



NRC NEWS

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NRC ISSUES GUIDANCE ON TREATMENT OF URANIUM FILTERED FROM LOCAL WATER SYSTEMS AND OTHER FACILITIES

The Nuclear Regulatory Commission has issued guidance allowing uranium recovery facilities to accept, process and dispose of certain ion-exchange resins used to remove naturally occurring uranium from municipal water systems.

The guidance states that the NRC considers certain resins “equivalent feed” – if they are essentially identical to material already processed at the facility – rather than “alternative feed” that would require a license amendment to accept and process.

This guidance can help community water systems comply with regulations issued in 2003 by the U.S. Environmental Protection Agency, placing a limit of 30 micrograms of uranium in drinking water. The transport, treatment and disposal of the uranium-loaded resins can be a significant cost – according to the EPA, as much as 50 percent of operating costs for smaller community water systems.

These treatment resins are chemically and physically essentially the same as ion-exchange resins already used at uranium recovery facilities and would be processed in the same way. The NRC staff has determined that uranium recovery facilities should be permitted to accept these resins as equivalent feed without the need for a license amendment, provided the processing remains within the scope of the facilities’ existing safety and environmental reviews.

“This is a win-win situation, benefitting our national interest by recovering valuable uranium while helping community water systems purify drinking water,” said Mark Satorius, director of the NRC’s Office of Federal and State Materials and Environmental Management Programs. “The ability to reuse the resins provides an economic benefit to the treatment facilities by reducing operating costs and the amount of resin requiring disposal.”

The guidance also allows mine dewatering operations to dispose of uranium-loaded resin in the same way – by sending them to a uranium recovery facility for processing – rather than disposing of them in a landfill. In a similar fashion, uranium-loaded resin from another licensed uranium recovery facility can also be treated as equivalent feed if it meets the criteria outlined in the guidance.

Once the uranium is recovered, the spent resins may be disposed in uranium mill tailings impoundments or as low-level radioactive waste, or they may be returned to the water treatment facility for reuse in stripping uranium from municipal water supplies.

The guidance is contained in Regulatory Issue Summary 2012-06: NRC Policy Regarding Submittal of Amendments for Processing of Equivalent Feed at Licensed Uranium Recovery Facilities, and is available on the NRC [website](#). Draft guidance was published for public comment Oct. 12, 2011.

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