

# Waste Isolation

## Pilot Plant

*... a critical step toward solving the nation's nuclear waste disposal problem*

# WIPP Milestones

- 1955** — The U.S. Atomic Energy Commission (AEC), predecessor of the U.S. Department of Energy (DOE), asks National Academy of Sciences (NAS) to study disposal of radioactive wastes.
- 1956** — The NAS recommends consideration of salt as host rock.
- 1970** — The AEC selects a salt mine near Lyons, Kansas.
- 1972** — The AEC withdraws from the Lyons site over concerns that drilling in the vicinity may compromise the future repository's integrity and strong political opposition.
- 1974** — AEC chooses site 30 miles east of Carlsbad for exploratory work.
- 1975** — A 3,000-foot-deep exploratory hole reveals structural deformation and pressurized brine. The U.S. Geological Survey recommends moving site 7 miles southwest.
- 1978** — New Mexico establishes the Environmental Evaluation Group (EEG) to provide technical oversight for the state's health and environment department.
- 1979** — Congress authorizes WIPP for research and development of safe methods of disposal of radioactive wastes generated by defense facilities that are exempt from regulation by the Nuclear Regulatory Commission (NRC), Public Law 96-164.
- 1980** — DOE issues Final Environmental Impact Statement (FEIS) and first Safety Analysis Report (SAR).
- 1981** — The state of New Mexico sues DOE and the U.S. Department of Interior (DOI). Suit is settled by agreement for more study and more communication with state.
  - First exploratory shaft drilled (Salt Handling Shaft).
- 1982** — Underground excavation begins.
  - DOE and state of New Mexico sign agreement that DOE will seek money from Congress for upgrading state's roads to be used to ship WIPP waste; state claims DOE is liable for accidents at WIPP or en route.
- 1983** — DOE decides to proceed with full construction of WIPP.
- 1984** — DOE and the state of New Mexico agree that WIPP must comply with all state, federal, and local laws and regulations, including those by the U.S. Environmental Protection Agency (EPA).
- 1985** — EEG judges that TRUPACT-I is unacceptable and notifies DOE.
  - EPA establishes radioactive waste disposal regulations specifically addressing transuranic waste and WIPP.
- 1986** — EPA states WIPP must comply with Resource Conservation and Recovery Act (RCRA) of 1976 for disposal of mixed (hazardous and radioactive) waste.

- 1987** — DOE selects cylindrical design for TRU waste shipping containers (TRUPACT-II).
- Federal court invalidates part of EPA's radioactive waste disposal rules, leaving no regulations applicable to WIPP.
- A modified agreement between DOE and the state of New Mexico commits WIPP to original rules until revised rules are in place.
- 1989** — DOE applies to DOI for withdrawal of 10,240 acres of federal land from public use for exclusive WIPP use.
- DOE issues its five-year test plan and asks EPA for approval to proceed with it.
- August 30 -- NRC approves TRUPACT-II.
- DOE completes repository construction with Air Intake Shaft.
- 1990** — DOE issues WIPP's first supplemental Environmental Impact Statement.
- EPA approves DOE's request to proceed with the five-year test plan.
- EPA authorizes New Mexico Environmental Improvement Division, now the New Mexico Environment Department (NMED), to regulate disposal of mixed and hazardous waste.
- 1992** — October 8 -- Congress passes WIPP Land Withdrawal Act (Public Law 102-579), President Bush signs it October 30.
- 1993** — Occupational Safety & Health Administration (OSHA) reviews and approves WIPP's States and Tribal Education Program (STEP).
- DOE announces decision to perform radioactive waste tests at Los Alamos National Laboratory (LANL). Accelerated regulatory compliance is now the main focus.
- DOE creates the Carlsbad Area Office (CAO), directly linking WIPP with DOE Headquarters.
- 1994** — October 6 -- Energy Secretary Hazel O'Leary presents first Voluntary Protection Program (VPP) "Star" award to Waste Isolation Division (WID), the management and operating contractor of WIPP.
- 1995** — April 3 -- DOE initiates plan for deactivation of the underground experimental area.
- May 26 -- DOE submits a revised RCRA Part B permit application to NMED for disposal phase. (First Part B application addressed the test phase, which was canceled).
- 1996** — February 1 -- EPA issues 40 CFR 194, compliance criteria for WIPP certification and re-certification.
- February 9 -- New Mexico State Mine Inspector recognizes WIPP for excellence in underground operations.
- August 14 -- Deactivation of the underground experimental area is complete.
- September 23 -- Congress passes the Land Withdrawal Act Amendment (Public Law 104-201) as part of the Defense Authorization Bill. The amendment deletes test phase language and eliminates redundant requirements.
- October 29 -- DOE submits WIPP's 84,000-page Compliance Certification Application (CCA) to EPA.
- 1997** — January 6 - 23 -- More than 380 stakeholders commented at eight public hearings held around the country: Albuquerque, Santa Fe, Carlsbad, Denver, Boise, Richland, Oak Ridge, and North Augusta.
- Public comment period for SEIS-II is extended to February 27 in response to stakeholder requests.
- EPA declares the WIPP CCA complete. EPA's congressionally-mandated one-year review begins.
- May 21 -- CAO completes first interstate shipment of transuranic waste with a TRUPACT-II, from New

Jersey to Rocky Flats Environmental Technology Site (RFETS).

- October 30 -- EPA gives its preliminary certification that WIPP meets federal radioactive waste disposal regulations.
- 1998** — January 5 - 9 -- EPA holds public hearings in Albuquerque, Carlsbad and Santa Fe, New Mexico on its preliminary certification decision.
- January 22 -- DOE issues its SEIS-II for the WIPP disposal phase.
- March 23 -- CAO completes the WIPP operational readiness review, which is required before the startup of a nuclear facility.
- April 1 -- CAO notifies Energy Secretary Federico Peña that the WIPP is operationally ready to receive waste.
- May 13 -- EPA certifies that WIPP meets all applicable federal nuclear waste disposal standards.
- May 13 -- Energy Secretary Federico Peña notifies Congress that disposal operations for transuranic radioactive waste will commence in 30 days, or about June 19.
- May 15 -- NMED issues a draft RCRA permit for disposal of transuranic mixed waste at WIPP.
- July 17 -- New Mexico Attorney General Tom Udall and three New Mexico environmental groups file lawsuits against EPA for certifying that WIPP can safely isolate transuranic waste for 10,000 years. Udall contends that the public did not have ample time to review the draft certification rule.
- November 10 -- NMED issues revised draft RCRA Hazardous Waste permit for WIPP; schedules public hearings for Feb. 22.
- December 18 -- DOE notifies states and tribes that the first shipment to WIPP could occur as early as mid-January. At the direction of Secretary Bill Richardson, DOE notifies the state of New Mexico, tribes, and the EPA that the first shipment of transuranic waste from LANL to WIPP could occur in mid-January. The shipments are dependent upon pending litigation in U.S. District Court.
- 1999** — February 22 -- Public hearings begin in Santa Fe on the draft RCRA permit for WIPP, ending March 26.
- March 22 -- District Judge John Garrett Penn dismisses a 1992 injunction that prevented DOE from shipping purely transuranic waste to WIPP. In his ruling, Penn also gives WIPP interim status to operate while awaiting a final RCRA permit from the state of New Mexico.
- March 22 -- DOE announces first shipment of non-mixed transuranic waste will leave LANL for WIPP in the early morning hours of March 24.
- March 24 -- Due to heavy fog, first waste shipment is rescheduled for March 25.
- March 24 -- New Mexico State Court denies a request for injunction to prevent DOE from shipping waste from LANL. The request is filed by Citizens for Alternatives to Radioactive Dumping (CARD), along with citizens Betty Richards, Bob Gaston, and Deborah Reade.
- March 25 -- First waste shipment leaves Los Alamos at 8 p.m. to the cheers of dozens of WIPP/LANL supporters.
- March 26 -- First shipment of waste from LANL arrives at WIPP at 4 a.m., and is greeted by hundreds of WIPP employees and local officials.
- April 17 -- WIPP celebrates its grand opening with Energy Secretary Bill Richardson, Senators Pete Domenici and Jeff Bingaman and Representative Joe Skeen. Hundreds of people turn out for the event, including many local, state and federal dignitaries.
- April 27 -- First shipment of non-mixed transuranic waste leaves the Idaho National Environmental and Engineering Laboratory (INEEL), meeting the April 30 deadline established in a settlement agreement between the state of Idaho and the DOE. The shipment arrives safely at WIPP on April 28.

- April 29 -- New Mexico Attorney General Patricia Madrid withdraws from a lawsuit challenging the EPA's certification of WIPP. Former Attorney General Tom Udall and environmental groups filed the lawsuit in 1998.
- June 16 -- First shipment of waste from RFETS arrives safely at WIPP.
- July 29 -- Mining of Panel 2 begins.
- October 26 -- The final WIPP Hazardous Waste Facility permit is issued by NMED allowing DOE to begin transuranic mixed waste disposal operations effective November 26.
- November 1 -- Southwest Research and Information Center, along with two private citizens, appeal the permit saying it is inadequate and "the Environmental Department ignored much of the expert testimony the center presented."
- November 3 -- The Department of Justice files a federal lawsuit against the NMED contending WID should not be required to obtain a financial assurance bond as a condition of the hazardous waste permit.
- 2000** — March 7 -- WIPP receives the Certificate of Compliance from the NRC for the remote-handled (RH) waste shipping cask, the RH-72B.
- March 13 -- Mining of Panel 2 is completed.
- April 3 -- LANL opens an office in Carlsbad.
- July 12 -- The first shipment of waste from Hanford leaves for WIPP and arrives safely on July 14.
- August 22 -- DOE announces that it is releasing 20 million in impact assistance funds to the state of New Mexico.
- September 22 -- Secretary of Energy Bill Richardson announces that the CAO is being elevated to a full field office to be known as the Carlsbad Field Office (CBFO).
- October 18 -- WIPP receives the 100<sup>th</sup> shipment of waste.
- November 2 -- WIPP receives the Certificate of Compliance for the HalfPACT transportation container.
- TRU waste cleanup at ARCO Medical Products company, a small quantity site in Pennsylvania, is complete.
- 2001** — March 14 -- The 100<sup>th</sup> shipment of waste from RFETS arrives safely at WIPP.
- May 8 -- The first shipment of waste leaves the Savannah River Site (SRS) and arrives safely at WIPP on May 10.
- August 24 -- Room seven in Panel 1 is officially filled and closed.
- 2002** — January 5 -- The 500<sup>th</sup> shipment of waste to arrives at WIPP.
- February 22 -- The Central Characterization Project (CCP) mobile characterization program is approved for use by both the EPA and the NMED. SRS receives authorization from CBFO to allow CCP to characterize and certify their waste for disposal at WIPP.
- April 6 -- The first shipment of waste characterized by the CCP at SRS arrives at WIPP.
- April 14 -- WIPP receives 25 shipments during the week, which is the most ever received in a calendar week. Twelve shipment arrive from INEEL and 13 from RFETS.
- May 31 -- DOE, the state of Idaho and EPA agree to pursue an accelerated cleanup strategy for INEEL. Under the plan, the parties will work to complete cleanup operations at INEEL by 2020.
- May 31 -- DOE, the state of New Mexico and EPA agree to pursue an accelerated cleanup strategy for generator sites in New Mexico. Under the plan, the parties will work to complete cleanup activities at Sandia National laboratories in Albuquerque by 2006 and at LANL by 2015.

- July 5 -- the NRC issues a revised Certificate of Compliance for the TRUPACT-II, approving revision 19a of the TRUPACT-II Authorized Methods for Payload Control (TRAMPAC). Revision 19a specifically allows approximately 2,000 drums of high-wattage contact-handled transuranic waste to be shipped to WIPP from LANL.
- August 1 -- Jessie H. Roberson, Assistant Secretary for Environmental Management visits WIPP to celebrate the receipt of 1,000 shipments of waste.
- August 24 -- The RH Performance Dry Run (PDR) was satisfactorily completed. The PDR demonstrates the RH facility is capable of handling and disposing of RH TRU waste.
- October 28 -- The final shipment of TRU waste to meet a 3,100 cubic meter project milestone for INEEL arrives at WIPP two months ahead of schedule.
- December 18 -- DOE and the state of Washington reach agreement on new requirements for the retrieval and characterization of suspected mixed waste, and for the appropriate management of mixed waste to facilitate the accelerated cleanup of Hanford.
- TRU waste cleanup at the Energy Technology Engineering Center, a small quantity site in California, is complete.

- 2003**
- February 3 -- Mining of Panel 3 begins.
  - March 12 -- Panel 1 is declared full. The volume of waste disposed in the Panel 10,296 cubic meters. On July 10, underground construction crews mortared the last of 12,578 concrete blocks to close off Panel 1 from active work areas.
  - April -- NRC approves Revision 19c to the WIPP TRAMPAC allowing shipment of heat sealed bags greater than 4 liters, if surface area requirements are met.
  - May -- TRU waste cleanup at the University of Missouri Research Reactor (MURR), a small quantity site, is complete.
  - August 20 -- The proposed ArrowPAK container, designed to ship high-wattage waste to WIPP, undergoes testing.
  - September 15 -- The proposed TRUPACT-III shipping container, a single containment vessel, undergoes testing.
  - September -- Characterization activities at Argonne National Laboratory - East come to a successful close. More than 400 drums of waste are characterized along with 29 additional debris waste drums.
  - September -- The SRS waste shipment rate to WIPP regularly reaches six shipments per week, the rate necessary to complete removal of all TRU waste drums from the site by the end of fiscal year 2006.
  - Over 7,550 cubic meters of TRU waste are disposed of at WIPP, roughly 1,500 cubic meters more than the previous year.

2004 — January 8 -- the first shipment of waste from the Nevada Test Site (NTS) arrives safely at WIPP.



U.S. Department of Energy  
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