

Arsenic System FAQ's

The arsenic system installed utilizing MetSorb adsorbent Media. This technology has been available since the early 2000s, with over 5,000 installations worldwide. It is accepted by the EPA, AWWA and all State agencies as a method to remove arsenic safely from drinking water.

What are the specs on the treatment system: materials used, extraction method, containment, etc?

The media (referenced as pellets) is MetSorb HMRG by Graver Technologies. The process is called Adsorption, it is considered passive and does not require any chemicals to be injected.

What is the expected noise level of the system when operational?

No mechanical noise to be expected. The prefilter is set to flush out sand and silt before entering the arsenic removal system. This might cause the sound of running water for about 10 minutes daily.

What are the contamination risks if one or more of the tanks leaks or if the pellets are dropped?

None, the media and the arsenic bind to each other. The process of removal spent media is highly controlled to prevent spills of media.

What is the concentration level of arsenic in the pellets and backwash water since Arsenic greater than 5.0 mg/L is a hazardous material?

The concentration of Arsenic in the pellets is less than 5.0mg/L. The arsenic attaches to the titanium surface and pore structure. During backwash the idea is to remove fines like silt and sand that increase the pressure delta across the media bed, that come up from the well, not to flush out the arsenic into a concentrated sludge.

What is the backwashing procedure?

Backwashing is running water in reverse through the removal media storage tank to fluff it up, making the treatment more efficient. The system will be backwashed every six months and will discharge over a five-day period at less than 1,000 gallons/day meeting ACC R18-9-B301 Type I general permit requirements.

Do you have test results that show the amount of arsenic that is likely to leach out of the pellets? Will this amount enter the backflush water? What happens to it then?

Short answer is there is no leaching out. More details can be found in the AWWA Research Foundation – Adsorbent Treatment Technologies for Arsenic Removal, 2005.

How are the waste products (saturated pellets) disposed of?

Waste samples are tested for leaching of metals, permitted and sent to landfill as a non-hazardous special waste, assuming the test results are acceptable. This hasn't been an issue in the 15 years Canyon Filtration (subcontractor for this project and owner of Big Park Water in VOC) has been doing this.

What is the chemical form of Arsenic in the water?

Based on the 2021 engineering report, Arsenic V (arsenate) is present with Arsenic III (arsenite) non-detect. No oxidation is present to convert arsenite to arsenate. Although the media will remove both forms with or without converting.