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Ra or U Out of H₂O

by Harry Hutchinson

A company that helps municipalities in the Midwest clear radioactive material from drinking water is extending its market to California. The company, RMD Operations LLC, provides filtration systems to remove normally occurring radioactive materials and other contaminants from water supplies. RMD also disposes of the nuclear waste trapped in the filters.

RMD, based in Arvada, Colo., has received a radioactive materials license from the California Department of Health Services with the understanding that the radioactive residuals will be stored outside the state. RMD operates as a service provider and markets filtration systems made by a sister company, Water Remediation Technology, also based in Arvada.

According to Duane Bollig, vice president for environmental and government affairs at Water Remediation, the company is talking with several municipalities in California about its services. RMD has run pilot systems in some California cities, including Modesto.

Lenore Hill, water resources manager for Modesto, told us that she reviewed the data from the demonstrations. "From my perspective, it worked," she said. Several wells had become contaminated by uranium after the water table rose in the area, to the point where radioactivity exceeded the California state maximum of 20 picocuries per liter. The pilot systems filter water from wells that were about to be shut down because of the uranium contamination, Hill said, but test results before and after filtration went "from too bad to run to nothing there."

RMD has marketed its filtration systems in Illinois, Wisconsin, and Minnesota, with its longest-running permanent installation in Oswego, Ill., Bollig said.

Jim Etheridge, operations supervisor for the city, said that Oswego has seven filtration systems in operation. The oldest has been operating for about a year and a half. Etheridge described them as 20-foot-tall vessels about 15 feet in diameter. The filter medium, he said, looks like green sand. The water is pumped into the vessel from the bottom so as it works upward, it disturbs and mixes with the grainy medium.

The systems at Oswego are filtering radium 226 and 228 from the water supply, Etheridge said. EPA regulations permit drinking water to emit no more than 5 picocuries per liter of total radioactivity from both forms of radium.

RMD has arrangements for the disposal of various contaminants with U.S. Ecology, a private company with space at the Department of Energy's Hanford site in Washington and at Grand View, Idaho, and with Newpark Environmental Services, which is headquartered in Lafayette, La. According to Bollig, uranium can be sent to reprocessors for recovery and eventual enrichment into reactor fuel.