

# Ledger-Sentinel

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## Oswego makes public works "history"

*New radium removal equipment activated at well, more to follow*

### John Etheredge

There were no speeches or even a ribbon-cutting ceremony with local dignitaries—those will be scheduled later—but Oswego made what could be called public works history last week.

Without any fanfare May 18, filtering equipment was activated at the village's well house No. 7, located in the shadow of the massive two million gallon capacity water tower in the Ogden Falls Subdivision on the village's far east side. The equipment serves to remove the radium that occurs naturally in the village's water supply.

Over the next few weeks, identical filtering equipment will be activated at the village's four other well houses according to Jerry Weaver, the village's director of public works.

When the equipment is operational at all of the wells within the next two months, the water village residents and businesses receive when they turn on their taps will not only conform to federal guidelines for acceptable levels of radium, it will be radium free, Weaver said.

History enters the equation because the village is the first public water supplier in the U.S. to remove radium with a patent-pending filtering system devised by Water Remediation Technologies (WRT) of Arvada, Colo.

The installation of the WRT filtering system also marks the end of a 21 year journey by the village to bring its water supply into compliance with federal radium guidelines. That two decade period spanned the tenures of four village presidents, four village administrators, and numerous board members and village staffers.

Like many other municipalities in northeastern Illinois, Oswego was notified by the Illinois Environmental Protection Agency (IEPA) in the spring

of 1984 that concentrations of radium in its water supply were in excess of regulations set by the U.S. EPA. The radium is found in the deep well aquifers from which the village and numerous other area municipalities pump their water.

According to the U.S. EPA regulations, the acceptable level of radium is no more than 5.0 pico curies per liter. (A pico means a trillionth; a curie is a measure of radioactivity.) The radium content in village water has ranged over the years between about six and 18 pico curies.

The U.S. EPA adopted the radium regulations after studies done in the 1970s linked concentrations of radium in drinking water with some forms of cancer, including cancer of the bone and sinus. However, over the years, village officials have consistently maintained the radium concentration in municipal water has not posed a significant health risk. They have cited the results of a 1985 study conducted by a researcher at the Argonne National Laboratory that determined someone would have to drink two liters of water containing 10 pico curies of radium every day for 6,000 years in order to ingest enough radium to risk contracting cancer.

To bring their water into compliance with the federal radium standards, many communities—including neighboring Montgomery and Aurora—long ago constructed water treatment plants that use conventional methods to reduce the radium content in their water supplies to bring them into compliance with the federal guidelines.

But Weaver said the village chose the WRT filtering system over those other systems due to several factors, including cost and environmental considerations.

Acting on the recommendation of its Yorkville-based engineering firm, Smith Engineering, Inc. and with the approval

of the IEPA, the village board awarded a contract to WRT in 2003 to install its filtering system at each of the village's wells. At that time, Mark Pries, the village's finance director, noted the \$2.8 million cost for the WRT system was about \$1.2 million less than the \$4 million cost for a conventional radium removal system.

Under terms of the 20 year agreement with WRT, the village will pay the firm to have a private contractor maintain the filtering system and to periodically remove and dispose of the low-level radioactive material collected at each of the wells as a result of the filtering process. The radioactive materials will be disposed at a landfill licensed to accept such materials located in Washington state.

Pries estimated the village's first year expense to maintain the system will be about \$164,000. That figure is projected to increase to about \$410,000 annually to 2023 due in part to the anticipated expansion of the village's water system.

Standing near the 32,000 gallon capacity filter vessel in the village's well house No. 3 located near the village's downtown on Monday, Weaver said environmental and ecological concerns were also considerations for village officials in choosing the WRT system.

"With this system, once the radium is removed, it is totally removed from the environment," he said. "It will be trucked out of state to an approved landfill. It will not be applied anywhere, it won't go into sludge or sanitary sewer lines. This is a total removal system."

Despite the new filtering system, Weaver said village residents shouldn't notice any change in their water.

"This system doesn't alter the characteristics of the water," he said. "It doesn't discolor or change the water's taste. It just removes the radium."