldicott, Neil Bardach	Adsorption (Bauxsol, Arsenic ProActiv)	Arsenic Removal Description: Bauxsol™ has a high acid neutralizing capacity and an excellent ability to trap trace metals and metalloids. Trapped ions are tightly bound by mechanisms that include: precipitation of low solubility minerals, isomorphous substitution, solid-state diffusion, and adsorption. Bauxsol™ has an excellent ability to remove As(V) from water and field trials show the addition of Bauxsol™ to sulfidic rock reduced the As concentration in leachate from 35 to less than 0.005 mg/L. Arsenic concentrations have remained below 0.005 mg/L for five years since the treatment and concentrations of trace metals have remained well below regulatory limits.