CBFO PROJECT EXECUTION PLAN

December 2007

Revision 3.2

This document supersedes DOE/CBFO 03-3293, Revision 3.1

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

The Critical Decision-2/3 (CD-2/3), *Approve Performance Baseline/Start Field Work*, approves the independently reviewed and certified budget-constrained scope, schedule and cost near-term execution baseline and the out-year planning estimate range (OPER), including documented assumptions and an associated risk management plan. A certified near-term baseline means that it is reasonable that the identified scope could be accomplished for the identified cost in the identified time period if near-term baseline costs are funded as profiled and contingency funds are provided when and as required, and that this baseline is acceptable as a point from which to control future change. Because of current budget constraints, the certification process recognizes that changes in EM complex and site priorities and funding plans are likely to result in changes to near-term and out-year cost, schedule, and scope.

The CD-2/3 approval subjects the baseline to configuration control. Cost and schedule performance information from your Earned Value Management System should be reported against the approved near-term execution baseline in IPABS/PARS and in all future Quarterly Project Reviews.

The decision document was based upon a currently severely constrained budget and anticipates that such constraints will continue. Environmental compliance activities have been given high priority but cannot in all cases be fully funded without jeopardizing other highly critical activities necessary to avoid unreasonable risk to human health and/or national security. Where compliance activities are not fully funded, managers must immediately inform appropriate regulatory authorities to explain the reasons for the problem and attempt to resolve the issue.

Changes to the near-term baseline and OPER will be effected through the change control process documented in the approved Project Execution Plan. In addition, you are to use the near-term baseline and OPER as the basis for cost benefit analyses to inform any future Acquisition Executive-directed baseline changes. Such future changes may be required to comply with applicable environmental legal obligations while maintaining essential functions necessary to protect human health, the environment and national security; reflect funding different from the baseline assumptions; incorporate technological advances; realize specific programmatic risks; or implement programmatic business cases. Prior to approving any baseline changes, the baseline should be independently reviewed and certified in accordance with the EM protocol for cleanup project baselines.

In addition to providing an approved near-term execution baseline, the CD-2/3 approval establishes the framework from which DOE, regulators, and stakeholders can understand the complex inter-relationship of activities within and among sites' cleanup scope. Therefore, the approved near-term baseline in conjunction with the OPER will also be used as a decision making tool in my out year planning initiative, as the rigorously-defined basis from which we can evaluate implications of various strategic options for completion of Environmental Management's overall mission.

CBFO PROJECT EXECUTION PLAN
Revision 3.2

Approved by:

Signature on file	12/12/2007
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APPENDICES

Acronyms

ABC	activity-based cost
ACWP	actual cost of work performed
AFP	approved funding profile
BCWP	budgeted cost of work performed
BCWS	budgeted cost of work scheduled
CAP	corrective action plan
CBFO	Carlsbad Field Office
CCB	Change Control Board
CCP	Central Characterization Project
CD	critical decisions
CH	contact handled
CP	capability projects
CTAC	CBFO Technical Assistance Contractor
CWIT	Complex Wide Integration Tool
D&D	decontamination and decommissioning
DOE	U.S Department of Energy
DOT	U.S. Department of Transportation
DP	directed programs
EAC	estimation at completion
EIR	external independent review
EM	DOE Office of Environmental Management
EMAAB	EM Acquisition Advisory Board
EMCBC	Environmental Management Consolidated Business Center
EPA	U.S. Environmental Protection Agency
EVMS	Earned Value Management System
FPD	Federal Project Director
FRAM	Safety Management Functions, Responsibilities, and Authorities Manual
HQ	DOE Headquarters
HWDU	hazardous waste disposal units
HWFP	Hazardous Waste Facility Permit
IPABS	Integrated Planning Accounting and Budgeting System
IPT	Integrated Project Team
ISMS	Integrated Safety Management System
LANL	Los Alamos National Laboratory
LWA	Land Withdrawal Act

M&OC	Management and Operating contractor
NDA	non-destructive assay
NDE	non-destructive examination
NMED	New Mexico Environment Department
NRC	U.S. Nuclear Regulatory Commission
OECM	DOE Office of Engineering and Construction Management
PARS	project assessment and reporting system
PBS	project baseline summary
PCR	programmatic change request
PEP	Project Execution Plan
QA	quality assurance
QAPD	Quality Assurance Program Document
RCRA	Resource Conservation and Recovery Act
REP	risk management/efficiency projects
RH	remote handled
RMP	Risk Management Plan
RP	reliability projects
SNL	Sandia National Laboratories
SO	Site Operations
SRS	Savannah River Site
TO	Transportation Operations
TRU	transuranic
TSCAI	Toxic Substance Control Act Incinerator
VM/E	Value Management/Engineering
VPP	Voluntary Protection Program
WBS	work breakdown structure
WIPP	Waste Isolation Pilot Plant
WIPT	WIPP Integrated Project Team
WTS	Washington TRU Solutions

1.0 MISSION REQUIREMENTS

The mission of the Carlsbad Field Office (CBFO) is to protect human health and the environment through the safe characterization, certification, and transportation of transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP), the operation and management of the WIPP for safe disposal of defense-related TRU waste, and establishment of an effective system for the management of TRU waste from generation to permanent disposal. Contact-handled TRU waste disposal operations at WIPP began in March 1999. Remote-handled TRU waste disposal operations began in January 2007. The decisions and activities related to approve mission need, conceptual design, preliminary design phase, and the approval to start operations were completed prior to the DOE O 413.3 definitions for critical decisions (CDs). Therefore the following bullets represent the current plan for CDs for a project that has begun operations.

- CD-2/3 – Approve Baseline. The goal for completion is 2007.

- CD-4. Project Completion. The current projected end of waste disposal operations is September 2030, followed by a deactivation and decommissioning period of approximately five years.

This CBFO Project Execution Plan (PEP) describes the mission of the CBFO and the WIPP, the planning and baseline development used to meet mission objectives, and the division of roles and responsibilities between DOE Headquarters (HQ) and CBFO. The PEP also addresses the division of roles and responsibilities among CBFO and other WIPP program participants. The PEP provides a concise link between program objectives and implementation strategy and describes, primarily through references, the supporting infrastructure. The PEP will be reviewed each fiscal year (FY) and updated when appropriate.

Several factors were considered in the development of the PEP. They include the documents DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets,* and DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*, as well as industry best practices. The DOE Office of Environmental Management (EM) has structured cleanup projects through its project baseline summary (PBS) system to apply DOE O 413.3A to WIPP operations and transportation. CBFO management is committed to ensuring that project objectives are met implementing appropriate project management controls consistent with DOE O 413.3A.

The PEP is the top tier of the CBFO project management document hierarchy (see Appendix 1) and describes in general terms the way CBFO manages its projects. Additional detail is contained in DOE/WIPP 04-3300, *Waste Isolation Pilot Plant Project Control System Description*, and other lower-tier documents.

This document highlights six key events that enabled the U.S. Department of Energy (DOE) Waste Isolation Pilot Plant (WIPP) to become operational and begin clean-up of transuranic (TRU) waste from generator sites throughout the DOE complex. First, on December 29, 1979, Congress passed the U. S. Department of Energy National Security and Military Applications of Nuclear Energy Authorization Act of 1980 (Public Law 96-164), which authorized the WIPP. Second, the DOE announced in a 1981 Record of Decision, their decision to proceed with WIPP in phased development at the selected southeastern New Mexico site. Third, on October 30, 1992, the

President signed into law the WIPP Land Withdrawal Act (LWA) (Public Law 102-579), removing from public use 16 square miles of land to be used exclusively for WIPP. Fourth, DOE issued an additional Record of Decision on January 22, 1998, to dispose of TRU waste at WIPP. Fifth, on May 13, 1998, the U.S. Environmental Protection Agency (EPA) certified that WIPP would comply with EPA radioactive waste disposal regulations. Finally, on October 27, 1999, the New Mexico Environment Department (NMED) issued the WIPP final Hazardous Waste Facility Permit (HWFP). The first shipment of TRU waste was received at WIPP on March 26, 1999. The historic development of the WIPP is summarized in DOE/CAO-00-3124, *Pioneering Nuclear Waste Disposal*. More detailed information on the background of WIPP can be found in DOE/EIS-0026-S-2, *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement*, and the documents referenced therein.

According to the authorization in Public Law 96-164, the WIPP facility is designed to permanently dispose of approximately 175,600 cubic meters (6.2 million cubic feet) of contact-handled (CH) TRU waste and remote-handled (RH) TRU waste. In addition, a Consultation and Cooperation Agreement with the State of New Mexico limits the volume of RH-TRU waste to 7,080 cubic meters (250,000 cubic feet).

The WIPP site is built on a 10,240-acre parcel (16 square miles) of land set aside by Public Law 102-579. The area of the WIPP facility enclosed in the property protection area is approximately 35 acres. The facilities are divided into three basic groups: surface structures, shafts, and subsurface structures. The WIPP facility surface structures accommodate the personnel, equipment, and support services required for receipt, preparation, and transfer of TRU waste from the surface to the underground. Four vertical shafts, the waste shaft, salt handling shaft, exhaust shaft, and air intake shaft, extend from the surface to the underground disposal horizon. The disposal horizon is located approximately 2,150 feet below the surface in a stable salt formation. The underground structures consist of the waste disposal, construction, and northern experimental areas.

Since opening in March 1999, the WIPP program has maintained an excellent operational and safety record. Major safety and TRU waste clean-up and disposal accomplishments include:

- No radiological releases to the environment during transportation and disposal
- Recertification under the DOE's Voluntary Protection Program (VPP) at the Star level, which recognizes companies that demonstrate outstanding protection of employee safety and health
- Awarded the VPP "Star of Stars" from DOE at the "Superior Star" level from 2001 through 2005, and the "Star of Excellence" level in 2006, and maintained the "Star of Excellence" to be received in 2007. Received the VPP Participants Association "Star Among Stars" award at the "Super Star" level from 2002 through 2005, the "Star of Excellence" level in 2006, and the "Super Star" level again in 2007
- 20 consecutive years as the State of New Mexico's "Mine Operator of the Year"
- Receipt of over 5,000 CH TRU waste shipments

- Disposal of over 82,000 CH-TRU waste containers (55-gallon drums, standard waste boxes, and ten-drum overpacks)
- Completion of waste disposal in 3 of 10 underground Hazardous Waste Disposal Units (HWDUs)
- Start up of RH-TRU waste disposal operations
- Clean-up of all TRU waste from 13 sites, including Rocky Flats
- Supporting the completion of compliance agreements for the cleanup of TRU waste at the Idaho National Laboratory and the Los Alamos National Laboratory

These accomplishments are important to the WIPP program and DOE, but most importantly, they have resulted in a significant reduction in risk to the nation from TRU waste stored above ground.

2.0 PROJECT DESCRIPTION

This section discusses the scope and objectives of the project, and provides a process description.

2.1 Scope

The current CBFO project is focused on TRU waste cleanup and transportation to and disposal at WIPP to reduce risk to the public and the environment by disposing of the existing TRU waste and continuing disposal of newly generated TRU waste. To achieve the goal of disposing of existing TRU waste, the management of the operations of various DOE TRU waste generator and storage sites, CBFO, and WIPP are integrated into a national TRU waste management system. The National TRU Waste Corporate Board (Corporate Board) provides coordination and strategic input for the TRU waste management system across DOE. With the assistance of the Corporate Board, CBFO has implemented a comprehensive approach to TRU waste characterization/certification, transportation, and disposal.

CBFO is responsible for coordinating activities related to characterization and certification of TRU waste at generator and interim storage sites, TRU waste transportation, transportation packaging and container development, and permanent disposal of TRU waste at the WIPP. The scope for the operations at the WIPP site has been incorporated into the maintenance and operating (M&O) contract at the Carlsbad Field Office. In 2001, Washington TRU Solutions, LLC, was selected as the M&O contractor (M&OC) for the WIPP site and in 2005 the contract was extended for five one-year options through 2010. CBFO is responsible for administration of the contract.

The DOE Office of Environmental Management (EM) provides policy direction to CBFO. The M&OC is responsible for operations at the WIPP and for integration and disposal of defense TRU waste for the National TRU Program. The Contractor participates in a coordinated approach to characterization, transportation, and disposal activities at the associated generator sites throughout the DOE complex. The M&O contract also identifies the objectives associated with the vision of

the Government that will be considered in the management, integration, and operation of WIPP and in conducting defense TRU waste activities.

2.2 Objectives

Specific objectives, including technical scope, cost, and schedule have been developed for this project. The following is a discussion of those objectives.

2.2.1 Project Objectives

The key project objectives are as follows:

- Support the EM TRU waste clean up risk reduction goal by characterizing, certifying, transporting and disposing of legacy TRU waste and newly generated TRU waste in a safe and compliant manner
- Implement project management best practices to maintain scope, schedule, and cost focused on safe, quality performance of the project's TRU waste activities

2.2.2 Technical Objectives

The key technical objectives are as follows:

- Safe and compliant characterization, transportation, and disposal of TRU waste at the WIPP, utilizing available funding
- Provide, coordinate, and manage transportation and disposal capability for the TRU waste complex that supports cleanup agreements and established disposal milestones across the DOE TRU waste complex
- Deliver central characterization project resources to TRU waste sites that provide a cost effective approach for characterizing and loading TRU waste for shipment to other sites and for permanent disposal at the WIPP

2.2.3 Cost Objectives

The key cost objectives are as follows:

- Implement sound project management processes and principles to provide effective stewardship of Federal dollars
- Identify and implement efficient and effective cost controls
- Apply earned value management techniques to optimize scope, schedule, and cost management

2.2.4 Schedule Objectives

Appendix 2 provides a summary project schedule that identifies the Level 1 project milestones and events.

2.3 Project Process Description

2.3.1 WIPP Process Description

The WIPP project has national and international impact. CBFO is responsible for integration, performance or other involvement in many of the TRU waste functions across the DOE complex. The TRU waste characterization process actually begins at sites that store and/or generate TRU waste. Sites that ship TRU waste to WIPP must have their wastes' physical, chemical, and radiological properties characterized to show they meet WIPP waste acceptance criteria. Figure 1 illustrates this process flow.

Once a generator or interim storage site's TRU waste is characterized to meet the regulatory requirements, the site is subject to certification audits by CBFO and oversight of the audit process by EPA and the NMED. Audit reports are approved by CBFO and then by the EPA and/or NMED, which allow CBFO to certify the site-related processes for waste transportation and ultimately disposal at WIPP. Some TRU waste sites do not have the facilities to characterize or load TRU waste for shipment to WIPP. For these sites, WIPP established the Central Characterization Project (CCP) to deploy trained teams of specialists and mobile equipment where needed to characterize and load waste in a safe and cost effective manner. Confirmation that TRU waste has been properly characterized for disposal is done by CBFO either at the shipping site or in Carlsbad.

TRU waste is transported in U.S. Nuclear Regulatory Commission (NRC) certified Type B shipping packages. Currently, CH-TRU waste is shipped in TRUPACT-II and HalfPACT containers. RH-TRU waste is shipped in RH 72B casks. Shipments of RH-TRU waste can also be made in CNS 10-160B casks. Transportation shipments are satellite monitored at all times while in route to the WIPP site.

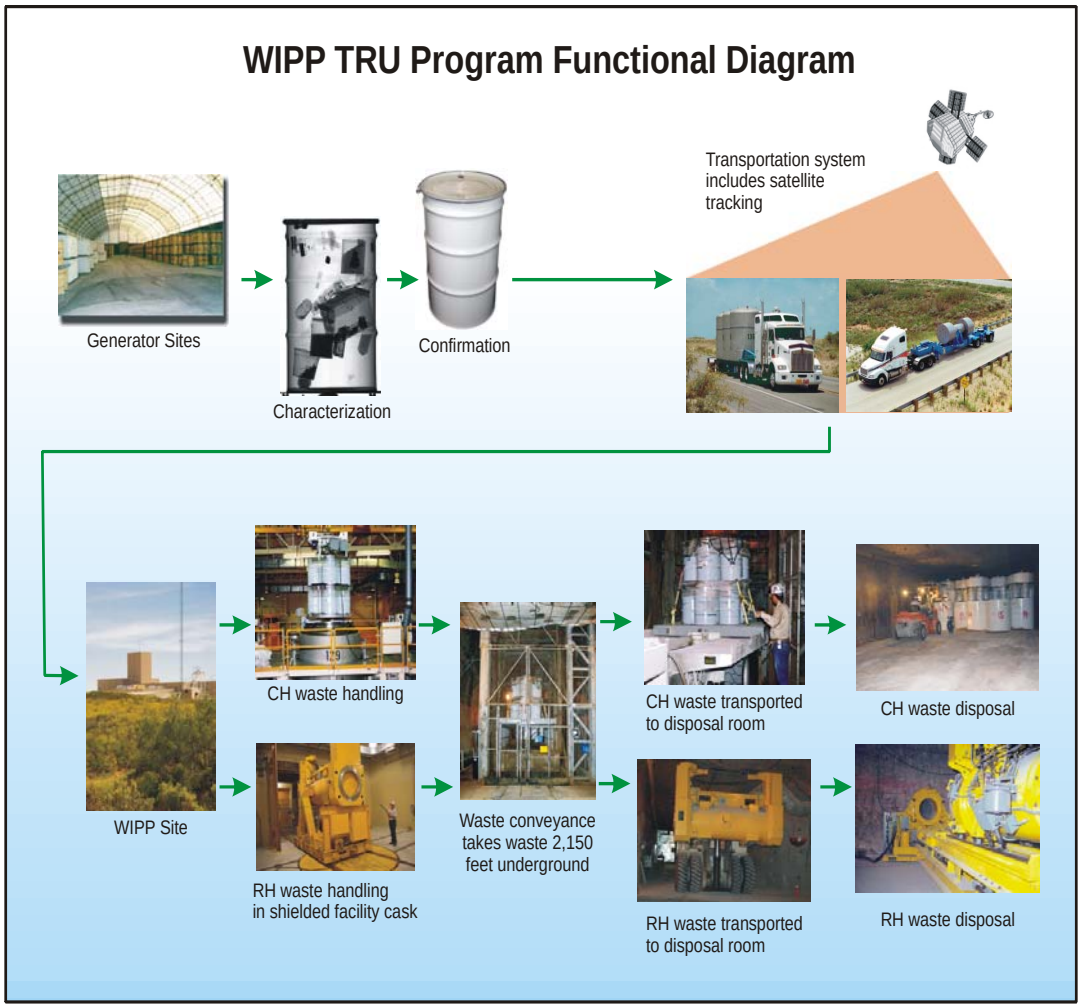

Figure 1. WIPP TRU Program Functional Diagram

At the WIPP site, waste shipments go through a security check and shipping manifest verification. Shipments are transferred to the parking area unit located adjacent to the Waste Handling Building. There are separate CH-TRU and RH-TRU waste handling areas to support surface waste processing activities. Payload containers are removed from the shipping packages and screened to verify that the containers are not contaminated. After the containers are removed from the shipping packages and payloads are verified to be from the site of origin and free of contamination, they are transported 2,150 feet below the land surface to the underground via a waste hoist. The underground disposal unit is composed of eight panels that are subdivided into seven disposal rooms. Disposal rooms have nominal dimensions of 13 feet high by 33 feet wide by 300 feet long. Panels 9 and 10 are currently planned to be constructed in the drift (tunnel) system as the repository is filled up. Currently, RH-TRU waste is disposed of in RH-TRU disposal canisters placed horizontally in a borehole in the walls of a disposal room. Typically, RH waste disposal operations will be performed one or more rooms ahead of CH-TRU waste disposal operations. After RH waste is emplaced in the walls of a disposal room, CH waste will be disposed on the floor of the room in vertical columns that are nominally three drum equivalents high.

3.0 PROJECT ORGANIZATION, ROLES, AND RESPONSIBILITIES

The Acquisition Executive responsibility for the WIPP resides with the Under Secretary for Energy, Science and Environment. The overall responsibility for the WIPP resides with the DOE CBFO Manager. The DOE CBFO Deputy Manager reports to the DOE CBFO Manager and serves as the CBFO Chief Operating Officer. The DOE CBFO Assistant Manager for Operations reports to the DOE CBFO Manager's Office and serves as the Portfolio Manager for CBFO projects. CBFO, in coordination with DOE HQ, has identified two Federal Project Directors (FPD) for the two Project Baseline Summary (PBS) Projects: CB-0080, Operate Waste Disposal Facility-WIPP, and CB-0090, Transportation-WIPP. PBSs CB-0080 and CB-0090 were placed under configuration control by DOE HQ (Principal Deputy Secretary for Environmental Management, memorandum dated July 10, 2006, subject to the Policies for Environmental Management Cleanup Projects. Contingency and Federal Risk Management Plans, and Configuration Control) and are used, along with an earned value management system, for reporting in Project Analysis and Reporting Summaries. The projects are included in the monthly Deputy Secretary report.

Change control roles and responsibilities for EM and CBFO are described in a memorandum from EM-1 (Memorandum Configuration Management and Change Control Process for the Environmental Management Program, James A. Rispoli, dated December 28, 2006). The program elements under EM configuration control are:

- Life-Cycle Cost
- Schedule
- Scope
- EM Performance Measures
- Toxic Substances Control Act Incinerator (TSCAI) Burn Plan
- WIPP Shipping Plan
- Savannah River Site (SRS) H-Canyon Nuclear Materials Processing Plan
- Contract Performance Incentives
- Regulatory Decision Documents
- Budget Execution
- PBS Structure
- Non-Labor Resource Funding

The EM Acquisition Advisory Board (EMAAB) charter (dated December 2006) establishes the decision process for EM line item construction, EM cleanup projects and selected subprojects greater than $20M in total value. The WIPP projects described above have been categorized as EM cleanup projects. The scope, schedule, and cost change controls for CBFO are described in

DOE/CBFO 95-1122, *CBFO Programmatic Change Control Process*. This document establishes a framework that provides for the project tracking and control needed to ensure projects are managed effectively and efficiently.

The CBFO Manager reports directly to EM for program policy and direction. The Corporate Board, consisting of representatives from across the TRU waste complex and EM, works to ensure that all efforts in the TRU waste complex are coordinated and integrated. Figure 2 illustrates the organizational relationship for CBFO, its contractors, DOE HQ, the Corporate Board and the generator sites.

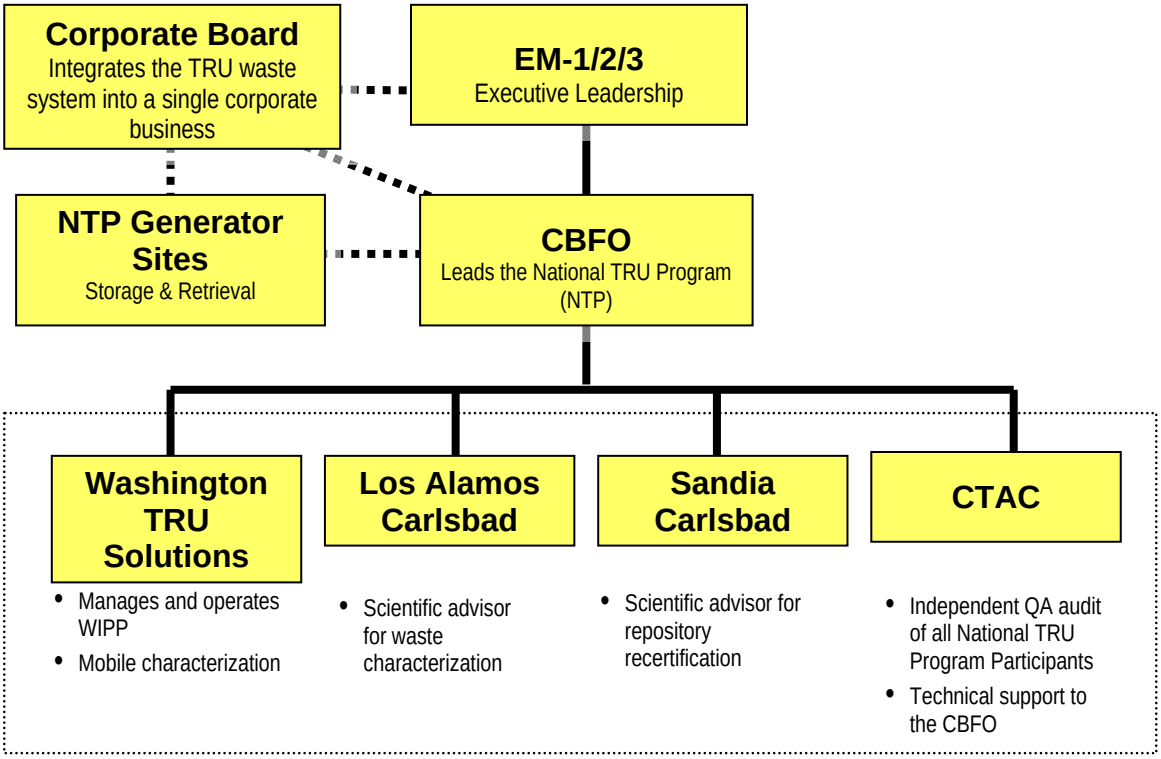

Figure 2. Organizational Structure

3.1 Federal Organizational Structure

CBFO is composed of the following offices (see Appendix 3):

- Office of the Manager
- Office of the Assistant Manager for Operations
  - Office of Site Operations
  - Office of the National TRU Program
- Office of Business
- Office of Quality Assurance

WIPP has two FPDs, one for PBS CB-0080, Operate Waste Disposal Facility-WIPP, and one for CB-0090, Transportation-WIPP. Both CBFO FPDs became certified at Level II through the Project Management Career Development Program, which is endorsed by the Office of

Engineering and Construction Management (OECM). The CBFO Portfolio Director is currently undergoing certification.

CBFO directs implementation of WIPP operations, assesses compliance with project guidance, works to have a commonality of activities and assumptions among all TRU waste sites, and prepares and coordinates plans for the management of TRU waste designated for disposal at WIPP. CBFO is responsible for implementing safe, compliant, efficient management and production processes to complete defense-related TRU waste cleanup. CBFO maintains an active public outreach program to keep stakeholders informed of the progress of activities. CBFO also provides the infrastructure and unique WIPP facilities for activities related to underground science programs.

CBFO roles and responsibilities are defined in detail in DOE/WIPP 98-2287, *Safety Management Functions, Responsibilities, and Authorities Manual* (FRAM). The authorities delegated from EM-1 to CBFO are also described in the FRAM.

As indicated in the organizational structure (Figure 2), contractors to CBFO have specific roles and responsibilities for ensuring the success of WIPP operations.

3.2 Integrated Project Team

DOE O 413.3A, *Project Management for the Acquisition of Capital Assets*, requires the development of an Integrated Project Team (IPT). The purpose of the WIPP IPT is to support project objectives, scope, schedule, cost and performance in order to achieve the successful development and maintenance of the WIPP life-cycle baseline in accordance with DOE Order 413.3A. The IPT is led by the FPD for PBS CB-0080.

The CBFO Manager charters the IPT and appoints the Federal members. The charter defines the scope, authorities, and roles and responsibilities of the IPT. The IPT includes both DOE Federal staff and participant staff representing the various disciplines at WIPP with the specific knowledge, skills or abilities necessary to support the successful execution of the current phase of the WIPP program (see Figure 3). The CBFO FPDs are permanent members of the IPT. Disciplines represented on the IPT include Safety, Cost and Schedule, Project Planning and Budget, Environmental and Permitting, National Environmental Policy Act, and Program Analyst. Other disciplines, such as quality assurance, contracts, and legal, will be requested by the FPD to participate as needed to support the implementation of the WIPP life-cycle baseline.

DOE O 413.3A indicates that membership of the IPT will change as a project progresses to ensure the necessary skills are represented to meet project needs. The WIPP project is stable, and no major changes are anticipated. WIPP has a single mission and the WIPP IPT is staffed to support the current disposal phase at WIPP.

The responsibilities listed below are tailored for the disposal phase of the WIPP Program life-cycle and are derived from DOE O 413.3A and DOE M 413.3-1.

The FPD:

- Prepares and maintains a team charter and operating guidance
- Provides the IPT broad program guidance and delegates project decision-making authority appropriate to the member's competency and limitations of authority
- Appoints leads within the IPT
- Keeps CBFO upper management, M&O Project Managers, and the IPT informed
- Schedules and holds regular meetings or delegates this responsibility

The IPT members:

- Identify and meet commitments
- Develop and integrate the scope, schedule, budget, risk assessment, and associated documentation that result in the development of or changes to the WIPP life-cycle baseline across participant functional responsibilities
- Identify project interfaces and support project management for completion of assigned responsibilities
- Maintain communication with their respective organizations, and other team members
- Develop, review, and evaluate financial and project management procedures and processes
- Communicate to management the recommendations for financial and project management improvements
- Identify continuous improvement opportunities within the WIPP life-cycle baseline
- Plan and participate in project reviews as necessary or assigned
- Plan and develop the monthly status meetings and complete follow-up action items as assigned
- Identify and coordinate project management training as required

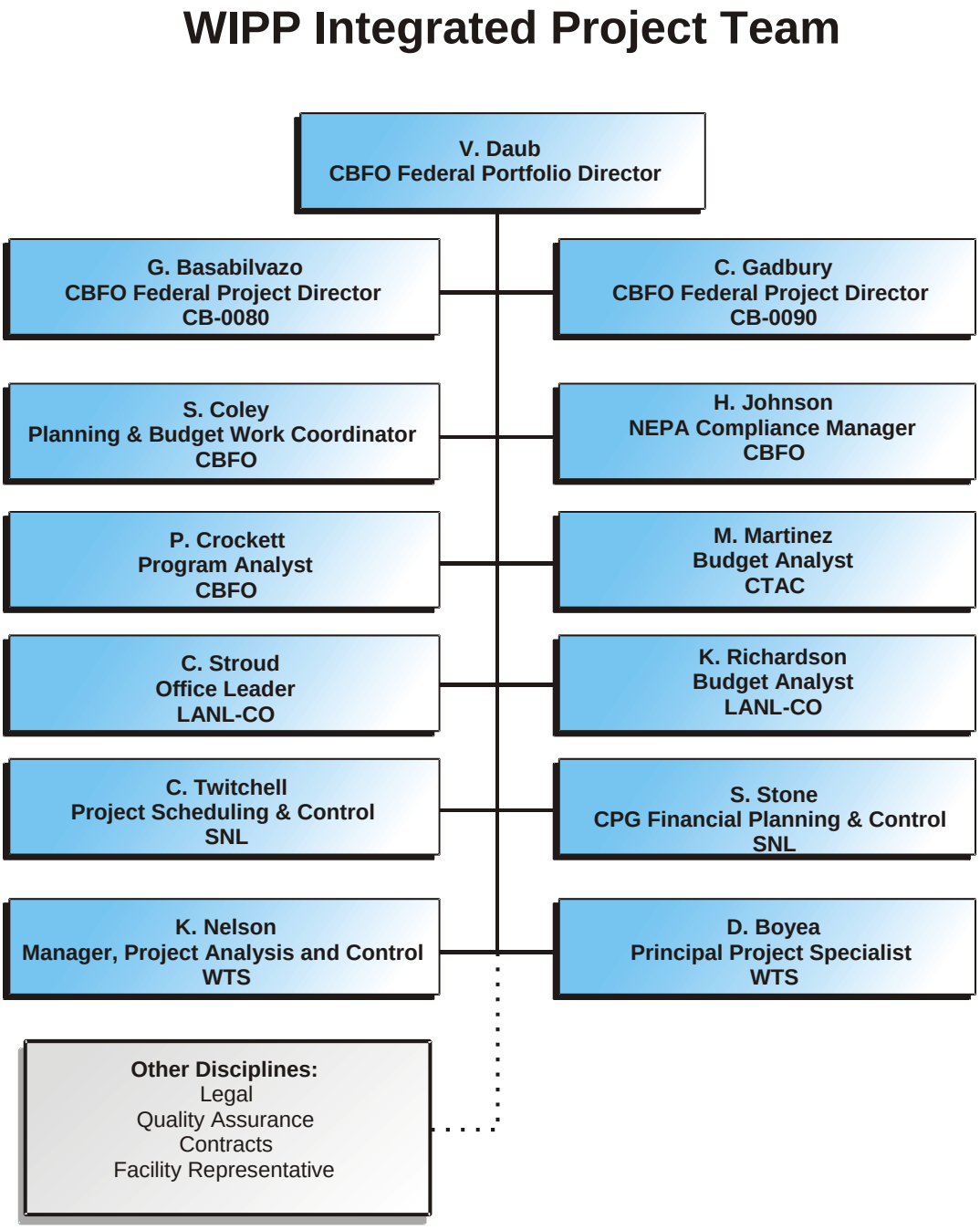

Figure 3. WIPP Integrated Project Team

3.3 Contractor Organizational Structure

Washington TRU Solutions, LLC (WTS), is the M&OC for WIPP and is also responsible for scheduling and coordinating transportation and managing the CCP. Under their contract with the CBFO, WTS is responsible for the integration of the three main functions within the TRU waste program: characterization, transportation, and disposal. Sandia National Laboratories – Carlsbad (SNL) is the scientific advisor for repository recertification for WIPP, Los Alamos National

Laboratory - Carlsbad (LANL) is the scientific advisor for waste characterization, and the CBFO Technical Assistance Contractor (CTAC) provides quality assurance and technical support to CBFO. CBFO also currently has two prime trucking contracts for the transportation of TRU waste to WIPP.

3.4 Interfaces

3.4.1 Interfaces at the Departmental Level

The WIPP Project is the key DOE activity to support the DOE objective of TRU waste cleanup and risk reduction. While the WIPP project resides in DOE EM, it also provides services to other DOE entities with defense TRU waste. EM and the TRU Corporate Board engage these other DOE elements as necessary. For EM, the Principal Deputy Assistant Secretary for Corporate Strategy (EM-2) is responsible for the corporate interfaces of this program. The EM Chief Operating Officer (EM-3) is responsible for the operational oversight and overall site integration and operations for CBFO.

3.4.2 Interfaces Within DOE

Assistant Secretary for Environmental Management (EM-1) is the Acquisition Executive for the WIPP Program.

The Office of Engineering and Construction Management (OECM) reviews DOE's project management structure, attends selected program reviews, conducts independent reviews, and validates the cost, schedule, and technical baseline(s).

Large quantity sites (Hanford, Idaho National Laboratory, Savannah River, Los Alamos National Laboratory, and Oak Ridge National Laboratory) store and/or generate TRU waste and WIPP is the disposition path for their cleanup of TRU waste. The CCP also provides characterization and loading services for several large quantity sites.

Small quantity sites (more than 20) are defined as other sites with defense TRU waste. These sites store and/or generate TRU waste and WIPP is the disposition path for their cleanup of TRU waste. WIPP CCP provides characterization and loading services for the small quantity sites.

The Corporate Board was organized in April 2001 to coordinate the TRU waste system as a single corporate business entity rather than a number of independently managed operations, and to coordinate standardized practices in managing the TRU waste complex, both large and small quantity sites across the nation. The Corporate Board is the principal means of integrating the independently managed DOE sites within the national TRU waste system. The Corporate Board develops recommendations, through consensus, for best practices for economy of scale, standardization, and the appropriate use of mobile/modular systems to minimize costs, optimize transportation logistics, and implement new policies or requirements. The board focuses on near-term issues and longer term risks to effectively use available shipping and disposal resources.

The Corporate Board meets approximately three times each year, with meetings being conducted by videoconference, as appropriate. Meeting agendas include many items such as site shipping

schedules; efforts to optimize characterization, transportation, and disposal activities; strategies to implement standard procedures and equipment; regulatory changes affecting TRU waste, and strategies to assist facilities across the country that have only small quantities of TRU waste. The Corporate Board members:

- Provide ideas, suggestions and solutions for issues and risks that affect the vision, mission, and goals of the WIPP Program
- Recommend priorities for the limited WIPP Program resources (such as shipping packages and mobile/modular systems)
- Examine specific generator/storage site and overall TRU system operating efficiencies in order to develop recommendations for standardization, modular/mobile initiatives, and economies of scale
- Monitor, review, and recommend appropriate performance metrics that arise from changes to the integrated schedule
- Champion and communicate Corporate Board recommendations at individual generator sites

As needed, sites that are currently shipping waste to WIPP may hold teleconferences and meetings to develop proposals for various topics. These meetings may be held in conjunction with Corporate Board meetings or may be separate, and are called by the CBFO Manager.

3.4.3 Interfaces Outside DOE

The LWA (Section 9(a)(1)) establishes the roles and responsibilities of the regulators for WIPP. Details regarding the WIPP regulatory structure are contained in DOE/WIPP 02-2171, *Waste Isolation Pilot Plant Biennial Environmental Compliance Report*, which documents CBFO's compliance with applicable environmental laws and regulations required in LWA Section 9(a)(1). The regulatory framework for WIPP activities such as characterization, transportation, and disposal involves multiple regulatory agencies and oversight organizations. The NMED, EPA, NRC, and the U.S. Department of Transportation (DOT) are the primary agencies that regulate WIPP activities. Additional oversight includes, but is not limited to, the following entities: the U.S. Mine Safety and Health Administration, the New Mexico State Mine Inspection Department, and the Defense Nuclear Facilities Safety Board. Table 1 summarizes the major areas that the various state and federal agencies regulate.

Table 1. State and Federal Agency Areas of Regulatory Responsibility

Licensing/ Permitting Agency	Area of Responsibility
NMED	Resource Conservation and Recovery Act (RCRA) as implemented by the New Mexico Hazardous Waste Act as reflected in the WIPP HWFP (including the Waste Analysis Plan), water discharge, groundwater, air emissions
EPA	TRU radioactive waste disposal, WIPP performance assessment
NRC	Certification of Compliance for TRU Waste NRC Type B transportation packages (HalfPACT, TRUPACT-II, etc.)
DOT	Highway transportation regulations

4.0 PROJECT DEFINITION

This section explains the management processes used to manage the WIPP project, such as PBSs, Life-Cycle Costs, Work Breakdown Structure (WBS), risks, and the technical, cost, and schedule baseline requirements for the two PBSs reported in Project Assessment and Reporting System (PARS).

Funding for the WIPP Baseline is categorized by PBS. Table 2 lists the five PBSs for the CBFO WIPP Project. Two of the PBSs (CB-0080, Operate Waste Disposal Facility-WIPP, and CB-0090, Transportation-WIPP) are in PARS. These two PBSs are listed in the Principal Deputy Secretary for Environmental Management memorandum dated July 10, 2006, subject, Policies for Environmental Management Operating Projects Performance Baseline, Contingency and Federal Risk Management Plans, and Configuration Control. The two PBSs use the CBFO earned value management system and are included in the monthly Deputy Secretary report. PBSs CB-0080 and CB-0090 were the main focus of the External Independent Review (EIR) team's assessment of WIPP. The EIR team focused their review on the two PBSs reported in PARS but also reviewed the other PBSs assigned to CBFO. One of the main points of the EIR team was the recognition that three PBS's (CB-0080, CB0-0081 and CB-0090) are not defined EM cleanup projects. To facilitate effective project management, a single PBS that includes the integrated functions of characterization and certification, transportation, and disposal operations would be a best business practice. CBFO PBSs are subject to acquisition executive approvals and change control thresholds established in the Deputy Secretary memorandum dated October 3, 2005, subject, Delegation of Acquisition Executive Authority for Office of Environmental Management Operating Projects.

Table 2. CBFO WIPP PBSs

PBS TITLE	PBS DESCRIPTION
CB-0080, Operate Waste Disposal Facility-WIPP	This PBS supports all integration and infrastructure activities related to the disposal of TRU waste at the WIPP, including 1) Operation of the WIPP facility; 2) Environmental Compliance of the site; 3) National TRU Waste Management, which coordinates all activities across the DOE complex for shipments of waste to the WIPP; and 4) administrative functions of the M&OC
CB-0090, Transportation-WIPP	This PBS includes all transportation activities required to support the disposal of CH and RH-TRU waste at the WIPP, including carrier services, transportation packaging, shipping coordination, and stakeholder interfaces related to transportation
CB-0020, Safeguards & Security	The Security Program at the WIPP includes, but is not limited to, planning, administering, and executing a program that protects government assets and provides support for emergency response activities
CB-0081, Central Characterization Project-WIPP	This PBS provides labor, materials, and supplies for operation of mobile waste characterization systems that are deployed to DOE generator sites for characterization of TRU waste to be disposed at the WIPP, and for other TRU waste-related services provided to generator sites
CB-0101, Economic Assistance to the State of New Mexico	The WIPP LWA requires payments to the State of New Mexico in the amount of $20,000,000 plus inflation for each of the 14 fiscal years beginning with FY 1998 and running through FY 2011. The purpose of this funding is primarily for road-related improvements related to New Mexico transportation of TRU waste to the WIPP

The PBSs are linked to life-cycle costs, budget request development, building blocks, the WBS, cost and schedule control, monitoring and reporting, and configuration management, as discussed in the following sections.

4.1 Life-Cycle Cost

The WIPP life-cycle, as defined in the LWA, comprises three phases: construction, disposal, and decommissioning. The construction phase began in 1977 and ended in 1998. This phase included construction of the surface and underground facilities.

The disposal phase began in March 1999, with the first receipt of TRU waste at WIPP. The current EM-defined end point for WIPP assumes that all existing defense TRU waste at generator sites, and the TRU waste that will be generated will be disposed of by 2030. Estimates for this phase are based on current disposal expectations and cyclical drivers, including the mining of new panels.

The WIPP decommissioning phase is defined in the LWA as "the period of time beginning with the end of the disposal phase and ending when all shafts at the WIPP repository have been back-filled and sealed." The decommissioning phase is projected to last five years, beginning in 2031 and ending in 2035. When decommissioning and dismantlement are complete, long-term stewardship of the site will be the responsibility of the DOE Office of Legacy Management.

The CBFO life-cycle cost estimates are based on the best data available. Information for the near term is based on detailed cost information from over eight years of disposal operations, planning assumptions, work required to accomplish the assumptions, and cost estimates for completing the identified work. The detailed estimates beyond the planning cycle are developed with less rigidity, because the scope of work in this period has not been defined to the same level of detail. CBFO estimates the WIPP life-cycle based on the mission to characterize, store, transport, and dispose of TRU waste, the associated regulatory drivers, and the EM-defined end point for WIPP.

CBFO defines the project control system employed to manage the current part of the WIPP life-cycle in DOE/WIPP 04-3300, *Waste Isolation Pilot Plant Project Control System Description.*

Baseline Drivers and Planning Assumptions are reviewed yearly to assist in baseline maintenance. Each PBS is broken down into building blocks of related work activities and WBS activities that explain the work being performed at WIPP. Actual costs are used for reporting current and prior years. All cost estimates are typically presented in constant dollars.

CBFO utilizes a building block approach to aid in planning, organizing and prioritizing work scope and in analyzing different planning scenarios. Building blocks categorize work into the groupings shown in Table 3.

Table 3. CBFO PBS Building Blocks

Building Block	Building Block Description
Site Operations (SO)	Includes the elements needed to ensure the WIPP site is in compliance and capable to receive and dispose of waste. Examples of elements include waste handling, mining operations, safety and health, regulatory/environmental compliance, security, WIPP Waste Information System, WIPP site quality assurance (QA) and generator site certification audits (i.e., certification audits not for CCP).
Transportation Operations (TO)	Includes the elements needed to ensure the transportation system is capable of transporting TRU waste from the generator/storage site to WIPP. Examples of elements include

Building Block	Building Block Description
	maintenance of transportation packages/casks, trailers, transportation carrier activities (including inter-site shipments), shipping coordination activities, corridor readiness and state agreements, and transportation-related grants to state governments on the shipping corridors.
Directed Programs (DP)	Includes elements necessary for operations and continuity that CBFO has been directed to fund, or elements CBFO funds directly. Examples of elements include New Mexico Impact Assistance required in the LWA, interagency funding (e.g., Bureau of Land Management, EPA) and grants and/or financial assistance not related to transportation operations (TO).
Reliability Projects (RP)	Includes the elements necessary to maintain the TRU waste throughput capacity over the life of the facility. Examples of elements include critical operations systems maintenance (e.g., exhaust fan replacement), construction activities, capital equipment, alterations and modifications, communications and information technology infrastructure. Reliability projects maintain the existing capabilities of WIPP over the life of the facility. Projects to expand WIPP capabilities are in the capability building block below.
Central Characterization Program (CCP)	Includes the elements needed to ensure the TRU waste characterization systems are functional and the cost of CCP operations attributed to CBFO to provide characterization and related TRU waste services to generator sites. Examples of CCP elements include acceptable knowledge for CCP, characterization activities (e.g., nondestructive examination (NDE), nondestructive assay (NDA), real-time radiography, and headspace gas), mobile loading, and CCP certification audits. CCP generator services support both large and small quantity sites.
Capability Projects (CP)	Includes the elements needed to extend beyond the current capability to transport and dispose of TRU waste at WIPP, such as TRUPACT-III and related trailer fabrication, WIPP facility large box processing station and upgrades, activities/projects that target certain TRU waste presently not shippable, and purchase of additional trailers if necessary. Once a new capability becomes operational, the annual costs become part of the core capability building blocks.
Risk Management/Efficiency Projects (REP)	Includes additional specific discrete projects that will reduce the risks that impede completing WIPP mission objectives (e.g., mitigation of single-point failures with significant operational

Building Block	Building Block Description
	impacts, demonstrating improved repository performance for continued certification and operational efficiency) and capital projects to improve efficiency, quality, and productivity.
Decommissioning and Dismantlement (D&D)	Includes the elements necessary to accomplish the decommissioning and dismantlement of WIPP so that the site can be turned over to DOE Legacy Management. Examples of elements include acquiring additional permits and approvals; conducting site radioactivity characterization surveys; dismantlement and removal of equipment, material and surface and underground structures; decontamination (if necessary) of usable equipment, materials and surface and underground facilities; backfilling and sealing shafts; construction of passive institutional control systems and implementation of active institutional controls (e.g., repository footprint fencing, surveillance monitoring, and ground water monitoring).

4.2 Work Breakdown Structure

The CBFO WBS is a hierarchically tiered framework that organizes work elements into manageable units in order to provide a logical sequence or activities. The work scope described in section 2 is controlled according to the WBS summarized at Level 2 in Table 4.

Table 4. CBFO Work Breakdown Structure

WBS Number Level 1	WBS Number Level 2	WBS Description
1.0 TRU Waste		Resources, activities and infrastructure needed to support characterization, certification, transportation and disposal of TRU waste at WIPP
	1.1 Waste Services	Resources, activities and infrastructure needed to support CCP for characterization and certification, mobile loading, and transportation to WIPP; shipping coordination; corridor readiness; Type B Package and trailer maintenance; and carrier contracts.
	1.2 Disposal Operations	Work activities required to safely conduct waste disposal operations at the WIPP. Includes infrastructure, CH and RH waste handling, mining, regulatory compliance and permits, and security.

WBS Number Level 1	WBS Number Level 2	WBS Description
	1.3 Capability Development and Enhancement Projects	Work activities for the development and/or enhancement of characterization and transportation, such as Type A packaging design and fabrication, and Type B packaging design, fabrication and NRC certification.
	1.4 Program Support	Support activities such as administrative and QA functions not directly related to waste characterization, transportation, and disposal operations.
	1.5 Dismantlement & Decommissioning	Will include the following items: surface decontamination (if needed), underground decommission, surface facility dismantlement, environmental compliance and surveillance and groundwater monitoring.
2.0 Special Initiatives		
	2.1 Underground Science	Activities associated with the WIPP existing facilities and infrastructure in support of scientific research projects that could benefit from the uniqueness of the WIPP underground features; funding for this WBS comes from earmarks.

The details of the WBS structure at Level 4 are shown in Appendix 4. The WBS illustrates the interrelated nature of TRU waste characterization, transportation, and disposal delineated by the current PBSs, and directly reflects the TRU waste cleanup and risk reduction strategy and approach defined earlier in this plan to achieve the program strategic initiatives/objectives and to produce the required deliverables. CBFO reviews the WBS down to the Level 4. CBFO contractors support CBFO programs, projects, and initiatives by performing tasks defined at Levels 5 and below. In this way, all activity is linked to the achievement of project goals and objectives. Each work package and work product in the WBS is assigned a unique identification number to facilitate tracking.

The WBS Dictionary augments the WBS with a set of brief narrative descriptions of the programs and work elements. A Responsibility Assignment Matrix is included in the documentation to delineate the cognizant CBFO personnel and contractor counterparts.

4.3 Baseline

Technical, cost, and schedule baselines were developed for the WIPP in August 2005. The baseline has been updated by change control and was updated after the EIR was conducted in November 2006, and will be included in the Critical Decision (CD)-2/3 package. CBFO has been measuring performance against the August 2005 baseline, as changed. Annual appropriations have not matched baseline funding assumptions and CBFO has done baseline changes each fiscal year as necessary to accommodate the actual funding provided for that fiscal year. Additionally, the

PARS systems measures performance from October 2003 while, in contrast, the baseline was built in August 2005 to funding targets provided in June 2005 that are different from the funding targets of 2003 and 2004. The August 2005 baseline is being maintained in accordance with this PEP and the CBFO change control procedure. The two PBS in PARS, CB-0080 and CB-0090, were the main focus of the EIR team. To facilitate effective project management and baseline implementation, a single PBS that includes the interdependent elements for characterization and certification, transportation, and disposal operations (PBS CB-0080, CB-0090, and CB-0081) has been proposed to EM.

The five year funding profile for CBFO, as defined by EM in June 2007, are as follows: FY2008 = $224,666K, FY2009 = $215,700K, FY2010 = $218,179K; FY2011 = $220,091K; FY2012 = $220,151K. The discussion of PBS CB-0080 and CB-0090 below are a subset of the overall five year funding profile and other sources as footnoted in the tables.

The remaining sections discuss the technical, cost, and schedule baselines for PBSs CB-0080 and CB-0090.

4.3.1 Technical Baseline PBS CB-0080, Operate Waste Disposal Facility - WIPP

This PBS supports integration and infrastructure activities related to the disposal of both CH and RH-TRU waste at WIPP, including 1) operation of the WIPP facility; 2) environmental compliance of the site; and 3) National TRU Waste Management, which coordinates all TRU-related activities across the DOE complex for characterization and shipment of waste to WIPP.

This PBS consists of work activities required to safely conduct waste disposal operations at the WIPP and includes items such as safety and health programs, mining, ground control, hoisting, maintenance, CH and RH-TRU waste handling and disposal, panel closure; facility alterations/modifications, major restoration and construction projects; compliance demonstration to EPA regulations at 40 CFR 191/194 for ongoing compliance, recertification, and change requests; compliance demonstration to the State of New Mexico for RCRA, HWFP, permit renewal, and permit modifications; other Environmental Compliance Programs; and security.

Technical requirements for this PBS baseline are delineated in several documents including, but not limited to, policies, operating procedures, documented safety analysis, technical safety requirements, authorization agreements, and regulatory permits. Technical requirements are flowed down in the contract with other DOE orders and technical standards.

4.3.2 Cost Baseline PBS CB-0080

The Total Project Cost (TPC) performance baseline for this PBS is shown in Table 5. The proposed total project cost baseline estimate is $5,347.1M.

Table 5. WIPP PBS CB-0080 – Operate the WIPP Site – Performance Baseline ($ millions)

PBS CB-0080	FY 97 – 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13 – 35	Total
Cost Baseline	-	133.0	127.0	129.9	134.2	159.9	-	684.0
Available Fee	-	9.1	9.0	6.8	-	-	-	24.9
Performance Baseline (Total Project Cost)	1,676.6	150.8	149.2	148.9	147.7	146.3	2,927.6	5,347.1

Fee reflects only the current contract period of performance.
Costs for FY08 – 35 are escalated.
Total Project Costs includes fee, management reserve and unfunded contingency
Cost baseline for FY08-12 is the Five Year Plan (including fee)
FY 97-07 are actual cost

4.3.3 Schedule Baseline PBS CB-0080

The Level I schedule baseline for PBS CB-0080 is shown in Appendix 2.

4.3.4 Technical Baseline PBS CB-0090

The technical baseline for this PBS includes all transportation activities required to support the transportation of CH and RH-TRU waste to WIPP, including carrier services, transportation packaging, shipping coordination, and state, tribal, and local interfaces related to transportation. The transportation portion of the program includes a fleet of trailers and packages. CBFO has contracts for transportation services with two carriers. The carriers provide the tractors and driver teams, and the government provides the trailers and shipping packages (TRUPACT-IIs and HalfPACTs). For CH-TRU waste, the shipping containers include TRUPACT-IIs, HalfPACTs and eventually TRUPACT-IIIs. For RH-TRU waste, the shipping containers will be primarily RH 72B casks, with some shipments in CNS 10-160B. Activities are ongoing to obtain NRC approval for and subsequently fabricate TRUPACT-IIIs, which will be used to transport large boxes of TRU waste. The large boxes are nominally 5.5 feet by 5.5 feet by 8 feet. If waste contained in these boxes was processed and repackaged to fit into a TRUPACT-II or HalfPACT, costs and the potential for worker exposure would increase. The TRUPACT-III will be of sufficient dimension to transport to WIPP many of the large boxes of CH-TRU waste stored at generator sites across the complex.

4.3.5 Cost Baseline PBS CB-0090

The TPC performance baseline for this PBS is shown in Table 6. The proposed total project cost baseline estimate is $1,035.3M.

Table 6. WIPP PBS CB-0090 Transportation, WIPP – Performance Baseline ($ millions)

PBS CB-0090	FY 97 – 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13 – 35	Total
Cost Baseline	-	27.1	28.2	28.8	31.9	42.5	-	158.5
Performance Baseline (Total Project Cost)	285.3	33.3	35.3	34.9	36.3	37.7	572.5	1,035.3

Costs for FY08 – 35 are escalated.
Total Project Cost includes management reserve and unfunded contingency
Cost baseline for FY08-12 is the Five Year Plan funding targets
FY 97-07 are actual costs

4.3.6 Schedule Baseline PBS CB-0090

The Level 1 schedule baseline for PBS CB-0090 is shown in Appendix 2.

4.4 Project Risk Management

The WIPP risk identification, assessment, mitigation, and monitoring processes are described in DOE/CBFO 03-3292, *CBFO Risk Management Plan* (RMP). The RMP contains a concise description of the strategy and framework considered in the risk management processes, culminating with the Risk Management Assessment. The RMP and Risk Management Assessment enable the early identification of and proactive response to risk items. The goal of the RMP is to develop activities to respond to risks while reducing or eliminating uncertainties. The ultimate goal is to increase probability for project success.

Risk identification, evaluation, mitigation, and management are conducted regularly as part of project management. Risk assessment is formally discussed among the federal and contractor staff during the monthly project status meeting to provide early identification of risk changes and new risks, with emphasis on priorities and potential mitigating actions. WIPP has two PBSs in the PARS, both with related activities and risks. Integrated risk monitoring, evaluation, and mitigation are ongoing efforts.

5.0 PROJECT MANAGEMENT, MEASUREMENT, AND CONTROL

This section describes the project's management systems, controls, and processes. It identifies how technical scope, cost, and schedule baselines are managed and how project performance is measured and reported for the PBSs in PARS. It discusses systems and processes related to identifying resource requirements, baseline maintenance, baseline change control, project reviews, and funds management. The project baseline was identified in section 4.2. The funding profile for the WIPP program (PBSs CB-0090 and CB-0080) is provided in section 5.3.1.

5.1 Change Control

The change control process in place at WIPP, as described in DOE/CBFO 95-1122, *CBFO Programmatic Change Control Process*, is used to maintain a formal and documented processes and controls for changes to technical scope, cost and schedule, as well as work authorization and funds management. The WIPP M&OC has developed and implements a change control process described in WP 15-FC.01, *WTS Baseline Change Control*. The EIR team stated. "…these documents describe a baseline change request process that meets or exceeds the requirements of the "Revisions and Data Management" Criteria 28-32 of ANSI/EIA-748-A-1998."

CBFO established a Change Control Board (CCB) for managing changes to the CBFO program within the CBFO approval authority, and to recommend changes to EM as necessary. The CCB reviews programmatic change requests (PCRs) that exceed approved thresholds, per Attachment 1 of CBFO-95-1122, *CBFO Programmatic Change Control Process*, and recommends that the CBFO Manager approve or reject proposed changes to the program baseline (such as funding, deliverables, milestones, or work scope). Changes exceeding CBFO approval levels are recommended to EM by the CBFO Manager. Based on the CBFO Manager's decisions, the CCB coordinator incorporates changes to the validated baseline and records the changes. The funding profile is forwarded to the CBFO Budget Analyst to reconcile with the Approved Funding Profile (AFP). This information is also passed on to the CBFO contract administrator(s) for issues resolution, as necessary. The process and CCB membership are documented in CBFO-95-1122, *CBFO Programmatic Change Control Process*.

5.2 Change Control Thresholds

The CBFO change approval authorities and thresholds for WIPP (see Table 7) are consistent with DOE O 413.3A, DOE M 413.3-1 and the December 28, 2006, EM-1 Memorandum on Configuration Management and Change Control Process for the Environmental Management Program.

Table 7. Change Control Thresholds

Baseline	Addition/Deletion/Revision	Approval Level		
		SAE	EM-1	CBFO
Scope	A change in scope that affects the site end-state	X		
	Changes to scope that affect operation functions or criteria that define completion at the project endpoint but do not affect mission need		X	
	Changes that do not affect operation functional requirements and do not affect the project endpoint			X
Schedule	1 year or greater increase in the original project completion end date	X		

Baseline	Addition/Deletion/Revision	Approval Level		
		SAE	EM-1	CBFO
	6 to 12 months increase in a project-level schedule milestone date that affects the original project completion end date		X	
	Increases of up to 6 months in a project-level schedule milestone date that affects the original project completion end date			X
Cost	An increase of the lesser of $100M or 25% (cumulative) of the original CD-2 baseline.	X		
	Changes to the PBS funding profile		X	
	Changes within a PBS			X

Notes:
1. DOE M 413.3-1, Table 2-2, "Performance Baseline Change Authority"
2. DOE O 413.3A, Section 5.i, "Baseline Management"

5.3 Funds Management

5.3.1 Authorization

Funding requests are prepared as part of the DOE annual budget request process for inclusion in the Office of Management & Budget and congressional budget submissions. EM develops annual budget guidance for the WIPP program. This guidance is provided to the WIPP site in preparation for the annual budget development and submittal process.

CBFO uses a budget and planning call notice to initiate the annual budget process. The notice contains budget planning assumptions for the annual budget request submittal to EM. CBFO uses the activity-based cost (ABC) management philosophy, critical path method of integrated project scheduling and DOE/WIPP 04-3303, *WIPP Cost Estimating Guide*, along with integrated budgeting and scheduling techniques to prepare annual budget requests. DOE/WIPP-04-3300, *Waste Isolation Pilot Plant, Project Control System Description*, describes the CBFO project control process.

The CBFO budget request process is used for planning and does not change the project baseline. Once an actual fiscal year funding amount for CBFO is determined by EM, a detailed execution approach to effectively utilize the funding is developed. Baseline changes are made as necessary to incorporate the execution plan into the baseline with associated ABC sheets to identify the execution scope and budget. The ABC sheets contain scope and budget for each activity of the execution year and typically for the next two fiscal years. Out-year estimate sheets contain summary-level scope and budget for four years beyond the fiscal years with ABC estimate sheets. Summary planning is done to support program estimates for the balance of this life-cycle baseline.

The resources needed to perform WIPP activities are determined by a sequence of logical steps. The major steps involved in determining resource requirements are to:

- Maintain a list of drivers and planning assumptions

- Maintain a list of the TRU waste inventories at generator/storage sites
- Develop or maintain TRU waste characterization work-off plans as necessary
- Maintain sufficient inventories of characterized TRU waste to effectively utilize available shipping and disposal capacity
- Develop integrated annual transportation schedules to support EM priorities and utilize available capabilities
- Maintain an integrated life-cycle baseline that is consistent with actual fiscal year funding and directed changes from EM
- Maintain cost estimates for the baseline as revised
- Monitor project risks and revise the RMP as necessary on an annual basis

As part of its ongoing budget submittal and planning process, CBFO coordinates inventory information, characterization work-off plans, and transportation schedules with the TRU waste sites. If changes to the baseline drivers and assumptions, inventories, work-off plans, transportation schedules, life-cycle baseline, and/or cost estimates for the scope and schedule arise, they will be managed through the CBFO or Headquarters change control process, as appropriate. The Corporate Board is a liaison between EM, CBFO, and the TRU waste sites, and is important in communicating changes.

As described above, the baseline drivers and assumptions are used to define the resource requirements for the baseline scope, schedule, and cost. If these drivers and assumptions change, a decision will be required whether to modify the baseline scope, schedule, and/or cost. The drivers and assumptions will be re-evaluated annually as part of the budget and execution planning process and decisions on whether to modify the baseline under configuration control will be made in that context.

CBFO issues to each participant a fiscal year execution letter containing the authorized work scope and budget authority. Each participant's management then authorizes the appropriate functional organizations to prepare cost account plans reflecting CBFO's direction, and proceeds with the work scope. These, along with the annual program execution letter from CBFO, serve as the official authorizing documents for work. The objective of work authorization is to ensure CBFO approval of project resource expenditures to accomplish a specified scope. The planning and work authorization process establishes the initial basis, which may subsequently be revised to incorporate changes using CBFO-95-1122, *CBFO Programmatic Change Control Process*.

The project control system employed by CBFO meets the internal needs of CBFO and complies with DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets,* and ANSI/EIA 748-A-1998, *Earned Value Management System (EVMS) Standard*. The system is described in DOE/WIPP 04-3300, *Waste Isolation Pilot Plant Project Control System Description*.

5.4 Monthly Contractor Project Reporting

WTS compiles, prepares, and submits a monthly project status report to CBFO. This monthly report includes the major participants' (WTS, SNL, LANL, CTAC, and CBFO) cost and schedule performance by PBS, building block, and WBS against the August 2005 baseline as revised. The report also presents status of safety performance, accomplishments and risk analysis.

The Earned Value Management System (EVMS) is based in Complex-Wide Integration Tool (CWIT) and is reported from there. CWIT collects and reports status on a monthly basis. The Cost Performance Report provides Budgeted Cost of Work Scheduled (BCWS), Budgeted Cost of Work Performed (BCWP), Actual Cost of Work Performed (ACWP), schedule variance, and cost variance information for the current period, as well as on a cumulative basis for the baseline. Variance analyses are provided for those WBS elements with variances exceeding established thresholds. Estimation at completion of a fiscal year or for longer periods, and variances at completion are also provided.

CBFO uses reports generated from CWIT in monthly status meetings with WIPP program participants. At a minimum, the following items are discussed:

- Accomplishments
- Overall status
- Variance in scope, schedule, and cost
- Earned value performance
- Risks and mitigation actions

The earned value system is compliant with ANSI/EIA-748-A-1998. The OECM certification review and the resulting corrective action plan (CAP) has been completed, and the project is awaiting formal certification from OECM. Variances from the baseline or planned performance are reported in the variance analysis section of the monthly report. A subset of the cost data from this monthly report is provided to CBFO and reported to EM through the Integrated Planning Accounting and Budgeting System (IPABS).

5.5 Project Reviews

Project reviews and communication with participants is important for evaluating and recognizing good performance and in improving undesirable performance. The FPDs conduct periodic reviews of their respective PBSs and the relationship between the PBSs.

5.5.1 Quarterly Project Performance Reviews

EM conducts Quarterly Project Performance Reviews for each fiscal year. CBFO has been presenting quarterly performance for over a year. The format and content has been variable;

however, the focus has been on the data regarding earned value performance, specifically the cost performance index and schedule performance index for the WIPP program. In addition, key milestones, risks, and status for the EIR have been discussed. All CBFO PBS projects received "Green" ratings each month of FY06.

5.5.2 External Independent Review

An EIR is required in DOE M 413.3-1 prior to CD-2/3. The primary purpose of the EIR is to support validation of the Performance Baseline by OECM and to provide an external perspective on the reasonableness that the baseline can be successfully completed.

A memorandum from the Principal Deputy Assistant Secretary for Environmental Management dated July 27, 2005, established the protocol for EM Operations Funded project performance baseline and EIRs. The memorandum established the EIR process for CD-2/3 for the WIPP program, which was categorized into an operations funded cleanup project. An EIR was conducted for the WIPP baseline in November 2006. An EIR final report was provided in January 2007. The EIR final report listed 33 findings and seven major findings. The CAP listed 46 recommendations requiring a response. The EIR team has provided final approval of the CBFO EIR CAP.

5.6 Critical Decisions

WIPP has been in disposal operations since 1999. The decisions and activities related to approve mission need, conceptual design, preliminary design phase, and the approval to start operations were completed prior to the DOE O 413.3 definitions for CDs. Therefore the following bullets represent the current CDs for a project that has begun operations.

- CD-2/3 – Approve Baseline. The goal for completion is 2007.

- CD-4. Project Completion. The performance baseline developed in August 2005 had a project completion date of September 2030. The current projected end of waste disposal operations is September 2030, followed by a D&D period of approximately five years.

5.7 Baseline Cost Contingency

The August 2005 Baseline was developed with the EM guidance in place for operating projects that did not include contingency in the baseline. Based on new subsequent EM guidance, CBFO has conducted a quantitative risk analysis and has determined appropriate cost estimates for Contractor Management Reserve and DOE unfunded contingency. The results of the quantitative risk analysis are included in DOE/CBFO 03-3292, *CBFO Risk Management Plan*.

5.7.1 Contractor Management Reserve

Based on the EM guidance in place when the baseline was developed, the current approach to contractor management reserve is as follows: as the M&OC identifies a positive cost variance (historically 2-3 %), the available funds can be applied as management reserve funding. The current RMP Monte Carlo analysis results for contractor management reserve results in an

approximate gross annual need for $13 million. That number was adjusted downward to $10M to account for historic positive cost performance. CBFO requested the identified contractor management reserve funding in the FY09 budget request submittal. If approved, a baseline change will be made to add the funding to the baseline for an identified management reserve.

5.7.2 DOE Unfunded Contingency

The DOE unfunded contingency estimates for the project PBSs were developed using Monte Carlo analysis in accordance with the RMP, with an 80 percent confidence level.

The estimated unfunded contingency amount identified by the risk quantification not contained in the baseline constitutes the CBFO unfunded contingency. Unfunded contingency as estimated from the Monte Carlo analysis represents about 28 percent of the total life-cycle costs. Additional information is included in DOE/CBFO 03-3292, *CBFO Risk Management Plan*.

6.0 PROJECT MANAGEMENT APPROACH

CBFO is responsible for the National TRU Program, TRU waste transportation to WIPP, and the operation of the WIPP. This is done with the highest emphasis on safety and quality assurance. The project is committed to maintain compliance with all applicable federal, state, and local laws, permits and certifications that govern WIPP activities. The CBFO mission to characterize, certify, transport, and dispose of existing TRU waste and newly generated TRU waste in a safe and compliant manner is transmitted and emphasized to all WIPP project participants. The key mechanisms by which this philosophy is conveyed to participants are by contract documents, DOE and CBFO policies and guidelines, and CBFO senior management reinforcement. WIPP participants are responsible for fully implementing the environment, safety and health requirements. Updates and changes to CBFO contracts are approved by the CBFO Contracting Officer.

6.1 Systems Engineering Approach

The WIPP team embodies a systems engineering approach and implements key activities to ensure effectiveness of this approach. The key areas are implemented through integrated technical planning and baseline control. The design basis for WIPP was and is established to the functional requirements and applicable codes and standards. The system drawings and specifications are under configuration control and are updated as upgrades or improvements are made. Currently, the key item in the systems engineering approach is the optimization of the CH, RH, mining, and maintenance operations to ensure the program operates effectively as designed. This includes preventative maintenance and upgrades or repair/replacements as necessary and ensuring that equipment and systems operate within specifications, and operations are compliant with approved safety documentation and operating permits. This approach allows fulfillment of mission requirements while protecting human health and the environment. Value engineering requirements are part of the M&OC contract.

6.2 Environment, Safety and Health

The WIPP program completed all the National Environmental Policy Act (NEPA) actions and acquired operating permits, regulatory approvals, and safety analysis approvals necessary to begin CH-TRU waste operations in March 1999. Subsequent to that, WIPP acquired the permits, safety analysis approvals and authorization for startup of RH TRU waste operations in January 2007. WIPP maintains an excellent worker safety record. Protection of the environment, the public, and the safety and health of employees is the number one priority for the conduct of operations at the WIPP site. The M&OC for WIPP developed a Worker Safety and Health Plan consistent with 10 CFR 851 Worker Safety and that plan applies to the conduct of WTS activities at WIPP. In addition, the WIPP M&OC prepares interface documents for the central characterization activities conducted at other generator sites. The WIPP M&OC have implemented a process to assure the requirements of 10 CFR 851 are appropriately flowed down to subcontractors performing work at the WIPP M&OC covered sites. The process includes specific clauses for subcontractors to work under the applicable requirements of the WIPP M&OC Worker Safety and Health Plan, as well as work control requirements, safety reviews, occupational medical requirements and others to ensure effective implementation of 10 CFR 851.

The overall WIPP safety program applies to everyone that enters the WIPP Site as they are provided a level of protection in accordance with Voluntary Protection Program STAR status level. The WIPP total recordable case rate is well below the DOE average. In addition, WIPP has the following achievements:

- Certification as the first DOE site to reach "Star" status under the DOE's Voluntary Protection Program (VPP) at "Star" status, which recognizes sites that demonstrate outstanding protection of employee safety and health with excellent worker involvement. That certification has been maintained by WIPP.

- Awarded the VPP "Star of Stars" from DOE at the "Superior Star" level from 2001 through 2005, and at the "Star of Excellence" level in 2006, and maintained the "Star of Excellence" to be received in 2007. Received the VPP Participants Association "Star Among Stars" award at the "Super Star" level from 2002 through 2005, the "Star of Excellence" level in 2006, and the "Super Star" level again in 2007.

- Twenty consecutive years as the State of New Mexico's "Mine Operator of the Year."

6.2.1 Environmental Management

6.2.1.1 NEPA Permitting and Regulatory Compliance

The NEPA requirements for opening and operating WIPP for the permanent disposal of TRU waste were completed and WIPP received the pertinent certifications and permits. The pertinent NEPA and regulatory documents and their dates of approval/issuance are listed below.

- September 1997 - DOE/EIS-0026-S-2, Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement

- May 1998 - EPA certifies that WIPP will comply with the disposal regulations in 40 CFR 191
- October 1999 - NMED grants WIPP the RCRA Hazardous Waste Facility Permit allowing disposal of mixed CH-TRU waste (contains chemical constituents at hazardous levels)
- March 2006 - EPA grants WIPP the first recertification to the radioactive waste disposal standards
- October 2006 - NMED grants WIPP approval for disposal of mixed RH-TRU waste

6.2.2 Safety Management

The WIPP program is operated in accordance with the authorization basis documentation for the hazards associated with the WIPP program. There are currently two approved Technical Safety Requirements documents, one for CH TRU waste and one for RH TRU waste. The WIPP RH and CH TRU waste technical safety requirements define the performance requirements of structures, systems and components, administrative controls and design features to ensure safe operation of WIPP. The two technical safety requirements documents are prepared in accordance with the guidance contained in 10 CFR Part 830, Subpart B, "Safety Basis Requirements". The WIPP RH and CH TRU waste Documented Safety Analysis documents govern activities performed at WIPP associated with receiving, handling and disposing of RH and CH TRU waste. There are currently two approved documented safety analysis documents, one for CH TRU waste and one for RH TRU waste operations:

- DOE/WIPP -95-2065, Waste Isolation Pilot Plant Contact Handled Waste Documented Safety Analysis
- DOE/WIPP-06-3174, Waste Isolation Pilot Plant Remote Handled Documented Safety Analysis.

CBFO has instructed the M&OC to merge the CH and RH-TRU waste documented safety analysis into a single document. The integration of these documents is planned for 2007.

6.2.3 Integrated Safety Management (ISM)

The Integrated Safety Management System (ISMS) is implemented at CBFO through DOE/CBFO 98-2276, *Integrated Safety Management System Description*, and WC 02-EC.0, *Environmental Management System Description*. These two documents provide basic information concerning the implementation of ISM and EM systems. They address activities performed by personnel in the management and operation of WIPP facilities and processes, including repository development, waste disposal, and aspects of the WIPP program that involve activities at Carlsbad, NM, facilities. WIPP program operations that occur at TRU waste generator sites follow the provisions of interface agreements and statements of work under the auspices of the respective DOE sites. CBFO staff provide oversight and guidance for environmental compliance, safety, and health programs, and assess the contractor's performance in accordance with DOE/CBFO 04-3299, *CBFO Contractor Oversight Plan*.

CBFO conducts an annual review of the implementation of the ISMS to verify that the WIPP ISMS is adequately implemented and overseen.

CBFO is dedicated to providing clear leadership that establishes expectations for verifying that work is conducted following the five Integrated Safety Management core functions in a manner consistent with the seven Guiding Principles established in DOE Policy 450.4, Safety Management System Policy. CBFO's role is critical in assuring safety is carried out for activities related to safely disposing of TRU waste at the WIPP site and in coordinating the National TRU Program at waste-generating sites, and with other participants involved in the permanent disposal of TRU waste. CBFO oversees and encourages a strong safety culture at the WIPP site and at other waste-generating sites by the following actions; assigning safety management roles, responsibilities and requirements, coordinating resources and central characterization activities at other sites, coordination of authorization agreements an safety basis, performing assessments, and by performing annual ISM effectiveness revision and providing feedback to federal staff and contractor staff accordingly.

In October 1994, the WIPP M&OC became the first government contractor to receive "Star" status in the DOE's Voluntary Protection Program (VPP). The program recognizes companies that demonstrate outstanding protection of employee safety and health. The contractor was awarded "Star" status again in May 1999 and in October 2002.

In August 2001, and each year since, as a result of its continuing VPP activities, WTS received a "Star of Stars" Award from DOE at the "Superior Star" level. WTS also received the "Star Among Stars" award from the VPP Participants Association in 2002, 2003, 2004, and 2005, each time at the "Super Star" level. WTS received the "Star of Excellence" in 2006 and maintained the "Star of Excellence" level in 2007.

6.2.4 Quality Assurance Management

DOE/CBFO 94-1012, *CBFO Quality Assurance Program Document* (QAPD), describes and establishes the CBFO QA program. The primary commitment document for the development of the QAPD are the EPA-required Nuclear Quality Assurance (NQA)-1 program requirements and DOE O 414.1C, *Quality Assurance*. The QAPD applies to all programs and projects managed by CBFO that require a QA program, including activities related to compliance recertification applications, waste certification, repository performance assessment, waste isolation, waste transportation, nuclear safety, environmental protection, and management and operation of the WIPP facility. The QAPD describes the requirements and applicability of the CBFO QA program for all WIPP participants performing work under the direction of CBFO.

The CBFO QA program is developed and maintained through an ongoing process that applies the QA program criteria in a graded manner. This process provides due consideration to the extent of a graded-approach, regulatory and permit requirements, and the current foreseeable activities expected to be performed under the direction of CBFO. CBFO does compliance audits of the project participants through the CTAC contractor.

6.2.5 Procurement/Acquisition Strategy

6.2.5.1 Alternative Strategies

The CBFO procurement and contracting philosophy is consistent with and supportive of EM strategy. The time span encompassed within the disposal phase of WIPP exceeds the duration of all of the current contracts that CBFO manages. The current types of contracts and their provisions have been determined to be the most appropriate for the continuing CBFO mission of characterizing, transporting, and disposing of TRU waste from the DOE complex. The CBFO mission of TRU waste disposal with an operating facility is expected to remain constant until at least 2030. If there are significant changes to the CBFO mission or the DOE acquisition policy during that period, CBFO will consider appropriate contracting strategies and alternatives.

6.2.5.2 Near Term Procurements

This acquisition strategy addresses the procurements that CBFO faces in the short term, defined as within the next three years. The following tables illustrate the current cooperative agreements/grants for WIPP activities. The acquisition strategy for upcoming financial assistance will be determined from discussions between EM and the CBFO Manager and will be awarded or renewed as required by funding and Congressional direction. The procurements are expected to reflect the approaches listed below.

Table 8. Cooperative Agreements and Grants and Performance Period

Contractor/Business Status	Work Responsibility	Financial Assistance Type	Performance Period
Western Governor's Association	Emergency Response	Cooperative Agreement	07/01/90 – 12/31/09
Southern States Energy Board	Emergency Response	Cooperative Agreement	05/24/93 – 06/30/09
Commercial Vehicle Safety Alliance	Training for Enforcement Officials to conduct inspections of commercial vehicles	Cooperative Agreement	10/01/97 – 09/30/11
Carlsbad Environmental Monitoring and Research Center	Environmental Monitoring	Grant	04/24/91 – 09/30/08
State of New Mexico	Emergency Response	Cooperative Agreement	07/27/88 – 06/30/08
Pueblo of Laguna	Emergency Response	Cooperative Agreement	12/27/00 – 12/26/10
Pueblo of San Ildefonso	Emergency Response	Cooperative Agreement	03/01/05 – 02/28/09
Confederated Tribe of the Umatilla Indian Reservation	Emergency Response	Cooperative Agreement	06/01/01 – 12/31/11
Shoshone-Bannock Tribes	Emergency Response	Cooperative Agreement	06/01/04 – 05/31/09
Pueblo of Acoma	Emergency Response	Cooperative Agreement	05/01/02 – 04/30/12
Pueblo of Nambe	Emergency Response	Cooperative Agreement	01/01/98 – 12/31/11
Navajo Nation	Emergency Response	Cooperative Agreement	03/01/06 – 02/28/11
Pueblo of Pojoaque	Emergency Response	Cooperative Agreement	06/01/01 – 09/30/10
Bureau of Land Management	Services related to management of land withdrawal area	Interagency Agreement	07/01/90 – 09/30/11
National Institute of Standards & Technology	Lab Services	Interagency Agreement	12/01/97 – 12/31/07
U.S. Dept. of Labor/Mine Safety & Health Administration	Mine safety Inspection services	Interagency Agreement	10/01/04 – 09/30/09
NM Dept. of Transportation	Road improvements	Grant	04/30/97 – 04/29/12

Contractor/Business Status	Work Responsibility	Financial Assistance Type	Performance Period
Veterans Affairs	Records storage services	Interagency Agreement	05/01/05 – 09/30/10
New Mexico Environment Dept.	Non-regulatory environmental surveillance of WIPP operations i/a/w Agreement in Principle	Grant	07/01/05 – 06/30/08

Table 9. Cooperative Agreements Funded by Earmarks

AGREEMENTS FUNDED BY EARMARKS			
Contractor/Business Status	**Work Responsibility**	**Financial Assistance Type**	**Performance Period**
City of Carlsbad	Infrastructure improvements, education support, and economic development initiatives	Grant	08/01/03 – 07/31/10
Center of Excellence	Improve protection of worker safety, human health, and the environment	Grant	10/01/05 – 09/30/10
Stanford University	Underground science	Grant	08/15/02 – 08/14/08
Center of Excellence	Hazardous waste issues along the U.S.- Mexico border region	Grant	09/03/04 – 09/30/08

Currently, the Environmental Management Consolidated Business Center (EMCBC) has two transportation contracts; one under full and open competition and the other a small business set-aside. The full and open contract was awarded to CAST Transportation. Contract transition is underway. The small business set-aside is expected to be awarded by the end of FY 2007. These contracts can last for five years after award. A separate acquisition plan for transportation services must be addressed in three and one-half years to assure a timely transition to the subsequent follow-on contract(s). The acquisition strategy for upcoming contract extensions/competitions will be determined from discussions between EM and the CBFO Manager. Acquisition strategies are further identified in the following paragraph. Table 10 illustrates the current contracts for WIPP activities.

Table 10. Current Contracts for WIPP and Performance Periods

Contractor/Business Status	Work Responsibility	Award/ Contract Type	Performance Period
Washington TRU Solutions, LLC	M&O Contractor	Cost Plus Award Fee (100% Performance Based Incentives (PBIs))	12/14/01 – 09/30/10
CTAC – Navarro Research and Engineering Small Business	Technical Assistance to CBFO	GSA Schedule Time and Materials	08/11/05 – 08/10/10
Tri-State Motor Trucking Large Business	Carrier	Competitive/Fixed Price/Indefinite Quantity	08/28/00 – 11/27/07
CAST Transportation Small Business	Carrier	Competitive/Fixed Price/IDIQ	03/14/07 – 03/13/12
Visionary Solutions Small business	Carrier	Competitive SB Set-Aside/Fixed Price/IDIQ	09/27/07 – 09/26/12
Netgain-TRANSCOM Small Business/8(a)	Satellite Tracking of Waste Shipment	8(a) Set-Aside Time and Materials	01/17/06 – 01/16/09
City of Carlsbad	Water-line Service to WIPP Site	Prices set by Statute	06/06/86 – 06/05/11
Sandia National Laboratories-Lockheed Martin	Scientific Advisor to CBFO for Repository Certification	DOE Contract with Lockheed Martin	10/01/93 – 09/30/08
Los Alamos National Laboratory - Los Alamos National Security, LLC	Scientific Advisor to CBFO for Waste Characterization	DOE Contract with LANS	12/21/05 – 09/30/13
Pecos Management	Oversight	Competitive Award by EM-CBC	10/07/05 – 09/30/10

6.2.5.3 Acquisition Strategy and Milestones in the Procurement Process

CBFO has four prime contracts that will be in the acquisition cycle over the next three years: the M&OC contract currently with WTS, the Carlsbad Technical Assistance Contract (CTAC)

currently with Navarro, and the TRANSCOM contract. The current M&O was awarded in 2000 and had a five-year base and five one-year options that were exercised in 2005. A follow-on contract will be required at the end of fiscal year 2010 and is expected to be awarded under a competitive best value approach using Federal Acquisition Regulation (FAR) Part 15.

The Carlsbad Technical Assistance Contractor (CTAC) provides independent technical support for CBFO QA Program audits and assessments required under the WIPP certification granted by EPA. To avoid conflict of interest issues, CTAC must be separate from the other WIPP contractors. CTAC also provides CBFO with independent technical assistance for other CBFO-required activities and oversight. This General Services Administration (GSA) contract was awarded in 2005 as a five-year service task order contract that will also expire in 2010. A follow-on contract is expected to be awarded in accordance with FAR subpart 8.4.

The vehicles transporting nuclear waste shipments, primarily TRU shipments, require satellite tracking for safety, security, and environmental protection. This requirement is fulfilled through the TRANSCOM contract. The current contract, awarded as an 8(a) sole source in January 2006, ends in January 2009. The follow-on contract is expected to be awarded as an 8(a) set-aside in accordance with FAR subpart 19.8.

CBFO requires the services of the scientific advisor for repository certification under Sandia National Laboratories-Lockheed Martin. This work scope is a very small part of the overall prime contract awarded by DOE for managing Sandia National Laboratories. The acquisition is awarded and administered by National Nuclear Security Administration in Albuquerque, NM.

6.2.5.4 Competition and Best Value Approach

CBFO maximizes competition wherever possible using a best value approach while working to comply with small business and socio-economic goals. CBFO requirements are unique and specific knowledge and background are needed, making sealed bids impracticable and awards using the best value approach more viable. Two of the three contracts, the M&O and CTAC, will require award in the short term and will be defined using competition and a best value source selection approach.

6.2.5.5 Small Business Participation

The current M&OC has a Small Business Plan requirement on the contract and is far exceeding its small business goals. The transportation and TRANSCOM contracts were unbundled from the M&OC so that CBFO could contribute to DOE in achieving socio-economic, small business goals placed on the department.

The CTAC contract must be a CBFO prime contract due to regulatory and independence requirements. The TRANSCOM contract has been awarded as an 8(a) sole source set-aside and the transportation contracts have been divided between full and open competition and small business set-aside. No other requirements can be unbundled from the M&O scope of work without significantly impacting performance, cost and schedule risks.

The Government performs a past performance review, including a review of cost control, at the end of each contract year. Based on historical data and a stabilization of requirements, the CBFO currently plan to award the follow-on TRANSCOM contract as an 8(a) non-competitive award using a firm fixed price contract.

6.2.5.6 Incentive Approach/Linkage to Performance Metrics

Where applicable (i.e., the M&O contract), fee incentives will be 100% quantitative and performance based, with emphasis on building structured incentives into the contract for the initial term, rather than periodically throughout the performance period. Cost, schedule, and desired results will drive incentive provisions. Fee amounts can be set for achieving cleanup and waste disposal results and based on the difficulty of the task and consequences of failure, with payments tied to specific achievements. Conversely, conditional payment of fee provisions can be identified and imposed for failure to achieve the desired results, such as failure to perform to contractual requirements, failure to perform to acceptable safety or environmental standards, or for cost or schedule overruns.

The current M&O contract is a cost plus award fee contract with targeted annual funding amounts. If the actual funding varies by 15% in either direction, an adjustment in the fee pool is allowed. The performance based incentives are used to incentivize the M&OC to characterize and dispose of TRU waste, the major requirement of the WIPP mission.

6.2.6 Configuration Management

Configuration management is described here because it is listed as a technical consideration in DOE Order 413.3A *Program and Project Management for the Acquisition of Capital Assets*. The configuration management process ensures that sustainable building design requirements, physical configuration, and facility documentation of the structures, systems, and components at the WIPP facility remain consistent throughout the operational life-cycle phase of the facility (per DOE Order 430.1B, *Real Property Asset Management*). Configuration management determinations for WIPP structures, systems, and components are the responsibility of the M&OC and are conducted in accordance with WP 09-CN3034, *Configuration Management Determination*. New designs or modifications to existing designs require design verification as described in WP 09-CN3018, *Design Verification*. The cost, scope, and scheduling to maintain configuration management is included in the baseline.

6.2.7 Value Engineering

Value engineering requirements have been placed into the WTS contract. WTS has developed a management policy that provides project personnel with management expectations regarding how and when to implement value management and value engineering. In addition, the document establishes a policy for consistently integrating value management/engineering (VM/E) principles in the design and execution of applicable WIPP work activities. WIPP has conducted several projects where VM/E principles were used to identify optimal approaches for an activity.

From the perspective of the DOE TRU waste complex, the Corporate Board provides results that are rooted in VM/E principles. The results of Corporate Board initiatives help optimize the TRU

program by identifying activities that can reduce the total life-cycle costs and/or improve the approaches for conducting TRU waste clean up.

6.2.8 Safeguards and Security

The WIPP Safeguard and Security Program provides security services for WIPP facilities, properties, and programs, and addresses threats identified in security assessments. This scope of work is included in the M&O contract. The WIPP Security Program, described in the WIPP Security Plan, complies with applicable federal requirements, including DOE O 470.1, *Safeguards and Security Program*, and state and local regulations and/or agreements. The cost and schedule for this effort is in the baseline in PBS CB-0020, Safeguards and Security.

7.0 SELECTED REFERENCES

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DOE/CBFO 98-2276, *Integrated Safety Management System Description,* U.S. Department of Energy, Carlsbad Field Office, Carlsbad, NM

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DOE Order 413.3A, Program and Project Management for the Acquisition of Capital Assets, U.S. Department of Energy, Washington, DC

DOE Manual 413.3-1, *Project Management for the Acquisition of Capital Assets,* U.S. Department of Energy, Washington, DC

DOE Order 414.1C, *Quality Assurance,* U.S. Department of Energy, Washington, DC

DOE Order 430.1B, *Real Property Asset Management*, U.S. Department of Energy, Washington, DC

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WP 09-CN3018, *Design Verification,* Washington TRU Solutions LLC, Waste Isolation Pilot Plant

WP 09-CN3034, *Configuration Management Determination,* Washington TRU Solutions LLC, Waste Isolation Pilot Plant

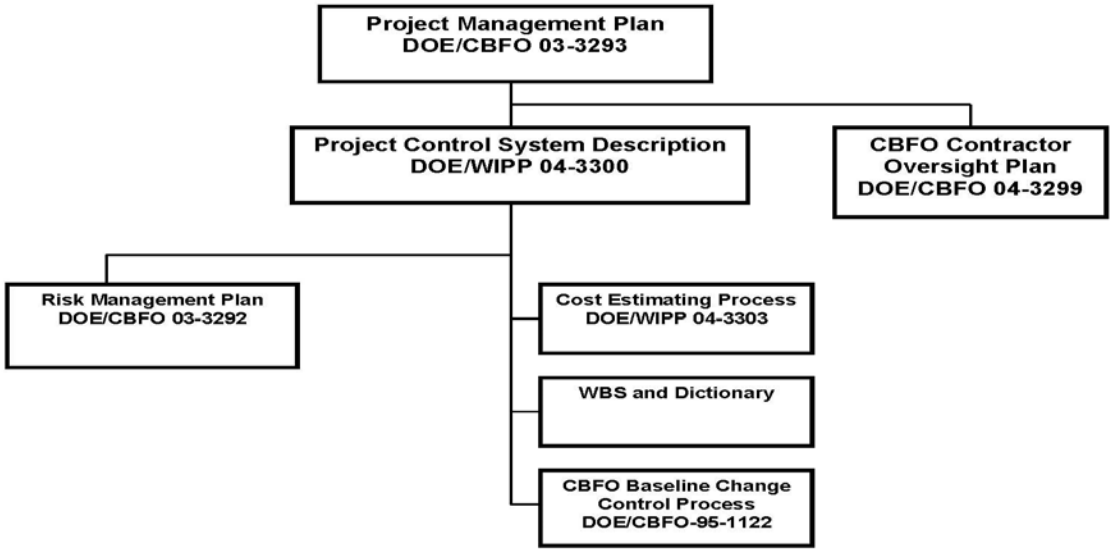
American Society of Mechanical Engineers (ASME), NQA-1 1989 Edition, Quality Assurance Program Requirements for Nuclear Facilities

American Society of Mechanical Engineers (ASME), NQA-2a 1990 addenda to NQA-2 1989, Part 2.7, Requirements of Computer Software for Nuclear Facility Applications

American Society of Mechanical Engineers (ASME), NQA-3 1989 Edition, Quality Assurance Program Requirements for the Collection of Scientific and Technical Information for Site Characterization of High-Level Nuclear Waste Repositories

Appendix 1

Project Management Documents



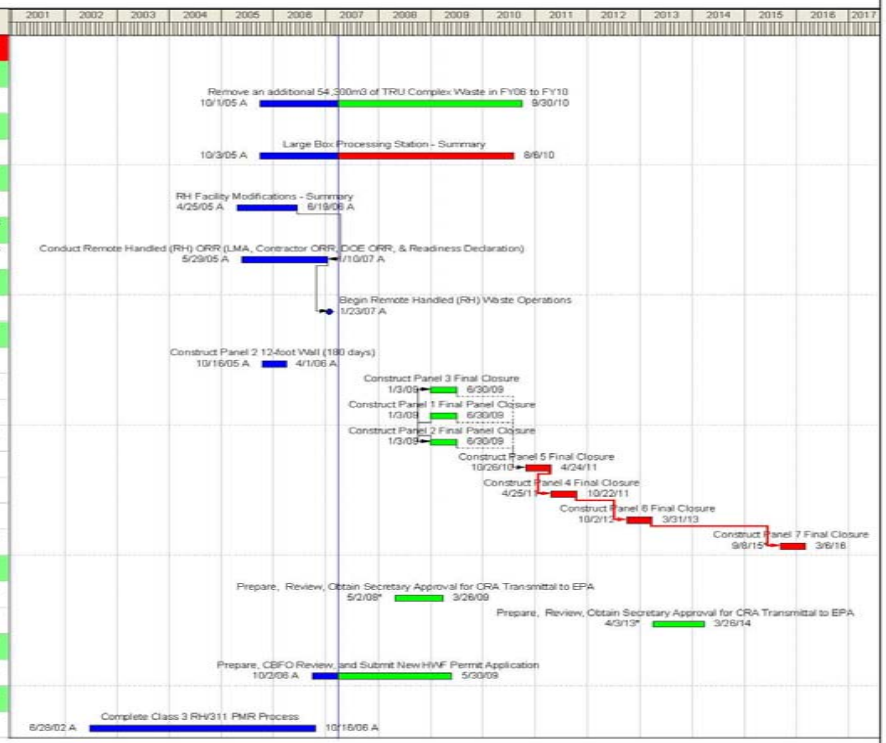
Appendix 2

Level 1 Schedule for PBS CB-0080 and CB-0090

PBS CB-0080 Operate Waste Disposal Facility - WIPP

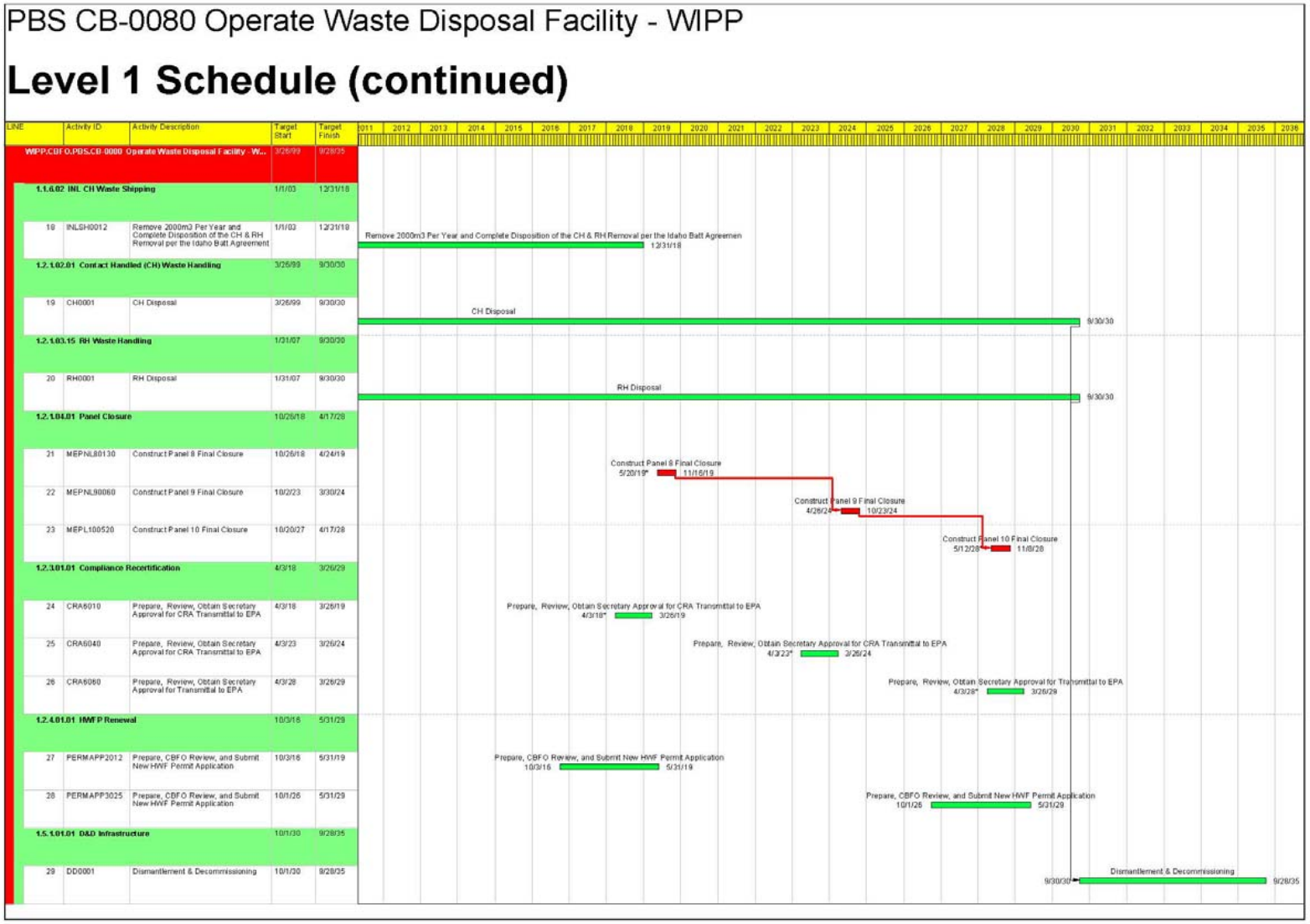
Level 1 Schedule

LINE	Activity ID	Activity Description	Target Start	Target Finish
WIPP.CBFO.PBS.CB-0080 Operate Waste Disposal Facility - WIPP			6/28/02	8/28/15
1.2.1 Waste Disposal			1/27/06	9/30/10
01	MMS0010	Remove an additional 54,300m3 of TRU Complex Waste in FY06 to FY10	1/27/06	9/30/10
1.2.1.02.06 Large Box Processing Station			10/3/05	8/6/10
02	GPPMRC4600.03	Large Box Processing Station - Summary	10/3/05	8/6/10
1.2.1.03.01 RH Waste Handling - Start-up			4/25/05	3/21/06
03	SUMM0010	RH Facility Modifications - Summary	4/25/05	3/21/06
1.2.1.03.08 RH Readiness Review			5/30/05	12/18/06
04	DOWORR1999	Conduct Remote Handled (RH) ORR (LMA, Contractor ORR, DOE ORR, & Readiness Declaration)	5/30/05	12/18/06
1.2.1.03.15 RH Waste Handling			1/31/07	1/31/07
05	RHSHSY0180	Begin Remote Handled (RH) Waste Operations		1/31/07
1.2.1.04.01 Panel Closure			10/16/05	8/28/15
06	MEPNL20250	Construct Panel 2 12-foot Wall (180 days)	10/16/05	3/4/08
07	MEPNL30140	Construct Panel 3 Final Closure	1/23/10	7/23/10
08	MEPNL10965	Construct Panel 1 Final Panel Closure	1/27/09	7/26/09
09	MEPNL20310	Construct Panel 2 Final Panel Closure	7/27/09	1/23/10
10	MEPNL50139	Construct Panel 5 Final Closure	7/6/10	1/15/11
11	MEPNL40139	Construct Panel 4 Final Closure	1/3/11	7/2/11
12	MEPNL80139	Construct Panel 8 Final Closure	8/25/12	1/3/13
13	MEPNL70130	Construct Panel 7 Final Closure	3/1/15	8/25/15
1.2.3.01.01 Compliance Recertification			2/1/08	3/28/14
14	CRA20025	Prepare, Review, Obtain Secretary Approval for CRA Transmittal to EPA	2/1/08	3/28/09
15	CRA5995	Prepare, Review, Obtain Secretary Approval for CRA Transmittal to EPA	4/3/13	3/28/14
1.2.4.01.01 HWFP Renewal			10/2/06	5/30/09
16	PERMAPP0012	Prepare, CBFO Review, and Submit New HWF Permit Application	10/2/06	5/30/09
1.2.4.03.01 RCRA Permit Management			6/28/02	9/22/06
17	RH311MOD0361	Complete Class 3 RH/311 PMR Process	6/28/02	9/22/06



PBS CB-0080 Operate Waste Disposal Facility - WIPP

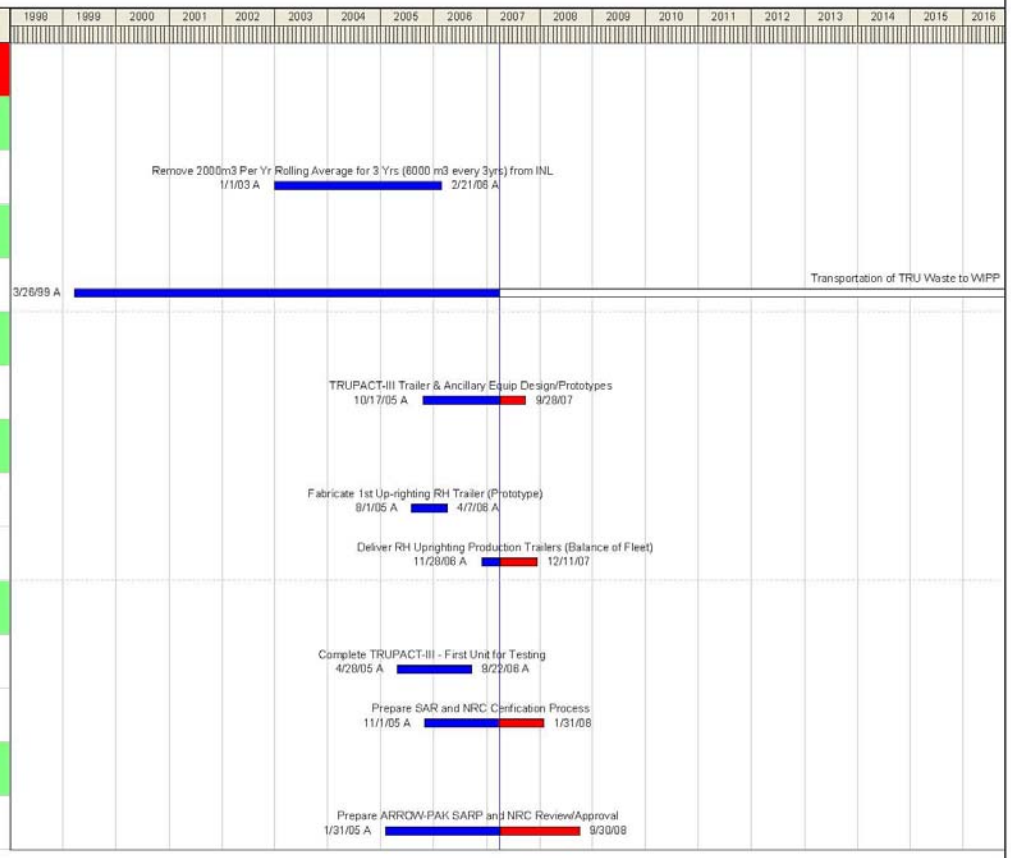
Level 1 Schedule (continued)



PBS CB-0090 Transportation - WIPP

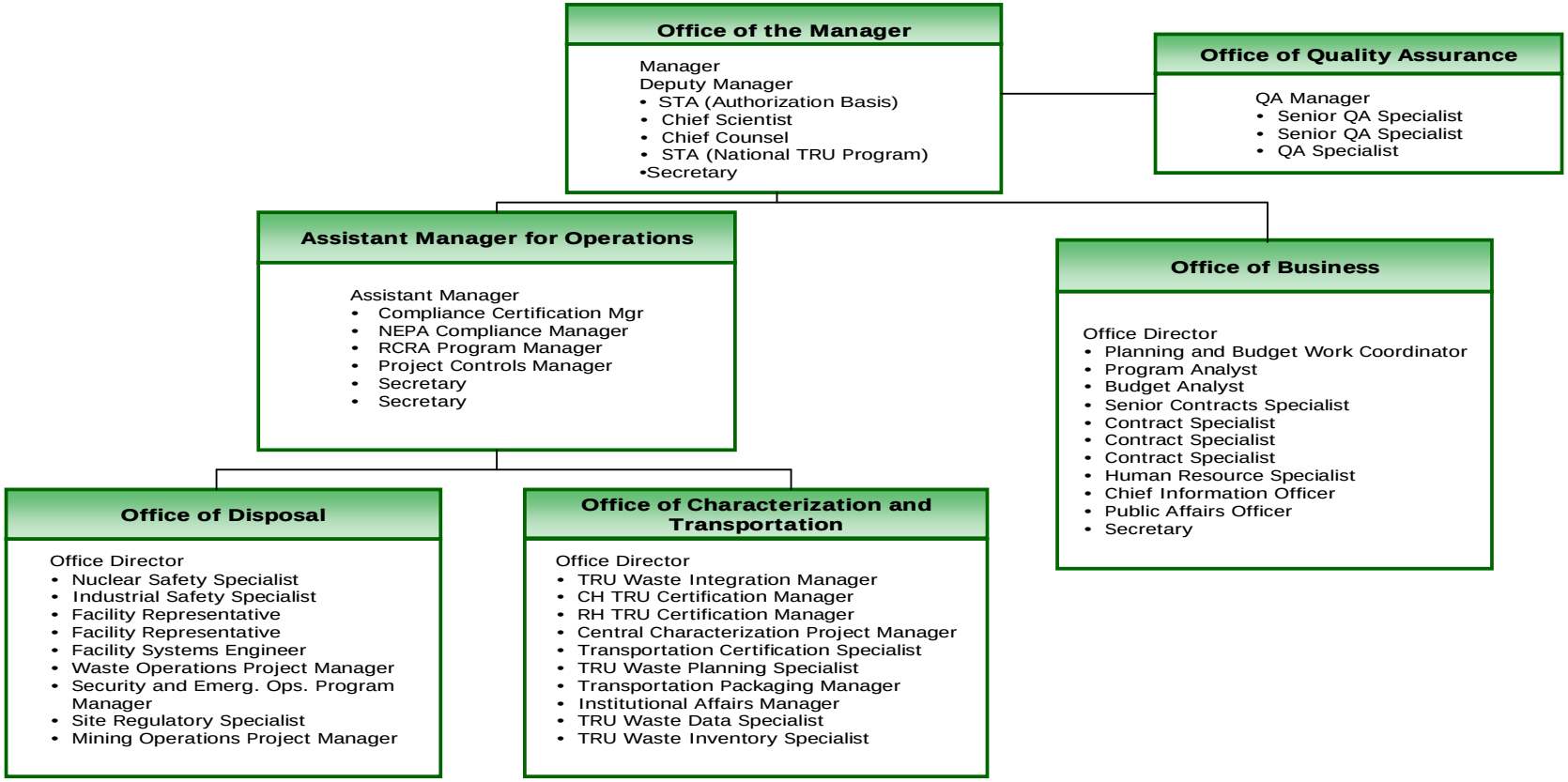
Level 1 Schedule

LINE	Activity ID	Activity Description	Target Start	Target Finish
WIPP.CBFO.PBS.CB-0090		Transportation - WIPP	3/26/99	9/30/30
1.1.6.02.00		INL CH Waste Shipping	1/1/03	12/31/05
01	MDP0020	Remove 2000m3 Per Yr Rolling Average for 3 Yrs (6000 m3 every 3yrs) from INL	1/1/03	12/31/05
1.1.8		Waste Services Support	3/26/99	9/30/30
02	TRAN001	Transportation of TRU Waste to WIPP	3/26/99	9/30/30
1.1.8.01.04		TRUPACT-III Trailers	9/15/05	9/15/08
03	TRLR0380.06	TRUPACT-III Trailer & Ancillary Equip Design/Prototypes	9/15/05	9/15/08
1.1.8.01.07		RH Trailers	8/1/05	8/30/08
04	TRLR0430.05	Fabricate 1st Up-righting RH Trailer (Prototype)	8/1/05	11/30/05
05	TRLR0910.06	Deliver RH Uprighting Production Trailers (Balance of Fleet)	1/17/06	8/30/08
1.3.2.03.01		TRUPACT-III System Design, Fabrication, & ...	4/28/05	6/29/07
06	TRUPIII1221.05	Complete TRUPACT-III - First Unit for Testing	4/28/05	6/21/08
07	TRUPIII1531	Prepare SAR and NRC Cerification Process	11/1/05	6/29/07
1.3.4.06.01		ARROW-PAK SARP	4/7/05	9/30/09
08	ARRPK0200.05	Prepare ARROW-PAK SARP and NRC Review/Approval	4/7/05	9/30/08



Appendix 3

CBFO Organizational Chart



July 26, 2007

Appendix 4

Carlsbad Field Office Work Breakdown Structure