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# Tank Waste Remediation System Retrieval and Disposal Mission Waste Feed Delivery Plan

**R.D. Potter**

Lockheed Martin Hanford Company, Richland, WA 99352  
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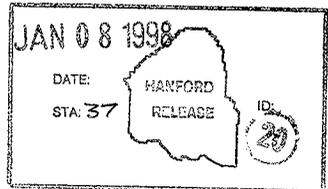
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**Abstract:** This document is a plan presenting the objectives, organization, and management and technical approaches for the Waste Feed Delivery (WFD) Program. This WFD Plan focuses on the Tank Waste Remediation System (TWRS) Project's Waste Retrieval and Disposal Mission.

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# Tank Waste Remediation System Retrieval and Disposal Mission Waste Feed Delivery Plan

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MACTEC

Date Published  
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Prepared by Lockheed Martin Hanford Corporation  
Richland, Washington

Prepared for the U.S. Department of Energy



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Document Title: Tank Waste Remediation System Retrieval and Disposal Mission Waste Feed Delivery Plan

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## EXECUTIVE SUMMARY

*This document is a plan presenting the objectives, organization, and management and technical approaches for the Waste Feed Delivery (WFD) Program. This WFD Plan focuses on the Tank Waste Remediation System (TWRS) Project's Waste Retrieval and Disposal Mission and is subordinate to the Tank Waste Remediation System Program Plan,<sup>1</sup> which should be consulted for additional direction on execution of the WFD Program. The Waste Retrieval and Disposal Mission includes the activities required to support a two-phased approach to treatment and immobilization of tank waste by private contractors. Phase 1 will be a demonstration phase to assess the effectiveness of private contractor technologies for an initial volume of Hanford Site tank wastes, and Phase 2 will be full-scale processing of the remaining wastes.*

*Before the U.S. Department of Energy (DOE) authorizes private contractors to proceed to the next demonstration phase (Phase 1B), the Project Hanford Management Contract (PHMC) team must demonstrate the ability to provide the necessary support to the private contractors. The PHMC Team conducted a "readiness to proceed" (RTP) self-assessment of its ability to support the private contractors. This plan supports the readiness-to-proceed evaluation.*

*Waste Feed Delivery Program functions that contribute to the Waste Retrieval and Disposal Mission and privatization activities include: establishing a waste feed strategy; defining the systems, structures, and components needed to implement the waste feed strategy; planning, funding, and monitoring waste feed projects; coordinating and overseeing support*

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<sup>1</sup>Freeman, D. V., 1998, *Tank Waste Remediation System Program Plan*, HNF-1883, Rev. 0, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

*functions that ensure that waste feed readiness and performance; assisting with transition to demonstration (Phase 1); and preparing for full-scale (Phase 2) operations.*

*This version of the WFD Plan describes the technical, programmatic, and management aspects of the WFD Program that are relevant to privatization support, and summarizes plans and activities that establish the program's RTP. This WFD Plan will be updated periodically to reflect changes to and evolution of the WFD Program.*

**CONTENTS**

1.0 INTRODUCTION ..... 1

2.0 MISSION ..... 2

    2.1 TANK WASTE REMEDIATION SYSTEM ..... 3

    2.2 TANK WASTE RETRIEVAL AND WASTE FEED DELIVERY ..... 3

3.0 WASTE FEED DELIVERY REQUIREMENTS ..... 4

4.0 WASTE FEED DELIVERY TECHNICAL OBJECTIVES AND APPROACH ..... 5

5.0 WASTE FEED DELIVERY PROGRAM ORGANIZATION ..... 6

    5.1 TANK WASTE RETRIEVAL ORGANIZATION ..... 6

        5.1.1 Tank Waste Retrieval Organization - Programs ..... 7

        5.1.2 Tank Waste Retrieval Organization - Supporting Functions ..... 9

    5.2 WASTE FEED DELIVERY PROGRAM ..... 10

        5.2.1 Waste Feed Delivery Program - Structure ..... 10

        5.2.2 Waste Feed Delivery Program - Management and Direction ..... 12

    5.3 WASTE FEED DELIVERY INTERFACES ..... 14

        5.3.1 Tank Waste Retrieval Organization - Programs and Support Operations ..... 15

        5.3.2 Tank Waste Remediation System Project Organizations ..... 16

        5.3.3 Subcontracted Support ..... 16

        5.3.4 Other Interfaces ..... 16

6.0 WASTE FEED DELIVERY MANAGEMENT APPROACH ..... 17

7.0 WASTE FEED DELIVERY PROGRAM WORK BREAKDOWN STRUCTURE, SCHEDULE, AND RESOURCES ..... 17

    7.1 WORK BREAKDOWN STRUCTURE ..... 17

    7.2 SCHEDULE ..... 17

    7.3 RESOURCES ..... 18

8.0 REFERENCES ..... 18

**APPENDIX**

GUIDANCE AND REQUIREMENTS TO DELIVERABLES CROSSWALK ..... A-i

**LIST OF FIGURES**

1. Waste Feed Delivery, the Tank Waste Remediation System Project, and the Project Hanford Management Contract ..... 8

2. Relationship of the Waste Feed Delivery Program and the Tank Waste Retrieval Organization ..... 9

3. Waste Feed Delivery and the Tank Waste Retrieval Organization ..... 11

**LIST OF TERMS**

BIO	Basis for Interim Operation
DOE	U.S. Department of Energy
DST	double-shell tank
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ES&H	environmental, safety and health
FDH	Fluor Daniel Hanford, Inc.
FY	fiscal year
HLW	high-level waste
ICD	Interface Control Document
IHLW	immobilized high-level waste
ILAW	immobilized low-activity waste
LAW	low-activity waste
LMHC	Lockheed Martin Hanford Corporation
MYWP	Multi-Year Work Plan
PHMC	Project Hanford Management Contract
PNNL	Pacific Northwest National Laboratory
RL	U.S. Department of Energy, Richland Operations Office
SST	single-shell tank
TRU	transuranic waste
TWR	Tank Waste Retrieval
TWRS	Tank Waste Remediation System
WBS	Work Breakdown Structure
WFD	waste feed delivery

**TANK WASTE REMEDIATION SYSTEM  
RETRIEVAL AND DISPOSAL MISSION  
WASTE FEED DELIVERY PLAN**

**1.0 INTRODUCTION**

The Waste Feed Delivery (WFD) Program is one of five major programs (WFD, Immobilized Waste, Tank Closure, Development and Demonstration, and Infrastructure Support) within the Tank Waste Retrieval (TWR) Organization. The TWR Organization is a major element of the Tank Waste Remediation System (TWRS) Project, which is operated by Lockheed Martin Hanford Corporation (LMHC) under DE-AC06-96RL13200, *Project Hanford Management Contract (PHMC)* (RL 1996). The TWRS Project includes operation and maintenance of the single-shell tanks (SST) and double-shell tanks (DST); retrieval of low-activity waste (LAW) and high-level waste (HLW) from the DSTs, SSTs, and miscellaneous underground storage tanks; delivery of the tank wastes to treatment and immobilization facilities; interim storage and disposal of immobilized LAW (ILAW); temporary storage and final disposition of immobilized HLW (IHLW); management of secondary wastes and byproducts; and safe closure of the DSTs, SSTs, miscellaneous underground storage tanks, and tank farm facilities.

The TWR Organization is responsible for the programmatic management of the Waste Retrieval and Disposal Mission, which includes the programs necessary to support TWR, delivery, storage, and disposal, and tank farm closure under the TWRS Project. Within the TWR Organization, the scope of the work to be performed under the WFD Program includes accomplishing retrieval and delivery of the tank wastes, staging the wastes (including conditioning if necessary to meet waste feed specifications), and transferring the wastes as feed to private contractor facilities for immobilization. This work is and will be supported by other organizations within the TWRS Project and the Project Hanford Management Contract (PHMC) team.

This WFD Plan has been prepared to support the WFD Program's readiness to deliver tank waste feed in accordance with established schedules and specifications. The primary purpose of this WFD Plan is to provide contributing managers and staff with the minimum direction and guidance necessary to achieve WFD's goals and objectives. These goals and objectives, and their accomplishment, must be consistent with higher order missions and charters, management policies and directives, and business and contractual responsibilities. This WFD Plan integrates relevant mission, strategic, and business planning requirements for the Waste Retrieval and Disposal Mission with the specific work scope to be accomplished in support of WFD.

This WFD Plan summarizes the bases for the work performed by WFD, describes organizational relationships and interfaces, and establishes WFD work practices. These practices

are in accordance with life-cycle asset management concepts and address the following areas: managing and controlling Technical and Programmatic Baselines; applying systems engineering and configuration management methods; acquiring and sustaining human and other resources for work performance; ensuring health, safety, and environmental compliance; achieving quality assurance, self-assessment, and startup readiness; and promoting stakeholder interests through open communication and economic transition.

After this **Introduction**, this WFD Plan is organized into the following seven sections.

- **Mission.** This section summarizes the missions and charters that are relevant to and provide the general bases and rationale for WFD work.
- **Waste Feed Delivery Requirements.** This section briefly identifies requirements that the WFD systems, processes, and projects must satisfy and refers to primary source documents where the requirements are established.
- **Waste Feed Delivery Technical Objectives and Approach.** This section summarizes the technical objectives that WFD must achieve and the overall means by which these objectives will be accomplished.
- **Waste Feed Delivery Program Organization.** This section presents the WFD Program organization and its relationship to functional organizations, projects, supporting entities within the TWRS Project, and other parties.
- **Waste Feed Delivery Management Approach.** This section addresses the management activities WFD will apply to accomplish its program objectives.
- **Waste Feed Delivery Program Work Breakdown Structure, Schedule, and Resources.** This section summarizes how WFD work is performed in accordance with the TWRS Project work breakdown structure (WBS), which forms the basis for structuring work in the multi-year work plan (MYWP).
- **References.** Provides a listing of the references cited in this WFD Plan.

## 2.0 MISSION

The bases for WFD work derive from the mission needs and requirements for the Hanford Site, TWRS Project, and the Waste Retrieval and Disposal Mission. This section of the WFD Plan describes the mission needs that are relevant to the work the WFD Program is expected to undertake. These mission needs provide the foundation for defining WFD work.

## 2.1 TANK WASTE REMEDIATION SYSTEM

The long-term mission for the TWRS Project is to retrieve current and future tank wastes, separate the wastes into LAW and HLW, immobilize the waste, store and dispose of ILAW onsite at the Hanford Site, temporarily store and remove IHLW to an offsite repository, manage certain other wastes associated with immobilization (e.g., cesium/strontium), and close the tank farms prior to turnover for final environmental remediation. The full range of TWRS Project missions and objectives are discussed in more detail in HNF-1883, *Tank Waste Remediation System Program Plan* (Freeman 1998) and in HNF-SD-WM-MAR-008, *Tank Waste Remediation System Mission Analysis Report* (Acree 1998). Although not all TWRS Project goals and objectives are directly pertinent to WFD, activities within the WFD Program must be consistent with the TWRS Project mission.

## 2.2 TANK WASTE RETRIEVAL AND WASTE FEED DELIVERY

The TWR Organization charter, as discussed in HNF-IP-0842, *TWRS Administration*, Volume 1, "Administration," Section 3.28, "Tank Waste Disposal Charter" (LMHC 1997), is to conduct business to achieve the common TWRS Project goals as follows.

- "Achieve real cleanup progress by planning the processes and activities, and designing and constructing the facilities or equipment that: 1) retrieves waste from the SSTs and DSTs, 2) separates tank waste into high-level and low-activity fractions and delivers feed to privately-owned and operated immobilization facilities, 3) stores and disposes immobilized waste, and 4) closes the tank farms."
- "Maintain management and financial control over the integrated technical, cost, and schedule baselines; meet baseline commitments and milestones."
- "Add stability to the local economy through an acquisition strategy that uses the best qualified, most competitive, and timely outside resources to provide technical support, products, and systems that augment the onsite capabilities."

From the Tank Waste Disposal Charter (HNF-IP-0842, Section 3.28 [LMHC 1997]), the stated WFD responsibility is the following.

- "Deliver waste feed to the privately owned and operated waste immobilization facilities within specification and on schedule."

Finally, HNF-SP-1230, *Tank Waste Remediation System Fiscal Year 1998 Multi-Year Work Plan - WBS 1.1* (Lenseigne 1997), provides further elaboration as follows.

- “Waste Feed Delivery’s goal is to retrieve waste from double-shell, single-shell, and miscellaneous underground storage tanks, condition the waste as necessary and transfer it as feed to private vendor plants for immobilization.”

### 3.0 WASTE FEED DELIVERY REQUIREMENTS

Numerous requirements apply to the WFD systems, processes, and supporting projects and organizations. These requirements, and the chosen methods for their implementation, are the primary bases for the WBS, schedules, tasks, and budgets associated with WFD. External requirements derive from various sources, including promulgated laws and regulations (e.g., U.S. Environmental Protection Agency [EPA], Washington State Department of Ecology [Ecology]), orders and directives (e.g., U.S. Department of Energy [DOE]), implementation procedures (e.g., safety authorization bases), professional organizations and publications (e.g., American National Standards Institute), and contractual documents (e.g., the PHMC [RL 1996]).

An overview of Waste Retrieval and Disposal mission requirements is provided in HNF-1883 (Freeman 1998). Technical requirements for the WFD Program are identified primarily in HNF-1901, *Tank Waste Remediation System Retrieval and Disposal Mission Technical Baseline Summary Description* (Treat et al. 1998). Most WFD activities during Phase 1 are affected or defined by technical requirements related to the following areas:

- Meeting waste feed envelope (e.g., radionuclide content, and chemical constituent concentrations), mass (total sodium and non-volatile oxides quantities), and delivery schedule requirements
- Completing a safe and effective TWR, conditioning, and delivery system (e.g., pipelines, pumps, instruments) capable of satisfying WFD requirements
- Completing safety Authorization Basis amendments, permit modifications, training, procedures, and other readiness measures to ensure on-time startup and continued delivery of waste feed throughout the life of the mission.

Programmatic requirements are primarily addressed in the implementing plans and procedures established for the TWRS Project in HNF-IP-0842 (LMHC 1997). Other programmatic requirements pertinent to waste retrieval and disposal and WFD are discussed in HNF-1883 (Freeman 1998). Most WFD activities are affected or defined by programmatic requirements related to: baseline management (including the Programmatic Baseline and the Technical Baseline); systems engineering management (including configuration management,

risk management, alternatives management, and interface management); environmental, safety and health (ES&H), and quality assurance; acquisition management; performance assurance; stakeholder affairs; and business management. It is through the implementation of these management systems and procedures that WFD programmatic requirements are satisfied.

#### 4.0 WASTE FEED DELIVERY TECHNICAL OBJECTIVES AND APPROACH

The primary goal of the WFD Program is to accomplish the WFD mission needs described in Section 2.0 of this WFD Plan. There are various over-arching technical objectives that WFD activities must satisfy in order to achieve the Waste Retrieval and Disposal Mission needs, and the WFD Program and supporting organizations from the TWRS Project and the PHMC team share the responsibility for achieving these technical objectives. The WFD Program is primarily responsible for identifying and defining work requirements that must be met by the supporting organizations. The WFD Program also tracks and monitors the work performance to verify that all technical requirements are satisfied. The WFD Program relies primarily on HNF-1901 (Treat et al. 1998) to ensure that the correct technical requirements and information are used and that configuration requirements for the Technical Baseline are met and maintained.

The WFD Program is responsible for meeting the following Phase 1 objectives:

- Establishing a waste feed strategy that identifies the source tanks, timing and order of waste retrieval, and waste transfer processes for delivery of tank wastes, on time and within envelope specifications, to the private contractors
- Ensuring that WFD is consistent and does not conflict with other tank farm and TWRS Project responsibilities, including resolution of safety and watch list tank issues, continued safe operation in accordance with safety authorizations and HNF-SD-WM-BIO-001, *Tank Waste Remediation System Basis for Interim Operation* (BIO) (FDH 1997), and maintaining DST capacity to support the waste storage needs of other TWRS Project missions
- Providing interface support and coordination with the U.S. Department of Energy, Richland Operations Office (RL), PHMC team members, and the private contractors as needed to meet the WFD needs of Phase 1
- Identifying, defining, and specifying the systems, structures, and components that will be needed to implement the waste feed strategy and support Phase 1
- Identifying, scoping, planning, funding, and monitoring the projects needed to refurbish, construct, install, test, turn over, operate, and maintain the equipment and facilities for accomplishing the WFD Program mission during Phase 1

- Coordinating and overseeing activities performed by supporting functional organizations and projects (including the development of effective environmental and safety compliance operations, maintenance, training, and other programs) to ensure the qualifications, readiness, and availability of the staffing, equipment, and facilities needed to accomplish WFD.

The WFD Program mission includes assisting with an efficient and effective transition between Phases 1 and 2. The objectives outlined above will be accomplished in ways that will best support this transition. Other Phase 2 objectives that support both the option of privatizing WFD activities and the option of continuing government contractor operation of WFD include:

- Preparing for delivery of wastes from DSTs, SSTs, and miscellaneous underground storage tanks to the Phase 2 immobilization system(s) (either Phase 1 with expanded capacity or new facilities)
- Laying the technical groundwork for staging and transferring tank wastes in a manner that will maintain operational safety, help minimize ILAW and IHLW volumes, and provide timely support to the Phase 2 immobilization program
- Supporting Phase 2 WFD planning in a manner that will enable final tank closure and environmental restoration to be conducted as efficiently and expeditiously as possible.

The overall WFD Program approach for achieving the program's objectives relies on the combined establishment and application of technical, schedule and cost baselines integrated with program logics for major program activities. These program elements are described in HNF-1883 (Freeman 1998).

## **5.0 WASTE FEED DELIVERY PROGRAM ORGANIZATION**

This section describes the WFD Program organization that performs WFD work and discusses the overall responsibilities and relationships of organizations that support the WFD Program. This section also identifies important interfaces with other programs, functional organizations, and projects.

### **5.1 TANK WASTE RETRIEVAL ORGANIZATION**

The PHMC (RL 1996) is the primary basis for defining Management and Integration work to be performed at the Hanford Site, and establishes the basic PHMC team relationships

and work scopes. Figure 1 depicts where, within the overall PHMC team, the TWR Organization (and WFD) is located.

### 5.1.1 Tank Waste Retrieval Organization - Programs

The TWR Organization includes five programs, which receive administrative and technical assistance from several program support operations (Figure 2). In addition to the WFD Program, the principal responsibilities of each program include the following.

- **Tank Closure Program.** Provide data to support decisions on tank farm closure; specify criteria for turnover of tank systems for closure; and close the SSTs, DSTs, miscellaneous underground storage tanks, and associated ancillary tank system equipment.
- **Immobilized Waste Storage and Disposal Program.** Receive, store, and dispose ILAW from the private contractors; receive, store, and prepare IHLW from the private contractors for geologic repository acceptance; manage the strontium, transuranic (TRU), and other separated tank waste feed returned from the private contractors; manage secondary wastes from the immobilization processes; and provide for the final disposition of packaged cesium product.
- **Development and Demonstration Program.** Deploy advanced technologies for the retrieval of waste from the SSTs (Hanford Tanks Initiative); integrate vadose zone program activities; and establish retrieval performance objectives that will form the basis for tank closure criteria.
- **Infrastructure Support Program.** Support infrastructure development and installation (e.g., roads, power, water) associated with physical operation of private contractor facilities; and transition infrastructure elements to DynCorp Tri-Cities Services, Inc. for utilities and other service delivery during private contractor operation of their immobilization facilities.

The five TWR Organization programs are interrelated and highly dependent on the successful completion of each of their respective missions. Coordination and interfacing ensure consistency of planning efforts, concurrence on overlapping or dependent technical issues and resolutions, integration of turnover efforts as different project phases begin and end, and sharing of staff as needed to balance temporary workload variances.

Figure 1. Waste Feed Delivery, the Tank Waste Remediation System Project, and the Project Hanford Management Contract.

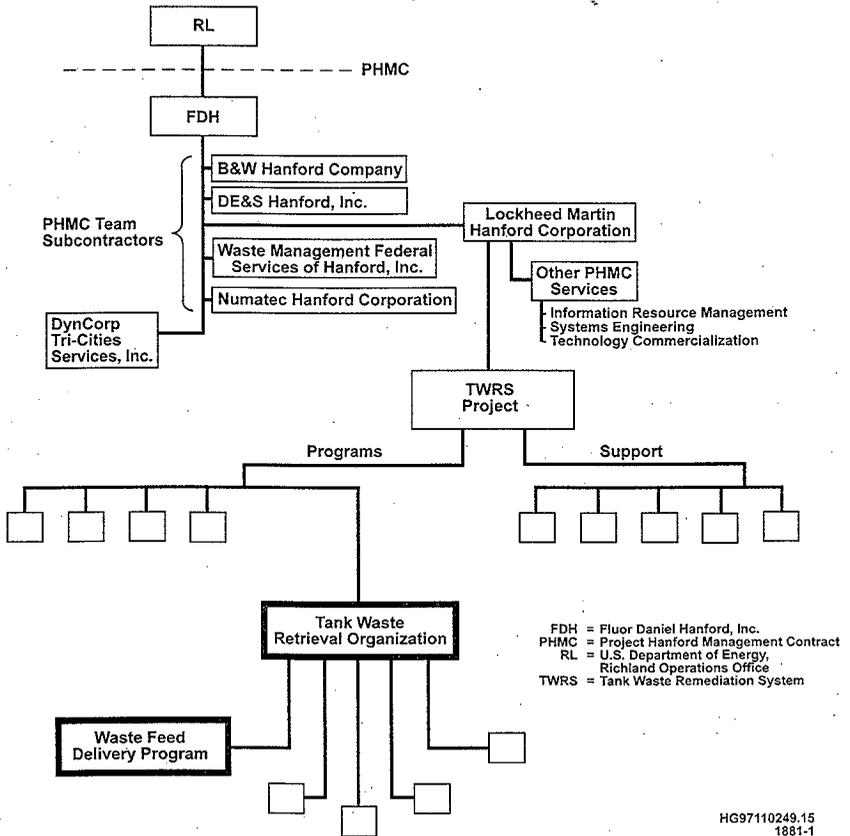
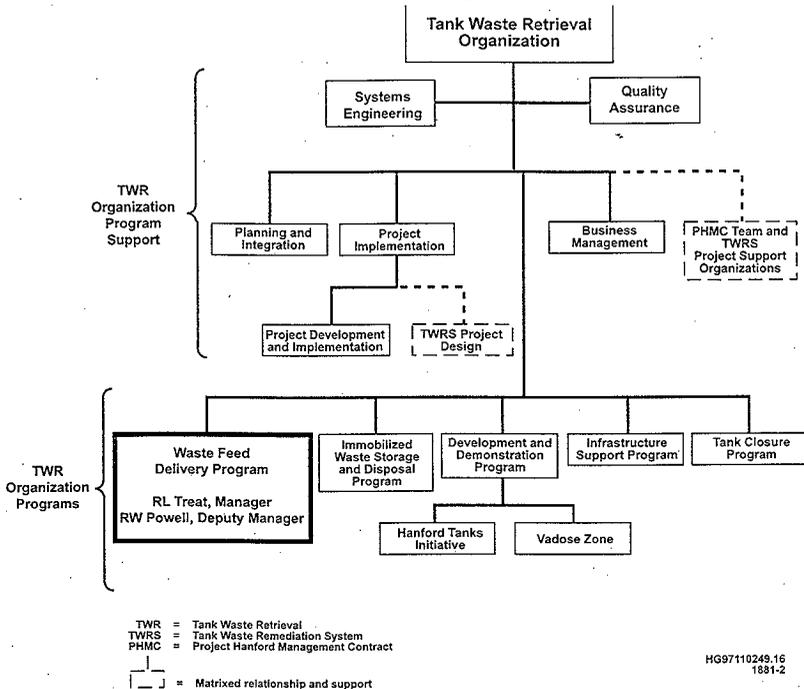


Figure 2. Relationship of the Waste Feed Delivery Program and the Tank Waste Retrieval Organization.



### 5.1.2 Tank Waste Retrieval Organization - Supporting Functions

The TWR Organization includes program support operations that provide planning, management, and performance support to the WFD Program (e.g., cost baseline planning, systems engineering/configuration management, financial variance reporting). These TWR Organization support operations include: Project Implementation; Planning and Integration; Business Management; Systems Engineering; and Quality Assurance. The full scope and responsibilities of the TWR Organization supporting operations is described in HNF-1883 (Freeman 1998). Specific interfaces with and assistance to the WFD Program are discussed in Section 5.3.1.

The WFD Program relies on TWRS Project functional organizations for technical support. These organizations are matrixed to the TWR Organization and its programs. Organizational contacts representing each matrixed organization are assigned to the TWR Organization Director and/or program manager to facilitate communication, technical support, and resource assignments. The organizational contacts are responsible for facilitating integration across the different functional organizations and projects that support the program, as well as representing the interests of their respective functional organization or project. The matrixed organizations and projects include: Characterization; Quality Assurance; Systems Engineering; ES&H; Tank Farm Maintenance; TWRS Operations, Engineering, and Nuclear Safety; and TWRS Project Design.

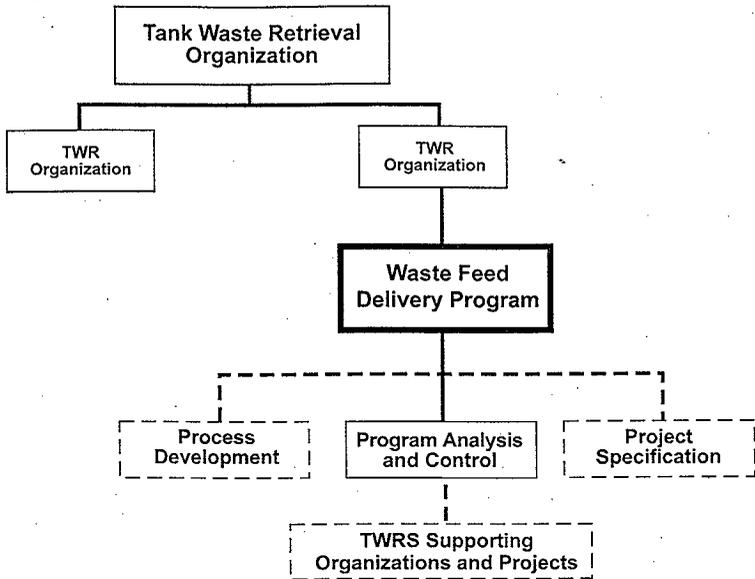
## 5.2 WASTE FEED DELIVERY PROGRAM

### 5.2.1 Waste Feed Delivery Program - Structure

The WFD Program (and its supporting functions) is structured to accomplish the objectives presented in Section 4.0 of this WFD Plan. As shown in Figure 3, the WFD Program is organized into three sections: Process Development; Project Specification, and Program Analysis and Control. Each of these sections represents a functional performance area, with primary responsibilities as follows.

- **Process Development Section.** The Process Development Section is responsible for conceptual development, testing, evaluation, refinement, and final selection of the overall processes for delivering tank waste. The WFD processes include actions necessary to retrieve, transfer, stage, adjust (as necessary), and deliver tank wastes to the private contractors. Included, for example, are identifying candidate source tanks, evaluating candidate tank contents against contract envelope specifications, and developing transfer logics and schedules to affect the movement of selected tank waste contents to staging tanks from which the private contractors will obtain their waste feed. Process Development is also responsible for defining requirements that address equipment and operation interfaces and for conducting the supporting analyses that enable definition of these requirements.
- **Project Specification Section.** The Project Specification Section is responsible for transforming identified WFD project needs into specifications and other direction to be used as the primary bases for project definition and design. Program work will typically end at preconceptual engineering, with full-scale engineering and construction typically being performed by other TWRS Project organizations and by PHMC team subcontractors. Project Specification supports project initiation, quality control, and oversight during the engineering and construction phases. This support is provided by developing (and monitoring performance against) design requirements, technical criteria, trade study

Figure 3. Waste Feed Delivery and the Tank Waste Retrieval Organization.



TWR = Tank Waste Retrieval  
 TWRS = Tank Waste Remediation System

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 = Matrixed relationship and support

descriptions, and preliminary project cost estimates and schedule, which serve as the bases for others to develop detailed project plans and designs.

- Program Analysis and Control Section.** The Program Analysis and Control Section is responsible for overall analysis of WFD performance, assessment of status and progress, and adjustment as needed to accomplish program tasks and technical activities. The primary means for achieving these goals are through establishment of Technical and Programmatic Baselines, analysis and evaluation of performance (e.g., cost variance, trend analysis), identifying required changes, and implementing changes to the baselines through established change control processes. Program Analysis and Control will depend on, and ensure the periodic development and updating of, a variety of management tools to support decision making and planning. The principal tools (plans, reports, and lists) that will be used include Level 1 Logics (FDH 1998); WFD Requirements List; WFD

Enabling Assumptions List; WFD Decisions List; WFD Risks List; WFD Opportunities List; Interface Agreements; Annual WFD Task Plans; Annual WFD Resource Needs Forecast; and WFD Status and Variance Reports. Each of these is derived from or encompassed by counterpart systems and tools used for TWR Organization management, as described in HNF-1883 (Freeman 1998).

The current WFD requirements, enabling assumptions, decisions, risks, and opportunities lists are maintained under graded change control and allocated by the WFD Program to activity managers during the annual MYWP preparation process to ensure a common planning basis. Activity managers are also required to use designated technical source information identified in HNF-1901 (Treat et al. 1998) and to comply with the configuration management requirements associated with Technical Baseline documents. The WFD Level 1 Logic details, supporting Technical Basis Reviews, and estimated resource needs provide additional structure for annual planning. Preparers of annual task plans must include Interface Control Documents (ICD) or other forms of interface agreements when more than one organization is involved in the work.

### 5.2.2 Waste Feed Delivery Program - Management and Direction

The WFD Program is directed by the WFD Program Manager, who is assisted in day-to-day operations by a Deputy Manager, and three Section Managers who oversee the work and staff of the Process Development, Project Specification, and Program Analysis and Control Sections. These managers are further supported in their management and direction of WFD by designated Program Facilitators (personnel who are matrixed from supporting organizations to support WFD). The duties and responsibilities of these managers and facilitators are discussed below.

**WFD Manager.** The WFD Manager is responsible for overall performance of the WFD Program. Chief duties include the following:

- Establishing program priorities in accordance with the Waste Retrieval and Disposal Mission and objectives
- Integrating annual WFD program and task plans and resource forecasts with TWR Organization planning efforts
- Ensuring WFD Program baselines are managed under established configuration and change control requirements
- Serving as Chairman of the WFD Change Control Board
- Ensuring conformance to applicable management and reporting requirements
- Imposing corrective actions and recovery plans as necessary to maintain timely and effective performance of WFD work.

**WFD Deputy Manager.** Reporting to the WFD Manager, the Deputy Manager is responsible for overall cost and schedule planning for the WFD Program and ensuring that cost/schedule performance is consistent with established program plans. Chief duties include the following:

- Directing the annual program planning effort, assembling annual task plans, compiling resource forecasts, and preparing other programmatic-level documents for planning WFD Program activities
- Acting as the lead for receiving and disseminating program budget and schedule reports
- Allocating enabling assumptions, requirements, decisions, risks, optimization opportunities, and other factors to supporting organizations
- Coordinating and leading meetings with Program Facilitators
- Monitoring and ensuring WFD Program performance remains consistent with the established Programmatic Baseline
- Developing risk management plans, corrective action plans, and recovery plans as appropriate.

**WFD Section Managers.** The Section Managers are generally responsible for day-to-day completion of tasks and activities within their sections, including defining process and project requirements and tracking progress to ensure conformance to the requirements.

The Process Development and Project Specification Section Managers are also responsible for the following:

- Assigning program tasks for performance by qualified and responsible technical personnel
- Overall management and control of program task performance (quality, budget, and schedule)
- Monitoring and correcting deficiencies in program task performance
- Preparing program task plans consistent with WFD program objectives, requirements, and section responsibilities
- Identifying new technical requirements, enabling assumptions, risks, decisions, and opportunities for improvement, and communicating them to the Program Analysis and Control Section Manager.

The Program Analysis and Control Section Manager is responsible for the following:

- Analyzing baseline performance through analysis of monthly status, variance, and trend reports provided by the TWR Organization's Business Management
- Maintaining the WFD components of the Level 1 Logics (FDH 1998) and associated data packages, the WFD Technical Baseline, and the WFD Programmatic Baseline
- Maintaining the lists of WFD key enabling assumptions, requirements, risks, decisions, opportunities, corrective actions, and recovery plans
- Evaluating how the above key list items crosscut program activities and organizations, and recommending their allocation to contributing organizations and activity managers (allocation primarily occurs in conjunction with the annual MYWP planning process, but also following approved changes).

**Program Facilitator.** As noted in Section 5.1.2 of this WFD Plan, technical support is provided to the WFD Program through support projects and functional organizations. To facilitate managing the work, the WFD Program managers and staff will access Program Facilitators; personnel working for or matrixed to the TWR Organization or WFD Program and assigned on a part-time basis the lead responsibility for interfacing with the supporting organizations.

The Program Facilitators are responsible for communicating, coordinating, facilitating, and monitoring the performance of work involving TWRS Project and waste retrieval and disposal support functions. Chief duties of the Program Facilitators include:

- Establishing effective communication between the TWR Organization and WFD Program and the supporting organizations
- Acting as a champion for win-win issue resolution for the TWR Organization, WFD Program, and the respective supporting organization, promoting decisions and actions that support the objectives of the involved organizations
- Evaluating technical and progress reports to assess the adequacy of the work performed by the respective supporting organizations
- Identifying opportunities to improve the supporting organizations' baselines.

### 5.3 WASTE FEED DELIVERY INTERFACES

The WFD Program must interact with and rely on other organizations and entities. The principal WFD Program interfaces are addressed below.

### 5.3.1 Tank Waste Retrieval Organization - Programs and Support Operations

In general, communication and coordination within the TWR Organization will occur directly between staff members. Program Facilitators will help identify and resolve project implementation, systems engineering, and quality assurance issues between organizations. Operations and programmatic assistance will be obtained from the TWR Organization support operations identified in Section 5.1.2. Specific interfaces with and assistance to the WFD Program include the following.

- **Project Implementation.** Coordination and interface with the WFD Program will primarily involve facilitation of work on design and construction (large capital) projects. The WFD Program will identify the engineering, safety, permitting, operations, and construction requirements that must be satisfied in association with projects. Project Implementation will take the lead on arranging for the required organization support (e.g., Tank Farm Operations, TWRS Project Design).
- **Planning and Integration.** Coordination and interface with the WFD Program will primarily involve periodic status checking to ensure consistency among WFD and other Waste Retrieval and Disposal Mission planning efforts. The WFD Program must coordinate with Planning and Integration on issues involving the private contractors (e.g., ICDs) and contract support from the PHMC team members (e.g., Waste Management Hanford, DynCorp Tri-Cities Services, Inc).
- **Business Management.** Coordination and interfaces with the WFD Program include developing WFD baselines, establishing and initiating tasks (including resource acquisition), and monitoring for and correcting variances from baseline budgets and schedules.
- **Systems Engineering.** Coordination and interface with the WFD Program will ensure that the physical architecture and supporting documents meet requirements established in HNF-SD-WM-SEMP-002, *Tank Waste Remediation System Systems Engineering Management Plan* (Peck 1998); risk management procedures are properly implemented in accordance with HNF-SD-WM-PMP-018, *Tank Waste Remediation System Risk Management Plan* (Zimmerman 1998); the means for achieving "product-dependent" interfaces are well described; and configuration management methods are applied to control changes to the physical architecture and supporting Technical Baseline documents in accordance with HNF-1900, *Tank Waste Remediation System Configuration Management Plan* (Vann et al. 1998).
- **Quality Assurance.** Coordination and interface between Quality Assurance and the WFD Program ensures that requirements from the PHMC team for quality assurance are adequately incorporated into WFD work.

### **5.3.2 Tank Waste Remediation System Project Organizations**

Program Facilitators (one for each functional organization and major project) have been identified within the WFD Program, and organizational contacts have been identified within each functional organization and major project. These individuals are responsible to help oversee and facilitate the identification and resolution of issues, including issues that have been elevated by staff. The Program Facilitators will communicate the breadth of WFD Program requirements, enabling assumptions, risks, and other matters pertinent to WFD accomplishment to the designated organizational contacts. The Program Facilitators and organizational contacts will attempt to resolve differences between the objectives of WFD and the supporting functional organizations or projects. The WFD Project Development Section Manager has been designated to act as an overall coordinator and interface lead for developing WFD project requirements.

### **5.3.3 Subcontracted Support**

Subcontracted support to the WFD Program will be required for workload balancing, specialty expertise, and economic diversification. Interfacing between the WFD Program and a subcontractor will normally occur between staff members, particularly for day-to-day communication and coordination. The primary PHMC team subcontractors from which the WFD Program will obtain services include Waste Management Federal Services of Hanford, Fluor Daniel Northwest Engineering, and Numatec Engineering. The WFD Program may seek support from other subcontractors (e.g., DynCorp Tri-Cities Services, Inc., Bechtel Hanford, Inc., Pacific Northwest National Laboratory (PNNL), enterprise companies established by PHMC team members). Contract-related negotiations and paperwork must be approved by the LMHC Contracts Division.

### **5.3.4 Other Interfaces**

In general, the remaining interfaces with the WFD Program are indirect and in support of other organizations with the responsibility for direct interaction. These remaining interfaces include the DOE; Fluor Daniel Hanford, Inc. (FDH); the Waste Integration Team; the private contractors; regulatory and other oversight agencies; stakeholders; and the general public. These interfaces are described in more detail in HNF-1883 (Freeman 1998).

## **6.0 WASTE FEED DELIVERY MANAGEMENT APPROACH**

The WFD Program implements numerous management systems and activities to ensure that WFD planning and implementation satisfy higher tier directives and guidance. These management systems and activities derive from or are encompassed in practices and procedures established for the TWR Organization Programs (e.g., WFD, Closure, Immobilized Waste). The management approach and specific systems, tools, plans, reports, and other mechanisms that the WFD Program will rely on to conduct its business are described in HNF-1883 (Freeman 1998). These include, but are not limited to scope, schedule, cost, and Technical Baselines; configuration management and change control practices; risk, alternatives, and interface management; acquisition management; and performance monitoring.

## **7.0 WASTE FEED DELIVERY PROGRAM WORK BREAKDOWN STRUCTURE, SCHEDULE, AND RESOURCES**

### **7.1 WORK BREAKDOWN STRUCTURE**

A WBS has been established for planning, execution, and control of work under the Waste Retrieval and Disposal Mission, including WFD work. The WBS is the primary means of organizing WFD tasks and activities and forms the basis for structuring work in the TWRS Project MYWP (HNF-SP-1230 [Lenseigne 1997]). The WBS represents the scope of work which, when sequenced in Level 1 Logics (FDH 1998), enables the work to be estimated, scheduled, budgeted, performed, and managed.

The WFD activities are broken into discrete packages for performance tracking and reporting. This work is detailed in activity data sheets, that are held as backup to the TWRS Project MYWP (Lenseigne 1997) and are available from the WFD Program files. The status of each active element is monitored regularly to determine if the planned work is being accomplished on schedule and within budget. Adjustments are made as program and project requirements demand.

### **7.2 SCHEDULE**

The Waste Feed Retrieval and Disposal Mission baseline schedule (including WFD work) is currently detailed in HNF-SP-1230 (Lenseigne 1997) but is in the process of being adjusted and reconciled with the Level 1 Logics (FDH 1998). Separate detail schedules have been prepared, consistent with the WBS and the current baseline schedule, for tasks needed to successfully complete the WFD work scope. Each detail schedule identifies the Level 1 Logic ties and interfaces necessary to coordinate its completion with the other elements of the WFD Program baseline schedule. These interfaces and dependencies are described in Technical Basis

Reviews, task plans, and Level 1 Logic details. Changes to the WFD schedule baseline will be processed consistent with configuration management and change control procedures specified in HNF-1883 (Freeman 1998).

### 7.3 RESOURCES

The WFD Program cost estimates are provided in HNF-SP-1230 (Lenseigne 1997). Cost estimates for subsequent fiscal years (FY) will be reconciled with the Level 1 Logics (FDH 1998). The level and types of human resources needed to accomplish WFD Program activities are projected in order to anticipate and manage variances in overall staffing, technical and management expertise, and administrative support. Periodically, the WFD Program will require support from individuals and companies who offer unique or supplementary services. The WFD Program will decide which type of resources (e.g., internal staffing, subcontractor) are most appropriate based on subcontracting and business practices established for the TWRS Project.

### 8.0 REFERENCES

#### Logic Diagrams

FDH, 1998, Logic Diagrams, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

- H-2-823148, TWRS Retrieval Level 1 Logic Immobilized Waste (ILAW)
- H-2-829149, TWRS Retrieval Level 1 Logic Immobilized Waste (IHLW)
- H-2-829150, TWRS Retrieval Level 1 Logic Infrastructure Phase 1 Privatization Support
- H-2-892151, TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 1st Feed Batches Tank 241-AN-105
- H-2-829152, TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 2nd Feed Batches Tank 241-AN-104
- H-2-829153, TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 3rd Feed Batches Tank 241-AW-101
- H-2-829154, TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 4th Feed Batches Tank 241-AN-103
- H-2-829155, TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 5th Feed Batches Tanks 241-AP-101 & 241-AW-104
- H-2-829156, TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 6th Feed Batches Tank 241-AY-101
- H-2-829157, TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 7th & 8th Feed Batches Tank 241-AN-107

- H-2-829158, *TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 9th Feed Batches Tank 241-AN-102*
- H-2-829159, *TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 10th Feed Batches Tank 241-AN-106*
- H-2-829160, *TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 11th Feed Batches Tank 241-SY-101*
- H-2-829161, *TWRS Retrieval Level 1 Logic Waste Feed Delivery LAW 12th Feed Batches Tank 241-SY-103*
- H-2-829162, *TWRS Retrieval Level 1 Logic Waste Feed Delivery HLW 1st & 2nd Feed Batches First Tank, 241-AZ-101*
- H-2-829163, *TWRS Retrieval Level 1 Logic Waste Feed Delivery HLW 3rd & 4th Feed Batches Second Tank, 241-AZ-102*
- H-2-829164, *TWRS Retrieval Level 1 Logic Waste Feed Delivery HLW 5th - 9th Feed Batches Third Tank, 241-AY-102*
- H-2-829165, *TWRS Retrieval Level 1 Logic Waste Feed Delivery HLW 10th - 12th Feed Batches Fourth Tank, 241-C-104*
- H-2-829166, *TWRS Level 0 Logic (2 Sheets)*

## Documents

- Acree, C. D., Jr., 1998, *Tank Waste Remediation System Mission Analysis Report*, HNF-SD-WM-MAR-008, Rev. 2, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- FDH, 1997, *Tank Waste Remediation System Basis for Interim Operation*, HNF-SD-WM-BIO-001, Rev. 0, Fluor Daniel Hanford, Inc., Richland, Washington.
- Freeman, D. V., 1998, *Tank Waste Remediation System Program Plan*, HNF-1883, Rev. 0, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- Lenseigne, D. L., 1997, *Tank Waste Remediation System Fiscal Year 1998 Multi-Year Work Plan-WBS 1.1*, HNF-SP-1230, Rev. 0, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- LMHC, 1997, *TWRS Administration*, HNF-IP-0842, Fluor Daniel Hanford, Inc., Richland, Washington.
- Peck, L. G., 1998, *Tank Waste Remediation System Systems Engineering Management Plan*, HNF-SD-WM-SEMP-002, Rev. 1, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- RL, 1996, *Project Hanford Management Contract (PHMC)*, DE-AC06-96RL13200, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Treat, R., P. Bartley, T. J. McLaughlin, R. D. Potter, R. E. Raymond, and W. L. Willis, 1998, *Tank Waste Remediation System Retrieval and Disposal Mission Technical Baseline Summary Description*, HNF-1901, Rev. 0, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

Vann, J. M., E. R. Hamm, and R. D. Crisp, 1998, *Tank Waste Remediation System Configuration Management Plan*, HNF-1900, Rev. 0, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

Zimmerman, B. D., 1998, *Tank Waste Remediation System Risk Management Plan*, HNF-SD-WM-PMP-018, Rev. 2, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

**APPENDIX A**

**GUIDANCE AND REQUIREMENTS TO  
DELIVERABLES CROSSWALK**

**Tank Waste Remediation System Retrieval and  
Disposal Mission Waste Feed Delivery Plan**

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Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
A.1 DOE Letter to H. J. Hatch, FDH, from W. J. Taylor, DOE, dated August 8, 1997, #9757162A (36 ITEM CHECKLIST)		
2. Requirements are identified, validated, and documented.	I	Plan references source documents for WFD requirements (see Section 3.0; reference to Technical Baseline and TWRS Program plan). The source documents provide the requirements identification, validation, documentation, and functional allocations.
3. Requirements are allocated to functions.	I	Plan references source documents for WFD requirements (see Section 3.0; reference to Technical Baseline and TWRS Program plan). The source documents provide the requirements identification, validation, documentation, and functional allocations.
8. Operations plans that describe how the PHMC team will execute the tech baseline have been prepared for all projects and are supported by lower-tier plans. The operation plans are consistent with MYWP and LCAM. Ops. and Maint. plans are integrated.	I	The WFD Plan includes organizational and programmatic guidance on integrating technical baseline, MYWP, and other LCAM elements throughout the WFD execution.
11. Waste feed plans and implementing actions and procedures are on track.	I	Discussed throughout this document and the TWRS Program Plan (for programmatic); and throughout TWRSO&UP and Technical Baseline Summary Description (for technical and engineering).
20. Waste has been characterized as necessary to satisfy all data quality objectives.	I	Sections 5.2.1 and 5.3.1; Coordination/Interface with the Characterization Project is addressed in the TWRS Program Plan; DQOs, characterization requirements and results are described in the TBSD, including the TWRS O&UP, both referenced by this plan.

Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
<b>A.2 DOE Letter to H. J. Hatch, FDH, from W. J. Taylor, DOE, dated August 8, 1997, #9757162A (BODY OF TEXT)</b>		
<b>General PHMC Responsibilities from RL's 8/8/97 letter, Section 2.1</b>		
4. Work in the technical baseline can be performed	I	Will be established through ICDs, MOAs, contracts and other program arrangements. Section 5.3 describes principal WFD interfaces; TWRS Program Plan describes how interface agreements will be established.
<b>Specific Responsibility from RL's August 8, 1997 letter, Section 2.2</b>		
1. Waste feed can be provided in the specified amount to the specified place at the specified time	I	WFD Plan (Section 4.0) identifies this as a key program objective; TWRS O&UP and other Technical Baseline documents establish how this will be done.
<b>A.3 DOE Letter H. J. Hatch, FDH, from William J. Taylor, DOE, dated December 2, 1997, #9761291</b>		
5. Provide specific information to address the ten areas in Paragraph 4.2.4 of the August 8 DOE letter of direction		
j. Deliver to DOE or make available for DOE review, Draft Program Plans	I	This is the WFD Program's plan (Section 1.0). Precursor and higher tier documents such as the TWRS Program Plan, are referenced where relevant to conduct of WFD activities.
11. Make a QA plan available for DOE review in January.		
c. Show how QA will be implemented in the waste feed delivery	I	Sections 3.04 and 5.3.1 show implementation. This is addressed at the TWRS Program Plan level and in HCF-IP-0842; these are referenced in Sections 3.0 and 6.0.

Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
<b>C.1 Interface Control Documents</b>		
<b>19. Low-Activity Waste Feed</b>	I	WFD Plan references interfaces in Section 5.3. Actual ICD requirements for LAW feed will be incorporated in the TWRS Program Plan, MYWP, and documents identified in the Technical Baseline Summary Description (e.g., TWRS O&UP, Privatization ICDs).
<b>20. High-Level Waste Feed</b>	I	WFD Plan references interfaces in Section 5.3. Actual ICD requirements for LAW feed will be incorporated in the TWRS Program Plan, MYWP, and documents identified in the Technical Baseline Summary Description (e.g., TWRS O&UP, Privatization ICDs).
<b>D.1 Detailed Instructions for Assessment of RTP - Appendix C, November 14, 1997</b>		
1. Show the ability to provide HLW and LAW waste feed at the correct rate to the correct location with verified composition and carry out responsibilities per the following ICDs:	I	WFD Plan (Section 4.0) identifies this as a key program objective; TWRS O&UP and other technical baseline documents established how this will be done.
2. Provide correct level-1 and mid-level logics and schedules that support the waste feed delivery.	I	See Section 5.2.1, Program Analysis and Control Section, and Section 7.0.
23. Show an ability to support private contractors regarding waste feed and delivery through the PHMC Team's QA Program.	I	Sections 3.0 and 5.3.1 address the Team's QA Program. ES&H and QA have prepared a QA Plan (HCF-IP-0842) for all TWRS activities, as discussed in the TWRS Program Plan.
<b>D.2 Plan for Determining PHMC-Team's RTP for Waste Feed Delivery (Table 2).</b>		
PHMC provide deliverables necessary to support RTP, as follows:		
15. WFD Program System Plan/ Functional Guidance	I	Section 5.0 provides functional guidance to WFD Program, and to TWRS and PHMC organizations supporting WFD.

Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
17. Waste Feed Transfer Procedure	I	Section 4.0; This is ongoing and covered in TWRS O&UP and other technical baseline documents as described in the TBSD.
18. M-50-03 Decision Report Sludge Washing (Milestone Completed, 1997)	I	N/A for Phase 1; results will be used to develop subsequent sludge washing decisions.
<b>D.3 Plan for Determining PHMC-Team's RTP for Waste Feed Delivery - Document Checklist (Table 3)</b>		
2. Plans call for implementing sludge-washing capability to provide sludge to privatization contractor(s) in Phase 1B.	I	See Section 4.0 on sludge washing; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in <i>Technical Baseline Summary Description</i> ).
3. Plans call for retrieving DST waste to make room for SST waste, to optimize tank storage, and to stage waste.	I	See Section 4.0 on retrieving DST waste to make room for SST waste; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in <i>Technical Baseline Summary Description</i> ).
6. Plans call for providing high-level waste feed to the privatization contractor(s).	I	See Section 4.0 and HCF-IP-0842, Vol. I, Sec. 3.28 regarding HLW feed; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in <i>Technical Baseline Summary Description</i> ).
24. Plans are that TWR will be responsible for consolidation and feed staging for Phase 1 treatment.	I	See Section 4.0 and HCF-IP-0842, Vol. I, Sec. 3.28 and HCF-SP-1230 (MYWP) regarding consolidation and feed staging for Phase 1; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in <i>Technical Baseline Summary Description</i> ).

Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
44. Plans integrate the waste feed delivery technical baseline.	I	The Technical Baseline is "captured" in the Technical Baseline Summary Description; the WFD Plan (Section 3.0) cites this as the source document for technical requirements related to WFD and to be integrated into technical planning work.
47. Plans include preparation and update of the waste feed delivery DQOs.	I	See Section 5.2.1 for waste feed delivery DQOs; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in Technical Baseline Summary Description).
48. Plans include preparation of the Tank Waste Ops and Utilization Plan to be consistent with the feed staging plans.	I	This is the current planning basis; TWRS O&UP will be updated to reflect the most current strategy for tank waste retrieval order, waste feed staging, and delivery timing.
50. Plans describe PHMC managing the interface during prep of Phase 1 feed envelope w/ Waste Processing Project.	I	See Section 4.0 and HNF-SP-1230 (MYWP);
51. Plans describe completion of LAW feed definition and LAW process flowsheets.	I	This is the current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in Technical Baseline Summary Description).
53. Plans define equipment requirements, infrastructure requirements, and recommend a preferred alternative consistent with DOE guidance.	I	This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in Technical Baseline Summary Description).

Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
60. Plans include updating the tank retrieval sequence document (TPA-45-02B-V) per the Waste Tank Ops and Utilization Plan; Update consistent with consolidation requirements and feed plans to Phase 1 contractors.	I	See Section 4.0 and HCF-IP-0842, Vol. I, Sec. 3.28 regarding update of tank retrieval sequence document ; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in Technical Baseline Summary Description).
61. Plans include completion of SST Retrieval Sys CDR, including sys def, leak detection mitigation and monitoring as req'd per TPA.	I	This is the current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in Technical Baseline Summary Description).
64. Plans include meeting feed quantity requirements for Phase 1 and allowing the HTI heel demonstration to proceed.	I	See Sections 4.0 and 5.2.1 regarding feed quantity; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in Technical Baseline Summary Description).
<b>E.1 TWRS Waste Disposal Division Planning Guidance dated July 7, 1997 (Updated December 12, 1997)</b>		
Division will prepare integrated plans consistent with the technical baseline and fully coordinated across projects.	I	See the Entire Document regarding Division's preparation of integrated plans consistent with the technical baseline and fully coordinated across projects; This is the current planning basis included in TWRS O&UP and other Technical Baseline documents (as described in Technical Baseline Summary Description). Arrangements for interfaces and coordination across projects are described in the TWRS Program Plan.

Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
PHMC develop sludge washing capability.	I	See Section 4.0 regarding sludge-washing capability; This is the current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in Technical Baseline Summary Description).
Private contractor(s) will perform retrieval for Phase 2 <i>(show in plans, schedule, budget)</i> .	I	See Section 4.0 regarding Private contractor(s) performing retrieval for Phase 2 sludge-washing capability; This is the current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in the TBD).
Retrieve and blend DST waste to make room for SST waste.	I	See Section 4.0 regarding retrieving and blending DST waste; This is the current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in Technical Baseline Summary Description).
Waste Retrieval Project will plan for the 10 Phase 1 items in paragraph 3.2.1.	I	See Entire Document regarding plan for the 10 Phase 1 items in paragraph Included in current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in Technical Baseline Summary Description).

Table A-1. Guidance and Requirements to Deliverables Crosswalk - TWRS Retrieval and Disposal Mission Waste Feed Delivery Plan. (8 Sheets).

Guidance or Requirement	Status	Implementing Location
Waste Retrieval Project will assume the 11 items in paragraph 3.2.2.	I	See the Entire Document regarding the issue that the Waste Retrieval Project will assume the 11 items in paragraph 3.2.2. Included in current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in Technical Baseline Summary Description).
Waste Feed Delivery will define feed process and retrieval systems, integrate the waste feed delivery technical baseline and define Retrieval Project requirements to interface with HTI and other EM-50 funded projects.	I	See the Entire Document regarding definition of the feed process and retrieval systems; This is the current planning basis described in program baselines (e.g., MYWP, TWRS Initial Updated Baseline), and supporting Technical Baseline documents (as described in Technical Baseline Summary Description).
Waste Feed Delivery will provide feed delivery support to the privatization requirements definition and down-select processes.	I	See the Entire Document regarding feed delivery support; This is the current planning basis for Privatization support identified in program baselines (e.g., MYWP, TWRS Initial Updated Baseline); also, refer to TWRS ICDs and supporting Program Files for other information regarding this issue.
Resolve feed/delivery composition issues identified during ICD development.	I	See the Entire Document regarding resolution of these issues; Refer to TWRS ICDs and supporting Program Files for resolution of these issues. Resolutions will be integrated in Technical Baseline documents and interface agreements as appropriate.

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