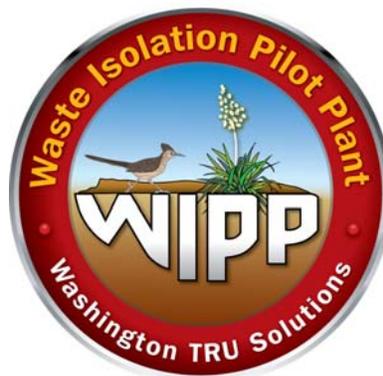


WP 15-3
Revision 1

WTS Program Execution Plan

Cognizant Organization: Project Analysis & Control

Approved by: Pam Hester



**WTS Program Execution Plan
WP 15-3, Rev. 1**

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1.0 INTRODUCTION

This document summarizes critical information and documentation necessary for Washington TRU Solutions LLC (WTS) to manage its work at the Waste Isolation Pilot Plant (WIPP). It reflects the manner in which the program will be managed by WTS under its contract with the U.S. Department of Energy (DOE) for the management and operation of WIPP.

The DOE *CBFO Program Execution Plan* (PEP), DOE/CBFO 03-3293, describes the mission of the Carlsbad Field Office (CBFO), the role of WIPP, the planning and baseline development used to meet mission objectives, and the division of roles and responsibilities between DOE Headquarters (HQ) and the CBFO. The PEP is the top tier of the CBFO program management document hierarchy (Appendix 1) and describes in general terms the way CBFO manages its programs. The purpose of this PEP is to ensure that the services furnished by WTS fully satisfy the CBFO requirements.

Several factors were considered in the development of the PEP. They include DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*; DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*; and the Project Execution Management Program for the Washington Division of URS, as well as industry best practices. Another factor considered was how to apply the aforementioned order and guidance to the WIPP program. By definition of the order, WIPP is no longer considered a project, but rather, an operation. WTS management is committed to ensuring that program objectives are met through a "tailored" approach to implementing appropriate program management controls consistent with DOE O 413.3A and the Project Execution Management Program.

2.0 MISSION REQUIREMENTS

According to the authorization, the Defense Authorization Act of 1979 (Public Law [P.L.] 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) transuranic (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 mission of WTS is to characterize, transport, and dispose of TRU waste in a safe, cost-effective, and timely manner.

3.0 PROJECT DESCRIPTION

The WIPP site is built on a 10,240-acre parcel (16 square miles) of land set aside by the Waste Isolation Pilot Plant Land Withdrawal Act (LWA) (P.L. 102-579). The WIPP facility is 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. The surface structures are located in an area of approximately 34 acres within a perimeter security fence. Four vertical shafts

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 four shafts are the waste shaft, the salt handling shaft, the exhaust shaft, and the air intake shaft. The underground structures consist of the waste disposal, construction, and northern experimental areas.

3.1 Scope

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

The CBFO is responsible for activities related to characterization and certification of TRU waste at generator and interim storage sites, TRU waste transportation, packaging and container development and permanent disposal of TRU wastes at WIPP. The scope for the operations at the WIPP site has been incorporated into the management and operating (M&O) contract at the CBFO. In 2001, WTS was selected as the management and operating contractor for the WIPP site and in 2005 the contract was extended for the five-year option.

The CBFO is responsible for administration of the contract. The DOE Assistant Secretary for Environmental Management (EM) provides program direction to the CBFO. WTS is responsible for operations at the WIPP and for integration and disposal of legacy defense TRU waste for the National Transuranic Waste Program. WTS participates in a coordinated approach to retrieval, characterization, transportation, and disposal activities at the associated generator sites throughout the DOE Complex.

3.2 Objectives

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

3.2.1 Programmatic Objectives

The key programmatic objectives are as follows:

Support the EM TRU waste cleanup 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 program management best practices to maintain scope schedule and cost focused on safe and compliant TRU waste cleanup and risk reduction.

3.2.2 Technical Objectives

The key technical objectives are as follows:

- Characterize, transport, and dispose of TRU waste at the WIPP site according to the funding profile.
- Provide transportation and disposal capability for the TRU waste complex that is commensurate with funding profile.
- Deliver Central Characterization Project (CCP) resources to TRU waste sites, which provides a cost-effective approach for characterizing and loading TRU waste for permanent disposal at WIPP.

3.2.3 Cost Objectives

Cost objectives include the following:

- Implement sound program 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.

3.2.4 Schedule Objectives

Dispose of 54,000 cubic meters of TRU waste from the DOE Complex in the period of fiscal year (FY) 2006 to FY 2010.

3.3 Process Description

The WIPP process actually begins at sites that store and/or generate TRU waste. The WIPP program is responsible for or involved in many of the TRU waste functions across the DOE Complex (Figure 1). Sites that ship TRU waste to WIPP must have their wastes' physical, chemical, and radiological properties characterized to show they meet the WIPP waste acceptance criteria. Some TRU waste sites do not have the facilities to characterize or load TRU wastes for shipment to WIPP. To assist the national TRU waste cleanup efforts, WIPP established the CCP with trained teams of specialists and mobile equipment that can be deployed where needed to characterize and/or perform confirmation and load waste in a safe and cost-effective manner.

TRU waste is transported in U.S. Nuclear Regulatory Commission (NRC)-certified Type B shipping packages. Currently, CH-TRU waste is shipped in TRUPACT-IIs and HalfPACTs. RH-TRU waste is shipped in RH-72B casks. Shipments of RH-TRU waste

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can also be transported in CNS 10-160B casks. Transportation shipments are monitored at all times while in route to the WIPP site.

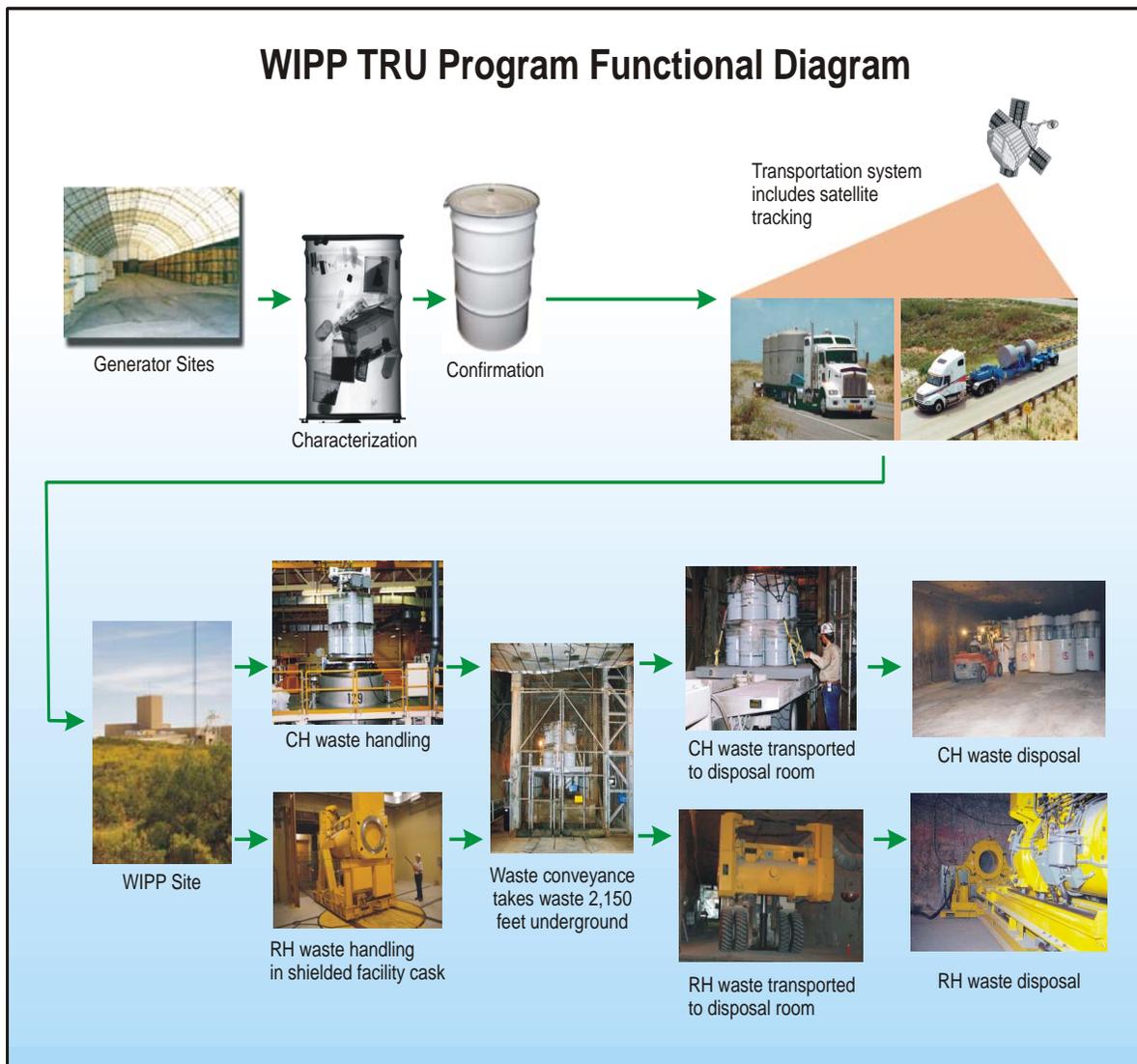


Figure 1 - WIPP TRU Program Functional Diagram

At the WIPP site, the 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 both CH-TRU and RH-TRU waste handling areas to support surface waste processing activities. Payload containers are removed from the shipping packages and are screened to verify that the containers do not have any contamination. 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 a panel that is subdivided into seven disposal rooms. Disposal rooms in a panel have nominal dimensions of 13 feet high, 33 feet wide, and 300 feet long. Currently, RH-TRU waste is disposed in an RH-TRU waste disposal canister in the walls of a disposal room in horizontally drilled boreholes. The

typical process for RH-TRU waste disposal is RH-TRU waste disposal operations will be performed one or more rooms ahead of CH-TRU waste disposal operations. After RH-TRU waste is emplaced in the walls of a disposal room, CH-TRU waste will be disposed in that room in vertical columns that are nominally three stacks high.

4.0 PROJECT ORGANIZATION, ROLES, AND RESPONSIBILITIES

4.1 WTS Organizational Structure

WTS is composed of the following offices:

- Office of the General Manager
- Business Management
- Site Operations & Disposal
- Engineering
- Retrieval, Characterization & Transportation
- Regulatory Compliance
- Safety & Health
- Quality Assurance

4.2 Interfaces

The CBFO is responsible for the mission of WIPP. It supports mission execution through planning, project management oversight and contract management, technical support, monitoring, operational surveillances, and audits. Federal staff responsibilities and authorities are defined in DOE/WIPP 98-2287, *Safety Management Functions, Responsibilities, and Authorities Manual*.

Sandia National Laboratories (SNL) is the scientific advisor for repository recertification for the WIPP.

Los Alamos National Laboratory (LANL) is the scientific advisor for waste characterization.

The CBFO Technical Assistance Contractor (CTAC) provides technical and quality assurance support to the CBFO.

Sites with a Large Quantity of TRU Waste: Hanford, Idaho National Laboratory, Savannah River Site, LANL, and Oak Ridge National Laboratory. These sites store and/or generate TRU waste and WIPP is the disposition path for cleanup of their TRU waste. The WIPP CCP provides characterization and loading services for several large-quantity sites.

Sites with Small Quantities of TRU Waste: These sites store and/or generate TRU waste and WIPP is the disposition path for cleanup of their TRU waste. The WIPP CCP provides characterization and loading services for the small-quantity sites.

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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 the CBFO, its contractors, HQ, the Corporate Board, and the generator sites. As indicated in the organizational structure, contractors to the CBFO have specific roles and responsibilities for ensuring the success of WIPP operations.

Organizational Structure

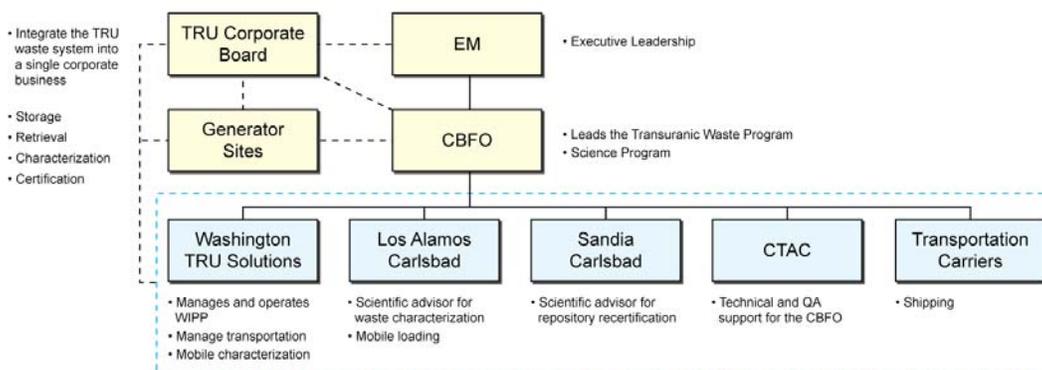


Figure 2 - WIPP Organizational Structure

The regulatory framework for WIPP activities such as characterization, transportation, and disposal involves multiple regulatory agencies and oversight organizations. In addition to the DOE, the New Mexico Environment Department (NMED), the U.S. Environmental Protection Agency (EPA), the NRC, and the U.S. Department of Transportation (DOT) are the primary agencies that regulate WIPP activities. Additional oversight includes, but are 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 as implemented by the New Mexico Hazardous Waste Act and reflected in the WIPP Hazardous Waste Facility Permit (including the Waste Analysis Plan). Permits WIPP as a TSD facility.
EPA	TRU radioactive waste disposal, repository certification, and effluent and environmental monitoring program requirements
NRC	Certification of Compliance for TRU Waste transportation packages (HalfPACT, TRUPACT-II, etc.)
DOT	Transportation regulations

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5.0 PROJECT DEFINITION

This section explains the management processes that are used to manage the WIPP program. Discussed within this section are the Project Baseline Summaries (PBSs), Life-Cycle Costs, Work Breakdown Structure (WBS), risks and the technical, cost, and schedule baseline requirements.

Funding for WIPP is categorized by PBSs. Table 2 lists the five PBSs for the CBFO WIPP Program. These PBSs are used for reporting progress and costs to HQ.

Table 2 - CBFO WIPP Project Baseline Summaries

PBS Title	PBS Description
CB-0080 Operate Waste Disposal Facility-WIPP	This PBS supports all integration and infrastructure activities related to the safe disposal of TRU waste at WIPP, including (1) safe operation of the WIPP facility, (2) environmental compliance of the site and vicinity, (3) LWA compliance and (4) National TRU Waste Management, which coordinates all activities across the DOE Complex for shipments of waste to WIPP.
CB-0090 Transportation-WIPP	This PBS includes all transportation and route preparedness activities required to support the disposal of both CH and RH TRU waste at WIPP, including carrier services, transportation packaging, shipping coordination, and stakeholder interfaces related to transportation
CB-0020 Safeguards & Security	The Security Program at 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 a mobile waste characterization system that is deployed to DOE generator sites for characterization of TRU waste to be disposed at WIPP.
CB-0101 Economic Assistance to the State of New Mexico	The LWA authorizes payments to the state of New Mexico. The purpose of this funding is for road improvements and community support in connection with WIPP.

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

5.1 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. Current planning assumes that all defense-generated TRU waste that currently exists at TRU waste sites and the TRU waste that will be generated during the decontamination and decommissioning of nuclear weapons facilities 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 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 backfilled and sealed." The decommissioning phase is projected to last five years.

The CBFO life-cycle cost estimates are based on the best data available. Information for the near term is based on detailed 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. The WIPP life-cycle estimates are based on the mission to characterize, store, transport, and safely dispose of TRU waste, and the associated regulatory drivers.

Detailed drivers and planning assumptions are reviewed yearly to assist in baseline maintenance. Each PBS is broken down into building blocks and WBS activities that explain the work being performed at WIPP. Actual costs are used for reporting of current and prior years. All cost estimates are presented in constant/burdened and current year dollars.

The CBFO uses 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	This building block includes the elements needed to ensure that the WIPP site is in regulatory and contract 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, and generator site non-CCP-related certification audits.

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Table 3 - CBFO PBS Building Blocks

Building Block	Building Block Description
Transportation Operations	This building block includes the elements needed to ensure that the transportation system is capable of safely transporting TRU waste from the generator/storage sites to WIPP. Examples of elements includes 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	This building block 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 assistances not related to transportation operations.
Reliability Projects	This building block 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, mine and shaft repair) 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	This building block includes the elements needed to ensure that the TRU waste characterization systems are functional. 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	This building block includes the elements needed to extend beyond the current capability to transport and dispose of TRU waste at WIPP. Examples of elements include TRUPACT-III fabrication (and carrier activities), WIPP facility large box processing station and upgrades, lead-lined waste containers, and large container NDA/NDE, activities/projects that target certain TRU wastes presently not shippable, and purchase of additional trailers as needed. Once a new capability becomes operational, the annual costs become part of the core capability building blocks.

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Table 3 - CBFO PBS Building Blocks

Building Block	Building Block Description
Risk Management/ Efficiency Projects	This building block includes specific discrete projects that will reduce the risks that impede completing WIPP mission objectives (e.g., mitigation of single point failures with significant operational impacts, demonstrating improved repository performance for continued certification and operational efficiency) and capital projects to improve efficiency, quality, and productivity.
Dismantlement and Decommissioning (D&D)	This building block includes the elements necessary to accomplish the D&D of WIPP. Examples of elements include acquiring additional permits and approvals for D&D; conducting site radioactivity characterization surveys; dismantlement and removal of equipment, material, surface structures 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 groundwater monitoring); and installation of permanent markers.

5.2 Work Breakdown Structure

WTS uses hierarchical coding structures to define all authorized contract work at the appropriate level needed for management oversight and control. The WIPP WBS is a product-oriented integration tool used as the common project reference point for planning, budgeting, estimating, work authorization, cost accumulation, and performance reporting, and is comprised of end products, support, services, facilities, and any other effort required to accomplish the goals of the CBFO. The WBS graphically displays elements representing work to be accomplished in logical relationships.

Each descending level represents an increasingly detailed definition of a WBS component. Additionally, each level provides a common framework for identifying and authorizing work, establishing schedules and assigning resources, collecting of costs, and measuring cost and schedule performance. The WBS is cross-linked to an Organizational Breakdown Structure to develop a Responsibility Assignment Matrix that aligns the scope with skilled personnel assigned from different organizations. Project resources are then linked and traceable to the scope and the responsible organizations both vertically and horizontally throughout the entire WBS structure.

Initially CBFO develops the WBS at summary levels down to Level 4 (see Appendix 2, CBFO Work Breakdown Structure). The CBFO oversees and approves the overall project/program WBS whose summary elements will become the basis for WTS to extend the summary WBS to levels appropriate to identify the work to be accomplished

and for management control purposes. The resulting WBS possesses the following characteristics:

- All contract work is included in the WBS.
- The WBS identifies all authorized work.
- It permits and facilitates the further detailing of each lowest level WBS element into cost accounts and work packages to be assigned to performing departments.
- It is the framework for the integration of work scope, related budgets, and schedules.
- It provides for the summarization and reporting of actual data and facilitates measuring performance against planned work, budgets, and schedules at lower levels.
- Only one overall WBS is established and authorized for execution of the contract.

Changes to the approved WBS are authorized through the Programmatic Change Control Process prior to implementation. These changes are submitted for approval to the CBFO with an explanation for the requested change(s) as well as an assessment of the impact that the change may have on other WBS elements.

In conjunction with the WBS, the CBFO has prepared a WBS Dictionary which further defines the WBS elements down to Level 4. The dictionary is a narrative summary description of each WBS element describing the scope to be accomplished. While the WBS may be the table of contents for the project, the WBS Dictionary is the book itself – telling what work will be accomplished. Activity based cost (ABC) estimate sheets are used to define work scope below Level 4.

5.3 Baseline

The integrated baseline enables control and measurement of progress and performance throughout the project life. The baseline is derived from the initial definition of scope requirements, milestones and schedules, development of cost estimates, budgeting, and work authorization processes. Performance is measured against the project baseline, and variations from the baseline are analyzed, reported, and controlled during the life of the project. The project management baseline components include scope, schedule, and cost.

Scope The scope component contains significant project technical goals and characteristics.

- (Technical)** The WTS Contract supported by the Contract Statement of Work and other defining documentation, identifies the actual approved scope for the entire contract period.
- Schedule** The schedule component consists of controlled and agreed milestones contained in the CBFO Project Master Milestone Schedule. The detailed Integrated Project Working Schedules are the level where the critical path method (CPM) of control establishes the durations, sequences, and interdependencies of project activities for accomplishing the project milestones. Only changes authorized in accordance with the Programmatic Change Control process are incorporated into the schedule baseline.
- Cost Baseline** The cost component establishes the estimated cost of executing the project in accordance with the scope and schedule components. Authorized scope and funding levels, contained in the fiscal year program execution letter from the CBFO, plus approved changes, form the cost baseline. When the authorized funds are time phased in accordance with the detailed working schedules, the performance measurement baseline (PMB) is formed. The PMB is the baseline against which the earned value management system (EVMS) calculates progress and performance.

5.4 Project Risk

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 approach 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, identified risks. 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 program success.

WP 15-GM.01, WTS Project Execution Plans, establishes WTS guidance for addressing risk at the individual project level.

Each manager identifies and assesses project risk associated with his/her particular scope. Once risks have been identified, the manager categorizes them by probability and severity (consequences). In conjunction with the project team, a risk management approach is developed. Mitigation actions are identified in the Risk Management Assessment. In order to determine the effectiveness of the Risk Management Assessment, the areas of medium and high risk are monitored and the status of significant changes is discussed during monthly project meetings. For low-risk elements not judged to require documented mitigation actions, managers assure that they are controlled through the normal management functions and work processes. Periodic reassessments of projects are performed to determine if new areas of risk need to be identified and assessed.

6.0 PROJECT MANAGEMENT, MEASUREMENT, AND CONTROL

The *WIPP Project Control System Description*, DOE/WIPP-04-3300, describes the project control system employed by the CBFO for activities associated with WIPP. WP 15-2, *Washington TRU Solutions LLC Management Control System Description*, describes the management control system (MCS) employed by WTS to meet the requirements as specified by the CBFO. The system meets the internal needs of WTS and the CBFO, and complies with DOE O 413.3A; DOE M 413.3-1; and American National Standards Institute/Environmental Industry Associations (ANSI/EIA) 48-A-1998, *Earned Value Management Systems*, which is the industry standard for management.

6.1 Planning and Work Authorization

6.1.1 Planning

Project planning at WIPP takes place in three phases; the life-cycle baseline planning and review, the annual EM budget submittal planning, and the near-term planning that takes place prior to the start of the execution year, when funding is received, that is necessary to update the performance baseline. The planning process at WIPP, as described in WP 15-2, is a systematic process that includes the development, revision, approval, and integration of the activity plans with budget formulation, budget execution, and life-cycle forecasting. The WTS contract with the CBFO is the controlling document for all WTS activities.

6.1.2 Scheduling

The WTS scheduling system, as described in WP 15-2, provides for the development and maintenance of schedules that support the WIPP mission. The system is a formal, complete, and consistent system with the attributes identified in DOE M 413.3-1. It employs the CPM scheduling technique to calculate project schedules and is capable of providing current status and forecasts for completion of all discrete authorized work activities. The scheduling system contains a summary and master schedule and related subordinate schedules that provide a logical sequence from the Project Master Milestone Schedule to the Integrated Project Working Schedules. The detailed working schedules are used to status and update summary level schedules. All scheduling information is contained in the Complex-Wide Integration Tool.

6.1.3 Estimating

The estimating process requires planning, discipline and interfacing with numerous functional departments and Project Team members. The estimate, associated scope of work, and execution strategy, once approved, establishes the expectations of achievement by the CBFO.

The estimate, time-phased with the schedule, becomes an integral component of the PMB, which is the basis for implementing the EVMS.

Developing the estimate details requires defining the control accounts, work packages, and tasks within the project WBS. The body of the estimate is assembled by addressing such items as labor, materials, subcontracts, and indirect costs.

Estimates are developed in accordance with guidance provided by the *WIPP Cost Estimating Guide*, DOE/WIPP 04-3303. The guide defines the elements of a cost estimate package and guides preparers through a systematic process that will result in a well-structured, accurate, and complete estimate.

6.1.4 Work Authorization

Because WIPP is an operating facility, and funding is provided on an annual basis, the work authorization process is based on annual funding provisions. The process of authorizing the specific project scope to the responsible organizations begins when the WTS General Manager receives the appropriate authorization and strategy or assumption documents from the CBFO. The General Manager issues a formal authorization document to the cost account managers (CAMs), empowering them to develop control account plans (CAPs). Authorization to begin work against the CAP is provided by the General Manager, or designee. Once execution begins, a resolved programmatic change request serves as the authorizing document for any changes to the execution of the CAP scope.

6.1.5 Budgeting

The budgeting process establishes the time phased scope and budget against which cost and schedule performance is measured. Following the authorization to proceed, and using the ABC estimating sheets developed during the planning process, CAMs perform a detailed analysis of the individual activities required to perform the overall control account scope and assign required resources to complete these activities. This information is used to resource load the detailed working schedules, producing CAPs that result in time-phased budgets that are summarized to various levels of the WBS and functional organizations to provide a performance plan against which work accomplished can be measured. At the WTS level, the performance plans are summarized from the control accounts to produce the WTS PMB. Ongoing performance is quantitatively measured against the PMB to provide indicators of project cost and schedule performance.

6.1.6 Performance Measurement

WTS has implemented an EVMS, in compliance with ANSI/EIA 748-A-1998, as the method used for measuring all project performance. This is the evaluation and feedback loop of the MCS. EV measurement is used to evaluate performance for all activities. Meaningful performance metrics enable better management insight, control, and decision making. Therefore, this objective measurement of work accomplished yields an accurate performance assessment.

6.1.7 Change Control

The change control process in place at WIPP is used to maintain a formal and documented process for changes to approved technical scope, cost and schedule. The change control process for WIPP is described in DOE/CBFO-95-1122, *Carlsbad Field Office Programmatic Change Control Process*, and is further described in WP 15-FC.01, WTS Programmatic Change Control Process. WP 15-FC.01 describes the process for adjustments to the life-cycle baseline, current year work scope, resource requirements, schedule milestones, and the WBS. The process applies to budgetary and programmatic changes to the baseline. Any resulting contractual changes must be made by the cognizant DOE Contracting Officer through a formal contract modification.

6.2 Monthly Contractor Reporting

Communication of project information and status is key to the successful management of the project. The routine internal communication tools used by WTS are the monthly progress status report and monthly progress review meeting. The progress report provides the requisite earned value data for measuring cost, schedule activity performance, completion of performance indicators, variance analysis, and major milestone status. The progress review meeting is used to convey project status and discuss variance corrective actions and other issues required to be resolved in order to meet the project performance objectives.

WTS compiles, prepares and submits a monthly report to the CBFO. This monthly report includes the major participants' (WTS, SNL, LANL, and CTAC) cost and schedule performance by PBS, building block and WBS. The report also presents a status on milestones, safety performance, accomplishments and risk analysis. The CBFO uses the report in monthly status meetings with WIPP program participants. Performance is reviewed against baseline cost, schedule and earned value plans. Safety performance, variance analysis, emerging risks, and mitigating actions are also discussed.

WTS also prepares a WTS monthly report at a detailed functional level and conducts a monthly meeting to internally discuss variances, risks and mitigating actions.

7.0 VALUE MANAGEMENT

Value management is an organized effort directed at analyzing the functions of systems, facilities, services, and supplies for achieving the essential functions at the lowest life-cycle cost consistent with the required performance, quality, reliability, and safety. Value management encompasses value engineering.

Value engineering is a planned, detailed review/evaluation of a project to identify alternative approaches to providing the needed assets.

A value management/engineering process is used that examines high-cost project activities in order to realize a maximum return on investment through the use of engineering tradeoffs and functional analyses that identify alternate means of achieving the same function at a lower life-cycle cost.

MP 1.46, WTS Value Management/Value Engineering Program, describes the WTS process for value management and value engineering.

8.0 ENVIRONMENTAL MANAGEMENT

The WIPP mission is to safely dispose of TRU waste in an environmentally safe, sound, compliant, and cost-effective manner. WTS has implemented an environmental management system (EMS) as required by DOE O 450.1 to ensure that its operations are conducted in an environmentally safe and compliant manner. The EMS conforms to the guiding principles of the international standard ISO 14001, *Environmental Management Systems - Specification with Guidance for Use*.

WTS is committed to achieving the highest standards of environmental quality, and to providing a safe and healthful workplace for its employees, contractors, and the surrounding communities. The *Environmental Management System Description* (DOE/WIPP 05-3318) describes the EMS. It also serves as a road map for the implementation of the EMS, and demonstrates how the EMS meets the requirements established by DOE Order 450.1, *Environmental Protection Program*. The EMS is integrated with the *WIPP Integrated Safety Management System Description* (DOE/CBFO 98-2276). The EMS, an integrated element of the ISMS, is addressed in documents that implement DOE/WIPP-04-3310, *CBFO/WTS Environmental Policy Statement*.

The EMS applies to all activities conducted by WTS and its subcontractors. WTS has established environmental programs to provide assurance that the environment, the workplace, and the community are preserved while providing flexibility to meet the needs of our business. WTS policies and procedures emphasize the responsibility of every employee to report potential environmental safety hazards and health concerns, and to be involved in implementing solutions that protect the environment and the workplace.

9.0 SAFETY

WTS integrates safety into management and work practices at all levels of the organization to accomplish the WIPP mission while protecting the worker, the public, and the environment. The integrated safety management system (ISMS) described in DOE/CBFO 98-2276 fulfills expectations of the DOE by taking into account the core functions and guiding principles needed to "do work safely," as mandated by the DOE through its directives.

The WTS safety program is designed to assure that 10 CFR 851, *Worker Safety and Health Program*, are met. The rule applies to activities with the potential to cause physical harm. WTS implements DOE O 440.1A, *Worker Protection Management for DOE Federal and Contractor Employees*. The WTS program complies with the rule and the order via MP 1.12, Worker Protection Policy; WP 12-IS.01, Industrial Safety Program; WP 12-FP.01, Fire Protection Program; WP 12-IH.02, WIPP Industrial Hygiene Program; WP 15-HS.02, WIPP Occupational Health Program; and WP 12-5, the WIPP Radiation Safety Manual.

The WTS WIPP Industrial Safety Program specifies the roles of personnel, managers, subcontractors, and others at WIPP in maintaining a safe and healthful workplace that is free of recognized hazards. This safety program also provides for implementation of the principles of integrated safety management, implements the elements of the DOE Voluntary Protection Program and provides compliance with applicable industrial safety and health regulations and standards, and DOE orders.

10.0 ENGINEERING

WTS engineering processes include design of new structures, systems, and components (SSCs); design modifications to existing SSCs; development of associated system description and design documentation, such as drawings and specifications, procurement requisitions and change notices, installation instructions, and testing of SSCs.

The Engineering Conduct of Operations document, WP 09, provides specific requirements and guidance as well as requirements for engineers to perform their specific job tasks.

11.0 OPERATIONS

Conduct of Operations, WP 04-CO, contains stringent operating practices by which personnel are expected to perform their work. The manual provides specific guidance for implementation of Conduct of Operations into departmental activities. The practices in this manual supplement other instructions provided in administrative, system, and operating procedures.

The WTS Maintenance Program was developed using a rigorous maintenance philosophy that addresses safety culture as the most important component of all maintenance craft activities. In addition, scheduling, personnel responsibilities, trending, preventive/corrective maintenance and plant assessment processes incorporated into the maintenance program are vital in maintaining DOE assets in a reliable condition. Focus on safety and reliability ensures preservation and availability of SSCs required for continuous plant operation. The WTS Maintenance Program is described in WP 10-2, Maintenance Operations Instruction Manual.

12.0 QUALITY ASSURANCE

The requirements driving the QA program are specified in federal and state regulations, orders, licenses, and waste shipping and acceptance criteria. QA program requirements affect every aspect of the project and emphasize planning, implementing, reporting, assessing, and improving processes to ensure that work performed meets the expectations of WTS customers.

Quality assurance is a shared interdisciplinary function and responsibility. It involves management and individual contributions from all organizations responsible to produce items, perform activities, and independently verify that items and activities comply with specific requirements. Managers are responsible for knowing the requirements and

standards to be followed, and for determining what criteria apply to the specific activities. All employees are responsible for complying with quality requirements.

The WTS quality assurance program is designed to ensure that the 10 criteria of Title 10 *Code of Federal Regulations* Part 830, "Nuclear Safety Management," Subpart A, "Quality Assurance Requirements"; and DOE O 414.1C, *Quality Assurance*, are met. The rule applies to activities with the potential to cause radiological harm, while the order applies to all other site activities. The WTS program is described in WP 13-1, Washington TRU Solutions LLC Quality Assurance Program Description.

13.0 COMMUNICATIONS MANAGEMENT

Communications management includes the processes required to ensure timely generation and dissemination of project information. Communication at WIPP falls into two main categories: the distribution of information to stakeholders and performance reporting within WTS and to the CBFO.

The DOE maintains a policy of openness for WIPP. WTS supports DOE efforts through its Media Relations section by providing the public clear, accurate, and timely information about DOE initiatives and WIPP operations and by using insight gained from public and project sources to positively position our customer, project, and company in the media. WTS also conducts a public outreach program consisting of speakers' bureau/exhibits; developing and distributing WIPP information packets, pamphlets, and fact sheets; providing site tours; and public meetings in support of regulatory permit modifications.

In the event of certain WIPP-related emergencies, WTS is prepared to coordinate the Joint Information Center in gathering and disseminating accurate information about the emergency to WIPP's stakeholders, the media, and the public.

Performance reporting involves collecting and disseminating performance information generally on scope, schedule, and cost. Performance reporting is discussed in Section 6.2.

14.0 PROCUREMENT/ACQUISITION STRATEGY

The WTS procurement mission is to align itself with the goals and desires of its internal and external customers. With this objective in mind, WTS:

- Creates an enthusiastic and innovative, customer-service oriented environment. Acts in a manner that fosters mutual respect and confidence among WTS, the CBFO, and supplier personnel.
- Procures quality goods and services in a timely and cost-effective manner, obtaining reasonable prices, and providing quality work in support of WIPP.

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- Develops instructions with adequate criteria and controls to assure that contract compliance and performance measures are met, and assesses customer satisfaction.
- Assures that subcontractors are value-added for WTS and implement purchasing processes, practices and systems that add value and reduce costs.

Annual organizational goals are established in the WTS Procurement Balance Scorecard Plan. This plan is prepared annually and reviewed by the CBFO.

Competition and Best Value Approach: WTS Procurement supports the WIPP mission by obtaining the best value for WTS (including price, quality, and delivery) by bringing the competitive forces of the market to bear. Good business practice dictates that goods and services be procured through competition to the maximum extent. Sole source procurements are only made in the best interest of the Government.

Small Business Participation: Overall goals to achieve small business objectives are contained in the prime contract Small Business Subcontracting Plan.

Acquisition Strategy and Milestones in the Procurement Process: Numerous large subcontracts have been identified for renewal or new award. Each of these subcontracts represents key areas of WTS performance in supporting the CCP and waste shipping schedules. Some of these large procurements include TRUPACT container maintenance contracts, acquisition of the new TRUPACT-III container, and acquisition of new centralized procurement containers. In addition, subcontracts for ongoing services to WIPP are continually in a renewal, re-compete, or administrative status. Some of these continuing subcontracts include security services, waste operations support materials such as magnesium oxide, and mobile characterization services in support of CCP.

Near-term procurements: Near-term procurements requiring DOE-Consolidated Business Center (EM-CBC) and/or DOE-Headquarters (HQ) reviews are typically identified annually under a call letter issued by the CBFO to WTS prior to commencing fiscal year activities. Occasionally, other procurements are identified during the fiscal year meeting the EM-CBC and/or HQ review threshold and are managed on a case-by-case basis.

15.0 CONFIGURATION MANAGEMENT

Configuration management is described here because it is listed as a technical consideration in DOE O 413.3A. The configuration management process ensures that sustainable building design requirements, physical configuration, and facility documentation of the structures, systems, and components within the WIPP facility remain consistent throughout the operational life-cycle phase of the facility (per DOE O 430.1B). Configuration management determinations for WIPP structures, systems, and components 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.

16.0 SAFEGUARDS AND SECURITY

The WIPP Safeguards and Security Program provides security services for WIPP facilities, properties, and programs, and addresses threats identified in security assessments. The WIPP security program is described in the WIPP Security Plan. The program complies with applicable federal requirements, including DOE O 470.1, *Safeguards and Security Program*, and state and local regulations and/or agreements.

17.0 RECORDS MANAGEMENT

The WTS records management program conforms to the records management requirements contained in the *CBFO Information Management Plan*, CAO-94-1001. The program, described in WP 15-RM, WIPP Records Management Program, provides the guidance necessary to meet the records management requirements for the creation, maintenance, use, and disposition of all records that document and support the WIPP mission. Procedures have been developed to carry out the performance duties necessary to implement the program.

18.0 REFERENCES

P.L. 96-164, Defense Authorization Act of 1979

P.L. 102-579, Waste Isolation Pilot Plant Land Withdrawal Act

DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*

DOE O 414.1C, *Quality Assurance*

DOE O 430.1B, *Real Property Asset Management*

DOE O 440.1A, *Worker Protection Management for DOE Federal and Contractor Employees.*

DOE O 450.1, *Environmental Protection Program*

DOE O 470.1, *Safeguards and Security Program*

DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*

ANSI/EIA 48-A-1998, *Earned Value Management Systems*

International Organization for Standardization 14001, *Environmental Management Systems – Specification with Guidance for Use*

CAO-94-1001, *CBFO Information Management Plan*

DOE/CBFO-95-1122, *Carlsbad Field Office Programmatic Change Control Process*

DOE/WIPP-98-2287, *Safety Management Functions, Responsibilities, and Authorities Manual*

DOE/CBFO-03-3292, *CBFO Risk Management Plan*

DOE/CBFO-03-3293, *CBFO Program Execution Plan*

DOE/WIPP-04-3300, *WIPP Project Control System Description*

DOE/WIPP-04-3303, *WIPP Cost Estimating Guide*

DOE/WIPP-04-3310, *CBFO/WTS Environmental Policy Statement*

DOE/WIPP-05-3318, *Environmental Management System Description*

MP 1.12, Worker Protection Policy

WP 04-CO, Conduct of Operations

WP 09, Engineering Conduct of Operations

WP 09-CN3018, Design Verification

WP 09-CN3034, Configuration Management Determination

WP 12-5, WIPP Radiation Safety Manual

WP 12-FP.01, Fire Protection Program

WP 12-IH.02, WIPP Industrial Hygiene Program

WP 12-IS.01, Industrial Safety Program

WP 13-1, Washington TRU Solutions LLC Quality Assurance Program Description

WP 15-2, Washington TRU Solutions LLC Management Control System Description

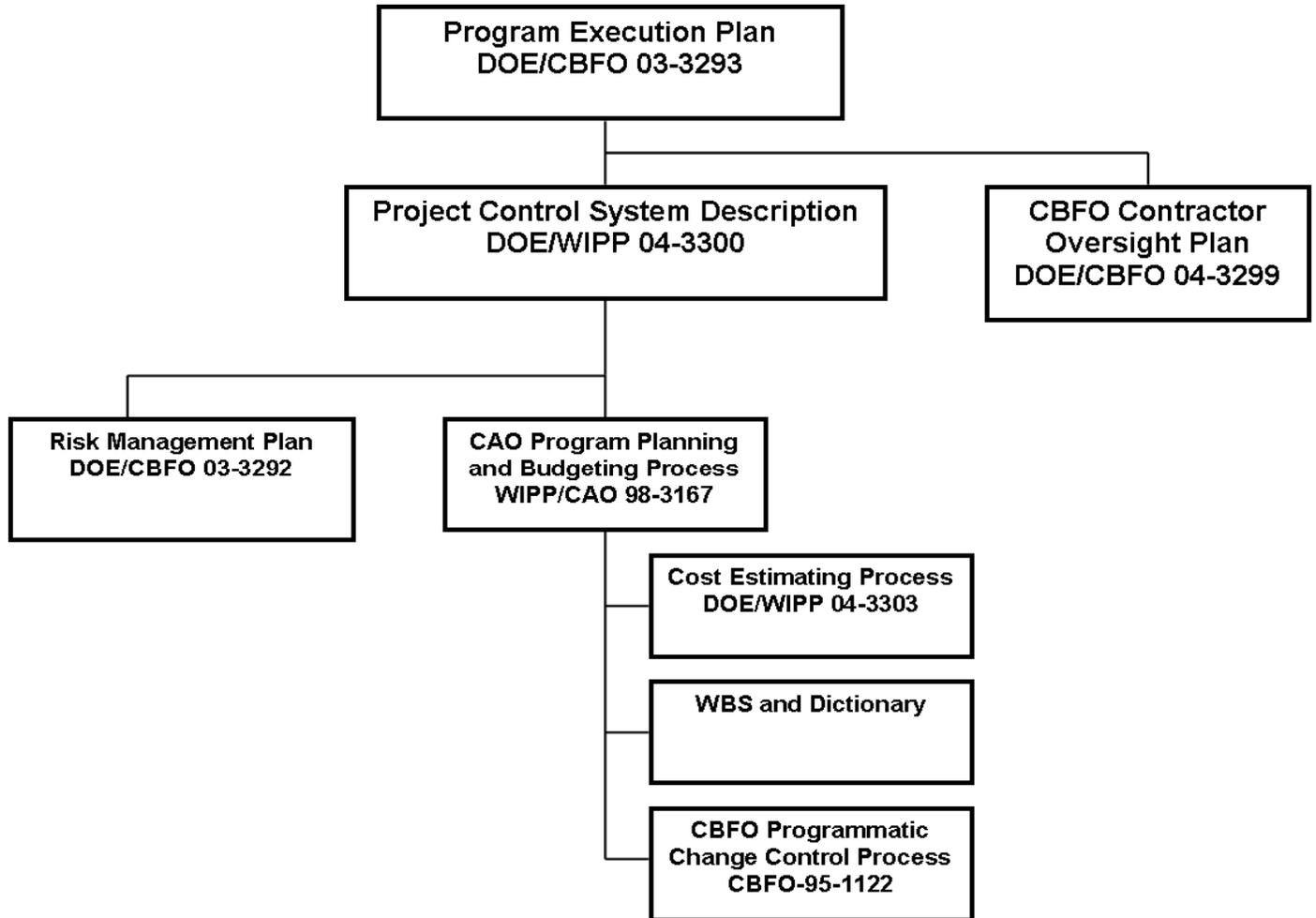
WP 15-FC.01, WTS Programmatic Change Control Process

WP 15-GM.01, WTS Project Execution Plans

WP 15-HS.02, WIPP Occupational Health Program

WP 15-RM, WIPP Records Management Program

Appendix 1 - Program Management Document Hierarchy



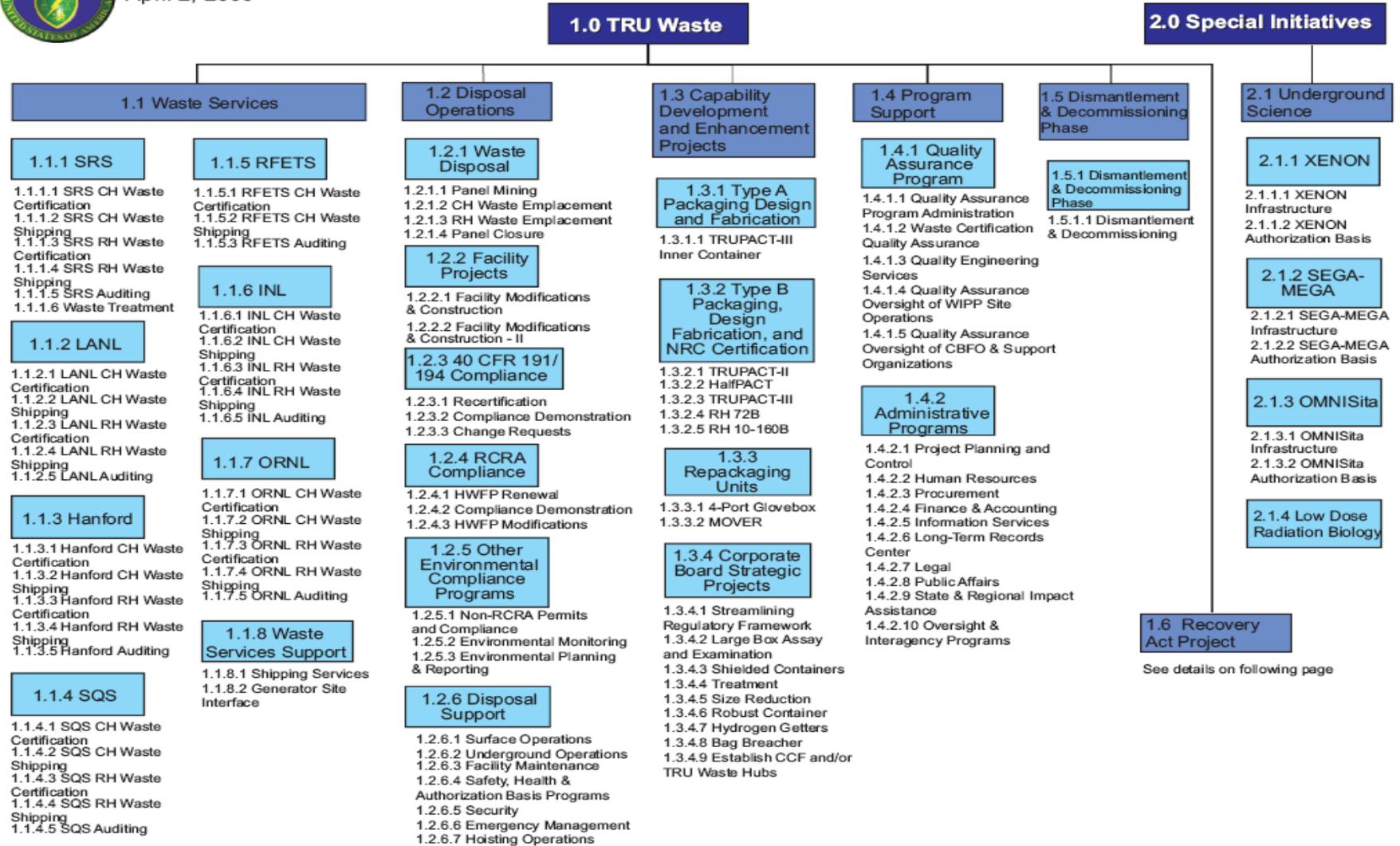
WTS Program Execution Plan WP 15-3, Rev. 1

Appendix 2 - Carlsbad Field Office Work Breakdown Structure



Carlsbad Field Office Work Breakdown Structure

April 2, 2009



See details on following page