Radium Removal From Drinking Water

Model - RAD-Clean System-600

Old School
Radium Removal

REMOVING RADIOACTIVE CONTAMINATION FROM ION EXCHANGE RESINS USED IN DRINKING WATER TREATMENT

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Discussion of Ion Exchange Process

Radium ions are cations, ions with positive charges, as are calcium, magnesium and several other metal ions. These ions are very strongly attracted to the media utilized in the **RAD-CLEAN SYSTEM 600**, even more so than Calcium, Magnesium, and other cations representative of hardness in water.

Back-flushing and Regeneration: When the tanks are back-flushed and the Ion Exchange capability is regenerated, the hardness ions will become unattached to the media and be flushed out of the system to a drain. During regeneration, most of the radium is also pulled off the media and flushed out of the system.

Typically the local Wastewater Treatment Plant(s) (WWTP) receive and treat the waste stream from the ion exchange process.

Because of the strong attraction the radium ions have for the media, not all the radium will be removed from the resins. Over time, the resins become saturated with radium ions that have not been removed during regeneration.

Replacement of Media 8-10 years: Once this condition occurs, the media must be removed and disposed of properly. New media is loaded into the tanks. This replacement of the media will only need to be replaced after eight to ten years.

Service of RAD-CLEAN SYSTEM 600: Another advantage of using ion exchange systems is that service is readily available nationwide. TA regional and local support system will ensure the system is maintained properly and that the exchange media will be disposed of properly.

Cost Effective: The ion exchange method is cost-effective both in start up and during life cycle maintenance.

Flow Volume: Because of the wide variation of flow volumes, the typical system operates with one module during times of low-flow. During high-flow conditions the second module automatically is brought on line.

System Footprint: The floor space needed for the typical small system user is about 20 ft^2.

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