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Revision 2

WTS Project Execution Plans

Cognizant Organization: General Manager's Office

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1.0 INTRODUCTION

This document establishes Washington TRU Solutions LLC (WTS) program and project management guidance for the planning, organizing, and controlling of the work of a project.

A project is defined as a unique endeavor, having defined start and end points, undertaken to create a facility, product, or service. It requires the allocation of resources to achieve a specific objective by following a planned, organized approach. This is in contrast to a program, which is a group of projects managed in a coordinated way so as to obtain benefits not available from managing them separately. Programs usually include an element of ongoing activity.

WTS, under contract with the U.S. Department of Energy (DOE) for management of the Waste Isolation Pilot Plant (WIPP), in conjunction with corporate leadership in Washington Group International, Incorporated, is committed to industry-leading quality and project performance in the characterization, transportation, and disposal of transuranic waste. Industry-leading quality and project performance is achieved through:

- Maintaining an effective operational organization.
- Implementing policies and procedures that establish consistent, proven methods to perform tasks and provide outstanding services.
- Providing functional guidelines as supplemental information or instructions.
- Defining responsibilities for task performance.
- Training employees on the requirements of the WTS Project Execution Management Program (PXMP). (Management Policy MP 1.42 - WTS Project Execution Management Program)
- Establishing performance-monitoring processes to verify compliance with the PXMP
- Periodically evaluating the PXMP and amending procedures to improve effectiveness.

2.0 DEVELOPMENT OF PROJECT EXECUTION PLANS

A Project Execution Plan (PXP) is developed to identify critical information necessary to manage a project. The plan uses the outcomes from all project-planning processes and integrates them into a formally approved document used to manage and control project execution. Because of the importance of this particular document to the success of a project, considerable effort needs to be made to ensure that the PXP addresses the needs of the project.

A PXP is developed using an integrated, systematic approach that ensures a project management system based on effective management practices that are sufficiently flexible to accommodate the size and complexity of the project. Organizational policies, constraints, and assumptions are also inputs into the development of the plan.

Once the project planning methodology is established, the combined skills and knowledge of project team members and external stakeholders are used to maximum advantage in developing the PXP. The Project Manager builds the team as the team builds the PXP, developing both mutual consensus and a sense of ownership.

The elements covered by the PXP should consider, as appropriate (see Attachment 1, Typical Table of Contents for Project Execution Plans, and Attachment 2, Typical Contents for Project Execution Plans, for a complete listing of PXP contents):

- A Mission Statement and project objectives.
- Performance Baseline (cost, schedule, and key performance parameters).
- Project description, including reference to operational, technical, and functional requirements.
- Acquisition strategy.
- Life-cycle costs.
- Work Breakdown Structure and dictionary.
- Organizational Breakdown Structure.
- Cost and schedule, associated with the Work Breakdown Structure, including identified contingency and management reserves.
- Risk analysis and risk management.
- Value management and value engineering planning (MP 1.46, WTS Value Management/Value Engineering Program).
- Resource requirements (including budget, staffing, support contracts); planned major procurements including long-lead procurement; project control and reporting systems.
- Permits, and licensing.
- Integrated Safety Management.
- Quality Assurance Plan (generally separate but updated).

- Planned design reviews, including critical design reviews and other reviews.
- Change control and management.
- Inspection, testing, test evaluation, turnover, and start-up.
- Training and operational readiness plans.

Since risk is inherent in all projects regardless of the complexity, risk management is an essential element of every project. Therefore, when preparing a PXP, a risk management analysis is a required element. Risks that have been previously identified in the WIPP Risk Management Plan (DOE/CBFO 03-3292) do not need to be repeated/restated in the WTS project level PXPs. Attachment 3 is an example of a risk assessment matrix. Definitions for probability, consequence, and overall risk can be found in DOE/CBFO 03-3292.

All projects with an expected life cycle cost greater than $500K, or as directed by the General Manager based on project complexity and risks, must have a PXP. All equipment purchases greater than $2M must have a PXP. The PXP may be highly abbreviated after application of a graded approach to planning. The WTS Department Manager/Senior Sponsor is responsible for this review and approval of the PXP. For projects/tasks and procurements that are of a value less than those specified above, the basic PXP requirements will be met by following the WTS Configuration Management Program as found in the WP 09-series of documents.

Major projects, with complex or unique design requirements that exceed $2M in value for engineering costs, shall require the use of the Project Definition Rating Index (PDRI) assessment tool described in Washington Group International Project Execution Procedure (PEP) 211.

The assessment of a PDRI score is recommended on projects for which WTS is a participant in the development of the scope definition documents. The assessment results will guide the actions of the project team as it progresses into the detailed design phase. The PDRI tool outlines a systematic approach for measuring the quality and completeness of scope definition for major design projects. Projects that begin with a thoroughly defined scope of work have an increased probability for success in terms of quality, cost, and schedule performance.

To ensure that PXP are developed as needed, a review of all WTS work scope will be performed by WTS Department Managers during the annual budget cycle to identify potential projects requiring PXPs.

3.0 GRADED APPROACH

A graded approach should be used by the Project Manager to determine the degree of formality and rigor to be applied to a project planning and project control processes. A graded approach to planning and controlling the project recognizes such factors as

safety, worker and public health, environmental/regulatory compliance, current level of knowledge, safeguards and security, programmatic importance, magnitude of the hazards involved, financial impact, schedule constraints, and other facility or specific requirements. This grading process provides flexibility in order to select the best controls to suit the project or activity.

A typical Table of Contents and expanded outline for PXPs are attached. Attachment 1, Typical Table of Contents for Project Execution Plans, defines the basic outline suggested by the Washington Group International Project Execution Management Program. Attachment 2, Typical Contents of Project Execution Plans, further defines the expected scope of each PXP with exceptions based on the Graded Approach.

4.0 REFERENCES

- DOE Order 413.3A, *Program and Project Management for the Acquisition of Capital Assets*
- DOE Manual 413.3-1, *Project Management for the Acquisition of Capital Assets*
- Washington Group International Project Execution Management Program
- DOE/CBFO 03-3292, CBFO Risk Management Plan
- MP 1.46, WTS Value Management/Value Engineering Program
- WP 09-Series of Documents
- WP 13-1, Washington TRU Solutions LLC Quality Assurance Program Description
- WP 13-QA.26, Quality Assurance Project Plan for External Programs
- WP 15-2, Management Control System Program

Attachment 1 - Typical Table of Contents for Project Execution Plans

This attachment gives an overall Table of Contents for the Project Execution Plan. All PXPs should contain brief narratives for each of the sections included in the Table of Contents. If a section is not applicable to the project being executed, then a narrative should be included stating so and giving an explanation.

TABLE OF CONTENTS

1. PROJECT OVERVIEW

2. CONTRACT OVERVIEW

3. PROJECT ORGANIZATION

4. PROJECT ADMINISTRATION

5. PROJECT BUDGET AND SCHEDULE

6. PROJECT RESOURCES

7. UNIQUE PROJECT CONSIDERATIONS

8. ENGINEERING AND DESIGN

9. PROCUREMENT AND MATERIALS MANAGEMENT

10. PROJECT CONTROLS

11. PROJECT QUALITY PLAN

12. CONSTRUCTION

13. COMMISSIONING AND START-UP

14. ENVIRONMENT, SAFETY, AND HEALTH

15. RISK MANAGEMENT PLAN

16. PROJECT CLOSEOUT

17. PROJECT PROCEDURES

Attachment 2 - Typical Contents for Project Execution Plans

This section includes a contents checklist for the Project Execution Plan. The checklist is organized according to the overall Table of Contents included as Attachment 1. The contents checklist is a comprehensive list (not necessary all-inclusive) of a variety of topics that may be included in the PXP. This checklist is intended to be a guideline to the Project Manager for selecting the applicable topics for inclusion in the PXP.

1.01 Project Overview (Discussion of these topics is suggested for all PXPs)
- Project Description/Summary of Work Scope
- Project Goals and Objectives Including Evaluation Method
- Mission Statement
- Management Overview of the Project Execution
- Critical Issues and Challenges
- Mechanism of Release to Proceed
- Client Identification
- Third-Party Organizations
- Partnering
- Applicable Reference Documents
- Project Management Authority
- Project Division of Responsibility Matrix
- Management Philosophy
- Mechanism for the Alignment of Project Goals
- Method for Formal Team Building
- Project Definition Rating Index (PDRI)
- Known Potential Problems
- Overview of Project Schedule Milestones
- Frequency of Customer Satisfaction Evaluations

1.02 Contract Overview (Contract Briefing Document) per the WTS Prime Contract

1.03 Project Organization
- Key Project Personnel
- Organization Chart – Company Team
- Organization Chart – Client Team (as appropriate)
- Organization Chart – Company/Partner, Joint Venture, or Consortium

1.04 Project Administration
- Client Requirements for Approval of Technical Data and Drawings
- Client Requirements for Approval of Procurement Documents
- Project Reporting Requirements (Internal and External)
- Ownership of Drawings and Documents
- Client Meeting Requirements
- Precedence of Documents
- Travel and Relocation Policies
- Document Control

Attachment 2 - Typical Contents for Project Execution Plans

- Correspondence
  - General
  - Originated by Company
  - Originated by Client
  - Suppliers and Contractors
  - Meeting Minutes
  - Inter-Office Memoranda
  - Telephone Conversations
  - Typical Formats
  - Mailing Addresses (including electronic) and Telephone Numbers
  - Document Distribution Requirements Matrix
  - Project Filing Index

- Site Visits and Plant Access
- Safety Rules
- Confidentiality Requirements
- Data Communication Links
- Articles for Publication

1.05 Project Budget and Schedule
- Total Project Cost Estimate (Summary)
- Definition of Contingency
- Control Budget and Control Schedule
- Description of Project Budget
- Explanation of Budget vs. Estimate
- Project Summary Schedules

1.06 Project Resources
- Project Staffing Plan
- Manpower Histogram
- Training Requirements Matrix
- Computer Requirements
- Electronic Communication – Home Office/Client Office/Construction Site – Utilization of Off-Project Resources
- Non-Central Reproduction, Communication Requirements
- Space Requirements

1.07 Unique Project Considerations
- Geographic Considerations
- Personnel Restrictions/Requirements such as Security Clearance, U.S. Citizen, etc.
- Confidentiality of Information
- Security/Safety/Risks
- Site Logistics/Complexity
- Client Considerations

- Currency Exchange
- Environmental Restrictions
- Climate

1.08 Engineering and Design
- General
- Permits, Laws and Regulations (Applicable industry and/or Client standards)
- Professional Engineers/Architects Seal Requirements
- System Descriptions
- Area Descriptions
- Definition of Deliverables
- Utilization of Standard Specifications
- Engineering Specifications Provided by the Client
- Numbering Systems for Design Documents and Drawings
- Plant Equipment Numbering (e.g., major equipment/valves/instruments, piping)
- Equipment List Format
- Drawing Title Blocks
- CAE/CAD Approach
- Computer Systems and Methods Needed
- Chief Engineers Design Reviews
- Engineering/Design Packaging
- Construction Involvement in Design
- Constructability Approach
- Value Engineering/Cost Reduction Program
- Process Safety Management/Hazard Review
- Unique Design/Execution Considerations
- Mechanical Data Books Requirements
- Calculation Books Requirements
- Soils Report
- Requirements for Record Drawings/Specifications Requirements
- Definition of Spare Parts Requirements
- Voided Documents
- Drawing Approval Requirements
- Excluded Items
- Record Document Disclaimer
- Operations Manuals
- Operator Training

1.09 Procurement and Material Management
- Procurement Systems
- List of Government-Furnished Services and Items (GFSI)
- Company or Clients Purchase Documents and Terms and Conditions
- Companywide Agreements planned to be used for the Project

Attachment 2 - Typical Contents for Project Execution Plans

- Receiving/Warehouse Requirements
- Competitive and/or Sole Source Bidding Criteria
- Technical and Commercial Bid Evaluation Requirements
- Procurement Review and Approval Summary
- Construction Participation during Subcontract and Purchase Order Preparation
- Applicable General Conditions
- Invoicing Services and Payment of Invoicing Responsibility
- Expediting Services, Including Supplier Document Review Requirements
- Inspection Services
- Approved Project Supplier List
- Subcontracting and Administration

1.10 Project Controls

- Work Breakdown Structure
- Methods of Scope Estimating and Documentation
- Method of Baseline Planning
- Procurement Tracking Method
- Quantity Tracking Approach
- Performance Measurement Criteria
- Method of Change Control/Management
- Subcontractor Reporting Requirements
- Control Systems
- Control Level Details
- Time Charging Instructions
- Frequency of Cost Reporting
- Tracking, Trending and Forecasting of Project Cost

1.11 Project Quality Plan

- Required compliance with Quality Assurance Program Description, or applicable quality standard
- Definition of Applicable Codes
- Technical Review Plan – Design
- Project Quality Assurance Plan (PQAP)
- Home Office and Construction
- Client Quality Review Requirements
- Construction Input to Quality Assurance/Quality Control Program
- Supplier Surveillance Services
- Audit Schedule
- Inspection Services

1.12 Construction

- Summary of Work
- Construction Participation during Engineering and Design
- Site Organization

Attachment 2 - Typical Contents for Project Execution Plans

- Mobilization Plan
- Site Survey
- Temporary Facilities Requirements
- Open/Closed/Merit Shop Evaluation
- Labor Relations/Applicable Labor Agreements
- Shop versus Field Fabrication Evaluation
- Subcontracting versus Direct Hire Construction Evaluation
- Evaluation of Special Requirements
- Evaluation of Special Equipment Requirements
- Operations Restriction During Construction
- Pre-Outage Construction Work Permit Requirements
- Summary Analysis of Tie-Ins to Existing Facilities
- Engineering Participation during Construction Phase
- Home Office Support during Construction Phase
- Support to be Provided by Others
- Definition of Project Completion (i.e., Mechanical Completion, Validation, and Measurement Criteria)
- Rigging/Equipment Plan
- Loss Control Program
- On-Site Material Control
- Supplier Back-Charges
- Security
- Environmental Compliance
- Safety
- Training and Orientation

1.13 Commissioning and Start-Up

- Mechanical Completion
- Precommissioning
- Commissioning
- Systems Turnover
- Plant Start-Up
- Operator Training
- Transfer of Care, Custody, and Control to Owner
- Building/Plant Occupancy Approval

1.14 Environment, Safety, and Health

- Staffing Requirements/Organization
- Safety Policy
- Client Interface
- Reporting Requirements
- Unique Risks/Considerations
- Safety Targets

Attachment 2 - Typical Contents for Project Execution Plans

1.15 Risk Management Plan
- Risk Definition
- Risk Assessment
- Risk Mitigation

1.16 Project Closeout
- Financial Closeout Requirements
- Project Completion Report

1.17 Project Procedures
- Documented Deviations to PXPs (list and hard copies), if necessary
- Project Specific Procedures (list and hard copies), if necessary
- Client Procedures (list and hard copies), if necessary

Working Copy

Attachment 3 - Sample Risk Management Assessment

PBS CB-0080 - Operation					
No.	Description of Condition	Probability	Consequence	Overall Risk	Mitigating Actions
1	Significant additional costs for dismantlement and decommissioning in 2030 to 2035	Medium	Medium	Medium	• Continue to monitor the condition and take appropriate actions if added cost is identified.
2	Delay in PMR for use of Hazardous Waste Disposal Units (HWDUs) Panels 8 10 greater than 60 days	Low	Medium	Low	• Expedite approval process by working with NMED. • Build inventory of characterized waste at generator sites, then expedite shipments once PMR is approved.
3	Underground equipment failure (trucks, haulers, power, etc.) And/or Waste handling equipment failure causing cessation of operations greater than 60 days.	Low	Medium	Low	• Conduct designated maintenance outages and replenish spare parts. • Evaluate the needed capital equipment replacements. • Maintenance worker overtime to recover equipment downtime. • For major failures, continue to monitor the condition and take appropriate actions as authorized. • Obtain Hazardous Waste Facility permit (HWFP) modification for additional storage.