

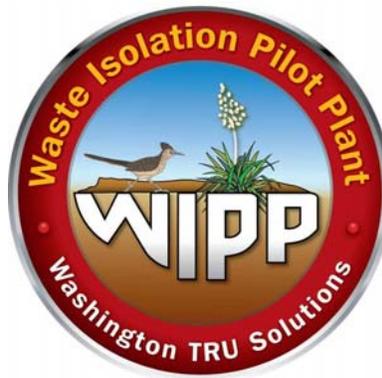
WP 04-AD.05

Revision 0

Project Execution Plan for the TRUPACT-III Project Implementation

Cognizant Department: Operations and Disposal

Approved by: Gene Valett



**Project Execution Plan for the TRUPACT-III Project Implementation
WP 04-AD.05, Rev. 0**

Record of Revision

REVISION	DATE	CHANGE DESCRIPTION
Rev. 0	8/2/10	Initial release

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1.0 PROJECT OVERVIEW

The scope of this project execution plan (PXP) specifically identifies methods, schedules, and costs for activities and equipment to ready the Waste Isolation Pilot Plant (WIPP) facility for safe and compliant receipt and processing of contact-handled (CH) transuranic (TRU) and TRU mixed waste in a TRUPACT-III shipping package. Resources including additional equipment, personnel, and process development are provided following an event-driven schedule. This method allows the provision of resources to closely follow requirements and expectations as determined by the U.S. Department of Energy (DOE)-approved shipping schedule.

The TRUPACT-III is a DOE Carlsbad Field Office (CBFO) initiative aimed at addressing the shippability of CH TRU waste in oversized boxes that are not transportable in the TRUPACT-II or the HalfPACT without size-reduction efforts.

The TRUPACT-III package has been developed and certified by Washington TRU Solutions LLC (WTS) via a subcontract with Areva Federal Services (AFS). The U.S. Nuclear Regulatory Commission (NRC) issued Certificate of Compliance 71-9305 for the TRUPACT-III in June 2010. WTS will contract with AFS to produce the necessary fleet of TRUPACT-IIIs. Packaging production work will be performed under the AFS NRC-approved Title 10 *Code of Federal Regulations* Part 71, Subpart H, "Quality Assurance Program," with oversight by WTS Packaging Integration and WTS Quality Assurance (QA). Packaging-related ancillary equipment includes a Standard Large Box 2 (SLB2) loading pallet, a roller floor, vent/test port tools, and various lift fixtures. These items have been or are being designed by WTS Packaging Integration (or in the case of the roller floor, AFS). Needed fleet components will subsequently be procured from an appropriate set of manufacturing subcontractors.

The trailer and tiedown system design has been developed by Reinke Manufacturing Company Inc. under a previous contract with WTS, and Reinke has also provided first prototypes of each. Based on lessons learned from use of the first prototypes, a subcontract will be placed with Reinke to make some modest design changes to trailers and tiedowns. Subsequently, fleet trailers and tiedowns will be produced by Reinke under subcontract to WTS. Reinke will also be tasked with modifying/refurbishing the original prototypes to comply with the final design and serve as spares for the fleet.

Working in conjunction with the Los Alamos National Laboratory mobile loading unit (MLU) team, Characterization Certification Project, and Savannah River Site (SRS), WTS Packaging Integration will develop the design of an MLU needed at the shipping sites to load SLB2s into the TRUPACT-III for transport to the WIPP site. Development and production efforts will parallel those used on previous CH and remote-handled MLU development and production efforts. The existing Type B packaging maintenance contract will be expanded in scope to cover TRUPACT-III. WTS Packaging Integration staff, in conjunction with the maintenance contractor, will identify TRUPACT-III specific tooling and fixtures needed to support maintenance. Needed components will then be procured by WTS and provided to the maintenance subcontractor as government-furnished equipment, or the maintenance contractor will develop or procure such items under provision of its maintenance subcontract, as appropriate.

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The new shipping package was certified in June 2010; accordingly, the WIPP facility will need the necessary equipment, trained and qualified personnel, and procedures to unload and process the large boxes for emplacement in the underground.

A detailed process description, along with proposed equipment and facility modifications, has been developed.

The PXP identifies the goal for receipt of the TRUPACT-III at WIPP. The objective is to prepare to receive large box waste utilizing the most practical approach documented by the TRUPACT-III Integrated Project Team Report dated June 4, 2010.

A total burdened project cost of \$20.5M, including contingency, is required to support the implementation of the TRUPACT-III. This does not include WTS labor for the additional scope in the subsequent fiscal years. The estimated costs provide:

- Six TRUPACT-III packages with roller floors (\$10.2M), various packaging related ancillary equipment items, two MLU, six trailers (including one spare) with tiedowns, and TRUPACT-III maintenance tooling for the maintenance contractor.
- WIPP safety analyses activities required to verify implementation of safe methods to process TRUPACT-III and emplace large box waste.
- Criticality analyses are provided to support waste acceptance criteria.
- Design, fabrication, and installation of equipment and processes to safely and efficiently process TRUPACT-III and emplace large box waste.
- Facility modifications to safely and efficiently process TRUPACT-III and emplace large box waste, limiting impacts to established TRUPACT-II waste handling processes.

Assumptions supporting the event-driven schedule include:

- Focus on shipments from SRS to WIPP
- Eight hundred cubic meters of waste to leave SRS by the end of calendar year 2012
- Six TRUPACT-III shipping containers currently planned (including roller floors and spares)
- Six TRUPACT-III transportation trailers currently planned (including one spare trailer)
- Two MLU-produced to support SRS to WIPP shipments
- Shipping Rate: June 2011 through September 2011 – one TRUPACT-III per week – SRS to WIPP

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- Starting October 2011 – five TRUPACT-IIIs per week – SRS to WIPP
- First TRUPACT-III production unit or a training unit provided to WIPP for training prior to testing of the Payload Transfer Station (PTS) (PTS installation currently scheduled for February 2011)
- Readiness assessment required based on DOE O 425.1D using the graded approach
- All payloads in accordance with the TRUPACT-III TRAMPAC Table 2.8-4
- SLB2 center of gravity may be off center axes (Generator Site [Central Characterization Project] will mark quadrant containing center of gravity prior to shipping to WIPP.)
- TRUPACT-II dunnage stored under cover, outside the CH Bay

2.0 CONTRACT OVERVIEW

WTS is the management and operating contractor for the WIPP near Carlsbad, New Mexico. WTS will use WP 09-DC.01, Construction Management Program, to perform contract overview as required.

3.0 PROJECT ORGANIZATION

A WTS management team or assigned delegates will support existing personnel and subcontractors through the engineering, procurement, fabrication and construction, testing and turnover processes. The WTS management team consists of:

Project Director	Wes Bryan
Project Manager	Gene Valett
Deputy Project Manager	Curtis Chester
Project Engineering Manager	Tim Chambers
Project Operations Manager	Mark Dziamski
Project Procurement Manager	Lynn Whiting
Project Quality Assurance Manager	Marty Keathley
Project Planning, Analysis, and Controls	Pam Hester
Project Safety Manager	Tim Rotert
Project Regulatory Manager	Rick Chavez
Project Training Manager	Tom Fabian
Project Packaging Integration Manager	Todd Sellmer
Project Construction Manager	Royce Allen

This PXP has been developed in accordance with the WIPP project execution procedures. This PXP establishes the elements of the project to safely and compliantly dispose of large box TRU waste received in the TRUPACT-III package. These elements include design, fabrication, and installation of additional equipment; facility construction; regulatory changes; and safety and criticality analyses. Project execution

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will encompass multiple fiscal years and shall be performed in accordance with approved WIPP procedures.

The WTS WIPP Site Operations and Disposal manager is the Project Director and is responsible for the execution of the project in accordance with the contract, WIPP procedures, and company policy. The direction and management of project activities are conducted in accordance with WIPP management policies and approved WIPP procedures. The Project Manager will maintain an active communications program to ensure that CBFO and WTS management and personnel are apprised of performance and other issues affecting as-planned project execution.

Regular status meetings will be held to update cost and schedule data.

4.0 PROJECT ADMINISTRATION

This project will be managed in accordance with this PXP and the detailed schedule as it becomes available. The Project Manager will be responsible for project administration and is supported by personnel identified in Section 6.0. Project costs and schedule maintenance support will be provided by WTS. The Project Manager will track the progress and a status report will be provided to WTS senior management.

5.0 PROJECT BUDGET AND SCHEDULE

5.1 Budget

The TRUPACT-III implementation project burdened cost for TRUPACT-III Packaging Integration and WIPP site readiness activities will be \$20.5M, including contingency. A project change request estimate for the FY 2010 cost of \$7.9M will be prepared. The activity based cost estimate details the FY 2011 estimated cost of \$12.6M to support an event-driven approach to project implementation. This does not include WTS labor for the additional scope in the subsequent fiscal years.

Budgeted Total Cost 10-01-09 - 09-30-12	FY 2010	FY 2011	FY 2012	Period Total
1.1.8.01.04 TRUPACT-III Trailers Subtotal				
Subtotal	\$52,415	\$659,762		\$712,177
1.1.8.01.11 TRUPACT-III - MLU Subtotal				
Subtotal	\$58,094	\$1,536,051		\$1,594,145
1.2.1.02.06 Large Box Processing Station Subtotal				
Subtotal	\$4,098,907	\$3,861,927		\$7,960,834
1.3.2.03.01 TRUPACT-III System Design, Fabrication, and Certification Subtotal				
Subtotal	\$3,696,875	\$6,505,972		\$10,202,847
Total	\$7,906,291	\$12,563,711		\$20,470,003

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5.2 Schedule

Major items and milestones from the current schedule are listed below. The schedule and milestones will be updated through the work control process. In general, it is anticipated that the implementation will be completed within eleven months from Notice/Release to Proceed with the budget outlined in Section 5.1.

Project Milestone	Deliverables	Responsible Organization	Date
Final Design Concept for WIPP Facility TRUPACT-III process	Sequence of operations, list of equipment, identified locations for processes	WTS Engineering	6/14/10 - Completed
NRC approval of TRUPACT-III	NRC issued Certificate of Compliance	WTS Packaging Integration	6/1/10 - Completed
Project Kickoff - Engineering Change Proposal approved	Finalize design assumptions/concept, formalize the PXP, assign project team	WTS	6/17/10 - Completed
Safety Design Strategy	Safety Design Strategy submitted for approval to the CBFO	WTS Nuclear Safety	7/22/10
Approved Safety Design Strategy	Letter from the CBFO	DOE CBFO	8/11/10
Place order for first two TRUPACT-IIIs	Purchase order issued to AFS	WTS Packaging Integration	9/9/10 (9/30/10 PBI exists)
Class 2 PMR	Submit Class 2 PMR to the New Mexico Environment Department	WTS	1/7/11
Facility modification complete	Notification to Project Director from Project Manager	WTS	4/28/11
Delivery of first TRUPACT-III production unit	Unit at WIPP site	WTS Packaging Integration	TBD
Declaration of readiness for a Readiness Review	LMA completion notification/letter from the CBFO	CBFO	8/11/11
TARGET: WIPP site ready to receive waste	NMED letter of approval	CBFO/WTS	6/11

6.0 PROJECT RESOURCES

The resources for the WTS Project Team will be provided from the existing WIPP organizations: Engineering, Operations, Construction, Packaging Integration, QA, Procurement, Industrial Safety and Health, Project Analysis and Control, Washington Regulatory and Environmental Services (WRES), and Regulatory Programs. Those team members are:

Gene Valett	Project Manager
Curtis Chester	Deputy Project Manager
Pam Hester	Project Analysis and Control (finance)
Phillip Blair	Project Analysis and Control (scheduling)

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Robert Johnson	Packaging Integration
Steve Porter	Packaging Integration (trailers, ancillaries, MLU)
Joe Willis	Packaging Integration (operations and maintenance manuals, maintenance)
Todd Sellmer	Central Characterization Project
Michael Marquez	Engineering
Mark Edwards	Procurement
Royce Allen	Facility Restoration/Construction
Kevin Bennett	Site Operations and Disposal
Mark Davis	Quality Assurance
Ryan Bowlin	Quality Assurance
Tracy Collings	Safety/Industrial Hygiene
Kevin Aragon	Industrial Safety
Wayne Patton	Nuclear Safety
Glen Galloway	Radiological Control
John Haschets	Permitting (WRES)
Tom Lichty	Training
Candace Nance	Training
Jim Waters	CBFO

These individuals will have access to additional support as required to complete the project as to the milestones outlined. Some of the design, fabrication/construction, and installation of equipment and facility modifications will be performed by subcontractors to WTS with appropriate oversight from WIPP organizations.

7.0 UNIQUE PROJECT CONSIDERATIONS

Select elements of the project will require access to areas already used for CH waste. Due to facility modifications in these areas, special considerations in those areas may be required to continue waste handling during those activities, or the activities will be prioritized for outage work to support the schedule. Those elements will be identified by the Project Manager and provided to senior management with a recommended path forward.

Modifications to the WIPP facility will require a Class 2 Permit Modification. Those modifications will include activities in the conveyance loading room, Room 108 (Overpack and Repair Room), Room 103 (CH Bay), and the Parking Area Unit.

The Modification to the facility is considered a Major Modification by DOE-STD-1189-2008, *Integration of Safety into the Design Process*. This consideration will require that a Preliminary Documented Safety Analysis (PDSA) be prepared and approved by the DOE approving authority. A Safety Design Strategy document will be prepared and may, with approval by the DOE approving authority, provide a release of funding for limited procurement and modifications to the WIPP facility prior to approval of the PDSA.

The target readiness date is June 2011 as provided by the CBFO. Funding will be challenged in FY 2010 and may delay award of some elements. Those elements will

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receive priority as funding is available. The current funding strategy is to prioritize the projects to be worked in the FY 2011 long maintenance outage and the long-lead time items. The remaining elements will be prioritized on a case-by-case basis to leverage opportunities to complete the implementation while minimizing impact to the current mission.

7.1 Tailoring Strategy

A key action needed to fulfill mission need is to prepare the WIPP facility to process TRUPACT-III waste by June 2011. DOE Order 413.3A, Chg 1, *Program and Project Management for the Acquisition of Capital Assets*, allows for combining critical decision (CD) elements through a tailoring strategy (TS). The TS documents how the requirements of DOE Order 413.3A, Chg 1, will be met through a tailored application and describes the project's approach for appropriately adapting CD requirements based on the project's risk, cost, and complexity.

CD-1 (Approve Alternative Selection and Cost Range), CD-2 (Approve Performance Baseline), and CD-3 (Approve Start of Construction) will be consolidated and approval will be sought through the safety design strategy. Approval is needed to formally request project engineering and design funds, provide design funds, and release funds for limited procurement and construction.

CD-1 approval will be requested through the approval of the safety design strategy. As provided by DOE O 413.3A, mission needs will be supported through procurement of long-lead items or items that, because of simplicity, do not have an alternative that provide cost or schedule benefit with respect to CD-0. For other elements, alternatives have been identified where the benefit to mission need allows for more than one option. Once CD-1 is approved, equipment considered to be long-lead items and those following a design/build strategy will be procured as allowed by DOE O 413.3A, Chg 1. Design costs will be identified separately in design/build proposals and those elements segregated appropriately to comply with DOE O 413.3A, Chg 1.

CD-2 (Approve Performance Baseline) approval will be requested through the approval of the safety design strategy. CD-2 is currently met by a project schedule showing cost and resource loading. Project scope is provided by the engineering change proposal ECP1-WH10-004, which provides the detailed conceptual design and changes to the existing WIPP design basis. Throughout this phase, cost estimates, schedules, and designs will continue to be refined as allowed by DOE O 413.3A, Chg. 1.

Throughout the design process, some elements of the selected equipment may change. If those changes impact the safety basis documentation, as determined by WTS Nuclear Safety and Engineering personnel, the safety basis information will be revised and resubmitted for approval. Those elements will be incorporated in the performance baseline as required.

CD-3 (Approve Start of Construction) approval will be requested through the approval of the safety design strategy for limited construction activities, including those items within non-waste handling areas such as Room 108 or the TRUPACT Maintenance Facility

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(TMF). Those equipment items include installation of the bolting robot, monorail hoist, yard transfer vehicle charging stations, lid stands, and removal of the TRUDOCK training unit. Other activities may be planned through normal work control processes, including upgrades to automated guided vehicle controls, electrical power, and communications (infrastructure), that do not interfere or impact normal waste handling processes.

To support the mission need, the Safety Design Strategy will be prepared to be approved by the DOE Authority Having Jurisdiction (AHJ). Additional safety basis documents, including the Hazard Identification and Operability Study, Fire Hazard Analysis, and Criticality Analysis, will be provided prior to the submittal of the PDSA. The PDSA is expected to be submitted to the CBFO for approval in October 2010, in accordance with the project schedule.

8.0 ENGINEERING AND DESIGN

WIPP engineering and design processes will be followed commensurate with the approved WIPP procedures. Configuration management and change control for this project will be managed in accordance with the approved procedures. The Project Manager will coordinate and use WIPP facility resources for all engineering functions. At certain points within the implementation process, facility modifications to existing waste handling areas will be completed. A New Mexico Licensed Professional Engineer's (PE) letter of compliance will be required to support continued TRUPACT-II waste processing to limit impacts to TRUPACT-II waste receipts while modifications are ongoing. WTS Engineering will use value engineering approaches to select the best alternatives where necessary and those approaches will be documented.

8.1 Nuclear Safety

WTS Nuclear Safety has performed a major modification determination in accordance with DOE-STD-1189-2008 and has determined that handling and disposing CH waste arriving at the WIPP site in the TRUPACT-III will require a major modification to the Waste Handling Building (WHB). As such, initiation of a PDSA is required in order to support the procurement of material and equipment required for the WHB modification. WTS Nuclear Safety will provide a criticality analysis for the large box container.

9.0 PROCUREMENT AND MATERIAL MANAGEMENT

Purchasing is performed in accordance with the WTS approved purchasing system and site approved procedures. WTS operates in accordance with DOE-approved procedures implementing all aspects of procurement from sole source to source selection and vendor qualification. QA will provide procurement reviews and inspection services as required, in accordance with WP 09-CN3005, Graded Approach to Application of QA Controls. On a case-by-case basis, as identified by the requisitioner, additional receipt inspection services will be supplied for non-quality affecting items.

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10.0 PROJECT CONTROLS

This PXP addresses the scope, schedule, and budget for this project. The PXP will be controlled to ensure revisions are processed and approved by appropriate parties.

The WTS subcontract technical representatives will track subcontractor work and costs. Activities will be performed in compliance with approved WIPP policies and procedures. Existing personnel will be used to support this effort.

11.0 PROJECT QUALITY PLAN

The WTS QA program, as discussed below, shall apply to all Quality Level 1 and 2 items and related activities. The WTS QA Department may be required to perform and document an assessment of each subcontractor's QA program. This assessment will determine the degree of adequacy in addressing both the basic and supplemental requirements of ASME/NQA-1-1989, *Quality Assurance Program Requirements for Nuclear Facilities* (1989). Corrective actions and/or modifications to the QA program may be required before proceeding.

WTS QA will also perform periodic surveillances, inspections, and oversight functions in accordance with WTS QA programs and procedures, and as specified in the applicable procurement documents. These surveillance and oversight functions will serve two purposes:

- To verify adequate implementation of the subcontractor's QA program.
- To provide oversight of design, fabrication, and verification activities.

All work shall be performed under the WTS or subcontractor's QA program. The subcontractor shall, upon WTS request, submit quality program documentation that includes, but is not limited to, the subcontractor's QA manual, QA procedures, internal audit reports, etc. The subcontractor shall grant WTS, or its designee, rights of access to the subcontractor's facilities and records for inspection or audit.

QA requirements, including the QA program, engineering design program, inspection requirements, personnel qualification, quality clauses, and documentation requirements shall be the primary basis for submittals and deliverables. Applicable quality clauses are delineated in the statement of work or the QA inspection plan. The subcontractor shall be responsible for their fabrication inspections and verification tests to ensure the finished products meet the requirements of the statement of work. Results shall be recorded and traceable to the manufacturing travelers used.

Test and inspection activities shall be documented and controlled by instructions, procedures, checklists, and travelers. Applicable nondestructive examination procedures shall be submitted to WTS in accordance with the approval request submittal register. Each person who verifies conformance of work activities for purposes of acceptance shall be qualified to perform the assigned task.

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11.1 Quality Assurance Representative

The QA representative will be responsible for the following related to Quality Level 1 and 2 items and related activities.

- Ensuring that proof tests, analytical tests, and preoperational tests, when applicable, are performed in accordance with written procedures that incorporate the requirements and acceptance limits contained in specified design documents.
- Ensuring that final inspection and testing of completed services are performed and documented to verify conformance to the specified requirements stipulated in the project execution procedures, PXP, drawings, and specifications and work packages. No equipment, services, or materials shall be delivered until the specified requirements have been satisfactorily completed and the associated data and documentation are available and authorized according to the statement of work.
- Reviewing quality-affecting documentation, including work packages, engineering change documentation, and procurements, to verify that requirements are met and programmatic elements have been properly addressed.
 - Control of Inspection, Measuring, and Test Equipment

The control, calibration, and maintenance of inspection, measuring, and test equipment are achieved through the implementation of documented procedures. These procedures identify the requirements for maintaining a calibration program, documenting calibration methods for each item, and documentation of the results of all calibration activities.
 - Inspection and Test Status

Inspection and test status is identified in accordance with established procedures. The identification of inspection and test status is maintained throughout the duration of the project to ensure that only equipment, services, and materials that have passed the required inspections and tests are delivered.
 - Record Retention

Records are maintained which identify the inspection authority for release of conforming equipment, services, and materials.
 - Control of Nonconforming Items

Ensure that materials and equipment that do not conform to specified requirements are prevented from inadvertent use. The procedures also provide for identification, documentation, evaluation, segregation when

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practical, disposition of nonconforming items, and for notification to the functions concerned.

When nonconforming items for which the company has responsibility are identified, the nonconformance will be analyzed and a disposition will be provided. Implementation of the disposition will be verified and documented. Repair and use as is dispositions will be approved by the engineering organization.

Records of nonconforming items that have been accepted and records of repairs that denote the actual condition of the items are maintained.

12.0 CONSTRUCTION

This project will use a WIPP-approved contractor to perform work. WTS will provide oversight activities to ensure that work is performed per approved design documentation and in a safe manner.

13.0 COMMISSIONING AND START-UP

As part of the commissioning process, a start-up test will be included in the work order to ensure operability of the equipment being installed. The start-up test will be written by the Engineering Department and witnessed by WTS QA, Start-Up Engineering, and Waste Handling Operations. Operations will be responsible for development of operations procedures and training and qualification of personnel to support TRUPACT-III processes. WTS Packaging Integration is responsible for development of the TRUPACT-III operations and maintenance manual, which, at a minimum, will delineate required maintenance activities to be performed and minimum training requirements for operation of the package.

Upon completion of training and qualifications processes, the TRUPACT-III process will be submitted for a readiness review. Approval for receipt and disposal operations to commence will be supplied by approved changes to the WIPP Hazardous Waste Facility Permit and the DOE.

An assessment of readiness will be part of this project to include integrated facility checkout, readiness review, and performance dry run.

13.1 Operations and Disposal

WTS Operations and Disposal will be responsible for participating in design reviews, installation, testing, and turnover. WTS Operations and Disposal will develop equipment-specific procedures and process operating procedures in compliance with approved WIPP policies and procedures. Existing personnel will be used to support this effort.

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14.0 ENVIRONMENT, SAFETY, AND HEALTH

All work associated with the TRUPACT-III implementation project will be performed in accordance with WP 15-GM.02, Worker Safety and Health Program Description, and applicable site requirements and procedures. Successful project completion requires implementation of safe work performance and quality into the management and performance of the project work.

14.1 Radiological Control

Work performed in Room 108 is not planned for radiological controls as it is not within a radiological controlled area. Work performed in the CH Bay will require consideration for applicable controls and postings at the time of the activity, which may include a job-specific Radiological Work Permit in certain cases. Work performed in the parking area unit is under a "Controlled Area" posting and not expected to have additional controls. WTS Radiological Control personnel will be responsible for participating in design reviews, installation, testing, and turnover. WTS Radiological Control personnel will develop equipment-specific procedures and process operating procedures in compliance with approved WIPP policies and procedures. Existing personnel will be used to support this effort.

15.0 RISK MANAGEMENT PLAN

WTS managers involved in project execution participate in the identification and assessment of program risks. They will review program documents, evaluate lessons learned, and use brainstorming and their own experience to identify risks.

Project risks are identified in the following areas:

- Cost and Schedule – Schedule is at risk where funding is not adequate to complete procurements or reserve contractor support for outage work.
- Funding – Funding availability is a risk in an event-driven schedule.
- Technical – Alternative analyses have provided options to support challenges for handling load centers located at large distances from the underground emplacement forklift. Funding will secure a design/build contractor and bring confidence to path forward.
- Programmatic – Priorities competing for limited resources. Labor saturation for current activities and planned future activities elevates programmatic area to HIGH risk.
- Support – Subcontractors are available and, with advance notice, can support labor effort effectively for scheduled activity.

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- Site-specific (PDSA/Safety Design Strategy) – PDSA is required to allow facility modification. The Safety Design Strategy requires DOE approval for limited procurement and facility modification to start.

Once risks are identified, WTS categorizes the identified risks by probability and severity (consequences) of each event.

After risks have been identified and categorized, a risk management approach and mitigation actions are developed for each high and medium risk. For low-risk elements not judged to require documented mitigation actions, WTS managers ensure that they are controlled through the normal management functions and work processes. All risks and mitigation actions are identified in the *CBFO Risk Management Plan* (DOE/CBFO-03-3292), which is updated annually.

In order to determine the effectiveness of the *CBFO Risk Management Plan*, the areas of medium and high risks are monitored and statused during monthly program meetings with the CBFO. In addition, periodic reassessments of programs are performed to determine if new areas of risk need to be identified and assessed.

Specific risks associated with the implementation of this PXP are included in Table 1.

16.0 PROJECT CLOSEOUT

Project completion will be defined by completion of identified tasks, qualification of personnel, completion of required procedure changes, turnover of equipment to operations for use, and declaration of readiness.

17.0 PROJECT PROCEDURES

This project will use existing site approved procedures and other documents in each aspect of this project. Some of the documents include:

- WP 02-AR3001, Unreviewed Safety Question Determination
- WP 02-EC3801, Environmental Compliance Review and NEPA Screening
- WP 04-AD3011, Equipment Lockout/Tagout
- WP 04-CO.01, Conduct of Operations series
- WP 08-PT.03, WIPP Quality Assurance Program Plan for Type "B" Packaging
- WP 09-CN3005, Graded Approach to Application of QA Controls
- WP 09-CN3007, Engineering and Design Document Preparation and Change Control
- WP 09-CN3023, Functional Classification Determination for Design

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- WP 09-DC.01, Construction Management Program
- WP 09-SU.01, WIPP Start-Up Test Program
- WP 10-2, Maintenance Operations Instruction Manual
- WP 10-AD3007, Use and Control of Rigging Components
- WP 10-AD3018, Use and Control of Personal Fall Arrest Systems
- WP 10-WC3011, Maintenance Process
- WP 12-5, Waste Isolation Pilot Plant Radiation Safety Manual
- WP 12-IS.01, Industrial Safety Program-Structure and Management
- WP 13-1, Washington TRU Solutions LLC Quality Assurance Program Description
- WP 15-GM.01, WTS Project Execution Plans
- WP 15-PC3041, Approval/Variation Request Processing
- WP 15-PC3609, Preparation of Purchase Requisitions
- WP 15-PS3002, WTS Controlled Document Processing
- PPE 002, WIPP Fall Protection Guide

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Table 1 - Risk Assessment Matrix for TRUPACT-III Project Implementation

Risk Identification	Probability	Consequence	Overall Risk	Comment/Mitigation
TECHNICAL/COST/SCHEDULE RISKS				
Project Experience	Low	Low	Low	Senior Level Staff
Design Uncertainty	Medium	Medium	Medium	Alternative analyses performed, several alternatives identified for each key process step
Adequate Project Planning	High	High	Medium	Utilize work control, plan and prepare projects for outage windows
Logical Work Schedule	Medium	Medium	Medium	Competing priorities for limited resources
Adequate Cost Estimate	Medium	High	High	Utilize approved WIPP procedure to support estimates
Estimate Details/Information	Medium	High	High	Review configuration management documents; developed assumptions
Uncertainty Contingency	Medium	Medium	Medium	Included Contingency
Adequate Staffing	High	High	High	Competing priorities; additional subcontract headcount required (up to five full-time equivalents [FTE])
Unusual Weather	Medium	Medium	Medium	Planning/Job Hazard Analyses
PROGRAMMATIC RISKS				
Material Availability	Medium	High	High	Utilize commercial off-the-shelf components
Equipment/Area Availability	Medium	High	High	Installation required during operations. Prior planning, off-shift work
Price Fluctuations	Medium	Medium	Medium	Utilize procedural methods for quotes
Personnel Skills	Low	Low	Low	Skill set available through WTS or subcontractor
Personnel Availability	High	High	High	Multiple projects competing for same resources/possibility of two FTEs for integrated staff augmentation - not identified in funding strategy
Qualified Subcontractors	Medium	Medium	Medium	Early identification of projects with this risk. Program additional QA early in project
Financially Stable Subcontractor	Low	Low	Low	Contract Requirement
Bonding/Insurance	Low	Low	Low	Contract Requirement
Available Craft Labor	Low	Low	Low	WTS or subcontractor labor will be used
Third Party Impact	Low	Low	Low	Good Communication
Third Party Approval Authority	High	High	High	Prior planning for New Mexico licensed PE/NMED availability
SUPPORT RISKS				
Process Familiarity	Medium	Medium	Medium	WTS Guidance
Training Availability	Low	Low	Low	WTS Training Support
SAFETY RISKS				
Safety/Injury Mgt. Program	Medium	Medium	Medium	WIPP Culture/Program
Emergency Preparedness Plan	Low	Low	Low	Contract Requirement

**Project Execution Plan for the TRUPACT-III Project Implementation
WP 04-AD.05, Rev. 0**

Table 1 - Risk Assessment Matrix for TRUPACT-III Project Implementation

Risk Identification	Probability	Consequence	Overall Risk	Comment/Mitigation
<i>EQUITABLE ALLOCATION OF CONTRACT RISKS</i>				
Delays	High	High	High	Contract Requirement
<i>OWNER RISKS</i>				
Funding Source	High	High	High	Early design concept, understand risk and impact, early planning for project execution
Site Access	Low	Low	Low	Contractor training for General Employee Training
<i>AUTHORIZATION BASIS RISKS</i>				
Hazardous Waste Facility Permit Change Request Approval Delay	Medium	Medium	Medium	Travel to Santa Fe to discuss plan and encourage discussion
EPA Evaluation	Low	Low	Low	Determined no further review needed
PDSA is Needed (6-month minimum duration)	High	High	High	Obtain funding and subcontractors early to complete
DOE does not approve Safety Design Strategy and delays limited procurement and facility modification	Medium	High	High	Provide technically correct SDS; wait until PDSA is approved to procure and modify facility; early discussion for concurrence on approach
Design Concept not Acceptable to NMED, CBFO, or both	Low	Low	Low	Involved DOE and WTS permitting group in preliminary planning and design selection
<i>SITE RISKS</i>				
Location Experience	Low	Low	Low	20+ Years at Site
Labor Laws	Low	Low	Low	20+ Years at Site
Weather Extremes	Low	Low	Low	Work planning and controlled, site familiarity
Available Access	Low	Low	Low	Current Access
Lay down/Storage in Place	Low	Low	Low	Storage available in TRUPACT maintenance facility, warehouse, convexes
New Utilities Required	Low	Low	Low	Preliminary walk-downs indicate utilities are available