

WIPP ALERT

WHAT: 3 days of public hearings to comment on the WIPP Supplemental Environmental Impact Statement II (SEIS II), which could determine New Mexico's future as the nation's designated nuclear burial ground.

WHY: Your silence will be viewed as support!

WHEN: January 8th from 2 p.m. to 5 and 7 to 9 p.m.
January 9th and 10th (schedule for both days)
9 a.m. to noon, 2 p.m. to 5 and 7 to 9 p.m.

WHERE: The **Sweeney Convention Center**,
201 West Marcy Street, Santa Fe.

What You Can Do:

- **ATTEND CCNS TOWN HALL INFO MEETING, January 6th** from 6 to 8 p.m at the **Community Room** of the downtown **Santa Fe Public Library**. Come learn more about the hearings and what you can do! CCNS will hand out literature explaining the SEIS II documents as well as a list of speaking points on: 1) Transportation; 2) Identification and approval of the volume and content of waste to be shipped to WIPP; & 3) WIPP design safety.
- **PRE-REGISTER TO SPEAK** at the SEIS II hearings: call **1-800-336-WIPP**. Individuals are allowed 5 minutes and organizations are given 10 minutes or sign up at the door for vacant slots.
- **CCNS needs your help. If you would like to donate time or money to support our work on WIPP please write CCNS or call (505) 986-1973.**



CCNS
Concerned Citizens for Nuclear Safety

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ATTEND THE HEARINGS AND SPEAK OUT



~~Benito Garcia
Chief, HRMB
P.O. Box 26110
Santa Fe NM 87502~~

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WIPP ALERT

DOE Public Hearings For WIPP ■ January 8, 9 & 10, 1997 SPEAK NOW OR FOREVER HOLD AMERICA'S NUCLEAR WASTE!

BEFORE WIPP CAN OPEN, DOE MUST TAKE A HARD LOOK AT ALTERNATIVES TO TRANSPORTING WASTE, INCLUDING LEAVING THE WASTE WHERE IT IS.

- DOE's Proposed Action Alternative would send 6.2 million cubic feet of waste to WIPP over 35 years. pages S-12-13.
- The alternatives which increase waste transportation to over 100,000 shipments could cause up to 15 fatalities in populations along the transportation route from radiation exposure not associated with accidents and **303 fatalities** from traumatic accidents not associated with radiation. page S-58.
- **Alternative 1** would double the volume of waste allowed at WIPP. **Alternative 2** would include waste contaminated with PCBs, require intermediate transportation to regional sites including LANL for thermal treatment, and extend the operation period to 150 years. pages S-13-15
- No Action Alternatives would begin dismantling WIPP in 1998 and treat on-site waste for indefinite storage. No fatalities would result from transportation. page S-16.

WIPP will not rid generator sites of stored Transuranic (TRU) waste. Even if WIPP opens, "about half" of the total volume of Contact Handled TRU inventory in storage would remain at the generator sites. page S-58. (references from SEIS II)

REMEMBER, BETTER ACTIVE TODAY THAN RADIOACTIVE TOMORROW!

For more information on the WIPP SEIS II public hearings call CCNS at 505-986-1973 or
The CCNS Hotline 986-5611 or 1-800-456-8863.

WIPP ALERT

DOE Public Hearings For WIPP ■ January 8, 9 & 10, 1997

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AMERICA'S NUCLEAR WASTE!**

ATTEND THE HEARINGS AND SPEAK OUT!

AT THE SWEENEY CONVENTION CENTER, SANTA FE, NM

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Concerned Citizens for Nuclear Safety

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The CCNS Hotline 986-5611 or 1-800-456-8863.

THE HISTORY AND POLITICS OF WIPP or...

\$\$\$ Wasted In Porkbarrel Politics

- 1957: The National Academy of Sciences recommended bedded salt formations as the best type for underground disposal of radioactive waste.
- 1969: Rocky Flats fires and plutonium releases convinced DOE to begin shipping TRU-waste to Idaho National Engineering Lab (INEL), agreeing it would only be for 10 years.
- 1970: DOE begins to store TRU-waste at above ground facilities as they anticipate finding and constructing a permanent disposal site.
- 1970's: The search is on, and after rejecting Lyons, Kansas, the DOE found Carlsbad, N.M. to be a politically friendly location.
- 1978: Energy Secretary James Schlesinger promised New Mexico would have veto power over WIPP and the facility would be subject to Nuclear Regulatory Commission licensing.
- 1979: Because WIPP is a military project, Congress specifically forbid NRC licensing and state veto power. State veto power was downgraded to "consultation and cooperation."
- 1980: The Carter administration proposed canceling WIPP but Congress disagreed and the project stalled throughout that year.
- 1981: Two days after President Reagan was inaugurated, his administration announced that the WIPP project would go full steam ahead. . . and the bureaucratic plot thickens.
- 1987: Congress began the process of considering legislation to set aside the land for the WIPP site by DOE.
- 1991: Energy Secretary Watkins announces that WIPP will open in October. New Mexico Attorney General Udall and citizens file a law suit which prevents WIPP from opening.
- 1992: Congress passes the WIPP Land Withdrawal Act.
- 1995: EPA holds hearings on revised compliance criteria and then approves a watered down version in 1996; N.M. Att. Gen. Udall & State of Texas & citizens file another law suit.
- 1996: The WIPP Land Withdrawal Act is gutted with the help of Sen. Domenici, so that WIPP doesn't need to comply with Solid Waste Disposal Act regulations on mixed waste.
- 1997: DOE holds Supplemental Environmental Impact Statement II (SEIS-II) public hearings in Albuquerque NM, Santa Fe NM, Denver CO, Carlsbad NM, Boise ID, Richland WA, Oak Ridge TN, and North Augusta SC.

WIPP IS SCHEDULED TO OPEN IN NOVEMBER OF 1997

DOE PUBLIC HEARING SCHEDULE:

ALBUQUERQUE CONVENTION CENTER

January 6th and 7th

9am to noon, 2pm to 5, 7pm to 9

SANTA FE SWEENEY CENTER

January 8th, 2 to 5pm, 7 to 9pm

January 9th & 10th

9am to noon, 2pm to 5, 7pm to 9

IMPORTANT WIPP HEARINGS

WHEN: January 6-7 - Albuquerque Convention Center
January 8-10 - Sweeney Center, Santa Fe

TO PRE-REGISTER: 1-800-336-9477
(for a scheduled speaking time)

The U.S. Department of Energy (DOE) has released its draft second supplemental environmental impact statement (D-SEIS-II) for the Waste Isolation Pilot Plant (WIPP) in southeastern New Mexico, to be the world's first nuclear waste repository. Beginning in late 1997, DOE plans to begin trucking plutonium-contaminated transuranic (TRU) wastes to WIPP. These hearings provide a good opportunity to tell DOE, other government officials, and the general public what YOU think about the safety of WIPP, transportation, and whether WIPP should open at all since there are safer and cheaper alternatives. **YOUR VOICE, YOUR QUESTIONS, AND YOUR PRESENCE CAN MAKE A DIFFERENCE!**

Before WIPP can open, DOE is required to complete the SEIS-II. The U.S. Environmental Protection Agency (EPA) must certify that WIPP complies with radioactive waste disposal regulations and the New Mexico Environment Department must issue a permit for toxic and radioactive wastes.

DOE says the purpose of the D-SEIS-II is to support four decisions:

1. Whether to open WIPP, or how to store transuranic (TRU) waste if WIPP doesn't open.
Our Response: Don't open WIPP, store wastes safely at existing sites.
2. Which portions of existing and to-be-generated TRU wastes would be disposed at WIPP.
Our Response: None
3. What treatment methods should be used for wastes being sent to WIPP.
Our Response: Don't ship wastes to WIPP. DOE should consult with state and local governments and affected citizens about the safest treatment methods at each storage site.
4. What transportation methods (truck or train) to ship wastes to WIPP.
Our Response: Don't ship wastes to WIPP. Don't ship wastes anywhere except by the safest method and to measurably improve public safety.

Issues of public concern

1. **Is WIPP safe?** No. DOE has spent \$2 billion during the past 20 years on WIPP, and it has been trying to ship wastes since 1988. But WIPP is not open because of unresolved health and safety problems and DOE's inability to show that radiation releases would result in less than 1,000 deaths in 10,000 years. EPA's approval must be based on a Compliance Certification Application (CCA) and a public rulemaking process. DOE submitted the CCA on October 29, 1996, but EPA should find the application to be very incomplete. DOE would then have to greatly revise and resubmit the CCA.

Among the problems with the site is that it is surrounded by oil and gas wells and potash mines. Mining those resources at the WIPP site would allow the wastes to escape into the ground water or to the surface. The ground water system at the site is not well understood, and millions of barrels of pressurized brine underneath the disposal rooms could bring wastes to the surface. DOE assumes that the four several-foot-diameter shafts could be completely sealed for 10,000 years but small boreholes would not remain sealed for more than 200 years, thereby providing pathways for wastes to escape.

2. **Will WIPP solve the nuclear waste problem?** No. DOE plans to dispose at WIPP about 32% of existing TRU wastes -- 65,600 cubic meters (2.32 million cubic feet) of 208,100 cubic meters (7.35 million cubic feet) ("Proposed Action"). DOE does not know what to do with the remaining wastes, but it plans to dispose of 175,000 cubic meters at WIPP, including TRU wastes produced during the next 35 years. The D-SEIS-II includes the alternative of sending virtually all TRU wastes to WIPP during the next 160 years ("Action Alternative 1"), leaving the wastes where they are ("No Action Alternative 2"), and others.

Moreover, the 5 million curies planned for disposal at WIPP is less than 0.02 percent of the radioactivity in all existing DOE and commercial nuclear wastes.

3. **Is transportation safe? No.** The D-SEIS-II estimates that the 38,089 truck shipments to WIPP during 35 years (see map) would result in 6 deaths and 48 injuries from 76 transportation accidents and that 3 people would die from radiation exposures during "accident-free" shipments. DOE does not expect that any accident would release radioactivity, but in a severe accident several people could be killed or injured and plutonium contamination could endanger future generations. Given the unprecedented nature of that shipping campaign, more accidents, deaths, and injuries could occur. The D-SEIS-II says that rail transportation would result in 10 times lower exposures to the public and 100 times lower doses to workers than truck shipments, but DOE plans to ship only by truck.

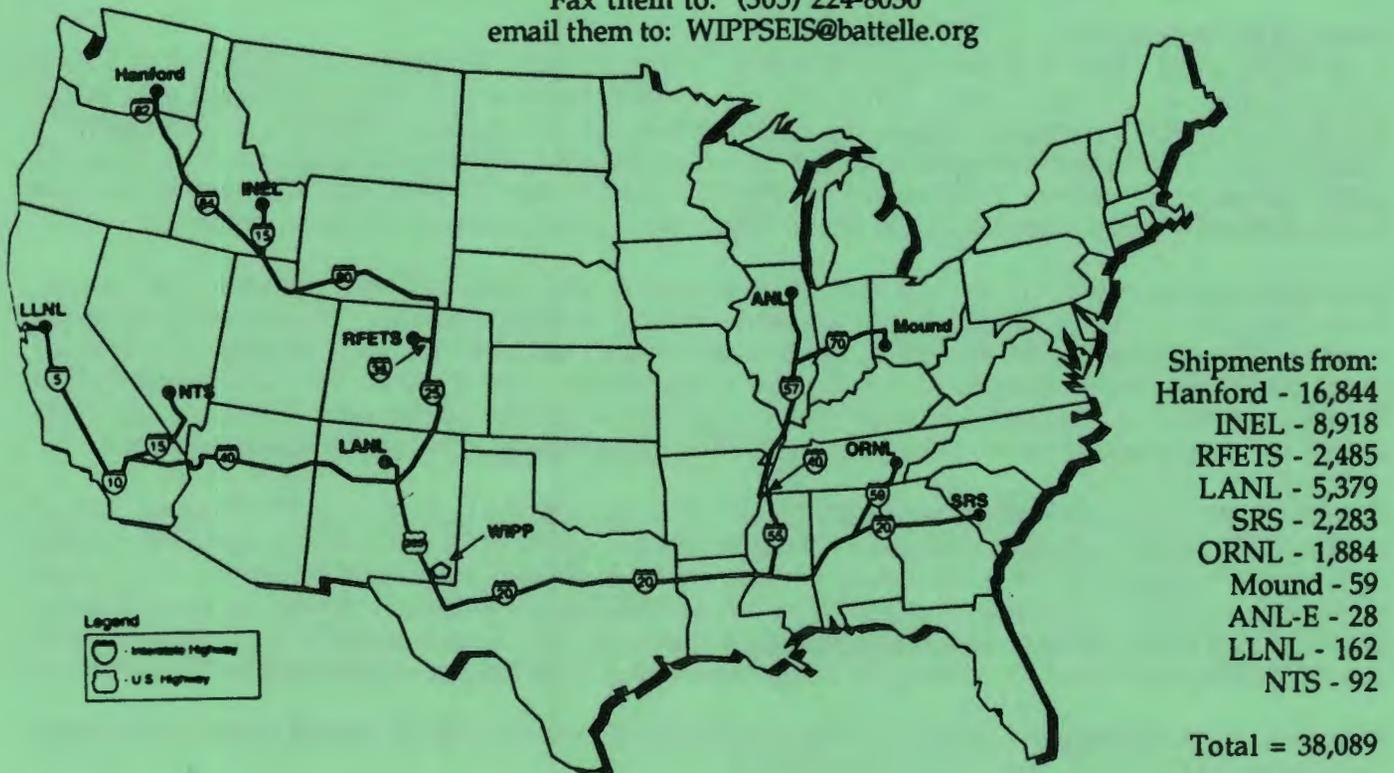
Other transportation problems include that the shipments would not be escorted nor have emergency response personnel. Thus, local emergency responders (including thousands of volunteers) in more than 25 states need to be trained and equipped to handle accidents for the next 35 years. And hospitals would need trained and equipped medical personnel with special medicines to treat victims with radiation exposures. Further, the containers to transport high radioactivity remote-handled wastes to WIPP have not been approved and built, so their safety is highly uncertain.

4. **Aren't millions of people endangered by the wastes at the storage sites? Yes, nuclear wastes are very dangerous!** However, major DOE nuclear weapons sites -- Hanford, Washington; Idaho National Engineering Laboratory; Savannah River Plant, South Carolina; Oak Ridge, Tennessee; and Los Alamos, New Mexico -- will be operating for decades and will have to take care of large quantities of waste in addition to TRU wastes. The other major TRU waste storage site -- Rocky Flats, near Denver -- is to be closed, but it will take years to do so, and some Colorado citizen groups advocate safer storage at Rocky Flats, rather than opening WIPP.

5. **Isn't WIPP the cheapest alternative? No.** The D-SEIS-II says that the total life cost of WIPP is \$19.1 billion (1994 dollars). For comparison, the Action Alternative 1 cost is \$50.5 billion (1994 dollars). But the No Action 2 alternative of not using WIPP and storing wastes at existing sites is \$2.7 billion (1994 dollars). Spending more to provide for safer storage sites is a much lower cost alternative.

The comment period ends on January 28, 1997

Send comments to: SEIS-II, P.O. Box 9800, Albuquerque, NM 87119
 Fax them to: (505) 224-8030
 email them to: WIPPSEIS@battelle.org



WIPP and NEPA*
(National Environmental Policy Act)

April 1977 - Sandia National Laboratories prepared a Draft Environmental Impact Statement (DEIS) for WIPP (SAND77-0650). The document described WIPP as a two-level pilot plant for emplacement of contact-handled (CH) transuranic (TRU) waste at about 2,100 feet below the surface and remote-handled (RH) TRU waste and high-level wastes (HLW) at about 2,600 feet underground. After the pilot plant phase, the HLW would be removed and decisions would be made to leave the CH and RH waste or close down the site. The document was not released for public comment and did not become public until 1978 in response to a freedom of information act request.

April 1979 - DOE released its WIPP DEIS for public comment. The comment period ran for 141 days and public hearings were held in Idaho Falls, ID; Albuquerque, Santa Fe, Carlsbad, and Hobbs, NM; and Odessa, TX.

December 1979 - Congress passed and President Carter signed Public Law 96-164. Section 213(a) authorized WIPP as a defense facility "for the express purpose of providing a research and development facility to demonstrate the safe disposal of radioactive wastes resulting from defense activities and programs of the United States exempted from regulation by the Nuclear Regulatory Commission."

October 1980 - DOE issued its WIPP Final EIS (FEIS). The preferred alternative was to put TRU waste in the first available HLW repository. That alternative was consistent with the Carter Administration program to cancel WIPP and to look at locations in several geologic media for disposal sites for commercial spent fuel, HLW, and TRU waste. Three other alternatives considered were no action (leave TRU waste at the Idaho National Engineering Laboratory (INEL)); the authorized WIPP facility (dispose of 6.2 million cubic feet of TRU waste in one level about 2,150 feet below the surface, beginning in 1987 and continuing for 25 years); and delaying the authorized WIPP until other sites were considered.

January 22, 1981 - DOE issued its Record of Decision (ROD). WIPP would dispose of TRU waste stored at INEL. "By approximately 1990 all existing waste stored at INEL will have been removed to WIPP, and the WIPP facility would be in a position to receive and dispose of TRU waste from other defense waste generating facilities." 46 Federal Register 9162 (January 28, 1981). HLW experiments would be done.

July 1, 1981 - A lawsuit filed by New Mexico Attorney General Jeff Bingaman against DOE and the Department of Interior (DOI) was settled. The settlement includes leaving the ROD in place and establishing a "consultation and cooperation" agreement between DOE and the State which allowed DOE to begin construction of WIPP.

April 1989 - DOE issued its draft supplemental WIPP EIS (D-SEIS-I) for public comment. The comment period was for 90 days and public hearings were held in Atlanta, GA; Pocatello, ID; Denver, CO; Pendleton, OR; Albuquerque, Santa Fe, and Artesia, NM; Odessa, TX; and Ogden, UT.

January 1990 - DOE issued its final SEIS-I. The proposed action was to emplace wastes in WIPP for a "Test Phase" of approximately five years. The two alternatives considered were no action (leaving TRU wastes at storage locations) or conducting tests at locations other than the WIPP underground until it was determined that WIPP complies with Environmental Protection Agency (EPA) disposal standards and other regulatory requirements.

June 13, 1990 - DOE issued its SEIS ROD. DOE stated that it would conduct the Test Phase and would issue another SEIS before making a decision to dispose of TRU wastes at WIPP.

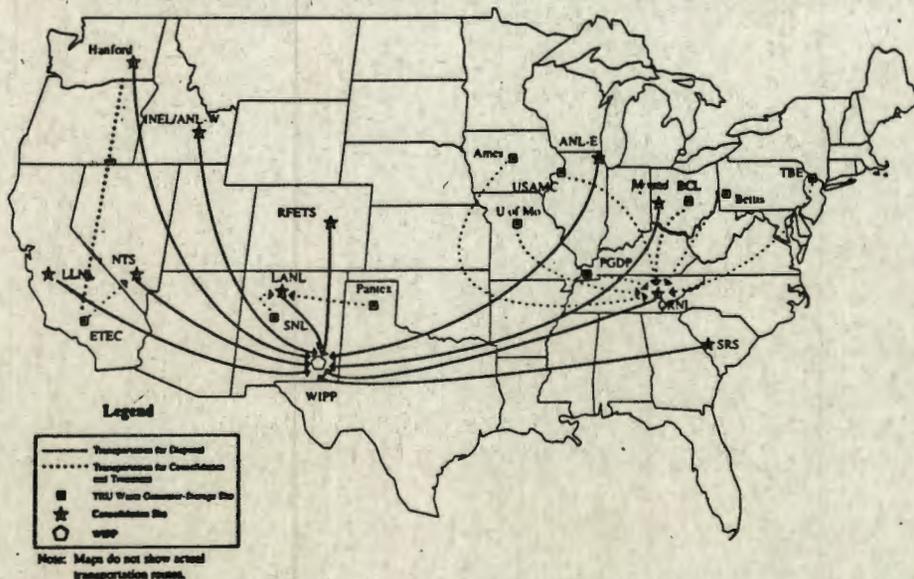
October 1991 - DOE Secretary Watkins announced that the Test Phase would begin that month. New Mexico Attorney General Udall, the State of Texas, members of Congress, and citizen groups filed lawsuits against DOE and DOI to prevent WIPP's opening (including challenging the SEIS-I). The District Court decision prevented WIPP from opening and included an injunction. The decision was upheld by the D.C. Court of Appeals on July 10, 1992.

October 1992 - The WIPP Land Withdrawal Act becomes law (PL 102-579), which establishes some legal and regulatory requirements for WIPP.

September 1996 - PL 104-201 becomes law. Sections 3181-3191 amend the WIPP Land Withdrawal Act, changing some regulatory and public participation requirements.

November 1996 - DOE issued its draft SEIS-II for a 60-day public comment period (now extended to 90 days). Hearings will be in Albuquerque, Santa Fe, and Carlsbad, NM; Denver, CO; Boise, ID; Richland, WA; Oak Ridge, TN; and North Augusta, SC.

WHERE WASTES ARE AND WHERE THEY GO ON THE WAY TO WIPP



CCNS Analysis and Criticism of the SEIS II on WIPP January 1997

DOE asks the public to address four questions in SEIS II comments.

1. Whether to open WIPP, or how to store TRU waste if WIPP does not open?
2. Which portions of existing and to-be-generated TRU wastes would be disposed at WIPP?
3. What treatment methods should be used for wastes being sent to WIPP?
4. What transportation methods (truck or train) should be used to ship waste to WIPP?

DOE proposes six alternatives among which the public may choose to answer these questions. None of the alternatives proposed in the SEIS II addresses the overall nuclear waste contamination at DOE sites or even the TRU waste accumulation. DOE plans for 35 years of future waste production without ever considering waste production beyond this time. CCNS, therefore, offers the following alternative:

- * WIPP should not open in 1998 . Too many unresolved questions remain about health and safety issues concerning transportation, waste form treatment, WIPP design, geology and hydrology .

- * Generator sites must take responsibility for long-term storage of waste generated in the past and future.. Communities around each generator site should choose which type of treatment and storage is most appropriate for securing its waste for long-term storage while a permanent solution is finalized.. DOE must consider plans for stopping all waste production.

- * Because of environmental and health concerns, research and development into thermal, shred and grout, and other waste form treatments should continue but on a limited scale. Further research is necessary to improve emissions and safety for workers and surrounding populations.

- * WIPP operations should be scaled back pending a determination that opening WIPP will significantly contribute to solving the waste problems at generator sites, both now and in the future. Without clear-cut determination of when waste production will end, future accumulation of waste at generator facilities would render WIPP's contribution negligible. Under these circumstances, WIPP transportation is hard to justify.

The following are DOE's alternatives

Proposed Action: Emplace 6.2 million cubic feet of defense related radioactive and hazardous waste (generated since 1970) which has been repackaged to meet WIPP Waste Acceptance Criteria. Transportation by truck only will occur over 35 years.

Talking points:

- a. The proposed alternative does not solve the TRU waste problems at our nation's nuclear weapons sites.
- b. Over one half of the current and projected TRU waste volume will remain at the generator sites. Generator sites like LANL will continue to produce waste long after WIPP closes under this alternative. The proposed alternative fails to deal with this waste.
- c. Unresolved problems at the WIPP site, including uncertain hydrological predictions, human intrusion scenarios, failure to consider rapid colloid transport or to analyze Karst occurrences may require increased pre-emplacment treatment.
- d. Rail transportation is less hazardous than truck transport.
- e. DOE estimates that the proposed action will cost approximately \$19.1 billion including approximately \$1.6 billion for truck transportation (1994 dollars).*

*DOE's past cost projections have been inaccurately low. There is no guarantee that these estimates are accurate projections.

Alternative I: Emplace 11.9 million cubic feet of defense and non-defense related radioactive and hazardous waste (including buried pre-1970 waste) which has been repackaged to meet Waste Acceptance Criteria. Transportation will occur by truck or by dedicated or regular rail over 160 years.

Talking points:

- a. The SEIS II admits that waste characterization for environmental restoration waste (buried pre-1970) and dismantling and decommissioning waste (for example for Rocky Flats) is highly uncertain. Waste Acceptance Criteria identification and repackaging requirements are not strict enough to exclude potential waste which would exceed WIPP's design capacity or legal restrictions.
- b. SEIS II admits that projected waste emplacement under this alternative violates existing legal restrictions and agreements with the State of New Mexico.
- c. Transportation over 160 years imposes an unacceptable burden on New Mexico. The longer transportation time is necessary for increased RH-TRU waste volume and excavation of new panels at WIPP.

d. Current WIPP designs limit excavation to ten panels. This alternative proposes 68 panels which would involve extensive excavation beyond areas included in the current performance assessment analysis. DOE does not have scientific data to support this increase in disposal volume.

e. Life cycle cost vary according to transportation choice, \$50 billion for truck transportation, \$47.5 billion for regular rail, and \$57.3 for dedicated rail. (1994 dollars).*

Alternative II: Emplace 5 million cubic feet (post treatment volume) of defense and non-defense related radioactive and hazardous waste (all current and projected waste including PCB contaminated waste) which has been thermally treated to meet RCRA land disposal regulations. Transportation would occur by truck or dedicated or by regular rail over 150 years.

Talking points:

a. This alternative only addresses waste generated for 35 years and does not solve the waste problem at generator sites. The longer transportation time is necessary for increased RH-TRU waste volume and excavation of new panels at WIPP.

b. Current WIPP designs limit excavation to ten panels. This alternative proposes 75 panels which would involve extensive excavation beyond areas included in the current performance assessment analysis. DOE does not have scientific data to support this increase in disposal volume.

c. Thermal treatment is dangerous for workers and populations around generator sites. The SEIS II cannot justify this technology at this time.

d. Transportation over 150 years imposes an unacceptable burden and risk on New Mexicans.

e. SEIS II admits that this alternative violates existing legal restrictions and agreements with New Mexico.

f. Thermally treated waste is a safer waste form than packaged, untreated waste.

g. Total life cycle cost approximately \$53-\$56 billion by truck, \$51-\$54 billion by regular rail, and \$56-\$61 billion by dedicated rail. (1994 dollars).*

Alternative III: Emplace 14.1 million cubic feet (post treatment volume) of defense and non-defense related radioactive and hazardous waste which has been shredded and bound in grout. Transportation would occur by truck, or by dedicated or regular rail over 190 years.

Talking points

- a. This alternative does not solve the waste problem at generator sites because it addresses only waste produced within a 35 year period. The longer transportation time is necessary for increased RH-TRU waste volume and excavation of new panels at WIPP.
- b. This alternative violates existing legal restrictions and agreements with New Mexico for volume limits at WIPP.
- c. Transportation over 190 years imposes an unacceptable risk on local communities.
- d. The SEIS II acknowledges that this technology could pose fire hazards and is so uncertain that no process has been selected.
- e. The treated waste form would be more acceptable for long-term disposal than untreated waste.
- f. Total life cycle cost approximately \$59.7 billion by truck, \$55 billion by regular rail, and \$68.5 by dedicated rail. (1994 dollars).*

No Action Alternative I: Dismantle and close WIPP within ten years. Consolidate waste at regionalized sites using either truck, regular rail, or dedicated rail and truck. Thermally treat defense and non-defense related radioactive and hazardous waste (4.49 million cubic feet after treatment) at regional sites repackaging indefinitely every ten years.

Talking points

- a. This alternative does not solve the nuclear waste problem at generator sites because it only addresses waste generated for 35 years into the future.
- b. WIPP is not ready to open because too many unresolved questions remain about WIPP's geology, hydrology, design, waste inventory, and operational safety. The decision to close WIPP should be based on the determination that WIPP is unsafe, or that the facility does not contribute to the nuclear waste pollution solution.
- c. Waste should be treated on-site and made safe for at long-term storage while the nation truly investigates permanent disposal. The method of treatment should be a decision made after full public hearings at each generator site.
- d. Any transportation of waste should be minimized. If consolidation becomes necessary, transportation should be by the safest way. Currently this would appear to be by dedicated rail.

- e. Total life cycle cost approximately \$28-\$31 billion by truck, \$28-\$31 billion by regular rail, and \$28-\$32 billion by dedicated rail (1994 dollars).*

No Action Alternative II: Dismantle and close WIPP. Repackage 6 million cubic feet defense only radioactive and hazardous waste generated on-site for 35 years to meet Waste Acceptance Criteria. No transportation unless necessary to protect public. Active institutional controls are assumed to cease after 100 years.

Talking points

- a. This alternative does not solve the nuclear waste problems experienced at nuclear weapons sites. Current practices for burying and storing waste assume temporary storage. Continuing these practices while accepting the reality of long-term storage would be irresponsible.
- b. WIPP is not ready to open because too many unresolved questions remain about WIPP's geology, hydrology, design, waste inventory, and operational safety.
- c. Total life cycle cost approximately \$2.75 billion. No transportation costs (1994 dollars).*

DOE's alternatives assume several invalid presumptions.

- a. The SEIS II assumes that active institutional control at generator sites storing waste will cease after 100 years. Active institutional controls must be planned for much longer.
- b. The SEIS II analysis projects current technology for waste treatment without considering the possibility that waste can remain on-site and untreated until DOE develops safer waste treatment processes.
- c. EPA is currently evaluating WIPP's compliance with federal waste disposal standards. Arguably the SEIS II record of decision should inform EPA's decision. Unfortunately, the SEIS II process will not be complete in time to contribute to EPA's determination under current timelines.
- d. The SEIS II alternatives ignore legal restrictions, yet no proposal is advanced for accommodating this reality.
- e. All SEIS II alternatives, including the proposed alternative, require more time for evaluation and research, yet DOE's timelines do not allow for research or additional planning time.

The comment period ends on February 27, 1997

Send comments to: SEIS-II, P.O. Box 9800, Albuquerque, NM 87119
Fax them to (505) 224-8030 email them to: WIPPSEIS@battelle.org



CCNS

Concerned Citizens for Nuclear Safety

WIPP

The Waste Isolation Pilot Plant

September 1996

WHAT IS WIPP?

In 1979 Congress authorized the Department of Energy (DOE) to construct the Waste Isolation Pilot Plant (WIPP) east of Carlsbad, New Mexico. WIPP was to be a project to demonstrate the safe underground disposal of transuranic nuclear weapons waste presently stored at DOE facilities around the country.

THE WASTE

Transuranic waste is waste contaminated by elements heavier than uranium such as plutonium. Plutonium has a half life of 24,000 years, meaning that half of the plutonium will have decayed into other elements after 24,000 years. All transuranics are man-made, alpha-emitters. Alpha particles are large, positively charged particles which can be easily stopped by a piece of paper or your skin, but which are extremely damaging if inhaled or ingested. Over half of the WIPP waste is mixed waste—radioactive waste that is mixed with hazardous chemicals like lead, carbon tetrachloride, etc.

WIPP is often promoted as the solution to our transuranic-waste (TRU-waste) problem. In reality, however, it is planned to hold only a small percentage of DOE's TRU-waste. Most of the TRU-waste is already in the ground, contaminating various facilities around the country. In fact 70% of the waste planned for WIPP has not even been created yet. Instead of being the answer to our waste problem, WIPP makes it possible to continue producing more waste, without addressing the problem we already have.

THE SITE (Theory)

The WIPP site was chosen for political, not scientific reasons. In 1956 the National Academy of Sciences (NAS) recommended salt formations as the most promising type of site for permanent underground disposal of radioactive waste because salt tends to creep. It was assumed that the salt would close in around the waste, creating a naturally sealed tomb that would prevent the waste from moving. Also, it was assumed that any underground salt formation would be dry.

THE SITE (Reality)

Almost immediately, scientists discovered that WIPP did not fulfill the ideal. During excavation, fractures appeared, creating new pathways for the release of waste to the environment. Also, the salt was not dry, but contained water which was seeping into the underground rooms. Additional water was coming down the shafts and a pressurized brine reservoir was discovered below the site.

All this water creates a serious potential for radioactive releases. As the water mixes with the waste and the decaying metal barrels in which the waste is packed, a radioactive slurry is created which is more easily moved through the cracks and fissures in the salt. Because there are large amounts of potash, gas and oil near the site, it is very likely that the repository will be breached by drilling and radioactive materials will come to the surface through the bore hole. If the brine reservoir below the repository is also breached, the pressurized brine would push the radioactive slurry to the surface with an even greater force.

There are many other problems with both the waste and the site. The decay of the waste and the barrels it is packed in creates flammable gases. The waste is also wrapped in plastic bags which can create a static electrical spark. During operations, this combination of flammable gases and electrostatic plastic bags could create a spontaneous fire or explosion at the facility or when the waste is moved. Also, the amount of gas generated may be enough to keep the rooms from closing around the waste as planned. And because the hydrology around the site is not fully understood there are serious questions about how long it would take contamination from the project to reach the Pecos River. Current estimates range from less than 100 years to 14,000 years or more. Finally, DOE has not solved the problem of sealing the shafts leading into the repository—There is currently no proven technology to seal shafts in salt.

TRANSPORTATION

Transportation of radioactive waste to WIPP is expected to account for the most serious of health effects of the entire project. As this is where most people will be exposed. As waste will travel through 21 states and 14 Indian reservations the DOE expects there will be a number of accidents that will release radiation. The shipping container for the waste (the TRUPACT II) has only been tested to out-of-date standards and has not been proved to withstand a crushing accident or a fire involving many of the chemicals that are routinely transported on the roads today. In the case of an accident in New Mexico, it would take 1-5 hours before special DOE Radiological Assistance Teams could reach the wreck. Also since the waste contains more than just alpha radiation, radiation will pass through the walls of the TRUPACTS during normal operations, exposing anyone living or working on the WIPP route or driving near one of the trucks to radiation..

ECONOMICS

The perception of radioactive contamination can affect tourism, and create a negative market for any agricultural products that are perceived to be contaminated. There are already at least 2-3 trucks per day carrying radioactive materials through New Mexico to and from Los Alamos National Laboratory. If WIPP (and the Yucca Mountain proposed high-level waste repository in Nevada) are allowed to open, the transportation of radioactive materials through our state will rise dramatically.

Today it is virtually impossible to obtain home-owners insurance for radioactive contamination. If your home, business or ranch were to be contaminated, either through normal WIPP operations or through an accident, the government would decide if clean-up of the contamination is economically feasible. You would have to prove government liability at your own expense and might never be compensated for, contaminated products, crops or clean-up.

Already, real estate values along the WIPP route have been shown to have declined and nothing has even been transported to WIPP. Again, even the perception of contamination is enough to affect business. Investor interest in our state may drop and bond ratings may fall when the contamination potential in New Mexico is known.

BUSINESSES AGAINST WIPP

Santa Fe and northern New Mexico businesses are taking a public stand in opposition to WIPP. The health and safety as well as the economic welfare of New Mexico is at stake. If we allow WIPP to open, 30,000 truckloads of deadly radioactive and hazardous chemical waste will begin converging on our state from across the country.

For more information on how you can get involved in this important issue call
Concerned Citizens for Nuclear Safety at (505) 986-1973 or 1-800-456-8863

BETTER ACTIVE TODAY THAN RADIOACTIVE TOMORROW

SHOULD DOE TREAT THE RADIOACTIVE AND HAZARDOUS WASTE?

January 1997

Answer: yes, but current technologies so endanger workers and surrounding populations that further research is needed before implementation of any treatment process.

WIPP Waste is Dangerous

WIPP waste includes 141 radioactive elements, 47 organic and 13 non-organic contaminants of concern (CoC's). An individual exposed for one hour to organic and inorganic CoCs at concentrations meeting emergency response 3 (ERG3) guidelines would develop or experience a life-threatening effect. Exposure to ERG2 concentrations for one hour result in an individual "experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action." Although exposure time for SEIS II accident scenarios is considered to be less than 30 minutes, the ERG guideline concentration values indicate how dangerous these chemicals are. Exposure to radioactivity is also dangerous whether from an external exposure from a TRUPACT or from inhalation or ingestion due to breach of a container.

SEIS II considers three accident scenarios to model the danger of exposure to individuals and general populations.

- a. Spill of radioactive and hazardous waste from a waste drum is considered to be a relatively high probability with low consequence results.
- b. Fire in a waste drum is a lower probability but higher consequence event.
- c. Earthquake which exceeds site design projections is considered a low probability high consequence event.

Waste treatment, for example, at LANL, reduces the likelihood of exposure and consequences of radioactive, organic, and inorganic releases from spills, fires and earthquakes at generator sites, during transportation, and during emplacement operations and long-term disposal at WIPP.

Problems exist with all treatments proposed.

PACKAGING TO MEET WIPP WASTE ACCEPTANCE CRITERIA

STANDARDS: The proposed action requires this minimal treatment.

- a. DOE requires minimal analysis of the drum contents, using process knowledge (identification of waste contents based on estimates from records stating what process produced the waste) and Real Time Radiography (x-ray analysis) which has been known to miss free liquids.

- b. Original drums are repackaged in waste boxes and labeled for WIPP.
- c. WIPP WAC standards may change. Currently the WAC limits pyrophoric metals (like Plutonium which will spontaneously combust) and free liquids. No limit exists for hazardous metals.
- d. Because the WAC standard simply packages waste and does not bind or treat it, the WAC's usefulness is undercut by the high level of uncertainty for identifying the drum contents.

THERMAL TREATMENT: could include plasma torch/electric arch treatment, vitrification, or molten salt processes.

- a. Waste is exposed to temperatures of up to 5400 degrees F. to reduce volume, hazardous gases, PCB's and other hazardous substances banned from land disposal by federal statutes. The process produces gas (treated and recycled into slag), low-level waste, and slag which is bound in ceramic or glass and sent to WIPP.
- b. Contact-handled TRU waste would be thermally treated at LANL, Savannah River, Oak Ridge, Hanford, Idaho Engineering Laboratory, Rocky Flats or WIPP.
- c. Remote-handled TRU waste would be thermally treated at Oak Ridge and Hanford.
- d. Thermal treatment is dangerous for workers and populations surrounding treatment facilities. The process is similar to incineration in that the emissions are not fully controlled. Further, because of the high temperatures and pressures, danger exists from steam explosions.

SHRED AND GROUT TREATMENT

- a. Removes liquids, pyrophoric and corrosive characteristics, and reduces gas generation.
- b. Increases volume of waste.
- c. Additives control long-term behavior and the potential for airborne releases.
- d. Although no specific process has been identified, the shredding process has a high risk of fire because of the pyrophoric content of WIPP waste.
- e. Emissions dangers during this treatment process exist for workers and surrounding populations.

Both thermal treatment and shred and grout treatment provide safer waste forms for transportation and long-term disposal. The technological level of expertise is not advanced enough to protect either workers at treatment sites or surrounding populations.

As is often the case with DOE's plans, these SEIS II treatment alternatives need work. While CCNS endorses waste treatment before any waste is shipped to WIPP, we cannot support current proposals. We recommend research and experimentation of these and other waste treatments at a small scale to perfect waste treatment before full scale implementation of any treatment technology.

For more information please contact:
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107 Cienega St.
Santa Fe, NM 87501
505-986-1973

The comment period ends on February 27, 1997

Send comments to: SEIS-II, P.O. Box 9800, Albuquerque, NM 87119

Fax them to (505) 224-8030

email them to: WIPPSEIS@battelle.org

State of New Mexico is Committed to WIPP Transport Safety

The Waste Isolation Pilot Plant (WIPP), the nation's intended repository for "defense-related" transuranic wastes, is currently projected by the U.S. Department of Energy (DOE) to open as early as November 1997. If and when this occurs, wastes generated from research, development and production of nuclear weapons at DOE sites across the country will be shipped to WIPP, 26 miles southeast of Carlsbad, New Mexico. A campaign of approximately 38,000 shipments is expected to continue for over 35 years.

The State of New Mexico has been working for more than six years, internally and with a coalition of western states through the Western Governors' Association, to develop a transportation system whose goal is the safe and uneventful transport of radioactive materials through western states. The WIPP Transportation Safety Program is a cooperative effort among the shipment-corridor states, tribes, local officials and the DOE. The program goes beyond what is required by law and has been proven through actual use in other radioactive waste shipping campaigns. There is not a shipment on the road that will have undergone as much scrutiny by transportation safety specialists as WIPP shipments. In a July 1989 report, the prestigious National Academy of Sciences WIPP Panel said, "The system proposed for transportation of TRU waste to WIPP is safer than that employed for any other hazardous material in the United States today and will reduce risk to very low levels."

Why all the fuss? The wastes being shipped to the repository in Carlsbad are not harmless. Transuranic wastes include laboratory clothing, tools, plastics, rubber gloves, wood, metals, glassware and solidified waste contaminated with man-made radioactive materials including plutonium, americium and curium. Some of these wastes, known as "mixed" transuranic waste, also contain hazardous chemical constituents. Most of these wastes are "contact-handled," meaning the radiation they emit does not require heavy lead shielding. The primary radiation hazard posed by this waste is through inhalation or ingestion. Inhalation of certain transuranic materials, such as plutonium, even in very small quantities, could deliver significant internal radiation doses. The remaining waste is referred to as "remote handled" because it requires heavy shielding and presents a much more significant external radiation hazard than contact-handled waste.

How are transuranic wastes being shipped? All contact-handled transuranic wastes destined for WIPP will be transported in the Transuranic Packaging Transporter (TRUPACT-II), a reusable shipping package or "cask," certified by the Nuclear Regulatory

Commission (NRC). Full-scale TRUPACT-II prototypes were subjected to a series of tests to demonstrate their ability to survive severe crashes and punctures followed by fires or immersion in water. Tests of full-scale containers go well beyond the NRC regulations, which require only computer simulation or tests on scale models. The TRUPACT-II has a flexible design which allows surfaces to move but still survive major deformities without leaking.

No more than three TRUPACTs, each holding up to fourteen 55-gallon drums of waste, will be secured directly to specially designed trailers and pulled by conventional diesel-powered tractors. The trucks will be equipped with a satellite communication and tracking system called TRANSCOM (see below).

About five percent of WIPP-bound waste by volume is classified as remote-handled. Additional procedures and standards will be required to address transportation safety related to these shipments, including certification of a shipping container by NRC.

What routes will be used? Specific routes have been identified for all WIPP shipments. The State of New Mexico has designated the following routes in accordance with federal regulations and guidelines:

- Shipments from the north will enter New Mexico on I-25 at Raton, travel south to the intersection of U.S. 285 (Lamy cutoff), and continue south on U.S. 285 through Vaughn, Roswell and Carlsbad, then east on U.S. 62/180 to WIPP.
- Shipments from the Los Alamos National Laboratory (TA-54) will use NM 4 to NM 502, then east to U.S. 84/285 (at Pojoaque) and continue south on U.S. 84/285 (through Santa Fe), then north on I-25 to U.S. 285 and south to Carlsbad. A bypass around the western side of Santa Fe is under construction and will be used when completed.
- Shipments from the west will enter the State on I-40 near Gallup, travel east through Grants, Albuquerque and at Clines Corners turn south on U.S. 285 through Carlsbad to WIPP.
- Shipments from the east will enter New Mexico from the south on U.S. 285 at the Texas/New Mexico border, travel north through Loving to Carlsbad and then to WIPP. The I-40 route from the Texas border west to Clines Corners is also "designated" for shipments from the east, but DOE is currently planning to use the southern route.

What is New Mexico doing to prevent accidents? Most truck accidents can be avoided by alert, skilled drivers who avoid driving when road and weather conditions are particularly hazardous and use high-quality, well-maintained equipment. These preventative measures were used in developing the accident prevention portion of the program to reduce the risks associated with transporting hazardous materials.

Drivers & Carriers. The U.S. Department of Transportation sets standards for drivers of trucks that carry hazardous cargo. DOE agreed to go beyond these requirements for its WIPP drivers and carrier. DOE has contracted with an exclusive carrier whose drivers have extensive, accident-free experience. WIPP drivers are subject to unannounced drug testing; will have no financial incentive to speed; and are fired upon any moving violation, even in their personal vehicles. The states have a program to audit the shipping contractors for compliance with the vehicle and driver requirements.

Independent Inspections. To identify and correct any mechanical defects in the vehicle and ensure radiation levels are within allowable limits, all shipments are subject to multiple inspections by state officials using enhanced safety standards that are much more stringent than those for other hazardous materials shipments. Inspections by specially trained state inspectors will take place prior to departure from the generator site, upon entry into the New Mexico, and when the shipment reaches the WIPP site. In addition, in compliance with their contract with DOE, drivers will pull over approximately every two hours to conduct a mechanical inspection of the vehicle.

Bad Weather and Road Conditions. The states and DOE have agreed on procedures to monitor weather and road conditions so that shipments can avoid hazards. Shipments will not depart DOE facilities if they are likely to encounter severe weather along the route. If unexpected bad weather or road conditions are encountered, pre-selected safe parking areas are available.

Shipment Notification and Tracking. All transuranic waste shipments will be monitored and tracked through a satellite-based system called TRANSCOM. The State of New Mexico has direct access to this system, which will provide shipping schedules and real-time tracking of shipments on the road. TRANSCOM allows for two-way communications with drivers and immediate emergency response guidance information, if necessary.

What is the New Mexico doing to prepare for transportation incidents? Emergency preparedness is a significant part of the WIPP Transportation Safety Program. While the shipments will be conducted in such a way as to prevent accidents from occurring, if one does take place, the State will be prepared to respond quickly, safely and effectively.

Emergency Response Plans and Procedures. A well organized and coordinated effort is necessary to make response to an accident swift and effective. Plans and procedures specifically designed to deal with transportation incidents involving the WIPP shipments are in place. The State of New Mexico has prepared several guidance documents which specify notification, incident command, and response procedures for use in the event of a WIPP accident.

Mutual Aid Agreements. The State of New Mexico has developed written agreements with DOE and the states of Arizona, California, Colorado, Nevada, and Utah to enhance any response to a WIPP accident, as well as to provide assistance for across state borders.

Training, Drills & Exercises. In coordination with DOE, the State of New Mexico has developed a WIPP-specific training regimen for emergency responders, which is incorporated directly into hazardous materials training programs for fire fighters, police and emergency medical staff along the routes. Hospital emergency room personnel also have been trained. Drills and exercises supplement the training.

Emergency Response Equipment. Radiation detection and personal protection equipment has been provided to emergency responders along the initial planned shipping routes in New Mexico. Responders have been trained to properly use this equipment in the event of an incident involving a TRUPACT.

The Program Is Proven. The inspection, shipment tracking and bad weather/safe parking procedures developed for WIPP shipments have been tested by other radioactive waste shipping campaigns in the past few years. Some aspects of the program have been modified based on deficiencies identified through evaluation on these shipments.

For More Information contact Chris Wentz or Heidi Snow of the New Mexico Energy, Minerals and Natural Resources Department, 2040 South Pacheco, Santa Fe, N.M. 87505 or telephone 505/827-5950.

**WIPP SAFE TRANSPORT PROGRAM:
STATE OF NEW MEXICO CONTACT LIST**

INFORMATION AND PROGRAM ADMINISTRATION

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Estimated Number of WIPP Shipments

Number of WIPP shipments will increase as more waste is certified:

DATE	AVERAGE SHIPMENTS/WEEK
November 1997	5
October 1998	7
October 1999	15
January 2000	17

Opening of shipment routes will be phased-in:

GENERATOR SITE	FIRST SHIPMENT DATE ¹	TOTAL # OF SHIPMENTS ²		
		CH	RH	TOTAL
Los Alamos, New Mexico	November 1997	5,009	367	5,376
Idaho National Engineering Lab	November 1997	5,782	3,136	8,918
Rocky Flats, Colorado	November 1997	2,485	0	2,485
Savannah River Site, South Carolina	May 1998	2,238	0	2,238
Oak Ridge, Tennessee	October 1998	251	1,276	1,527
Hanford, Washington	October 1998	13,666	3,178	16,844
Lawrence Livermore, California	October 1999	162	0	162
Nevada Test Site	October 1999	86	0	86
Mound Laboratory, Ohio	October 2003	59	0	59
Argonne National Lab-East, Illinois	October 2003	28	0	28
Totals		29,766	7,957	37,723

¹ For contact-handled (CH) transuranic waste only. U.S. DOE projects that remote-handled (RH) waste shipments will commence in October 2001.

² Includes existing and to-be-generated wastes.

Source: Modified from U.S. Department of Energy (Carlsbad Area Office) presentation to Transportation External Coordination Working Group, Pittsburgh, PA, July 16, 1996 and DOE/CAO Handout: "National TRU Waste Management Plan Complex Integration Configuration," 9/23/96.



ENVIRONMENTAL EVALUATION GROUP

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

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Public Hearing
on
WIPP DISPOSAL PHASE DRAFT
SUPPLEMENTAL ENVIRONMENTAL
IMPACT STATEMENT

Robert H. Neill

January 8, 1997
Santa Fe

EEG has published reviews of the previous DOE Environmental Impact Statements (EIS) on WIPP including

EEG-3	August 1979	Draft EIS
EEG-10	January 1981	Final EIS
EEG-41	July 1989	Draft Supplemental EIS

Written comments also were provided to DOE on the Final 1990 Supplement to the EIS on WIPP in April 1990. We are reviewing the 1996 Draft Supplement to the EIS (SEIS-II) received on November 25, 1996 and will publish our analyses. Please let EEG know if you wish a copy of our report. The 60 day deadline for comments imposed by DOE is not adequate to do a thorough job since it is necessary to also review the final Compliance Certification Application as well as the Safety Analysis Report in the same time frame.

Our principal concerns are as follows

- The long-term disposal impact of the Proposed Action is being addressed in much more detail through the DOE Compliance Certification Application (CCA) which provides one year for review. Evaluating alternatives to the Proposed Action outlined in the SEIS cannot be addressed in sufficient detail in 60 days.
- Chapter 6 lists all regulatory agencies and the status of permits for WIPP. One regulatory agency is notably absent. It is DOE. The Department has the legal authority to self regulate operational activities at WIPP. The status of WIPP's compliance with DOE Orders or even a list of DOE Orders is conspicuously absent. Indeed, DOE has the authority to self-approve the Draft Supplement to the EIS but fails to describe the internal system to be used. As an example, the DOE long-term disposal calculations in the SEIS are approved by DOE and in the CCA by EPA.
- The alternatives are not reasonably viable. As DOE notes, alternative #1 and alternative #3 are in violation of the WIPP Land Withdrawal Act. Alternative #2

exceeds the limits of RH-TRU in the NM/DOE C&C Agreement. The problems of leaving the repository open for 150 to 190 years (which will undoubtedly require new shafts and surface facilities) are not addressed. It would make more sense to complete WIPP and then propose a second repository, tailored to the unique needs of RH-TRU waste emplacement including limits on thermal loading. The SEIS should address this alternative.

- The alternatives include almost doubling the authorized waste volume, bringing non-defense TRU waste and commercial TRU waste. Increasing the curie inventory would increase the amount of transuranics allowed to be released.
- Nowhere in Chapter 1 is there any recognition that EPA makes the determination whether WIPP complies with the EPA Standards for the Safe Disposal of TRU wastes (40 CFR 191). Although Congress reassigned that authority from DOE to EPA in 1992, the text implies that DOE still makes the determination.
- The text states that the waste acceptance criteria were issued in 1989 and appears ignorant of the work that began a decade earlier. The report EEG-4, February 1980 by Marshall Little, "Review Comments on the Report of the Steering Committee on the Waste Acceptance Criteria for the WIPP" is not referenced. (Chapter 2)
- The text states that DOE is awaiting certification by NRC of the RH-TRU shipping container. This is misleading since a design has not been submitted to NRC by DOE for certification.
- Statements are based on the 8/95 Draft Waste Management PEIS but DOE has never issued that report in final (p. 2-5).
- The Glossary, Acronym, and Measurements and Conversions Sections appear hastily done and require about 20 corrections.

- The text indicates that DOE has a need to dispose of all TRU wastes and does not consistently recognize that only defense TRU wastes can be disposed at WIPP according to law. Transuranic wastes generated by non-defense activities or civilian nuclear activities of the Department are not eligible for disposal at WIPP. (This point is recognized later by DOE on page 5-7, lines 5 and 6).

- The document acknowledges that the expected quantity of RH-TRU waste of 35,000 m³ far exceeds the WIPP design capacity of 7080 m³. But the Inventory Tables for the Proposed Action show 35,000 m³ and the Draft PEIS shows all TRU waste as coming to WIPP. Since RH-TRU waste is not scheduled for shipment for several years, the effective capacity for RH-TRU will only be about 4300 m³ with the present design. SEIS-II makes no mention of the need to modify the waste emplacement design in order to accommodate 7,080 m³ of RH-TRU.

- The Draft SEIS cites a number of DOE documents that are either in draft or in preparation. While a number of these are not directly relevant to WIPP, some of them are important. They include the
 - a) 1995 Draft Waste Management PEIS
 - b) Draft Storage and Disposition of Weapons Usable Fissile Materials PEIS 1996.
 - c) LANL Site-Wide EIS (1995 Draft in Preparation)
 - d) Draft EIS for Nevada Test Site and Off-site locations in State of Nevada 1996.
 - e) Site Wide EIS for Rocky Flats (Draft in preparation).

- EEG is pleased that DOE is seriously considering treatment of radioactive wastes. For years EEG has noted that waste is respirable, soluble and confined by a carbon

steel Type A drum. The 20 year longevity requirement for the drum has been deleted by DOE from the WAC as has the 1% limit on respirable particles. In contrast, certain low level wastes are required by NRC to have a 300 year design life for the waste container or the waste form. We believe that modifying the waste form through thermal treatment and shredding and grouting should be vigorously pursued to accommodate the anticipated volume of TRU waste which is twice the capacity of WIPP.

- The preliminary nature of the long-term performance calculation is noted in the Draft SEIS. The radiological consequences of long-term performance are calculated using codes that have subsequently been changed for the CCA calculations. Some of the changes may have a significant impact on results.
- The inhalation risks to people on the surface from future human intrusion was deemed inconsequential and not calculated in the SEIS-II despite earlier work by both EEG (EEG-11) in January 1982 and DOE (TME 3151) in July 1982 that concluded inhalation is a significant concern.
- Unwarranted claims of conservatism for long-term performance calculations are made in the SEIS-II.
- In evaluating action alternatives 1, 2 and 3, BRAGFLO was modified to accommodate additional waste volumes. This was done by increasing the z distance in a two-dimensional grid by factors of approximately ten, Table H-8. This violates the two-dimensional assumption of the BRAGFLO grid. A three-dimensional analysis may well be needed.
- EEG compared the results of the routine and accidental risks from truck transportation to WIPP with findings in EEG-46 ("Risk Analysis of the Transport of Contact Handled Transuranic (CH-TRU) Wastes to WIPP Along Selected Highway Routes in

New Mexico Using RADTRAN IV," Anthony F. Gallegos and James K. Channell, EEG-46, August 1990). Agreement was quite close when allowance was made for differences in miles traveled and other assumptions. Therefore we believe the assessment of transportation risks in SEIS-II is reasonable and adequately conservative.

- Risks from rail transportation were calculated in a more superficial manner. They were "determined by adjusting the transportation impacts from truck shipments" (page E-58). The results indicated that regular rail shipments have much less effect than truck shipments which is consistent with findings in the past. EEG believes that rail shipments to WIPP need to be seriously reevaluated and that DOE should be open to changing their "truck only" policy if the findings indicate it is advantageous.
- For over 20 years, the Department's policy has been to dispose of defense transuranic waste at WIPP rather than leave it at the generator sites indefinitely. The August 1995 DOE Draft Waste Management Programmatic Environmental Impact Statement provides calculations that indicate leaving the waste at the generating sites indefinitely rather than disposing at WIPP would result in fewer cancer fatalities, a smaller collective radiation dose, and a cheaper cost. The SEIS-II needs to explain the reasons why technical objections have not been raised by CAO on these 8/95 DOE conclusions. It is important for credibility that a detailed analysis of the basis of these diametrically opposed conclusions be provided.
- Calculations of the long-term consequences should use the analyses submitted in the EPA Application. SEIS-II used methods and data in the Draft Application. EEG had extensive comments on the draft and published them in EEG-61.
- The SEIS-II states that the worst consequence of a drilling intrusion is at 100 years, so such an intrusion was analyzed. At 100 years, repository gas pressure has not yet built up, and no spallings occurs because spallings is assumed to occur only when

repository pressure exceeds 8 MPa. By this choice of an intrusion at 100 years, a major release mechanism has been eliminated (Figure 6-41, CCA). Moreover, the low gas pressure at 100 years is insufficient to push brine up the borehole into the Culebra.

In summary, the Draft Supplement does not provide the required documentation.