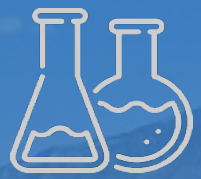
New Mexico Environment Department

Regulatory Update: Waste Isolation Pilot Plant Radioactive and Hazardous Materials Meeting

Stephanie Stringer, Resource Protection Division Director

November 4, 2019

Our Foundation



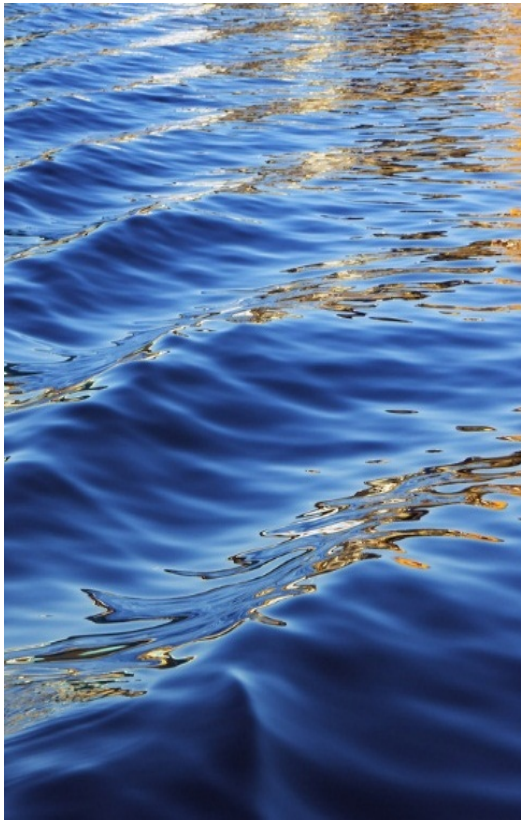
Science: Using the best available science to inform our decision-making in protecting public health and the environment.

Innovation: Employing creative engineering and technological solutions to address environmental problems.

Collaboration: Engaging communities and interested stakeholders in environmental decision-making.

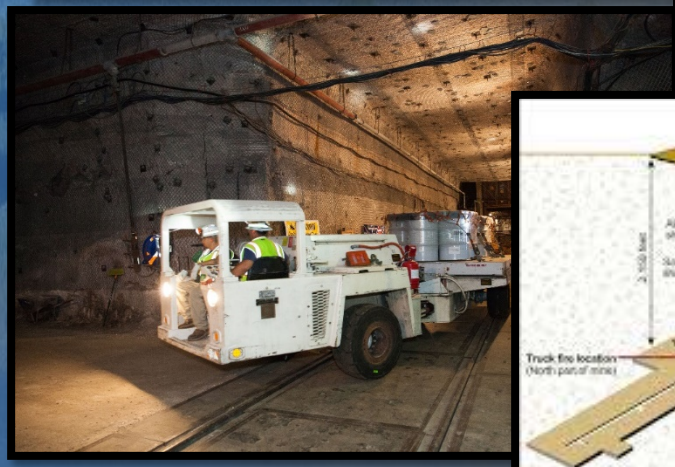
Compliance: Ensuring meaningful compliance with state regulations and permits.

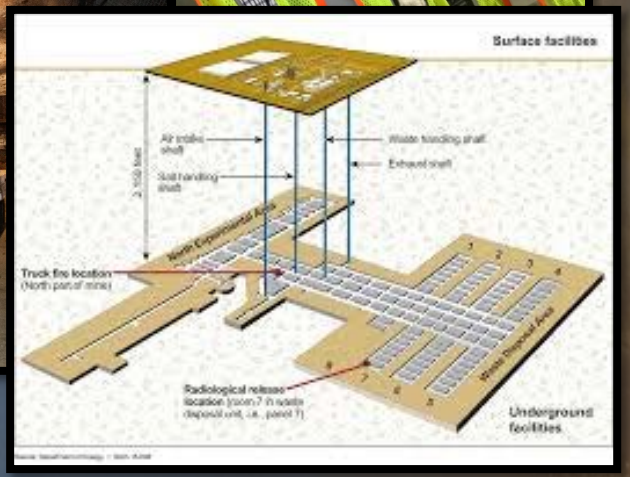
Waste Isolation Pilot Plant Overview



Waste Isolation Pilot Plant

- Storage and disposal facility for transuranic mixed waste
- Geologic repository mined 2,150 feet underground near the middle of the bedded salt formation
- 26 miles SE of Carlsbad
- Delaware Basin salt beds
- Salado Formation: 2,000-foot-thick salt bed below the surface





Type of Waste Accepted

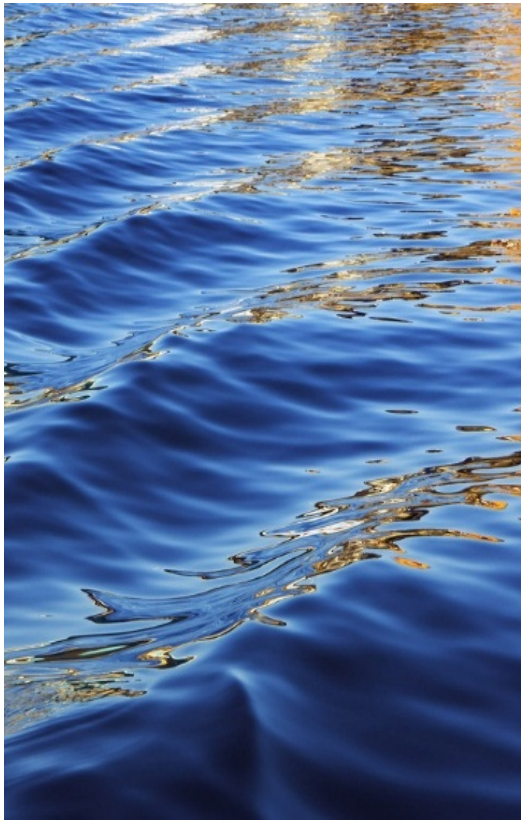
- Transuranic (TRU) Waste
  - Contact-handled (CH) waste
  - Remote-handled (RH) waste
  - Defense-related
- TRU Mixed Waste
  - Hazardous components
- As of October 2019 - 97,100 cubic meters emplaced

Number of Waste Shipments to WIPP by Facility per Calendar Year (CY)

Generator Sites	Location	CY 2017	CY 2018	CY 2019 (-October 25, 2019)	TOTAL
Argonne National Laboratory (ANL)	Chicago, Illinois	0	2	2	4
Hanford Site (Hanford)	Hanford, Washington	0	0	0	0
Idaho National Laboratory (INL)/ Advanced Mixed Waste Treatment Project (AMWTP)	Idaho Falls, Idaho	88	243	214	545
Los Alamos National Laboratory (LANL)	Los Alamos, New Mexico	1	5	27	33
Oak Ridge National Laboratory (ORNL)	Knoxville, Tennessee	17	47	21	85
Sandia National Laboratories (SNL)	Albuquerque, New Mexico	0	0	0	0
Savannah River Site (SRS)	Aiken, South Carolina	9	1	2	12
Waste Control Specialist (WCS) (Waste from LANL)	Andrews, Texas	18	13	2	33
TOTAL		**133**	**311**	**268**	**712**

Since 1999 WIPP has received over 12,000 shipments from facilities around the country. Shipments to WIPP began in 1999 and were suspended in February 2014 because of a fire and unrelated radiological release in the underground. Shipments resumed in April 2017.

Regulatory Authority



NMED's Regulatory Authority

- **NM Hazardous Waste Act**
  NMSA 1978 §74-4-1 to -14
- **Resource Conservation and Recovery Act (RCRA)**
  U. S. Environmental Protection Agency granted NMED primacy of RCRA Hazardous Waste Program
- **NMED issued Permit on October 27, 1999**
  Renewed November 30, 2010

https://www.env.nm.gov/hazardous-waste/wipp/

NMED Responsibilities

- Ensuring compliance with existing rules
- Reviewing and Issuing Permit Modifications and Renewal Applications
- Observation, review and approval of generator site audits

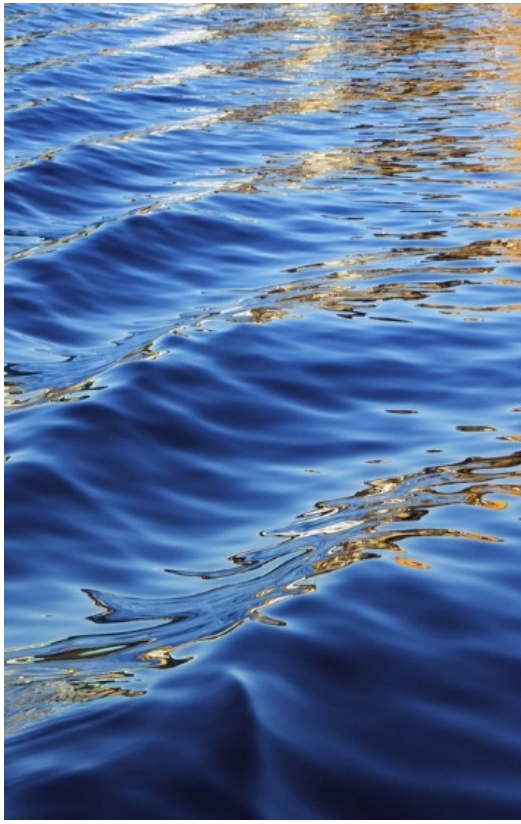
U.S. EPA Regulatory Authority

Radiation Protection Program Responsibilities

- **Certification Authority**
  - *WIPP certified May 13, 1998*
  - *Recertified July 13, 2017*
  - *Next recertification application due to EPA March 2019*

- **Oversees Radiological Aspects**
  - Waste characterization
    40 CFR 194
  - Radioactive Waste Disposal Standards
    40 CFR 191

Current Regulatory Activities



Class 3 Modification: Clarification of TRU Mixed Waste Disposal Volume Reporting (VOR)

- Submitted January 2018
- Congress limited volume to be disposed of at WIPP to 6.2 million ft^3 of TRU waste
- Purpose of permit modification request was to distinguish between the way RCRA waste volume is calculated versus the way Land Withdrawal Act TRU waste volume is calculated
- Hearing October 2018; Issued December 2018 with clarification how volume will be calculated
- Currently before Court of Appeals

Class 3 Permit Modification: Excavation of a New Shaft and Associated Connecting Drifts

- Submitted December 2017 for class determination; resubmitted as Class 3 August 2019
- Proposes to install ventilation shaft to support an upgrade to underground ventilation system
  - Provides improved air quality for workers
  - Expands the activities that can be done concurrently (ground control, mining, and waste emplacement)

10 Year RCRA Permit Renewal

- Current Permit expires December 2020
- Renewal Application due July 2020
- Scope in development by DOE
- Anticipated submittal date in Spring 2020

Non-Priority Permit Modifications

- Above Ground Concrete Overpack Container Storage Unit (Class 3)
  - Proposes to construct a concrete pad for container storage at the surface, providing the Permittees have the ability to store waste on the surface for up to one year
  - Necessary when facility is undergoing maintenance or when an event delays waste emplacement or shipments
- Modify Excluded Waste Prohibition (Class 3)
  - Permit currently prohibits emplacing waste that was ever managed as high level waste and waste from tanks unless approved through Class 3 permit modification request
  - Modifies prohibition of excluded waste to allow waste that was managed as high level waste and waste from tanks to be shipped to WIPP facility

NMED Observation of Waste Generator Site Audits

- Permit requires DOE to perform annual audits of any generator site that is shipping waste to WIPP
- Permit allows NMED to observe these audits to validate sites are implementing applicable Permit waste characterization requirements
- NMED reviews and approves a final audit report
- Audits within last year:
  - Oak Ridge National Lab, Knoxville, TN
  - Los Alamos National Lab, Los Alamos, NM
  - Sandia National Labs, Albuquerque, NM
  - Lawrence Livermore National Lab, Livermore, CA
  - Idaho National Lab, Idaho Falls, ID
  - Advanced Mixed Waste Treatment Project, Idaho Falls, ID
  - Argonne National Lab, Chicago, IL
  - Savannah River Site, Aiken, SC

QUESTIONS?

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