

future activities involving transportation of other waste types (hazardous, low-level, low-level mixed, and high level waste). There would also be cumulative impacts at some of the treatment sites as a result of past, present, and reasonably foreseeable future activities.

DOE did not select the No Action Alternatives because they would not isolate TRU waste from humans and the environment, and could cause public harm if long-term institutional control were to be lost. (Although no deaths would be expected based on current population densities and distributions under No Action Alternative 1, intruders could receive doses that greatly exceed current regulatory limits; up to 800 deaths could occur over 10,000 years under No Action Alternative 2). Maintaining such controls indefinitely would require future generations to incur risks and costs that can be avoided by disposing of the waste in WIPP now. In addition, the No Action Alternatives could not be implemented without modification of agreements that DOE has reached with several states regarding the offsite disposition of TRU waste.

DOE did not select the Action Alternatives because disposal of the volumes and waste types involved in these alternatives would require modification of the WIPP Land Withdrawal Act and the C&C Agreement. DOE did not select either thermal or shred and grout treatment because the SEIS-II analyses show that these treatments do not materially improve the repository's performance, and also have greater costs and near-term impacts across the DOE complex.

This decision is consistent with the intent of Congress, as expressed in the WIPP Land Withdrawal Act, that DOE commence disposal operations at WIPP once all applicable health and safety standards and laws have been met. The decision will enable the Department to comply with the agreements that DOE has entered into with several states, particularly those agreements that set a schedule for removal of TRU waste from DOE sites.

Implementation of the decision to dispose of TRU waste at WIPP is contingent on obtaining a Compliance Certification from EPA. EPA recently proposed to certify compliance, subject to certain conditions (62 FR 58792, October 30, 1997). DOE has applied for a RCRA permit from the New Mexico Environment Department for disposal of mixed TRU waste; such a permit is not needed for disposal of other TRU waste at WIPP.

Mitigation Measures

DOE has a Mitigation Action Plan in effect for WIPP to reduce possible adverse environmental effects. DOE will continue to implement those actions and provide information on their status in its annual mitigation action reports.

DOE will comply with applicable Department of Transportation and Nuclear Regulatory Commission regulations governing the shipment of TRU waste. As described in SEIS-II, DOE will transport TRU waste to WIPP in such a manner as to alleviate, to the maximum extent possible, potential impacts from transportation of TRU waste over the highways. These measures include tracking shipments with the TRANSCOM satellite tracking system and maintaining constant communication with the driver to provide notice of adverse weather or road conditions along the route. Equipment will be inspected at the beginning of each shipment and periodically every 100 miles or every two hours while on route. If shipments are delayed on route, drivers will park at designated DOE or Department of Defense sites, or State designated parking areas if possible. If no such sites are available, drivers will park in areas away from population concentrations and notify the State Police of the shipment's location.

In addition to maintaining its own emergency response capabilities, DOE offers emergency response training to police, fire, and medical personnel located along the WIPP transportation routes. In the event of an accident involving a WIPP shipment, the driver would notify emergency responders by cellular phone and also the WIPP Central Monitoring Room using the TRANSCOM system. A DOE official would be dispatched to assist at the accident site. DOE resources would be available to support mitigation of the accident, including but not limited to package recovery and site cleanup.

The United States Department of the Interior suggested in comments on the draft SEIS-II that DOE should develop a spill contingency plan to address the potential impacts of a diesel fuel spill on fish and wildlife and their habitats. DOE already has plans in place to address the potential impacts of a truck accident; these plans address potential releases of TRU waste and other materials. Remediation efforts may include excavation and disposal of contaminated environmental media as appropriate.

A copy of SEIS-II and this Record of Decision are available from the Center for Environmental Management

Information, telephone: 1-800-7EM-DATA (1-800-736-3282) (in Washington, D.C., call 202-863-5084).

Issued in Washington, D.C., this 16th day of January, 1998.

Elizabeth A. Moler,

Deputy Secretary of Energy.

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BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Record of Decision for the Department of Energy's Waste Management Program: Treatment and Storage of Transuranic Waste

AGENCY: Department of Energy.

ACTION: Record of decision.

SUMMARY: The Department of Energy (DOE) is issuing this Record of Decision on where, i.e., at which DOE sites, the Department will prepare and store its transuranic (TRU) waste prior to disposal. Each of the Department's sites that currently has or will generate TRU waste will prepare and store its TRU waste on site, except that the Sandia National Laboratory in New Mexico (SNL-NM) will transfer its TRU waste to the Los Alamos National Laboratory (LANL) in New Mexico. LANL will have facilities, not available or anticipated at SNL-NM, to prepare and store this waste prior to disposal.

DOE made this decision based on analyses in the Department of Energy Final Programmatic Waste Management Environmental Impact Statement (WM PEIS) (May 1997) and other information. This decision differs slightly from the Preferred Alternative in the WM PEIS. The Appendix to this Record of Decision lists the sites for which DOE analyzed the potential impacts of treating (which includes packaging) and storing TRU waste in the WM PEIS. The potential health and environmental impacts of this decision were identified and evaluated in the Decentralized Alternative of the WM PEIS.

In the future, the Department may decide to ship TRU wastes from sites where it may be impractical to prepare them for disposal to sites where DOE has or will have the necessary capability. The sites that could receive such shipments of TRU waste are the Idaho National Engineering and Environmental Laboratory (INEEL), the Oak Ridge Reservation (ORR), the Savannah River Site (SRS) and the Hanford Site. However, any future decisions regarding transfers of TRU wastes would be subject to appropriate review under the National Environmental Policy Act (NEPA), and

to agreements DOE has entered into, such as those with States, relating to the treatment and storage of TRU waste. Future NEPA review could include, but would not necessarily be limited to, analysis of the need to supplement existing environmental reviews. DOE would conduct all such TRU waste shipments between sites in accordance with applicable transportation requirements and would coordinate these shipments with appropriate State, Tribal and local authorities.

This Record of Decision was prepared in coordination with the Record of Decision issued on January 16, 1998, on disposal of DOE's TRU waste, which is based on the Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement (WIPP SEIS-II), issued in September 1997. On the basis of the analyses in the WIPP SEIS-II, DOE decided to dispose of TRU waste generated by defense activities at the WIPP near Carlsbad, New Mexico, after preparation (i.e., treatment, as necessary, and packaging) to meet WIPP's waste acceptance criteria.

FOR FURTHER INFORMATION CONTACT: Copies of the WM PEIS and this Record of Decision are available in DOE public reading rooms and selected libraries located across the United States. A list of the public reading rooms at which the WM PEIS and this Record of Decision are available can also be accessed on the DOE Office of Environmental Management's World Wide Web site at <http://www.em.doe.gov/em30/>. To request copies of the WM PEIS, this Record of Decision, or a list of the reading rooms and public libraries, please write or call: The Center for Environmental Management Information, P.O. Box 23769, Washington, DC 20026-3769, Telephone: 1-800-736-3282 (in Washington, DC: 202-863-5084).

For further information on DOE's national Waste Management Program, the WM PEIS, or this Record of Decision, please write or call: Ms. Patrice Bubar, Director, Office of Planning and Analysis (EM-35), United States Department of Energy, Office of Environmental Management, 19901 Germantown Road, Germantown, MD 20874, Telephone: (301) 903-7204.

For general information on the U.S. Department of Energy National Environmental Policy Act process, please write or call: Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Assistance (EH-42), United States Department of Energy, Office of Environment, Safety, and Health, 1000 Independence Avenue, SW., Washington, DC 20585-0119,

Telephone: (202) 586-4600, or leave a message at (800) 472-2756.

SUPPLEMENTARY INFORMATION:

Background

DOE prepared this Record of Decision pursuant to the Council on Environmental Quality's regulations for implementing NEPA (40 CFR parts 1500-1580) and DOE's NEPA Implementing Procedures (10 CFR part 1021). This Record of Decision is based on analyses contained in the Department of Energy's Final Waste Management Programmatic Environmental Impact Statement (DOE/EIS-0200-F). DOE published a notice of its intent to prepare the WM PEIS in the **Federal Register** on October 25, 1990. DOE issued a Draft WM PEIS on September 22, 1995, and hearings were held during the public comment period, which closed on February 19, 1996. All public comments were addressed in the Final WM PEIS, which DOE issued on May 30, 1997.

Purpose and Need for Agency Action

DOE needs facilities to manage its radioactive and hazardous wastes in order to maintain safe, efficient, and cost-effective control of these wastes; to comply with applicable Federal and state laws; and to protect public health, safety and the environment. The WM PEIS is a Department-wide study of the environmental impacts of managing five types of waste generated by defense and research activities at a variety of DOE sites around the United States. The five waste types are: low-level mixed waste, low-level waste, TRU waste, high-level waste, and hazardous waste. The WM PEIS examines, in an integrated fashion, the potential impacts of managing these waste types and the cumulative impacts of waste management, transportation and other ongoing and reasonably foreseeable activities.

The WM PEIS provides information on the potential impacts of alternatives for nationwide waste management that DOE will use to decide, on a programmatic basis, where, i.e., at which DOE sites, to locate particular waste management facilities. However, DOE will not decide the specific location of new facilities at sites selected to manage a particular type of waste, or a facility's capacity and design, until DOE completes appropriate site-wide or project-specific NEPA reviews, such as an environmental assessment or environmental impact statement. These subsequent analyses would rely, to the extent appropriate, on the analyses in the WM PEIS.

This Record of Decision applies only to the treatment (including packaging) and storage of TRU waste as analyzed in the WM PEIS. Records of Decision for the four other waste types analyzed in the WM PEIS will be issued in due course. An Appendix to this Record of Decision identifies the major sites evaluated in the WM PEIS as potential locations for waste management operations, and the sites analyzed that have TRU waste.

TRU Waste Treatment and Storage

TRU waste is waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years (a few exceptions to this definition are identified in the WM PEIS). Over 99% of the total volume of existing and anticipated TRU waste is located at the DOE sites listed in the Appendix. TRU waste is categorized as either contact-handled (CH) or remote-handled (RH), based on the radiation level at the surface of the waste container. CH-TRU waste constitutes more than 85% of the total existing and anticipated volume of TRU waste considered in the WM PEIS. CH containers can be safely handled by direct contact, with appropriate health and safety measures. RH-TRU waste contains a greater proportion of radionuclides that produce highly penetrating radiation, and thus RH containers require special handling and shielding during waste management operations.

Alternatives Considered

In the WM PEIS, the term "alternative" refers to a nationwide configuration of sites for treating, storing, or disposing of a waste type. The alternatives analyzed for each waste type fall within the four broad categories described below.

No Action Alternatives

These alternatives involve the use of currently existing or planned waste management facilities at DOE sites. In the NEPA process, a no action alternative or "status quo" alternative may not comply with applicable laws and regulations; however, analysis of such an alternative is required and provides an environmental baseline against which the impacts of other alternatives can be compared.

Decentralized Alternatives

These alternatives involve managing waste where it is or will be generated. Unlike the no action alternatives, the decentralized alternatives may require the siting, construction, and operation of new facilities or the modification of

existing facilities. Under the decentralized alternatives, waste management facilities would be located at a larger number of sites than under regionalized or centralized alternatives.

Regionalized Alternatives

These alternatives involve consolidating waste management activities by transporting wastes to a limited number of sites (fewer than the number of sites considered for the decentralized alternatives but greater than the number of sites considered for the centralized alternatives). In general, sites with the largest volumes of a

particular waste type were evaluated as potential regional sites for consolidating waste management activities.

Centralized Alternatives

These alternatives involve consolidating management of wastes at fewer locations than the regionalized alternatives (typically one to three locations). As was the case for the regionalized alternatives, generally those sites with the largest volumes of a particular waste type were evaluated as potential sites for centralized waste management.

There are many possible combinations of the number and locations of DOE sites for waste management facilities. To limit these combinations to a reasonable number for meaningful analysis, DOE selected alternatives that cover the full spectrum of reasonable alternatives under each category for each waste type. Table 1 summarizes the alternatives for TRU waste treatment storage that are analyzed in the WM PEIS, and the preferred alternative that DOE developed based on the analysis and other relevant criteria identified in the WM PEIS.

TABLE 1.—SUMMARY OF TRU WASTE ALTERNATIVES ANALYZED IN THE WM PEIS

Alternative Category	Description
No Action	Eleven sites* that anticipate generating TRU waste in the future would prepare TRU waste to meet planning-basis WIPP waste acceptance criteria**; existing TRU waste at 16 sites would be stored indefinitely; assumes TRU waste would not be transported among sites.
Decentralized	Either fixed or mobile characterization facilities would be operated at sites that would need to retrieve existing TRU waste, treat, repackage, and ship the waste. TRU waste would be shipped from the 6 sites with the smallest amounts to the nearest site of the 10 sites (ANL-E, NTS, Hanford, INEEL, LANL, LLNL, Mound, ORR, RFETS, SRS) with the largest amounts of TRU waste for storage prior to disposal; assumes for purposes of analysis that the waste would be prepared to meet waste acceptance criteria for WIPP and that disposal would occur at WIPP.
Regionalized (3 Subalternatives)	Three subalternatives differ in the level of treatment assumed for the purpose of impact analysis and the number of sites at which treatment would occur; RH-TRU waste would be treated and stored at Hanford and ORR; CH-TRU waste would be treated and stored at all sites considered in each alternative except ORR; all three subalternatives assume for purposes of analysis that disposal would occur at WIPP. Subalternatives: 1. TRU waste would be shipped from the 10 sites with the smallest amounts to the 6 sites with the largest amounts (together having 95% of current and anticipated TRU inventories) for treatment to reduce gas generation and storage prior to disposal. 2. TRU waste would be shipped as described for Regionalized Alternative 1; the waste would be treated to meet Land Disposal Restrictions (LDRs). 3. TRU waste would be consolidated at the 4 sites with approximately 80% of the current and anticipated inventories; treatment to meet LDRs would occur at these 4 sites.
Centralized	All CH-TRU waste would be treated at WIPP to meet LDRs; all RH-TRU waste would be treated at Hanford or ORR to meet LDRs and stored there until disposal; assumes for purposes of analysis that disposal would occur at WIPP.
Preferred	Combination of the Decentralized Alternative, under which most TRU waste would be treated and stored where it is located, and parts of the Regionalized Alternative, under which some TRU waste could be shipped to INEEL, LANL, ORR, and SRS for treatment and storage, pending disposal, with the level of treatment and whether to dispose of TRU wastes at WIPP to be decided on the basis of analyses in the WIPP SEIS-II.

* The Appendix to this Record of Decision lists the sites' names and their abbreviations.

** WIPP waste acceptance criteria Revision 5 as defined in the WIPP SEIS-II.

Environmentally Preferable Alternative

The WM PEIS analyzed a number of potential impacts, including those on human health, air and water resources, ecological resources, land use, and site infrastructures for each of the major sites at which waste management facilities might be located. Differences in impacts among all of the action alternatives were small. Nonetheless, all potential impacts identified in the WM PEIS were considered in DOE's selection of the preferred alternative, its identification of the environmentally preferable alternative, and its decision regarding treatment and storage of TRU waste.

For the 20-year period of waste management operations analyzed in the WM PEIS, the potential impacts under the No Action alternative for TRU waste management are smaller than those identified under the action alternatives, and on this basis, the No Action alternative could be considered to be the environmentally preferable alternative. However, the No Action alternative assumes indefinite storage, and therefore does not include preparing and shipping the waste for disposal, i.e., permanent isolation from the human environment. Although the No Action alternative could pose less risk to workers and communities surrounding

DOE's sites for the first 20 years, the longer-term risks are likely to exceed those for the first 20 years, not only as a result of continuing routine storage operations, but also as a result of degradation of storage facilities and containers.

Taking these circumstances into account, the Department considers the environmentally preferable alternative to be the Decentralized Alternative under which DOE will prepare the TRU waste for disposal with minimal transportation. Transportation of TRU waste would occur only in situations where the sites at which the waste is

located lack the capability to prepare it for disposal.

Decision: DOE National Programmatic Configuration for Treatment and Storage of TRU Waste Prior to Disposal

The Department will develop and operate mobile and fixed facilities to characterize and prepare TRU waste for disposal at WIPP. Each of the DOE's sites that has, or will generate, TRU waste will, as needed, prepare and store its TRU waste on site, except that the SNL-NM will transfer its TRU waste to LANL in New Mexico. LANL will have facilities, not available or anticipated at SNL-NM, to prepare and store this waste prior to disposal.

Basis for the Decision

Although the No Action Alternative resulted in the lowest impacts among the alternatives analyzed in the WM PEIS over the next 20 years, DOE did not select this alternative because it does not meet the Department's needs for the continued, safe management of TRU waste. Under the No Action Alternative, health and environmental impacts would continue to occur beyond the 20-year period of analysis in the WM PEIS. In the WIPP SEIS-II Record of Decision (discussed further below), DOE decided to dispose of TRU waste at WIPP, after treatment to meet the planning basis waste acceptance criteria. The No Action alternative evaluates treatment to meet the WIPP waste acceptance criteria only for TRU waste to be generated in the future; i.e., existing retrievably stored TRU waste would not be prepared to meet WIPP waste acceptance criteria. Eventually, the stored waste as well as the newly generated and treated waste would have to be repackaged to maintain safe storage conditions.

Among the action alternatives, health and environmental impacts are generally similar over the 20-year period of analysis. DOE's decision seeks to limit environmental impacts and costs, while providing for the safe management of DOE's TRU waste. Among the action alternatives, the life cycle costs estimated in the WM PEIS are lowest for the Decentralized Alternative.

The level of treatment analyzed under the Decentralized Alternative in the WM PEIS corresponds to the level of treatment selected in the Record of Decision for the WIPP SEIS-II for preparing the TRU waste for disposal. Thus the potential health and environmental impacts of treating TRU waste in accordance with the WIPP waste acceptance criteria are identified and evaluated in the analysis of the

Decentralized Alternative, which also identifies the potential impacts of treating and storing waste from SNL-NM at LANL.

Future Decisions

The Department may, in the future, decide to transfer TRU wastes from sites where it may be impractical to prepare them for disposal to sites where DOE has or will have the necessary capability. The sites that could receive such shipments of TRU waste are INEEL, ORR, SRS and Hanford. However, any future decisions regarding transfers of TRU waste would be subject to appropriate NEPA review, and to agreements, such as those between DOE and States, relating to the treatment and storage of TRU waste. Future NEPA review could include, but would not necessarily be limited to, analysis of the need to supplement existing environmental reviews.

DOE would conduct all such TRU waste shipments between sites in accordance with applicable transportation requirements and would coordinate these shipments with appropriate State, Tribal and local authorities.

As provided by 10 CFR § 1021.315, the DOE may revise this Record of Decision in the future as long as the revised decision is adequately supported by existing environmental impact statements. Revision of this Record of Decision could occur, for example, as new technology or information from ongoing studies becomes available, or as DOE identifies situations in which it would be appropriate to transfer TRU waste to INEEL, ORR, SRS or Hanford. Implementation of the Record of Decision is subject to compliance with all applicable Federal, State, and local requirements.

Differences From the Preferred Alternative in the WM PEIS

This decision differs from the preferred alternative identified in the WM PEIS in three respects. First, the preferred alternative in the WM PEIS included treatment and storage of ORR's RH-TRU waste on site, and treatment and storage of ORR's CH-TRU waste at SRS. Since publication of the WM PEIS, the Department has been considering treatment, as needed, of both ORR's CH-TRU and RH-TRU waste at ORR, because the radiation levels of ORR's CH-TRU waste are close to the levels of ORR's RH-TRU waste, and because the two waste forms share other physical characteristics. By including treatment of ORR's CH-TRU waste with its RH-TRU waste, DOE would reduce the need

to transport CH-TRU waste and achieve economies of scale. The proposed action for a TRU waste facility at ORR that could treat, as needed, both its CH-TRU and RH-TRU wastes is subject to appropriate site-specific review under NEPA.

The second difference between this decision and the preferred alternative in the WM PEIS concerns RH-TRU waste at SRS. The preferred alternative called for transferring this waste to ORR for treatment and storage. The Department has now decided that it should defer any determination whether to transfer RH-TRU waste from SRS to ORR until DOE has the results of the NEPA review for the proposed ORR facility and additional information regarding its capability to meet transportation requirements for shipping the RH-TRU waste to ORR.

The third difference between this decision and the preferred alternative in the WM PEIS concerns the transfer of a portion of the TRU waste at the Rocky Flats Environmental Technology Site (RFETS) to INEEL. Since publication of the WM PEIS, additional information about the characteristics of the TRU waste at RFETS has become available indicating that existing or anticipated facilities at RFETS may be able to prepare this waste for disposal. If, in the future, RFETS needs to use another site's capability to prepare some of its TRU waste for disposal, DOE will complete any further review under NEPA that may be necessary, and will notify the appropriate State, Tribal and local authorities prior to making a final decision.

Coordinated Decision on Level of Treatment and Disposal of TRU Waste

This Record of Decision has been prepared in coordination with the WIPP SEIS-II Record of Decision (January 16, 1998), which specifies the level of treatment for, and the disposal location of, TRU waste generated by defense activities. The decisions on the level of treatment of TRU waste and where to dispose of it are based on analyses in the WIPP SEIS-II. In the WIPP SEIS-II Record of Decision, DOE has decided that TRU waste destined for disposal at WIPP will be treated to meet the planning basis waste acceptance criteria (Revision 5 of the waste acceptance criteria as defined in the WIPP SEIS-II), which establish the minimum requirements for preparing TRU waste for disposal at WIPP. DOE has treated in the past and based on site-specific circumstances, may decide in the future to treat TRU waste at some sites more extensively than is required under the WIPP waste acceptance criteria.

Mitigation

Chapter 12 of the WM PEIS describes measures that DOE takes in order to minimize the impacts of its waste management activities. Mitigation measures are an integral part of the Department's operations, so as to avoid, reduce, or eliminate potentially adverse environmental impacts. Some of the more important mitigation measures that DOE will continue during the treatment and storage of TRU waste are:

- Use of pollution prevention plans;

- Assistance to States, Tribes, local governments, and other public entities concerning human health, environmental, and economic impacts, including transportation planning and emergency response assistance;
 - Use of "cleaner" waste treatment and storage technologies as they become available;
 - Rigorous quality assurance programs for the characterization of TRU waste;
 - Reuse of existing facilities wherever feasible rather than construction of new facilities;

- Occupational safety and health training to ensure that workers understand operational safety procedures.

Site-specific, non-routine mitigation measures may also be identified and implemented in the course of further decision making under site-specific NEPA reviews based on the WM PEIS.

Issued in Washington, D.C. this 20th day of January, 1998.

James M. Owendoff,
Acting Principal Deputy Assistant Secretary for Environmental Management.

APPENDIX—SITES EVALUATED IN THE WM PEIS AND SITES WITH TRU WASTE

Abbreviation	Full name	State	Major site ¹	TRU waste
ANL-E	Argonne National Laboratory—East	IL	Yes	Yes.
BNL	Brookhaven National Laboratory	NY	Yes	No.
ETEC	Energy Technology Engineering Center	CA	No	Yes.
FEMP	Fernald Environmental Management Project	OH	Yes	No.
Hanford	Hanford Site	WA	Yes	Yes.
INEEL	Idaho National Engineering and Environmental Laboratory	ID	Yes	Yes.
LBL	Lawrence Berkeley Laboratory	CA	No	Yes.
LLNL	Lawrence Livermore National Laboratory	CA	Yes	Yes.
LANL	Los Alamos National Laboratory	NM	Yes	Yes.
Mound	Mound Plant	OH	No	Yes.
NTS	Nevada Test Site	NV	Yes	Yes.
ORR	Oak Ridge Reservation	TN	Yes	Yes.
PGDP	Paducah Gaseous Diffusion Plant	KY	Yes	Yes.
Pantex	Pantex Plant	TX	Yes	No.
PORTS	Portsmouth Gaseous Diffusion Plant	OH	Yes	No.
RFETS	Rocky Flats Environmental Technology Site	CO	Yes	Yes.
SNL/NM	Sandia National Laboratories—New Mexico	NM	Yes	Yes.
SRS	Savannah River Site	SC	Yes	Yes.
UofMO	University of Missouri	MO	No	Yes.
WIPP	Waste Isolation Pilot Plant	NM	Yes	No.
WVDP	West Valley Demonstration Project	NY	Yes	Yes.

(1) Sites analyzed in the WM PEIS as potential locations for waste management facilities for one or more types of waste.