



## Waste Management

During vitrification—the process of immobilizing tank waste in glass—secondary liquid, called effluent, will be generated by the Low-Activity Waste Facility, the Analytical Laboratory, and when transfer pipes are flushed. The effluent is fed to the Effluent Management Facility, where excess water is boiled away. The water is then piped into holding vessels, where testing ensures it

meets waste acceptance criteria before transfer to the Liquid Effluent Retention Facility. The remaining waste concentrate is returned to the Low-Activity Waste Facility for treatment.

During full operations, the Low-Activity Waste Facility is designed to vitrify up to 5,000 gallons of low-activity waste per day, equal to 1.75 million gallons per year.

### PORTSMOUTH SITE

#### Building demolition helped by new dust-suppression tool

Workers at the Department of Energy's Portsmouth Site in Ohio have been using a new tool as part of the dust-suppression systems for the X-326 process building demolition project. The X-326 was one of three massive process buildings originally built to enrich uranium at the site, which was in operation starting in the 1950s. Environmental remediation of the site began in 1989, and deactivation and decommissioning activities began in 2011. Demolition of the facility has

led to a dusty work environment.

The new dust-suppression tool—a tracked Prinoth Panther T16 crawler carrier—features a zero-degree turn radius and can adapt to irregular terrain. It traverses the demolition area daily, spraying down building debris with an onboard high-pressure water cannon known as the Dust Demolisher, which is hooked up to a 2,700-gallon tank of fixative used to lock down dust. The fixative, which normally dries clear, has been

tinted green to mark areas that have already been sprayed.

The Dust Demolisher delivers water and fixative on demand at up to 150 pounds per square inch and with a throwing range of more than 150 feet. The tool has a 30- to 330-degree rotation capability in 10-degree increments. In addition to the Dust Demolisher, the X-326 demolition project has multiple other dust-suppression systems in place.

Once demolition of the X-326 building and debris removal are complete, the dust suppression systems will be moved to the next process building slated for demolition. More than 80 percent of X-326 has been demolished, and completion of the project is on the DOE Office of Environmental Management's (EM's) 2022 priorities list.

"The Panther and Dust Demolisher represent state-of-the-art mitigation tactics for dust suppression," said Jeremy Davis, acting Portsmouth Site lead with the EM Portsmouth/Paducah Project Office. "They are part of a



The Panther T16 sprays fixative with a high-pressure water cannon onto X-326 building debris at the Portsmouth Site. (Photo: DOE)

comprehensive strategy to protect workers and our neighbors from any potential hazards associated with cleanup activities."

Covering approximately 2.5 million square feet of floor space spread across two floors,

*Continued*

## In Case You Missed It . . .

**An IAEA team is recommending improvements to Denmark's radioactive waste program.** An independent review conducted by an International Atomic Energy Agency team found that Denmark has developed a robust and well-functioning system, but that the national program needs further refinement if it is to be effectively implemented. The review of Denmark's program was conducted in May by an IAEA Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning, and Remediation (ARTEMIS) mission team.

The government of Denmark requested the review of its waste management program to fulfill its European Union obligations requiring an independent review of EU member states' national radioactive waste man-



Denmark's Riso National Laboratory for Sustainable Energy. (Photo: DTU)

agement programs. The Danish parliament adopted a resolution outlining the policy goals and activities of its national program for safely managing radioactive waste and spent nuclear fuel in 2018.

**The deadline for comments** on the Nuclear Regulatory Commission's new decommissioning rulemaking has been extended until August 30. The proposed rule, which would amend the NRC's regulations pertaining to nuclear facilities transitioning to decommissioning, was first published in the *Federal Register* on March 3 with deadline for comments of May 17. The NRC said it issued the extension to allow more time for members of the public to submit their comments, which can be done online by visiting [regulations.gov](https://www.regulations.gov) and searching for Docket ID NRC-2015-0070.

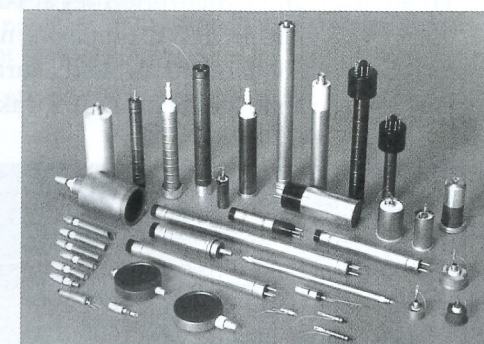
Notice of the 105-day extension was published in the May 17 *Federal Register*.

*For in-depth coverage of these stories and more, see ANS's Nuclear Newswire at [ans.org/news](https://www.ans.org/news).*

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