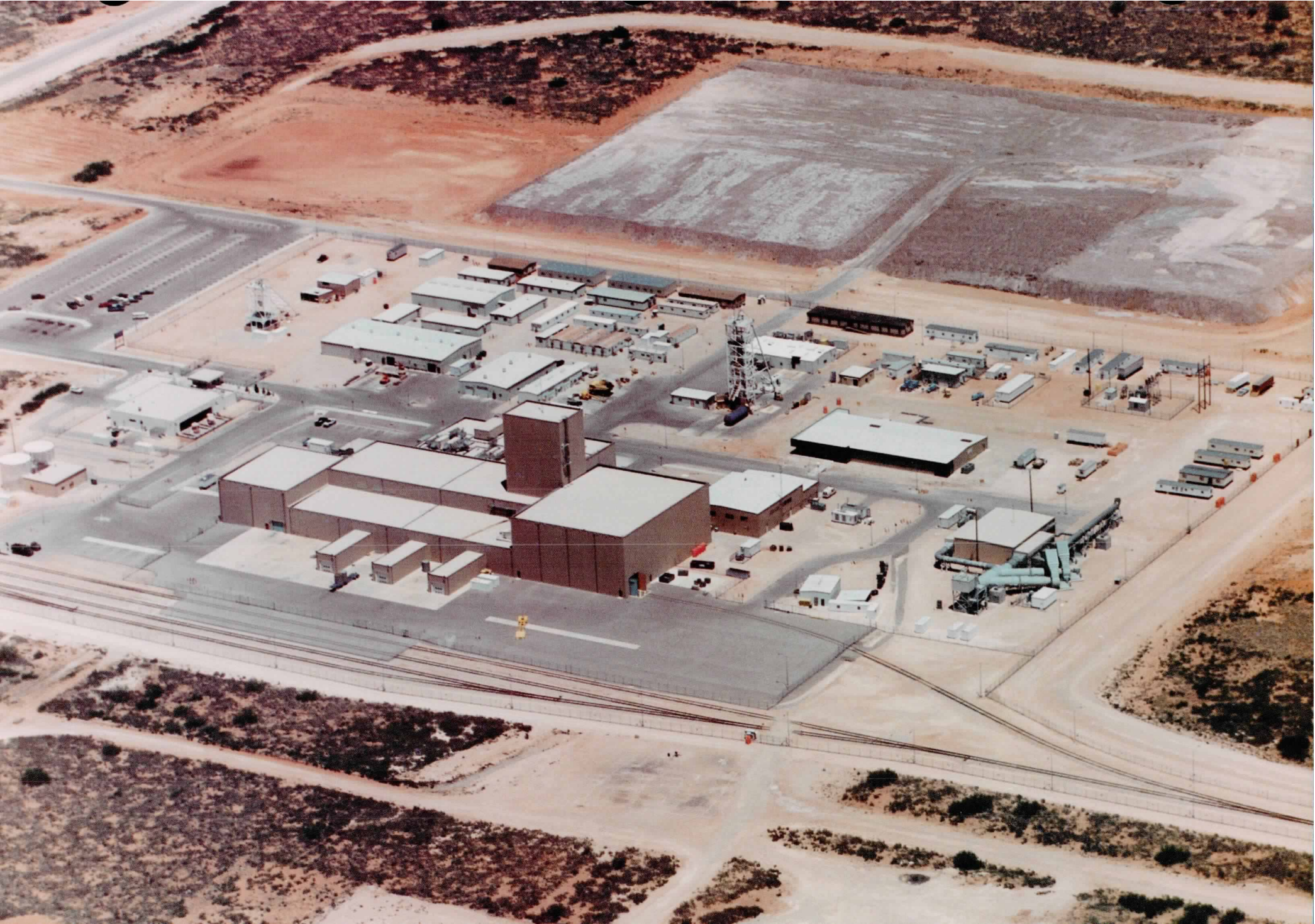


**WIPP TRU WASTE
TRANSPORTATION**

NUCLEAR WASTE TECHNICAL REVIEW BOARD

M. H. McFADDEN

SYSTEM INTEGRATION MANAGER, DOE/WIPP

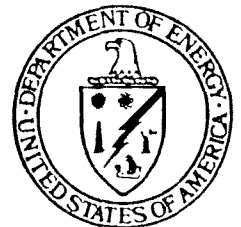


WASTE ISOLATION PILOT PLANT - MAY 1990

WIPP MISSION

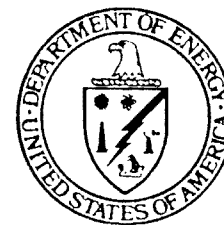
To provide a research and development facility to demonstrate the safe disposal of radioactive wastes resulting from the defense activities and programs of the United States exempted from regulation by the Nuclear Regulatory Commission.

Public Law 96-164



TRANSURANIC WASTE CHARACTERISTICS

- **Non-radioactive materials are contaminated with radioactive materials**
- **Radioactive materials are heavier than Uranium (primarily man-made)**
- **Radioactive material quantities are too small to be economically recoverable**





BACKGROUND

- **WIPP transportation program began in 1978 when TRUPACT-I design was initiated**
- **Accomplishments**
 - **Initial contact with states regarding WIPP transportation routes and concerns, 1986**
- **Congress authorized \$1M to address states concerns with WIPP transportation in 1988**
- **Secretary Watkins met with WGA in 1989 and agreed to have a cooperative agreement between DOE and WGA**



THE PRIMARY GOAL OF THE TRANSPORTATION SYSTEM IS PUBLIC SAFETY

- **Waste packages**
- **Transporter packages**
- **Routing**
- **Qualified carriers**
- **Tracking system**
- **Emergency response**



WASTE PACKAGES ARE CERTIFIED TO WIPP WASTE ACCEPTANCE CRITERIA

- **Non-combustible Type “A” package**
- **No liquid waste forms**
- **No explosives**
- **No pyrophorics**



TRANSPORTER PACKAGES ARE NRC CERTIFIED

- **Non-vented/doubly contained**
- **Tested under accident conditions**
- **Legal weight and dimensions**
- **TRUPACT-II for CH waste**



SHIPPING CONTAINER

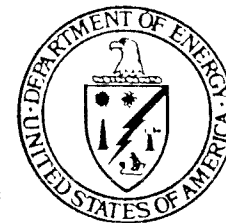
- **TRUPACT-I**
 - **Designed by Sandia and General Atomics**
 - **Rectangular design, one on each trailer**
 - **Single containment and vented through a HEPA filter**
- **TRUPACT-II 1986**
 - **Rectangular design that looked like TRUPACT-I**
 - **Designed by Transnuclear, Inc., White Plains, NY**
 - **Double containment and not vented**



SHIPPING CONTAINER

(cont.)

- **Problems with rectangular design**
 - **Pressurization concerns**
 - **NRC certification uncertainties**
- **DOE made a decision to start over in 1987**
 - **Cylindrical design**
 - **Contract awarded to NuPac,
Federal Way, WA**
 - **Double containment and not vented**
 - **Three TRUPACT-IIs on each trailer**



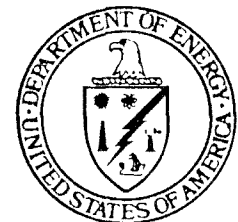
ROUTING

- **Route selection was initiated in 1986**
- **Route selection was coordinated with the impacted states**
- **New Mexico routes had been designated in DOE/New Mexico agreements in 1982**
- **DOE/New Mexico agreements required upgrade on New Mexico routes**
- **Attorney general state of NM ruled that changes in DOT regulations required the state to designate NM routes, 1989**



A CONTRACT CARRIER WILL BE USED TO ENHANCE SAFETY REQUIREMENTS

- **Emergency response plan**
- **Equipment maintenance plan**
- **Insured/bonded**
- **8 hour replacement capability**



DRIVER QUALIFICATIONS

- **Mature**
- **Experienced**
- **Trained**
- **Good driving record**
- **Single commercial drivers license**
- **Annual physical**



TRACKING SYSTEM

- **Digital two-way communications**
- **Vehicle location**
- **Vehicle status**
- **States and Tribal governments access**



EMERGENCY RESPONSE TRAINING

- **Developed curriculum in 1987**
- **Presented to states along routes from INEL and Savannah River for agreement**
- **Trained over 6000 emergency responders to date**
- **Providing periodic refresher training**





United States
Department of Energy
Waste Isolation Pilot Plant

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