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NATIONAL TRANSURANIC PROGRAM PLAN

October 1994

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U.S. Department of Energy
Carlsbad Area Office
Carlsbad, New Mexico

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NATIONAL TRANSURANIC PROGRAM PLAN

October 11, 1994

Submitted by:

A handwritten signature in cursive script, reading "Mark L. Matthews", positioned above a horizontal line.

Mark L. Matthews, P.E., Manager
National TRU Program Office

Approved by:

A handwritten signature in cursive script, reading "George E. Dials", positioned above a horizontal line.

George E. Dials, Manager
Carlsbad Area Office

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ACRONYMS AND ABBREVIATIONS

ANL-E	Argonne National Laboratory - East
ANL-W	Argonne National Laboratory - West
CAO	U.S. Department of Energy Carlsbad Area Office
CCB	Change Control Board
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CH	Contact Handled
DOE	U.S. Department of Energy
DOE-AL	U.S. Department of Energy Albuquerque Operations Office
DOE-HQ	U.S. Department of Energy Headquarters
EA	Environmental Assessment
EIS	Environmental Impact Statement
EM	Office of Environmental Management
EM-10	Office of Planning and Resource Management
EM-30	Office of Waste Management
EM-40	Office of Environmental Restoration
EPA	U.S. Environmental Protection Agency
FFCA	Federal Facility Compliance Act
FTE	Full-Time Equivalent
FY	Fiscal Year
HANF	Hanford Site
IART	TRUPACT-II Incident/Accident Response Team
INEL	Idaho National Engineering Laboratory
IWG	interface working group
LANL	Los Alamos National Laboratory
LLNL	Lawrence Livermore National Laboratory
LLW	Low-Level Waste
LWA	WIPP Land Withdrawal Act
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
NTP	National Transuranic Program
NTPO	National Transuranic Program Office
NTS	Nevada Test Site
ORNL	Oak Ridge National Laboratory
OSHA	Occupational Safety and Health Administration
PA	Performance Assessment
PAC	Program Assessments and Certifications
PCS	Project Control System
PDP	Performance Demonstration Program
PEIS	Programmatic Environmental Impact Statement
QA	Quality Assurance
QAPjP	Quality Assurance Project Plan
QAPP	Quality Assurance Program Plan

ACRONYMS AND ABBREVIATIONS (continued)

R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
RFETS	Rocky Flats Environmental Technology Site
RH	Remote Handled
SARP	Safety Analysis Report for Packaging
S&A	Sampling and Analysis
SNL	Sandia National Laboratories
SP&I	Systems Planning and Integration
SPM	Systems Prioritization Methodology
SQS	Small Quantity Site
SRS	Savannah River Site
S&S	Safeguards and Security
STP	Site Treatment Plan
TQM	Total Quality Management
TRU	transuranic
TRUPACT-II	Transuranic Package Transporter - II
TSD	treatment, storage, or disposal
WAC	Waste Acceptance Criteria
WBS	Work Breakdown Structure
WCPP	Waste Characterization Program Plan
WID	Westinghouse Waste Isolation Division
WIPP	Waste Isolation Pilot Plant
WTAC	WIPP Technical Assistance Contractor

1. MISSION NEED AND OBJECTIVES

1.1 INTRODUCTION

As a result of various program initiatives, the U.S. Department of Energy (DOE) has generated and will continue to generate waste contaminated with radioactive materials. Because of increased awareness of the risks and special requirements to safely manage long-lived alpha-emitting radionuclides, a new category of radioactive waste, transuranic (TRU) waste, was adopted in 1970. DOE Order 5820.2A, *Radioactive Waste Management*, defines TRU waste as:

"Without regard to source or form, waste that is contaminated with alpha-emitting transuranium radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of assay. Heads of Field Elements can determine that other alpha-contaminated wastes, peculiar to a specific site, must be managed as transuranic waste."

TRU waste is generated and stored at various DOE sites around the country. In December 1993, the National Transuranic Program Office (NTPO) was established as part of the Carlsbad Area Office (CAO) to integrate and coordinate the diverse organizational elements that contribute to the complex-wide management of TRU waste. Figure 1-1 shows the locations of the major DOE sites that are part of the National TRU Program (NTP). Numerous sites with small TRU waste inventories are also part of the national TRU waste system.

The majority of TRU waste is also contaminated with hazardous materials and is thus considered mixed waste. Mixed waste must be managed in compliance with all federal, state, and local regulations that are applicable to the radioactive and/or hazardous component of the waste. Each generator site is responsible for the management of its respective waste. Sites must plan and implement programs to minimize, characterize, package, treat, store, ship, and dispose of all TRU waste; construct required waste management facilities and equipment; obtain permits; perform site-specific National Environmental Policy Act (NEPA) analyses; conduct environmental studies; perform laboratory analyses; and certify that waste meets appropriate disposal facility criteria.

Due to the toxicity and long half-lives of TRU radionuclides, TRU waste must be disposed in a manner that offers greater confinement than shallow land burial. The Waste Isolation Pilot Plant (WIPP) has been constructed and is currently undergoing testing to demonstrate that TRU and TRU mixed waste can be safely disposed in a deep geologic repository.

NTPO is tasked with analyzing the issues associated with the management of all TRU wastes. The WIPP Land Withdrawal Act (LWA) requires the preparation of a plan that details the activities required to achieve permanent disposal of all TRU wastes. In accordance with the LWA, NTPO will develop, prior to WIPP beginning operations, the plan, strategies, and schedule for disposal of all TRU waste.

Figure 1-1: National TRU Program Site Locations

**Figure 1-1
Major National TRU Program Site Locations**

This program plan describes the functional elements of the NTP; establishes program baselines against which overall progress will be measured; and describes the organizational relationships, programmatic responsibilities, and division of work scope among the various DOE organizations that comprise the program.

1.2 JUSTIFICATION FOR MISSION NEED

The mission of the NTPO is to integrate the national TRU waste system to assure that all TRU waste under the purview of the DOE is effectively and systematically managed from generation to disposal. This mission is supported by the Office of Environmental Restoration and Waste Management (EM-1) at DOE Headquarters (DOE-HQ). The NTPO mission supports the successful completion of DOE-HQ goals, including attaining and maintaining full compliance with regulatory requirements, waste minimization/pollution prevention, integrated waste management using the "cradle-to-grave" approach, developing and implementing innovative technologies, environmental remediation, and the decontamination and decommissioning of surplus DOE facilities.

1.3 OBJECTIVES

The major objectives of the NTP include the following:

1. Establish an efficient management system that identifies and resolves complex-wide issues, analyzes alternative management strategies, and implements management strategies that optimize system effectiveness, minimize cost, and support high-level schedule objectives.
2. Identify waste characterization requirements and develop required technology and methods to obtain waste characterization and inventory data to support regulatory compliance and systems planning activities.
3. Provide a safe and efficient transportation system, including emergency response training for local, state, and tribal personnel, with an adequate number of U.S. Nuclear Regulatory Commission (NRC) certified packagings to support the shipment of TRU waste.
4. Support development of waste acceptance criteria (WAC) for WIPP; develop plans and standards to certify that waste meets these criteria; and conduct certification reviews, surveillances, and audits of waste certification activities.
5. Complete required activities to support a decision by the Secretary of Energy to begin disposal operations at WIPP in 1998.
6. Establish a program to identify, characterize, treat, store, transport, and dispose of TRU waste that is not authorized for disposal at WIPP.

7. Address the issues surrounding small-quantity generator/storage sites (SQS) and develop a program to characterize, package, and transport SQS waste to interim storage sites.

2.0 TECHNICAL PLAN

2.1 SUMMARY DESCRIPTION OF THE NATIONAL TRU PROGRAM

Attachment 1 shows a graphical depiction of the NTPO work breakdown structure (WBS). The following sections describe the work assigned to the four WBS Level 3 elements.

2.1.1 Systems Planning and Integration (WBS 1.0)

A comprehensive system analysis of the TRU waste program is being developed and implemented by the NTPO. The major responsibilities of this functional area are to integrate and develop program guidance to the DOE generator/storage sites regarding TRU waste management, identify and resolve complex-wide issues, and develop logic diagrams for the NTP. This task has been subdivided into three primary subtasks, which are described in the following sections:

2.1.1.1 Integration Activities (WBS 1.1)

This subtask encompasses the integration of all NTP activities, including:

- support to the TRU Waste Steering Committee,
- management and coordination of the interface working groups,
- organization and coordination of generator/storage site workshops,
- technical reviews,
- TRU waste update meetings, and
- DOE-HQ support and integration.

2.1.1.2 Systems Engineering (WBS 1.2)

A comprehensive system analysis of the TRU waste program is being developed. The analysis consists of the following activities:

- developing logic diagrams for the generator site TRU waste activities,
- developing TRU systems requirements which focus on collecting all mandated functional, performance and regulatory requirements, and
- developing a system strategy and model to support "cradle-to-grave" management of TRU waste throughout the complex.

2.1.1.3 Issues Identification and Resolution (WBS 1.3)

Support for the identification of cross cutting system issues and resolutions includes the following elements:

- identifying and resolving major TRU waste issues,
- conducting NTPO quick response tasks,
- managing and administering Systems Planning and Integration (SP&I) projects, and
- coordinating NTPO technical integration and NTP/DOE-HQ policy development.

2.1.2 Technology Development and Waste Characterization (WBS 2.0)

The NTPO will provide technical expertise, guidance, and support to effectively define and initiate implementation of a waste characterization and technology development program. The program is comprised of the following principal elements:

2.1.2.1 Analytical and Test Methods Development (WBS 2.1)

Analytical and test methods are being developed for contact-handled (CH) and remote-handled (RH) TRU waste under this portion of the program. The following are included:

- developing methods for sampling and analysis (S&A) of TRU gases, and TRU solidified waste,
- developing non-destructive methods for characterizing wastes and non-destructive radioassay methods and/or non-destructive examination using real-time radiography, and
- conducting special studies that consist of undertaking research and development (R&D) projects supporting S&A that are not covered otherwise in this program.

2.1.2.2 Support Services (WBS 2.2)

Support services are provided for the following areas:

- developing the Waste Characterization Program Plan (WCPP), Quality Assurance Program Plans (QAPPs), and other applicable documents,
- managing and overseeing the waste characterization program,
- evaluating existing TRU waste analytical services,
- assisting in the management of data, the management of the privatization laboratory contract, and general engineering support,
- developing portable mobile systems for S&A of TRU waste,
- supporting technology transfer, and
- conducting a waste inventory management study that identifies and analyzes the current data collection systems.

2.1.2.3 Program Implementation (WBS 2.3)

Program implementation consists of providing general support of the various DOE generator/storage sites in the areas of program management, facility operations, and TRU waste characterization activities, and providing general support services such as data management, laboratory contract management, and engineering support.

2.1.2.4 Performance Demonstration Program (WBS 2.4)

The performance demonstration program is composed of independent technical oversight and coordination of the Performance Demonstration Program (PDP) to qualify participating analytical laboratories. This includes an assessment of the following:

- certification reviews for waste characterization, and
- PDP applications for TRU waste characterizations methods.

2.1.3 Transportation, Packaging and Emergency Response (WBS 3.0)

The NTPO will provide technical expertise, guidance, and other support as necessary to initiate implementation of the transportation, packaging, and emergency response programs, including workshop participation with users of the NTPO transportation and packaging systems. The following sections present a summary of the three programs.

2.1.3.1 Transportation Program (WBS 3.1)

This program will establish requirements for document development and control, technical interface, training and demonstration, and special studies. Reviews of the following documents will be provided as required:

- TRUPACT-II Fleet Management
- Study of transportation alternatives applicable to WIPP, as required in the LWA
- Carrier Management Plan
- TRUPACT-II Incident/Accident Response Team (IART)
- TRUPACT-II Recovery

Technical interfaces will be provided to the Western Governors' Association, Commercial Vehicle Safety Alliance, and the TRANSCOM tracking system. Special training on emergency response and the use of TRANSCOM will be provided to various state and tribal governments. Carriers, IART, and vehicle recovery personnel will be provided direction for participation in activities associated with WIPP emergency response exercises to assure coordination with emergency response groups. This element also includes the management of the carrier contract, including planning, scheduling, and dispatching shipment; assuring adequate driver training and qualifications; and establishing equipment maintenance criteria.

2.1.3.2 Packaging Program (WBS 3.2)

In this program packages will be designed, developed, and fabricated, and the final transportation packages for RH and CH TRU wastes will be certified. Design, development, and certification of new or modified ancillary equipment will also be provided. This program will ensure the timely renewal of the NRC issued Certificate of Compliance (C of C) for the TRUPACT-II. The Safety Analysis Report for Packaging (SARP) of the 72b Cask will be reviewed and submitted, and the TRUPACT-II Content Codes will be revised and submitted to the NRC as required. Technical support will also be provided in the TRUPACT-II gas generation test program, payload compliance training for the use and maintenance of transportation packages, submittal of NRC applications, and quality assurance surveillance activities. The packaging program will also investigate the possibility of expanding the envelope of acceptable waste forms that may be transported in existing packages and analyze the feasibility of developing new and improved transportation packagings.

2.1.3.3 Emergency Response Program (WBS 3.3)

Support will be provided to the TRUPACT-II IART by maintaining and controlling associated equipment and by participating in emergency response exercises. General support will be provided to perform document reviews and maintenance, including the IART guide; the Emergency Response, Roles, and Responsibilities document; and others. The IART will attend workshops, seminars, and other training programs associated with emergency response.

2.1.4 Program Assessments and Certifications (WBS 4.0)

This NTPO will provide technical expertise and guidance in the areas of program management, development of TRU waste certification standards, performance of surveillances, audits, and assessments of DOE generator/storage sites and NTPO projects, and certification of TRU waste characterization and packaging programs. This program is comprised of three principal activities which are described in the following sections:

2.1.4.1 Certification Review and Surveillance (WBS 4.1)

Scheduled and unannounced field surveillance/audits of generator site characterization and packaging programs will be conducted and coordinated for the following:

- certification review,
- establishing a tracking system for all action items and corrective actions, and
- assisting in a compliance verification audit to provide a periodic reassessment of the generator/storage sites' performance of waste certification activities.

Certification review and surveillance activities include pre-surveillance, on-site surveillance, and post surveillance.

2.1.4.2 Certification Standards Development (WBS 4.2)

The development of certification standards will be supported by the following tasks:

- provide certification evaluation and criteria change control for the WIPP WAC,
- support the Waste Acceptance Criteria Certification Committee in the development and maintenance of the WIPP WAC, and
- provide evaluation of certification and criteria change control management of technical documents associated with certification standards development.

2.1.4.3 Program Assessments and Management (WBS 4.3)

This program will provide program management to all elements of the Program Assessments and Certifications (PAC) group of the NTPO. Program assessments will be conducted of the Technology Development and Waste Characterization; Transportation, Packaging and Emergency Response; and Systems Planning and Integration organizations of the NTPO. The PAC group will also perform assessments of generator/storage site waste management activities including waste minimization, storage, treatment, and transportation.

2.2 REQUIREMENTS

2.2.1 WIPP Authorizing Legislation

WIPP was authorized by Congress under Public Law 96-164 in 1979 for the express purpose of providing a research and development facility to demonstrate the safe disposal of radioactive waste resulting from the defense activities and programs of the United States exempted from regulation by the Nuclear Regulatory Commission.

2.2.2 WIPP Land Withdrawal Act

The Waste Isolation Pilot Plant Land Withdrawal Act (LWA) was enacted in October 1992. The LWA provides for the withdrawal of the lands surrounding WIPP from all public use (including mining) and transferred control of the lands from the Secretary of the Interior to the Secretary of Energy. The LWA includes a number of other provisions in addition to the land transfer, including prerequisites for initiating the Test Phase and disposal operations at WIPP and requirements for decommissioning, mine safety, retrievability, and providing economic assistance to the State of New Mexico. It should be noted that DOE has decided not to conduct test activities that utilize TRU or TRU mixed waste at WIPP. Therefore, the portions of the LWA that address requirements for initiating and conducting the WIPP Test Phase are no longer applicable.

2.2.3 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the principal federal regulation addressing the treatment, storage, and disposal of hazardous waste. RCRA is a primary driver for the NTP because the majority of TRU waste is mixed waste, and RCRA applies to

the hazardous waste component. The U.S. Environmental Protection Agency (EPA) is the agency charged with enforcing RCRA, but the law allows EPA to grant state governments regulatory authority. Most states that host TRU waste generator sites have passed their own state hazardous waste laws and have been granted regulatory authority for RCRA-regulated hazardous wastes.

RCRA requires hazardous waste treatment, storage, and disposal (TSD) facilities to operate in accordance with a permit. Permits establish acceptable operating conditions, practices, and procedures for the characterization, handling, storage, treatment, and disposal of hazardous waste closure and post closure. RCRA also requires units that will no longer be used to undergo closure. Closure involves the implementation of a closure plan that details how the facility will minimize the need for further maintenance and prevents contaminants from impacting human health and the environment. The plan will detail the extent of contamination and remediation required to obtain closure and what post closure monitoring is required.

Each of the generator sites has applied for a RCRA permit, and WIPP will submit a revised permit application addressing disposal activities to the New Mexico Environment Department in June 1995.

2.2.4 Description of the Systems Prioritization Method

For WIPP to comply with EPA's *Environmental Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Waste* (40 CFR 191, Subpart B), DOE must demonstrate that TRU waste to be disposed in WIPP will remain adequately isolated from the environment for a period of 10,000 years. Sandia National Laboratories (SNL), the technical advisor for the WIPP project, is in the process of gathering data and preparing computer models of the WIPP site and the wastes that will be disposed. SNL is conducting iterative performance assessments (PAs) of WIPP so that DOE may provide interim guidance while preparing for a final compliance evaluation. SNL is also implementing the Systems Prioritization Method (SPM) as a decision analysis tool for assisting the Carlsbad Area Office in planning the appropriate suite of programs to pursue for an ultimate demonstration of compliance with 40 CFR 191.

The Carlsbad Area Office, in March 1994, announced a new approach to identifying experiments, modeling, engineering design, and waste acceptance criteria needed to support regulatory compliance. Various combinations of these are collectively called sets of activities. This approach is referred to as the System Prioritization Method and is designed to:

- address regulator and stakeholder concerns early and throughout the process of regulatory compliance,
- lead to a scientifically sound Performance Assessment used in demonstrating regulatory compliance, and
- use taxpayer dollars in an efficient, cost-effective manner.

It is only through total system analysis that the value of any activity can be assessed. It is possible that through the selection of an engineered barrier that the results of an experiment are no longer valuable. The value of any particular experiment, engineered barrier, repository design, or waste modification is in demonstrating regulatory compliance. If an activity does not meet the above criteria, or the same result can be achieved more efficiently by other means, the activity will not be pursued.

The System Prioritization Method is an interactive process that uses the Performance Assessment codes in the same fashion as before but in addition figures in cost and schedule for activities to interdependently prepare a decision matrix of different activity sets leading to compliance. The Carlsbad Area Office will decide which activity set best meets the goals of schedule, cost and assurance of demonstrating full regulatory compliance.

Stakeholder issues and concerns relevant to performance assessment and regulatory compliance will be addressed for resolution through the System Prioritization Method process. The Carlsbad Area Office has begun to identify these issues and concerns through interactive meetings. A series of System Prioritization Method workshops to acquaint stakeholders with WIPP activities and the System Prioritization Method process was initiated in August 1994 and will continue through 1995. Feedback from participants of the August meeting has been positive.

2.2.5 National Environmental Policy Act Requirements

Activities performed as part of the NTP may be considered major federal actions and be subject to NEPA. NEPA requires that federal agencies consider the impact of their actions on the human environment as defined in the regulations (40 CFR 1500-1508). NEPA requirements are intended to ensure that reasonable alternative courses of action are identified and that the environmental consequences of proposed actions are investigated before a decision is made.

The level of NEPA documentation required for each activity (e.g., environmental impact statement [EIS] or environmental assessment [EA]) will be determined as a result of a NEPA review, including the possible use of a NEPA checklist. To the extent possible, NEPA analyses will tier to higher level NEPA documents, including the Office of Environmental Management Programmatic EIS (PEIS), WIPP Supplemental EIS, and ceded EISs at the generator sites. DOE is committed to preparing a Disposal Phase EIS for WIPP before commencing disposal operations.

2.2.6 Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) is a federal regulation that guides the characterization and clean-up of inactive sites that contain hazardous materials. At most DOE sites that manage TRU waste, CERCLA is being implemented through agreements among DOE, EPA, and state regulators. These agreements establish the scope, estimated cost, and schedule for site characterization and remediation activities. The enforceable milestones established in these agreements often have stipulated

penalties and fines if the milestones are not achieved. The NTP will assess the TRU waste-related requirements needed to support implementation of the compliance agreements at the various DOE sites and provide guidance for activities to characterize, package, treat, store, ship, and dispose of TRU waste that results from CERCLA actions.

2.2.7 Stakeholder Involvement

The success of the NTP rests on the public's understanding of and involvement in its decision-making process. In light of this principle, DOE has established a policy of openness. DOE encourages public participation and involvement in NTP activities. Each generator site is responsible for implementing a community relations program that will include TRU-waste related programs and projects. In addition, the CAO will establish a structured approach to identify and interact with potential stakeholders. CAO will coordinate with site community relations programs to ensure that stakeholder input is obtained and factored into the decision-making processes for the NTP.

2.2.8 Worker Safety and Health

Activities related to the NTP will comply with all applicable federal, state, and local worker safety and health requirements, policies, regulations, and appropriate Occupational Safety and Health Administration (OSHA) regulations (29 CFR 1910.120). All activities at the sites, including characterization, handling, storage, treatment, and shipping, involve potential worker safety hazards that must be considered. Hazards can include such elements as toxic materials, radioactive materials, and biohazards. NTP activities will adequately address potential worker safety and health issues by conducting hazards and safety analyses and completing health and safety plans, as required for each specific task.

2.2.9 Federal Facility Compliance Act

The Federal Facility Compliance Act (FFCA) was passed in October 1992 to give states that host federal facilities greater enforcement authority over mixed waste stored and generated at those facilities. DOE is required to prepare Site Treatment Plans (STPs) that detail how it will develop treatment capabilities for mixed waste. The FFCA requires that DOE examine centralized, regional, and on-site treatment alternatives as part of the STP development process. The STPs will become the basis for compliance agreements between the regulatory agency (either EPA or the state) and DOE, including enforceable milestones and stipulated penalties.

3. MANAGEMENT APPROACH

As shown in Figure 1-1, many sites in geographically diverse locations comprise the NTP. Attachment 2 shows the NTP management organizational structure.

The NTP will be managed in full compliance with all applicable rules, regulations, and requirements, including federal, state, and local regulations, and DOE orders. Special emphasis will be placed on ensuring the quality of the information generated by NTP

activities. Waste characterization programs will be conducted according to the QAPP, with each participant preparing QA Project Plans (QAPjPs) that demonstrate how the individual sites will meet the QAPP requirements. Sites will also prepare certification plans that demonstrate that waste meets applicable waste acceptance and transportation criteria. Implementation of QAPjPs and certification plans will be routinely audited by the PAC organization of NTPO.

3.1 HEADQUARTERS MANAGEMENT

3.1.1 Office of Waste Management

The Deputy Assistant Secretary for Waste Management (EM-30) has been delegated the authority for establishing policy for TRU waste management by the Assistant Secretary for Environmental Management (EM-1). EM-30 is responsible for implementing DOE-HQ policy and formulating guidance for field elements regarding waste management. EM-30 is also responsible for integrating the activities of the NTP with DOE-HQ programs addressing other waste types. Implementation of the NTP has been delegated to the CAO, as defined in the CAO/EM-30 Memorandum of Agreement.

EM-30 also provides guidance and direction to waste generator/storage sites responsible for the day-to-day management of TRU waste. EM-30 is responsible for obtaining the resources necessary to manage TRU waste in full regulatory compliance and for ensuring that site programs are managed effectively and efficiently.

3.1.2 Office of Environmental Restoration Management

The Deputy Assistant Secretary for Environmental Restoration (EM-40) is responsible for managing TRU waste at cleanup sites (both federally and privately owned) where EM-30 has no presence, as detailed in the EM-30/40 Memorandum of Understanding. Responsibilities include the characterization, treatment, packaging, shipping, and interim storage of TRU waste/material removed from cleanup sites.

3.2 ALBUQUERQUE OPERATIONS OFFICE MANAGEMENT

The Albuquerque Operations Office (DOE-AL) is responsible for providing administrative support to the CAO. This support includes personnel management, contract management, budget and financial planning, and subcontractor performance evaluation.

3.3 CARLSBAD AREA OFFICE MANAGEMENT

The CAO Manager has been delegated the authority to implement the NTP. He is responsible for the successful completion of the WIPP mission, as well as the integration of the national TRU waste system to ensure that all TRU waste under the purview of the DOE is effectively and systematically managed from generation to disposal. The system integration functions have been delegated to the NTPO Manager.

3.4 NATIONAL TRU PROGRAM OFFICE MANAGEMENT

The NTPO Manager is responsible for the implementation of the integration functions of the NTP. The NTPO Manager is responsible for fulfilling the day-to-day administrative, technical, and management requirements necessary to meet the objectives for the program, as outlined in Section 1.3.

3.5 TRU WASTE STEERING COMMITTEE

The mission of the TRU Waste Steering Committee is to join with NTPO and DOE-HQ to provide leadership, vision, and support in developing a strong, systematic approach for managing the NTP. This will be accomplished by focusing on cross-cutting and complex-wide strategies and plans that provide the link between the headquarters-level DOE strategies and the plans at individual sites. In support of its mission, the TRU Waste Steering Committee will have objectives related to integrated planning, issue and risk management, program monitoring, stakeholder interface guidance, and feedback on key NTPO products. The TRU Waste Steering Committee is co-chaired by the NTPO Manager and the Director, Division of Technical Assistance, Office of Waste Management at DOE-HQ (EM-332) and is composed of members from other DOE-HQ organizations, including EM-40, and TRU generator/storage sites.

3.6 INTERFACE WORKING GROUPS

Interface working groups (IWGs) may be established by the TRU Waste Steering Committee to address specific technical areas that require in-depth analysis. IWGs are composed of members from DOE generator sites, national laboratories, NTPO, private industry and universities that have expertise related to the issue of concern. IWGs operate according to an annual charter granted by the TRU Waste Steering Committee. The charter clearly establishes the goals of the organization and will include the milestones and deliverables that must be accomplished in the upcoming year. Meetings are held periodically to discuss progress/issues, and progress is reported to NTPO on a regular basis. IWGs will also assist NTPO and DOE-HQ prepare draft policy and guidance and review programmatic guidance and documentation.

Attachment 3 lists the IWGs that are currently active and the chairpersons for the individual IWGs.

3.7 GENERATOR/STORAGE SITES

The manager at each site will be responsible for implementing the programs and policies formulated by the NTPO and established by EM-30. Sites must plan and implement programs to minimize, characterize, package, treat, store, and ship all TRU waste, including waste that is not planned for disposal at WIPP; support national programs for TRU waste disposal; construct required waste management facilities and equipment; obtain permits; perform site-specific NEPA analyses; conduct environmental studies; perform laboratory analyses; and certify that waste destined for WIPP meets the WIPP WAC.

3.8 POLICY GUIDANCE

The overall policies that guide the NTP are established by the DOE Assistant Secretary for Environmental Management (EM-1). The Deputy Assistant Secretary for Waste Management (EM-30) is responsible for developing and issuing policy guidance directly to NTP participants. The NTPO is tasked with managing the NTP and making recommendations to EM-30 regarding policy and program direction.

3.9 PROJECT CONTROL SYSTEM

The Administrative Branch of the CAO is in the process of defining and implementing a project controls system (PCS) that will be applied to all branches of the CAO, including the NTPO. The PCS will provide project control reporting for the NTPO and will be developed to conform with DOE Notice 4700.5, *Project Control System Guidelines*. The PCS will provide all official progress and performance reports. The initial phase of establishing the PCS has been to develop a relational data base that includes cost estimates, labor requirements, work scope, milestones, and deliverables down to WBS Level 3, for a six-year period from fiscal year (FY) 1995 to FY 2000. As part of the system validation, the relational data base will be expanded to provide this same information down to WBS Level 6 for FY 1995 activities. Program participants that receive funding through NTPO will be required to provide regular status reports that detail technical progress, compare actual costs against the spending plan, and highlight accomplishments and potential barriers to completing the project. Changes to approved plans will be managed through a change control board (CCB). The CCB will review requests to modify baseline costs, schedules, and work scopes, and approve requests as appropriate.

4. ACQUISITION STRATEGY

DOE is responsible for the management of TRU waste. Various DOE organizations contribute to the overall success of the NTP, including DOE-HQ, CAO, NTPO (as part of CAO), and other DOE field elements that manage sites that generate and store TRU waste. Both the NTPO and the other field elements will be responsible for planning and implementing programs and projects in support of the NTP mission. In general, the NTPO will be responsible for identifying and resolving system-wide issues, analyzing alternatives, and making policy and guidance recommendations to DOE-HQ. The sites will be responsible for managing wastes at each facility in compliance with applicable requirements.

NTPO-managed activities will include the following:

- conducting strategic planning and systems integration,
- designing, licensing, and constructing transportation packagings for TRU waste,
- operating and managing the fleet of TRU transportation packagings,
- providing emergency response training,
- supporting the development of the WIPP WAC,
- approving and auditing the implementation of waste certification programs,
- developing and gaining approval for analytical methods applicable to TRU waste,

- conducting assessments of generator site TRU waste management activities, and
- issuing guidance and gathering waste characterization data to support PA and the WIPP RCRA Permit.

DOE field elements will be responsible for the following:

- providing day-to-day management of stored and newly-generated TRU waste,
- minimizing the generation of TRU waste,
- attaining and maintaining full compliance with regulatory requirements,
- planning and managing construction projects (e.g., line items, general plant projects, and capital equipment),
- developing the capabilities to characterize, package, treat, store, and ship waste, and
- assessing environmental impacts in compliance with NEPA.

Each DOE organization will be responsible for procuring goods and services required to meet the goals of the NTP. Subcontracts will be awarded based on criteria established by the Project Manager responsible for the individual project and procurement personnel. Realistic lead time for procurement of products and services will be incorporated in all schedules.

5. PROJECT SCHEDULE

The current milestone schedule for the NTP is shown in Attachment 4. Detailed schedules for the next five years (FY 1996 - FY 2000) will be finalized by March 1995. The schedule is based on the goals of the NTP and milestones have been established for each of those goals.

6. RESOURCE PLAN

The resource plan presented here represents only those activities funded through the NTPO. Efforts performed by DOE-HQ and construction projects and other activities funded as part of sites' operating budgets are not included, although they do contribute to the successful completion of the NTP.

6.1 COST

Funding profiles have been established for NTPO-funded activities for a six-year period from FY 1995 through FY 2000. These profiles are presented in Attachment 5, along with the applicable WBS element. These profiles will be finalized, and a cost baseline will be established in FY 1995.

6.2 LABOR

Personnel resources include NTPO staff requirements, sites that are performing NTPO-funded activities, and subcontractors. The NTPO has an approved staffing level of 10 positions. For FY 1995, a total labor requirement of 134 full-time equivalent (FTE)

employees has been established for various DOE site contractors and NTPO subcontractors, as shown in Attachment 5. Labor estimates for years beyond FY 1995 will be developed as part of establishing technical, cost, and schedule baselines in 1995 for the period of FY 1996 through FY 2000.

7. CONTROLLED ITEMS/BASELINES

The NTPO has established cost and schedule baselines for FY95. Baselines for the next five years (FY 1996 through FY 2000) are planned to be fully developed and approved by March 1995.

8. NATIONAL TRU PROGRAM CHARTER

8.1 SUPPORTING DOCUMENTS

Documents supporting the Program Charter include this National Transuranic (TRU) Program Plan, the CAO/EM-30 Memorandum of Agreement Concerning Management of the National Transuranic Waste Program, the EM-30/40 Memorandum of Understanding, project baselines, implementing plans and procedures, and supplemental guidance issued as required.

8.2 OFFICE OF WASTE MANAGEMENT PROGRAM AUTHORITIES AND RESPONSIBILITIES

The Office of Waste Management, EM-30, is responsible for assuring that the NTP plans and operations are coordinated, integrated, and consistent with DOE-HQ programs, policies, and guidance.

Specific TRU waste-related responsibilities include the following activities:

1. Issuing key policy guidelines for CAO TRU waste activities.
2. Approving and issuing key policy guidance and priorities for DOE-wide TRU waste management in coordination with the CAO.
3. Providing guidance for preparation of budget requests, in coordination with the Office of Planning and Resource Management, EM-10, and acquiring and providing resources to fund the NTP, consistent with priorities of the EM program.
4. Reviewing proposed policy, guidance, plans, and other documents developed by the NTP and providing policy guidance to ensure consistency with other waste type planning efforts and other DOE programs.
5. Performing integration activities between TRU waste and other waste types, including integration with other DOE-HQ organizations.

6. Co-chairing the TRU Waste Steering Committee, with emphasis on policy, overall strategy, and coordination with other waste type planning efforts.
7. Participating in meetings, working groups, task forces, and annual reviews where there are cross-cutting issues (i.e., storage, characterization, treatment, etc.).

8.3 OFFICE OF ENVIRONMENTAL RESTORATION AUTHORITIES AND RESPONSIBILITIES

The Office of Environmental Restoration (EM-40) has responsibility for managing TRU waste at cleanup sites (both federally and privately owned) where EM-30 has no presence, as detailed in the EM-30/40 Memorandum of Understanding. Responsibilities include the characterization, treatment, packaging, shipping, and interim storage of TRU waste/material removed from cleanup sites.

Specific responsibilities related to the NTP are the following:

1. Serving as a member of the TRU Waste Steering Committee.
2. Reviewing proposed policy and guidance developed by the NTP to ensure consistency with removal and subsequent cleanup action planning efforts related to other waste types.
3. Participating in meetings, working groups, conference calls, and annual reviews where there are cross-cutting issues that may impact removal and cleanup activities.

8.4 ALBUQUERQUE OPERATIONS OFFICE AUTHORITIES AND RESPONSIBILITIES

The DOE-AL provides administrative support to CAO. DOE-AL also provides specialized legal, procurement, personnel, and ES&H support, as needed by the CAO.

The DOE-AL Manager has the authority and responsibility to perform the following activities:

1. Coordinate and integrate all administrative support to accomplish the WIPP and NTP missions.
2. Provide independent assessments of ES&H, safeguards and security, OSHA, and nuclear safety program implementation and compliance at WIPP and issue assessment reports.

8.5.2 Responsibilities of the National TRU Program Office Manager

The NTPO Manager reports to the CAO Manager.

The responsibilities of the NTPO Manager include the following:

1. Identifying issues that need to be addressed to properly manage TRU waste on a complex-wide basis.
2. Conducting analyses and strategic planning necessary to establish and implement an integrated TRU waste management program through the TRU Waste Steering Committee.
3. Developing options, recommendations, and proposed priorities and guidance regarding TRU waste management at the DOE generator sites for EM-30 review, consideration, and direction.
4. Co-chairing the TRU Waste Steering Committee, with emphasis on development, management, and direction of TRU waste planning activities.
5. Coordinating Interface Working Groups and task forces that address issues to better manage TRU waste.
6. Identifying data collection needs for the TRU waste program.
7. Developing and managing the transportation and packaging systems for TRU waste destined for WIPP.
8. Developing and supporting special studies for more effective and efficient management of TRU waste at DOE sites.
9. Developing, issuing, and approving TRU waste documents, in coordination with DOE-HQ and consistent with DOE-HQ policy guidance.
10. Providing programmatic, technical, and budget direction to NTP contractors.
11. Developing, submitting, managing, and executing the CAO NTP budget.
12. Developing and managing the planning process for the NTP activities delegated to the CAO.
13. Integrating activities with the WIPP program to ensure compatible policies and programs.
14. Ascertaining TRU waste treatment technology requirements and needs to ensure compliance with environmental regulations.

15. Providing TRU waste systems planning in compliance with NEPA.
16. Providing technical expertise, guidance, and support to effectively define and implement a waste characterization program, which includes the data requirements necessary to demonstrate compliance with applicable regulations.
17. Certifying that the quality of waste characterization information generated by programs and processes at the generator sites is sufficient to demonstrate that the waste meets the final WIPP WAC and is acceptable under the WIPP RCRA permit.

8.6 TRU WASTE GENERATOR/STORAGE SITES AND SMALL-QUANTITY HOLDERS AUTHORITIES AND RESPONSIBILITIES

The DOE field elements responsible for DOE facilities and privately owned sites holding DOE-owned TRU material/waste are responsible for the management of all TRU material/waste at that site in accordance with federal, state, and local regulations. Sites must plan and implement programs to minimize, characterize, package, treat, store, and ship all TRU waste, including waste that is not planned for disposal at WIPP; support national initiatives to develop disposal capabilities; construct required waste management facilities and equipment; obtain permits; perform site-specific NEPA analyses; conduct environmental studies; perform laboratory analyses; certify that waste destined for WIPP meets the WIPP WAC; and assure that waste shipped to other facilities meets the facility WAC.

Specific responsibilities include the following:

1. Establishing internal organization, staffing, policies, and authorities required to carry out the site mission. This includes implementing programs addressing QA and ES&H requirements.
2. Preparing site budgets, schedules, plans, and reports.
3. Serving as interface with state and federal regulatory agencies regarding TRU waste-related activities and issues and satisfying regulatory requirements, agreements, and permit conditions.
4. Providing information to DOE-HQ and NTPO addressing waste characteristics, inventories, issues, and plans.
5. Supporting the development and implementation of national TRU waste strategies and initiatives.
6. Planning and managing line item, general plant project, and capital equipment construction projects at the site.
7. Managing waste in full compliance with regulatory requirements.

8. Managing TRU waste destined for WIPP in accordance with WIPP-related requirements.
9. Reporting to DOE-HQ and the NTPO all issues identified through the efforts described above that may affect current planning and schedules for operation of WIPP.
10. Communicating potentially precedent-setting regulatory activities (e.g., permit conditions, treatment requirements, compliance agreements, etc.) to NTPO so that the system-wide impacts may be analyzed.

8.7 TRU WASTE STEERING COMMITTEE AUTHORITIES AND RESPONSIBILITIES

The TRU Waste Steering Committee, with members from all the DOE generator/storage sites, will join with the CAO and DOE-HQ to provide leadership, vision, and support in developing a strong systematic approach for managing the NTP by focusing on cross-cutting and complex-wide strategies and plans that provide the link between the high-level DOE strategies and the individual site plans. The TRU Waste Steering Committee will operate in accordance with the approved charter.

Specific responsibilities of the TRU Waste Steering Committee include the following:

1. Developing complex-wide integrated strategic and implementation plans that reconcile national and site-specific priorities.
2. Supporting planning and program management activities by assisting the NTPO in identifying key (as defined by the committee) risks and issues and ways to manage them.
3. Monitoring site-specific and complex-wide program progress and adjusting the plans as needed in a timely fashion; progress toward achieving the NTP milestones will be reviewed at least annually.
4. Supporting stakeholder participation in the CAO Intergovernmental and External Affairs Outreach Program by providing technical and political background, ideas, and advice to CAO and by sharing information from site-specific advisory committees and stakeholder interactions from across the complex, especially lessons learned.
5. Reviewing and commenting on key NTPO products designed to support the NTP management efforts and the TRU Waste Steering Committee in fulfilling its charter.

8.8 INTERFACE WORKING GROUP AUTHORITIES AND RESPONSIBILITIES

Interface Working Groups (IWGs) may be formed at the direction of the NTPO Manager or the TRU Waste Steering Committee to address cross-cutting issues facing the NTP. IWGs

provide technical advice; review and evaluate policies, plans, and alternatives; provide recommendations; and facilitate communication among technical experts within DOE, private industry, and universities.

Specific responsibilities will include the following:

1. Developing an IWG charter that establishes the mission, goals, organization, activities, and reporting requirements. Charters will be renewed annually and will include specific milestones for the upcoming year.
2. Holding meetings, conducting analyses, and investigating issues, as necessary to perform the mission of the IWG.
3. Periodically documenting results of meetings and analyses.
4. Providing technical advice to the NTPO Manager

8.9 REPORTING

Reporting will be performed in accordance with a modified Uniform Reporting System, as described in DOE Order 1324.2A.

Attachment 1

NTPO Work Breakdown Structure

National TRU Program Organization

— Programmatic Direction
 - - - Administrative Support
 . . . Policy and Guidance Support
 Interaction

Attachment 3
Current Interface Working Groups

Interface Working Group	Chairperson	Organization
Nondestructive Assay/Nondestructive Examination (NDA/NDE)	Fred Schultz	ORNL (MMES)
TRUPACT II Gas Generation Test Program	Bob Spooner Phil Gregory	CAO WIPP (WID)
Rocky Flats Plant Residues Efficiencies	Greg Moore Mark Matthews	DOE-RFFO CAO
TRU Projects Intersite (TRU Partnership)	Chris Peterson	Hanford (WHC)
Waste Characterization	TBD	

NOTE: Additional IWGs may be added once their charters are approved by the TRU Waste Steering Committee.

Attachment 4
NTPO Milestone Schedule

1.0 Systems Planning and Integration

Milestone Description	Milestone Date	Status
Establish and utilize an effective TRU Steering Committee and Interface Working Groups	5/94	Complete
Implement Annual Cycle process to identify major cross-cutting issues and initiate resolution activities	8/94	Complete
Establish Program Baseline	10/94	
Prepare and Issue NTPO Program Plan	10/94	
Develop initial set of Logic Diagrams for generator sites' TRU operations	12/94	
Evaluate operational and regulatory issues of alternatives for storage/disposal of TRU wastes from small generator sites	3/95	
Develop conceptual level plan, plus strategy options for Integrated RH Program	3/95	
Develop alternatives and strategies to dispose of all TRU waste	9/95	
Develop plan for disposal of all TRU waste	12/96	
Submit Comprehensive TRU Waste Disposal Plan to Congress	12/97	
Notification to States and Indian Tribes of Intent to Transport Waste	12/97	

2.0 Technology Development and Waste Characterization

Milestone Description	Milestone Date	Status
Prepare and Issue TRU System Baseline Inventory Report, Revision 0.	6/94	Complete
Initiate development of Quality Assurance project plans at Hanford, ORNL, and SRS.	8/94	Complete
Prepare and Issue Waste Characterization Quality Assurance Program Plan	11/94	
Prepare and Issue revised Waste Characterization Program Plan	11/94	
Update TRU inventory database, provide waste inventory definition to draft Compliance Package	3/95	
Develop privatized laboratory capability for headspace gas analytical services	3/95	
Develop TRU waste sludge analysis capability	3/95	
Issue Technology Development Program Plan	10/95	
Provide Supplemental Inventory Data to PA based on Waste Characterization Program Plan	12/95	
Waste Inventory Definition to Final Compliance Package	12/96	

3.0 Transportation Packaging and Emergency Response

Milestone Description	Milestone Date	Status
Complete Transportation Alternative Study	4/94	Complete
Obtain NRC renewal of the TRUPACT-II C of C	6/94	Complete
Issue Carrier Contract for FY95 - FY97	11/94	
Complete RH Packaging Optimization Study	3/95	
Submit higher wattage limit SARP revision to NRC (for Gas Generation Test Results)	6/95	
Complete CH Packaging Optimization Study	9/95	
Complete design of alternate CH package	4/96	
Start Fabrication of RH Casks	12/96	
CH Carrier Operational	6/97	
Fabrication of First RH Cask complete	6/98	
Fabrication of First Alternate CH Package complete	6/98	

Attachment 5
NTP Budget and Labor Estimates (\$ 000/FTE)

Activity	WB S	Item	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	TOTAL
Systems Planning and Integration	1.0	Budget	4,686	5,584	5,593	6,094	5,499	7,020	34,476
		FTE	26	TBD	TBD	TBD	TBD	TBD	26
Technology Development and Waste Characterization	2.0	Budget	10,138	13,606	12,338	11,820	8,379	6,492	62,771
		FTE	90	TBD	TBD	TBD	TBD	TBD	90
Transportation Packaging and Emergency Response	3.0	Budget	3,625	3,743	9,680	11,492	13,568	12,283	54,391
		FTE	15	TBD	TBD	TBD	TBD	TBD	15
Program Assessments and Certifications	4.0	Budget	397	700	1,161	1,390	1,700	1,794	7,142
		FTE	3	TBD	TBD	TBD	TBD	TBD	3
		TOTAL BUDGET	18,944	23,633	28,772	30,786	28,146	27,588	168,779
		TOTAL FTE	134	TBD	TBD	TBD	TBD	TBD	134