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To 430 site
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WIPP File

DOENEWS:

FOR IMMEDIATE RELEASE

WIPP RADIOACTIVE WASTE TESTS BEGIN WEDNESDAY AT LOS ALAMOS

LOS ALAMOS, N.M., April 25 -- The U.S. Department of Energy's (DOE) Waste Isolation Pilot Plant (WIPP) transuranic radioactive waste tests begin Wednesday, April 26, at Los Alamos National Laboratory (LANL).

Results from the Actinide Source-Term Waste Test Program (STTP) will confirm performance assessment computer models that help determine if the WIPP is suitable to safely and permanently dispose of defense-generated transuranic waste. The program is expected to last three to five years. Preliminary data from the tests, some of which will be available in late May, will confirm performance assessment models used to show compliance with the Environmental Protection Agency's (EPA) long-term radionuclide containment standards. The DOE's final compliance certification application will be submitted to the EPA in December 1996.

"It is important that these tests get underway now so that data will be available to support our 1996 EPA compliance application," said George Dials, manager of the DOE's Carlsbad Area Office. "We expect that the data will support the information we have already collected on this subject."

The WIPP is a research and development facility operated by the Carlsbad Area Office. Located 26 miles east of Carlsbad, it is designed for the safe, permanent disposal of transuranic radioactive waste left from the production of nuclear weapons. Project facilities include excavated rooms 2,150 feet below the earth's surface in an ancient stable salt formation.

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According to the DOE, the tests are designed to establish the behavior of transuranic elements in waste when mixed with brine, which is present in minute amounts in salt formations. Tests will be conducted on several transuranic waste types, typical of those temporarily stored at DOE sites nationwide.

Transuranic waste is contaminated with radioactive elements heavier than uranium, primarily plutonium. The dry waste generally consists of clothing, tools, rags and other items used while making and maintaining nuclear weapons. This trash -- if not contaminated with radioactive and chemically hazardous materials -- could be disposed of in a regular landfill.

The DOE cancelled underground tests with radioactive materials at the WIPP in October 1993 because of scientific and budgetary questions. Tests in laboratory settings, with both simulated and radioactive wastes, will demonstrate compliance with EPA requirements.

In a laboratory, certain repository conditions, like those that might exist at the WIPP thousands of years in the future, can be simulated. Laboratory data will add to an already solid scientific foundation for the WIPP facility, allowing an earlier disposal decision to be made.

Radioactive waste already characterized for disposal at the WIPP is readily available at LANL for this experimental program. This was a major factor in the DOE's selection of LANL as the test facility, along with the cost-effectiveness of its proposed approach.

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The STTP consists of 15 drum-scale tests with heterogeneous wastes (combustibles, laboratory, wastes, metals, etc.), 33 liter-scale tests with homogeneous wastes (sludges, cemented or solidified waste, pyrochemical salts, etc.) and six pressurized liter-scale tests at 60 bar (870 pounds per square inch gauge) with homogeneous waste. Each set of experiments contains certain influencing variables designed to illustrate the behavior of actinides in actual waste immersed in brine.

Actinides are radioactive elements including thorium, uranium and others that have an atomic number greater than uranium.

Complex analytical measurements will be conducted periodically on brine samples to determine the effect of each waste type on properties of actinides and to determine gas generation characteristics of the waste. The analytical results from these experiments will provide an understanding of the chemistry of actinides under conditions similar to the WIPP waste disposal rooms. The chemical equilibrium achieved by the actinides in the tests will serve to effectively demonstrate the overall long-term disposition of radionuclides in the WIPP.

The STTP will provide a technological base to augment other studies to ensure compliance of the WIPP with the DOE and EPA regulations.

Located in northern New Mexico, LANL is a multidisciplinary research organization that applies science and technology to problems of national security ranging from defense to energy research. It is operated by the University of California for the DOE.

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For more information on the STTP and other WIPP programs, the public can call the toll-free WIPP Information number, 1-800-336-WIPP (9477).

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