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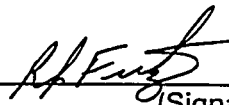
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7. Abstract

Describes the objectives that are to be used to define the roles and responsibilities, policies, and systems to be used in the management, direction, control, and performance of work associated with the MWTF Project.

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MULTI-FUNCTION WASTE TANK FACILITY MANAGEMENT PLAN

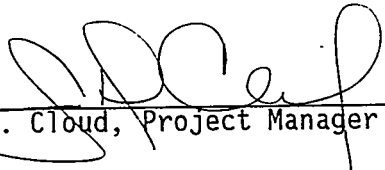
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WESTINGHOUSE HANFORD COMPANY
MULTI-FUNCTION WASTE TANK FACILITY
MANAGEMENT PLAN

ICF Kaiser Hanford Approval:



J. D. Cloud, Project Manager

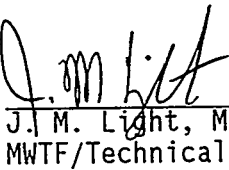
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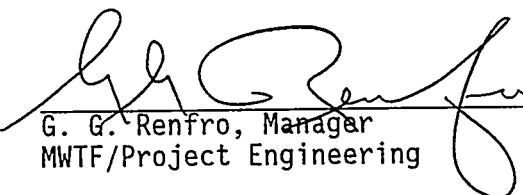
R. L. Fritz, Project Manager
MWTF

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Date



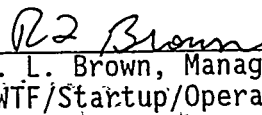
J. M. Light, Manager
MWTF/Technical Studies/Project Integration

11-14-94
Date



G. G. Renfro, Manager
MWTF/Project Engineering

11/14/94
Date



R. L. Brown, Manager
MWTF/Startup/Operations

11/14/94
Date

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WESTINGHOUSE HANFORD COMPANY
MULTI-FUNCTION WASTE TANK FACILITY
PROJECT OFFICE MANAGEMENT PLAN

1.0 INTRODUCTION

This Westinghouse Hanford Company (WHC) Multi-Function Waste Tank Facility (MWTF) Management Plan (hereinafter referred to as the Management Plan) provides guidance for execution WHC MWTF Project activities related to design, procurement, construction, testing, and turnover.

This Management Plan provides a discussion of organizational responsibilities, work planning, project management systems, quality assurance (QA), regulatory compliance, personnel qualifications and training, and testing and evaluations.

Classified by the U.S. Department of Energy (DOE) as a major systems acquisition (MSA), the MWTF mission is to provide a safe, cost-effective, and environmentally sound method for interim storage of Hanford Site high-level wastes. The MWTF Project shall comply with the project management control system policies and guidelines provided in DOE Order 1332.1A, *Uniform Reporting System* (DOE 1985); DOE Order 4700.1, *Project Management System* (DOE 1987); and other applicable Orders and criteria.

This Management Plan provides policy guidance and direction to the Project Office for execution of the project activities.

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2.0 OBJECTIVES

The objectives of this Management Plan are to define the roles and responsibilities, policies, and systems to be used in the management, direction, control, and performance of work associated with the MWTF Project.

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3.0 ORGANIZATIONAL ROLES AND RESPONSIBILITIES

The MWTF Project Office is an organization within WHC Construction Projects. The WHC organizational structure is depicted in Figure 3-1. The Project Office organization is part of the Tank Waste Remediation System (TWRS) Division (Figure 3-2).

The organizational role of the Project Office as the MWTF Project Integrating Contractor and as an MWTF Project Participant (participant) is discussed in this section. Also presented is the matrix support role of other organizations supporting the Project Office.

3.1 ORGANIZATIONAL ROLES

3.1.1 WHC MWTF Project Office

Westinghouse Hanford Company has established a Project Office to accomplish its work on the MWTF Project in an expeditious and cost-effective manner, with appropriate attention to quality and safety. The organizational structure of the Project Office is shown in Figure 3-3. The Project Office functions as a participant and as the Integrating Contractor (Figure 3-4).

3.1.1.1 WHC MWTF Project Office as the Integrating Contractor. The Project Office, in its capacity as the Integrating Contractor, is responsible for and supports the DOE, Richland Operations Office (RL) Multi-Function Waste Remediation Facility (MRF) Project Office by supplying technical direction, cost and schedule management, control, integration, QA, applied technology, safety/regulatory compliance support, and startup and operations activities, and the Management of Procurement of Government Furnished Equipment (GFE) for MWTF activities.

The Project Office manages and integrates the Architect-Engineer (A-E), Technology, Construction Management (CM), and WHC support organizations.

The work performed by each participant will be coordinated, guided, technically monitored, and reviewed for compliance to requirements by the Project Office as the Integrating Contractor. The Project Office will be responsible for preparing Letters of Instruction (LOI), or other appropriate documentation for the A-E, CM, and other participants.

3.1.1.2 WHC MWTF Project Office as a Participant. The Project Office, as a participant, shall develop (or coordinate) and implement the following activities/documents in support of the MWTF Project:

- WHC-SD-W236-FDC-001, *Multi-Function Waste Tank Facility Functional Design Criteria (FDC)* (WHC 1992a) and WHC-SD-W236A-SDRD-001, *Multi-Function Waste Tank Facility Supplemental Design Requirements Document (SDRD)* (WHC 1993a)
- Plans for liaison and control of activities being performed by each of the WHC matrix support organizations

Figure 3-1. Westinghouse Hanford Company Organization Chart

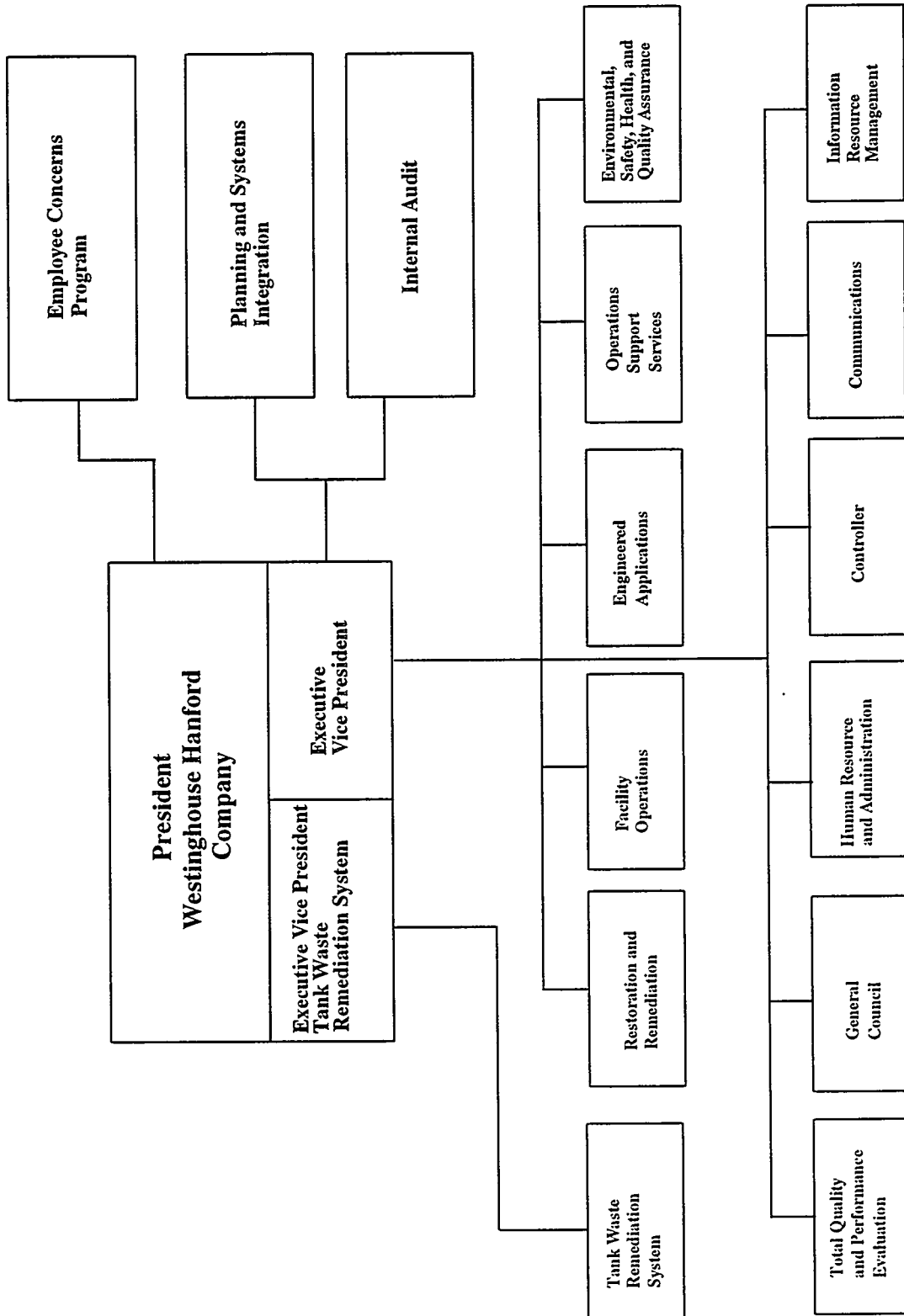


Figure 3-2. Tank Waste Remediation System Division Organization

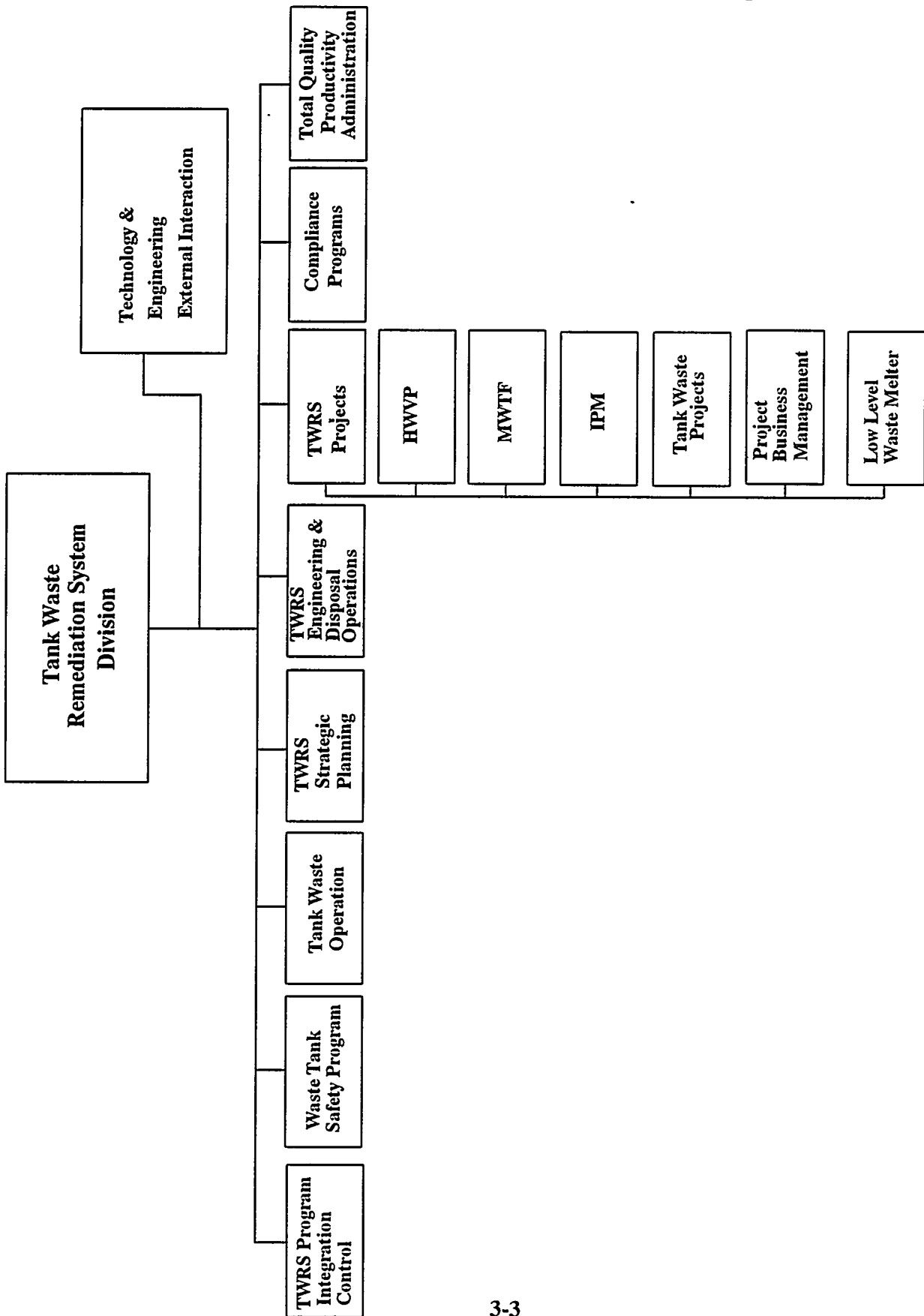


Figure 3-3. Multi-Function Waste Tank Facility Project Office Organization

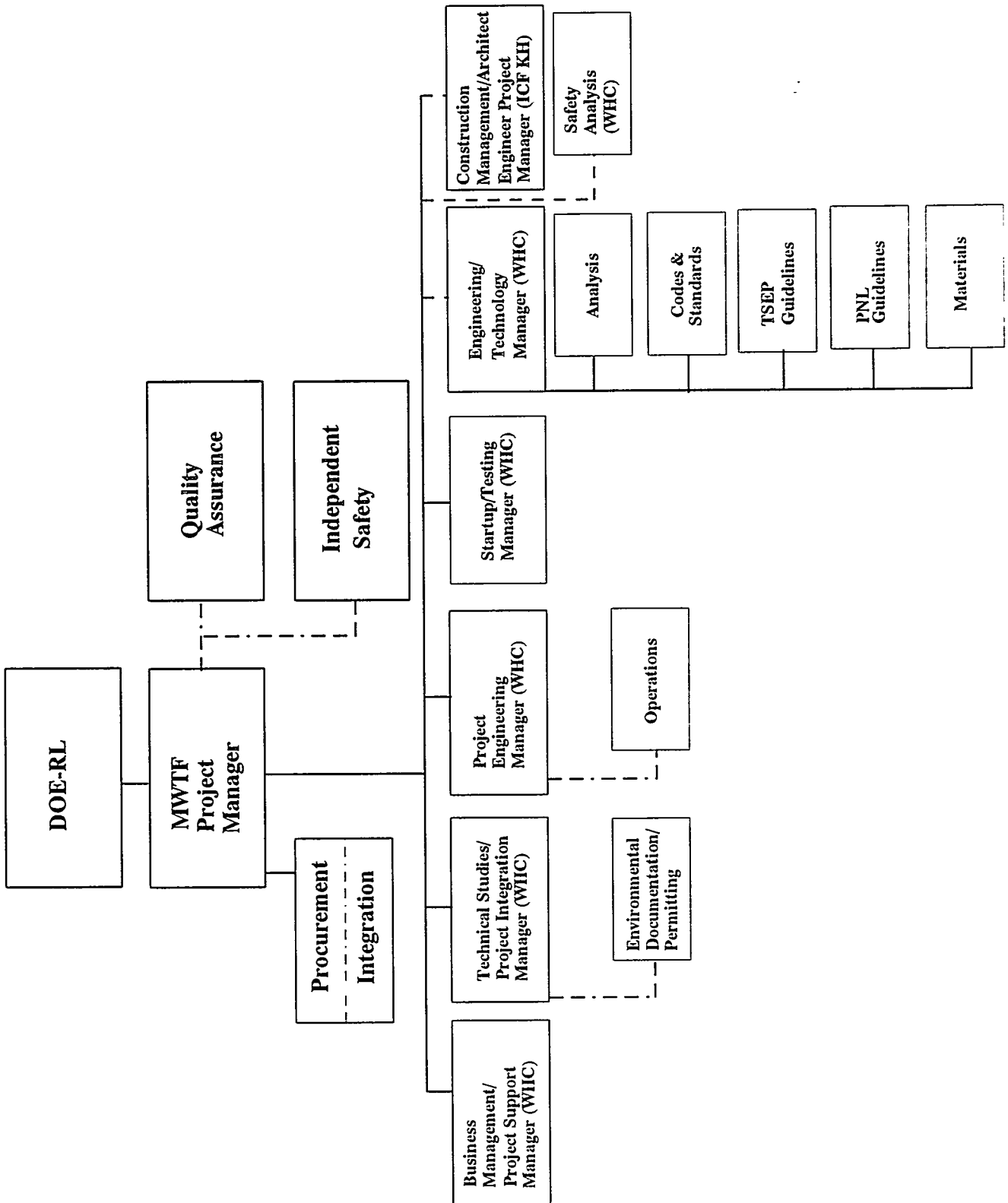
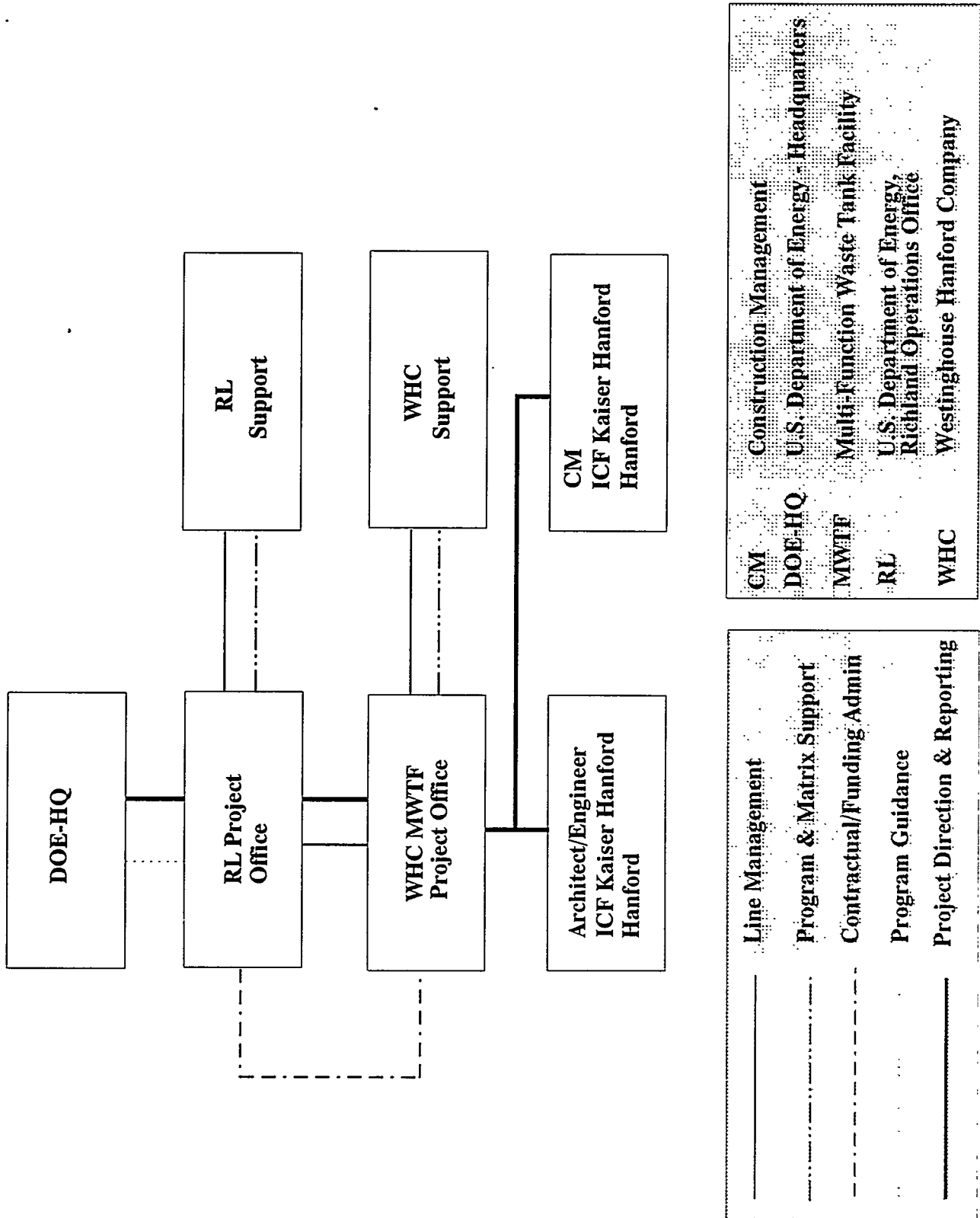


Figure 3-4. Multi-Function Waste Tank Facility Project Organization



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- *Multi-Function Waste Tank Facility Preliminary Safety Analysis Report (PSAR)*, WHC-SD-W236A-PSAR-001, WHC 1994.
- WHC-SD-W236A-QAPP-001, *Multi-Function Waste Tank Facility Quality Assurance Program Plan (QAPP)* (WHC 1992b)
- Documentation to ensure compliance to the *National Environmental Policy Act of 1969 (NEPA)*
- The necessary permit applications
- Methods to ensure performance of operations and maintenance reviews of facility design
- The MWTF Project Startup/Testing and troubleshooting program.
- WHC-SD-W236A-PNL-001, *Multi-Function Waste Tank Facility Project W-236A, Master Procurement Plan for GFE.*

The Project Office shall develop and maintain, as necessary, specific documentation such as plans and implementing documents, flow diagrams, or procedures for implementing and controlling its responsibilities on the MWTF Project. This documentation will supplement existing Hanford Site or WHC plans, procedures, or policies. Refer to Section 3.2.1 for more details regarding responsibilities for performance of these duties.

The major project documentation includes the following:

- WHC-SD-W236A-QAPP-001, *Multi-Function Waste Tank Facility Quality Assurance Program Plan (QAPP)* (WHC, 1992b)
- WHC-SD-W236A-PLN-001, *Multi-Function Waste Tank Facility Project W-236A Master Procurement Plan for Government Furnished Equipment*, (WHC, 1994)
- WHC-SD-W236A-PSAR-001, *Multi-Function Waste Tank Facility Preliminary Safety Analysis Report (PSAR)*, (WHC, 1994)
- WHC-SD-W236A-FDC-001, *Functional Design Criteria*, (WHC, 1991)
- Environmental Impact Statement
- RAEP - Radioactive Air Emissions Report, DOE/RL-93-94, Rev.0
- NESHAPS - National Emissions Standards for Hazardous Air Pollutants, DOE/RL-94-92, Rev.0
- TAPS - Notice of Construction for Toxic Air Pollutants, DOE/RL 94-91, Rev.0
- SWDP - State Waste Discharge Permit
- UIC Permit - 173-303-802 (3)

3.1.2 WHC Matrix Support

Westinghouse Hanford Company provides matrix support to the Project Office through various organizations. The following is a brief description of each WHC support organization and the services provided.

3.1.2.1 Waste Tank Programs/Operations/System Engineering. The Waste Tank Safety, Operations, and Remediation organization provides technical support, as required, to the Project Office in the areas of feed composition information and interfaces between the TWRS and the MWTF Project. The Toxic Air Permit Radiological organization also provides input to design criteria, reviews documentation, and assists in maintenance of the FDC for the MWTF. The Systems Engineering group provides direct input on project technical requirements.

3.1.2.2 Tank Waste Remediation System Projects Safety Assurance Group. The Tank Waste Remediation System (TWRS) Projects Safety Assurance group provides the independent safety review of MWTF project safety-related documentation prepared by WHC, including the Hazard Category, the PSE, and the PSAR. The TWRS Projects Safety Assurance Group performs audits and surveillances to ensure compliance with safety standards, regulatory requirements, and DOE Orders.

3.1.2.3 Emergency, Safety, and Quality Services (ESQ). The ESQ organization provides oversight activities and direct support through the development of QA plans and the QA chapters of the PSAR and a final safety analysis report (FSAR). Oversight activities include audits, surveillances, and appraisals of WHC and other participating contractor organizations performing safety, environmental, or quality-affecting activities.

3.1.2.4 Independent Safety and Safety Analysis. The MWTF and Environmental Safety Assurance organizations provide independent environmental overview of the MWTF Project baseline criteria documents, the PSAR and FSAR, and safety assessments. Responsibilities and requirements are outlined in the Safety Management Plan, Appendix I.

3.1.2.5 Safety Analysis and Engineering. The Safety Analysis and Engineering organization provides technical support, as required, to the project in the areas of system design, and development engineering and preparation of safety analysis reports (SAR's)

3.1.2.6 Operations Support Services. The Operations Support Services organization supports the Project Office by providing the requisite facilities, utilities, facilities maintenance, and other necessary landlord activities. Operations Support Services provides criteria for the site interface requirements between the MWTF Project and site utilities (water, steam, electricity, etc.).

3.1.2.7 Human Resources and Administration. The Human Resources and Administration organization provides support, as required, to the Project Office in employee recruitment, wage, and salary programs; equal employment opportunity and affirmative action programs; other employee relations activities; and procurement of goods and services.

3.1.2.8 Communications. The Communications organization supports the Project Office by providing communication programs and media channels.

3.1.2.9 Information Resource Management (IRM). The IRM Department provides planning, integration, and technical support, as required, to the project in the areas of automated data processing (ADP) management, word processing, telecommunications, information systems, mail services, records management, and document control.

3.1.2.10 Controller. The Controller organization supports the Project Office by providing the project's mandatory accounting services and systems. These included payroll; business travel; and the management, maintenance, and provision of training for the financial data system. The Controller organization also provides data administration support.

3.1.2.11 General Counsel. The General Counsel's office supports the Project Office by providing the requisite expertise in the clearing of documents for publication, as well as any necessary legal representation. Environmental permits and certain WHC contracts are reviewed by the General Counsel's office.

3.1.2.12 TWRS Operations. The TWRS Operations organization is the ultimate user organization of the completed project. The TWRS Operations organization is responsible for the quality and completeness of the design criteria/performance requirements and is fully accountable for the operation and maintenance of the facility after turnover. Therefore, the Operations organization performs sufficient surveillance and review to ensure that design criteria/performance requirements are developed during the project evolution process. The TWRS Operations organization participates in technical reviews and acceptance testing to ensure operability, maintainability, and design criteria/performance requirements are appropriately addressed by the project. The TWRS Operations organization ensures effective transition planning (e.g., training, spares, startup, etc.) is coordinated with the project. The TWRS Operations organization also performs operational tests after completion of the project.

3.1.2.13 Program Office

The Operations Upgrades Program provides overall direction to the MWTF project to assure that TWRS programmatic needs are being captured. The basic requirements of storage volume required, need dates, location, and special features are all determined by the program office and transmitted to the project via direction provided in the multi-year work plan, and milestone description sheets.

3.1.3 A-E, CM (ICF KH)

The A-E, ICF KH, as a participant supports the WHC MWTF Project Office in Design (Title I, II, and III) and CM (see Figure 3-4).

3.1.3.1 A-E Services. The A-E services for the MWTF will provide the design media required for the procurement, construction, and acceptance testing activities on the MWTF Project. The A-E also will be responsible for

acceptance inspection for the government. Specific plans are prepared and approved for each phase of this effort.

3.1.3.2 CM Services. The CM services for the MWTF will provide an orderly sequence of procurement and construction events that deliver quality facilities in a timely manner that meets or exceeds all operational/functional design requirements.

3.2 ORGANIZATIONAL RESPONSIBILITIES

3.2.1 WHC MWTF Project Office

The Project Office provides technical guidance, baseline performance evaluation, administrative control, and coordination of participant activities. The responsibilities of various Project Office organizations are described in the following subsections and depicted in Figure 3-5.

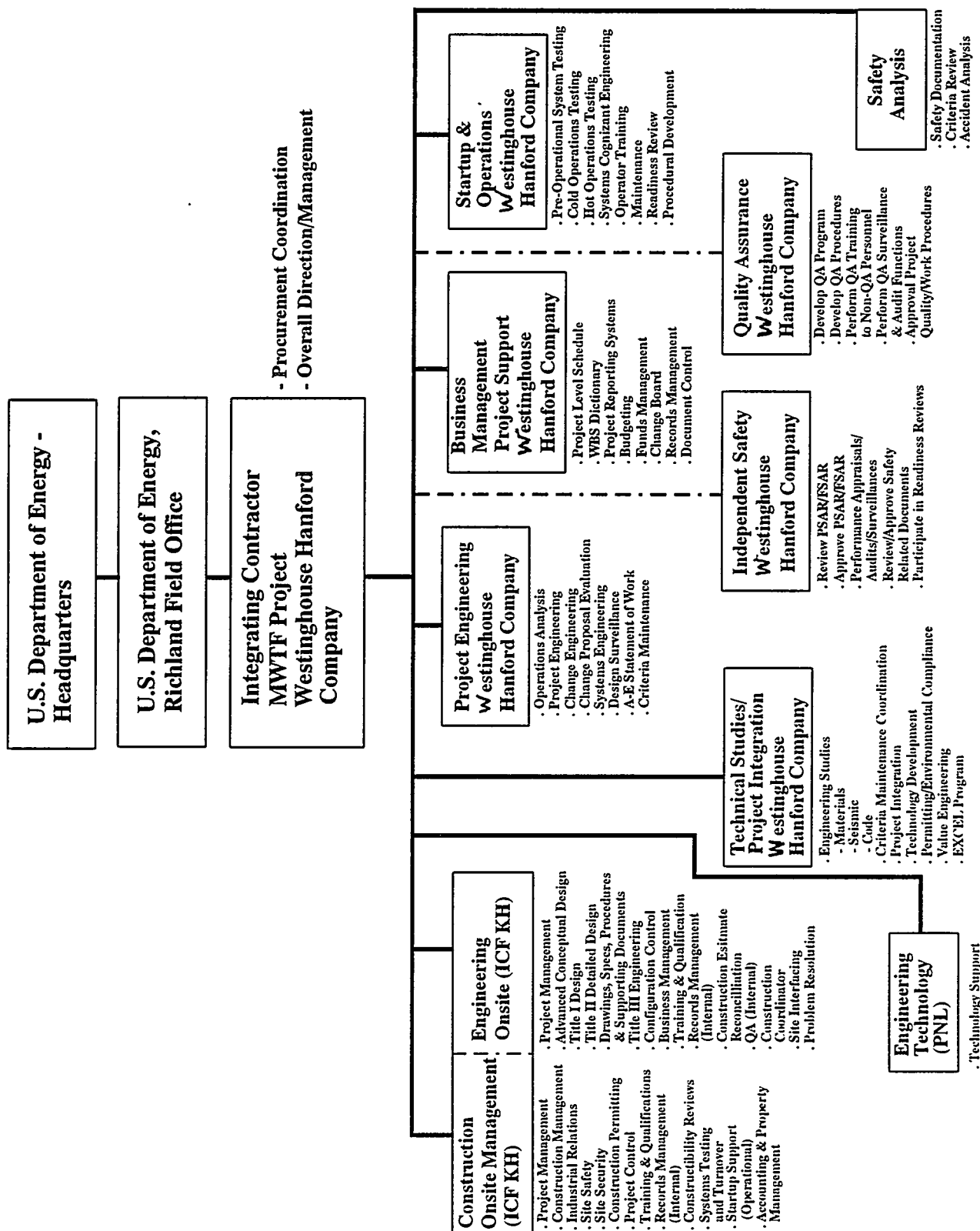
3.2.1.1 WHC Project Manager. The project manager has been delegated the responsibility by the RL MRF Project Office for the development, implementation, and maintenance of MWTF Project management systems. The project manager's responsibilities are as follows.

- Guide the performance of design, procurement, construction, and testing through review and approval of project documentation from project inception to completion.
- Establish a project management staff and maintain order/procedural compliance through training and development in accordance with WHC-SD-W236A-TR-001, *Multi-Function Waste Tank Facility Qualification and Training Plan* (WHC 1993b).
- Coordinate the activities of the Business Management, Technology, Project Engineering, Startup/Testing, Project Support, Technical Studies/Project Integration, and Construction organizations for technical monitoring and establishment of MWTF objectives. Review work packages prepared by project organizations to meet approved FDC and system requirements.
- Provide coordination, technical monitoring, and integration of A-E, CM, and IRM activities; review work packages prepared by other organizations, and approve contractor work plans defining contractor work scope, budgets, and schedules. The project manager also will approve the design for conformance to design criteria based on review input from supporting organizations.
- Participate in design reviews to assess adequacy from an engineering, conformance to design criteria, startup, and operational viewpoint. Oversee and optimize design efforts from the standpoint of cost, safety, reliability, maintainability, and accuracy, and for compliance to applicable codes, standards, and regulations.

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Revision 1

- Define corrective actions where required to accomplish work requirements. Guide the work teams to resolve interface problems to produce quality work the first time.
- Report to senior WHC management the progress of RL MWTF Project Office-issued operations directives.

Figure 3-5. Multi-Function Waste Tank Facility Responsibilities



- Integrate the activities of various participants and the interfacing site organizations (Operations, Site Services, IRM, Safety, QA, etc.) to prepare an Environmental Impact Statement, an environmental permitting plan, and the Air Quality and *Resource Conservation and Recovery Act of 1976* (RCRA) permit applications. Coordinate preparation of the PSAR and FSAR.
- Develop the comprehensive procurement schedule of GFE, coordinate and expedite the procurement process, review and concur with procurement documents.
- Review and approve the A-E's and CM's QA plans and implementing procedures. Plan, schedule, and coordinate QA audits and surveillances, and ensure that final government acceptance inspections are performed.
- Coordinate preparation of the startup test plans, procedures, and preoperational tests; conduct operational readiness review(s); and schedule maintenance on the completed facility until it is transferred to the Operations organization.
- Transfer the MWTF to the WHC Operations organization.
- Provide a safe, cost-effective, and environmentally sound method of providing interim storage of Hanford Site high-level wastes in compliance with the project management control system policies and guidelines provided in DOE Order 1332.1A, *Uniform Reporting System* (DOE 1985).

3.2.1.2 Business Management/Project Support. The project manager has delegated to the Business Management/Project Support organization responsibility for the development and implementation of the MWTF Project management systems in accordance with Section 5.2. This organization also functions as the focal point for the business and administrative aspects of the Project Office including financial interfaces within the following matrix organizations:

- TWRS Projects
- Programs
- Engineering Services
- Safeguards and Security
- QA
- Site Management
- Business Systems
- IRM.

Develop, coordinate, and maintain MWTF Project cost estimate, budget, and financial planning activities. Prepare and submit budget planning documents (project master schedule; project milestone status; WHC matrix organization, i.e., IRM Security, Data Administration, etc.) consistent with timing of the RL budget cycle.

Prepare a consolidated narrative on cost, schedule, funding, and staffing monthly progress reports to keep the RL MRF Project Office well informed of technical, cost, schedule status, and any issues.

Report status, performance assessment, and corrective actions to the RL MRF Project Office using standard formats. Prepare program status briefings to RL and DOE-Headquarters (DOE-HQ).

Participate on Change Control Boards to perform change control actions in accordance with the TWRS Projects integrating procedures.

3.2.1.3 Technical Studies/Project Integration. The Technical Studies/Project Integration organization is responsible for coordinating technical guidance and interproject integration of activities. This organization also is responsible for technical studies/project integration support of MWTF Project laboratory work, modeling, and pilot- or full-scale systems tests performed by other technical organizations. Responsibilities in this role include the following:

- Coordination of project technical support and data needs
- Coordination with the project to ensure technology activities are implemented consistent with the current design needs
- Coordination of review and evaluation, from a technical perspective, of development reports/data from other development performers; development reports/data that may contain information important to design will be provided to the Project Engineering organization
- Coordination of Value Engineering/Eccel efforts
- Serving as the coordinator of principal technical agencies (Central Engineering, Value Engineering, other sites) on the MWTF to ensure successful project integration
- Coordinating performance review of technology and verification that corrective management action is taken for performance problems
- Coordinating development of the environmental documentation and permit applications
- Coordination of information/activities at other DOE sites' which can support the MWTF execution.

3.2.1.4 Project Engineering. The Project Engineering organization has overall responsibility for integrating the design. Key activities include maintenance of the technical criteria baseline; ensuring design compliance to baseline criteria; and providing formal direction to, and oversight of, the A-E. Responsibilities in this role include the following:

- Reviewing and providing comments on A-E work plans, as well as all other required management plans and procedures
- Evaluating the A-E's performance of design activities on a continual basis. This evaluation shall cover required tasks, schedules, and costs

- Ensuring that corrective action is taken by the A-E management as required
- Requesting that other WHC matrix support organizations support the reviews and performance evaluation as necessary
- Coordinating the design review activities associated with constructibility, compliance with the FDC and other design requirement documents, operability, maintainability, environmental permit conformance, and SAR impacts. The documented design reviews will be coordinated by the Project Engineering organization with WHC organizations.
- Interfacing with the A-E for comment submission and resolution
- Forwarding systems engineering material to the A-E with guidance on the application to the design
- The WHC Project Engineering manager will be responsible for configuration management for the MWTF Project in accordance with Section 5.7.

3.2.1.5 Permitting and Regulatory Compliance/Safety Analysis. The Permitting and Regulatory Compliance (Regulatory) organization is responsible for developing plans, schedules, budgets, environmental permit application criteria, environmental analyses, and safety documentation; and for obtaining the approvals required for the construction, startup, and operation of the facility. The Regulatory organization provides guidance to the project for all MWTF Project environmental compliance efforts. The Safety Analysis organization provides safety documentation and prepares the MWTF Project PSAR and FSAR. This includes coordinating input from other Project Office organizations, the A-E, and other review organizations, as well as resolving and providing disposition of comments. The organization's responsibilities also include preparing safety documentation plans, conducting accident and safety analyses, preparing technical input to environmental permit applications, performing technical analyses associated with resolving safety and environmental issues, providing input to the Technology organization on development data required for safety and environmental analysis, and monitoring the performance of accident and safety analyses conducted by participants. In addition, both organizations review relevant design media transmitted to them for important safety and environmentally significant impacts.

3.2.1.6 Startup and Operations. The Startup and Operations Integration organization is responsible for MWTF startup and operations planning. The management function of this organization includes preparation for operating crew staffing, training, document preparation, materials procurement, operational readiness reviews, MWTF startup testing (including interfacing with the A-E on development of acceptance test procedures), and preoperational and operational testing.

3.2.1.7 QA. The Project Office has been assigned by the RL MRF Project Office the responsibility to develop and maintain WHC-SD-W236A-QAPP-001, *Multi-Function Waste Tank Facility Quality Assurance Program Plan* (WHC 1992b).

To support this task and other related tasks, the Project Office has independent QA support responsible for performing the QA function in accordance with Section 6.0 of this Management Plan.

3.2.2 WHC Matrix Support

Each WHC matrix support organization shall provide the required resources to support the planned progress of the MWTF Project in a cost-effective and timely manner.

3.2.3 Architect-Engineer, Construction Management

The A-E and CM services will be provided by ICF KH.

3.2.3.1 A-E. The A-E shall be responsible for the quality, technical accuracy, and cost-effectiveness of the design, including the following:

- Meeting project technical requirements as imposed by the baseline documents
- Providing the minimum construction cost, with life-cycle cost analysis, consistent with operational, maintenance, environmental, security, and safety requirements
- Meeting safety, environmental, security, energy conservation, and QA requirements imposed by the baseline documents
- Meeting applicable federal, state, and local requirements
- Performing final government acceptance inspections.

Major work documents include:

- W236A-TI-AP3 *Plant Acquisition Plan*
- WHC-SD-W236A-ACDR-001, *Advanced Conceptual Design Report*
- WHC-SD-W236-CDR-001, *Multi-Function Waste Tank Facility Conceptual Design Report*, (WHC 1993)
- W236A-TI-AP1, Rev.2, *Architect/Engineer Management Plan*, for the Multi-Function Waste Tank Facility, Project W-236A
- WHC-SD-W236A-SDRD, *Supplemental Design Requirements Document*
- Title I Engineering Work Plan
- Title I Design Report
- Title II Engineering Work Plan
- QAP No. 834, Rev.0, *Quality Assurance Plan for Title II Design*.

3.2.3.2 CM. The CM shall be responsible for the quality and cost-effectiveness of the construction and other services.

Construction activities include bid, award, construction, installation, testing, and acceptance of work. Other services include support to the project activities, such as safety, scheduling, and planning for acquisition, construction, inspection, and testing.

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4.0 WORK PLANNING

The WHC project manager is responsible for MWTF Project work planning. This includes coordinating and integrating work planning activities of participants with support from the Project Control organization and other integrating team members.

The MWTF Project work planning is accomplished through a number of related annual planning and budgeting cycles including budget submission planning, detail work planning, and midyear assessment.

4.1 BUDGET SUBMISSION PLANNING

Budget submission planning is an annual cycle for out-year planning required to support preparation of the MWTF budget submission, including the Activity Data Sheet (ADS) and Construction Project Data Sheet. The ADS is prepared and updated as part of the Hanford Site integrated planning process and provides the basis for DOE/S-0090P, *Five-Year Plan* (DOE 1991a).

The Project Office initiates ADS planning activities in the second quarter of the fiscal year (FY) following receipt of program planning guidance and direction from RL. The Project Office reviews and revises current out-year project planning. Planning revisions support a multiyear program plan and budget guidance in approved FY cost account plans. The organization provides guidance and direction to the participants for accomplishing out-year planning in accordance with the updated MWTF Project objectives and requirements. Participant planning and budget data, updated schedules and milestones, and resource requirements are integrated to support preparation of an updated ADS for the project. Preparation of an updated Construction Project Data Sheet also is based on this out-year planning plus any additional RL guidance.

Changes to the MWTF Project cost, schedule, and technical baselines developed during this budget submission planning cycle will be processed and administered through the change control process. The Business Management/Project Support organization shall analyze impacts to the approved baselines and prepare change requests, as necessary, in accordance with the requirements of WHC-IP-0944, *Tank Waste Remediation System Projects Integrating Procedures*, TWRS-PIP-2.2, "Baseline Change Control," Rev. 0 (WHC 1994).

Budget submission planning activities provide the basis for developing cost and schedule information required for the annual DOE-HQ validation of MWTF Project costs.

4.2 DETAIL WORK PLANNING

Detail work planning is an annual planning and budgeting cycle that is performed during the fourth quarter of the FY to prepare/update FY project work plans for the following FY. The FY project work plans are prepared and updated as part of the Hanford Site integrated planning process and support a multiyear program plan.

The Project Office initiates preparation of the detailed FY project work plan upon receipt of RL site baseline guidance. This guidance typically includes planning guidelines/constraints, work priorities, and specific funding guidance for the MWTf Project. Based on this RL guidance, the Project Office, as the Integrating Contractor, provides planning guidance and direction to the participants for the development/update of their detailed work plans to ensure coordinated and consistent planning based on the approved work breakdown structure (WBS). The Business Management/Project Support organization coordinates the review, consolidation, and integration of the participants' work plans, including resource-loaded schedules, milestones, and budgeted costs for work to be performed, to prepare an FY project work plan. The final FY project work plan shall be submitted to the RL program manager for review and approval.

The Project Office prepares detailed work plans at the cost account level for WHC as a participant to support the overall preparation of the FY project work plan. Project Office detailed work plans are developed and updated based on the approved contractor work breakdown structure (CWBS) in accordance with the requirements of WHC-CM-2-5, *Management Control System* and applicable TWRS Projects integrating procedures.

The FY project baselines are established or revised through the change control process following RL approval of the FY project work plan. The Business Management/Project Support organization shall coordinate preparation of change requests, as necessary, for all changes to approved project baselines developed during this detailed work planning cycle, in accordance with the requirements of TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994).

4.3 SUPPORTING DOCUMENTS

The Project Office requirements related to work planning are met, wholly or in part, by the following:

- ADS's (Activity Data Sheets)
- Construction Project Data Sheets
- Milestone Description Sheets
- Cost account authorizations
- Cost account plans
- Project master schedule
- FY work plans
- WHC contractor master schedule
- WHC detailed schedule
- TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994)
- WHC-CM-2-5, *Management Control System*.

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5.0 PROJECT MANAGEMENT SYSTEM

5.1 GENERAL DESCRIPTION

The intent of the Project Office management system is to guide the successful execution of the design, procurement, construction, testing, and turnover to the operating organization of the MWTF Project within the project's baseline, cost, schedule, and technical criteria.

The following sections provide descriptions of the management system(s) to be used, including procedures, practices, hardware, and software.

Audits and surveillances are performed by the MWTF Project Office and the RL MRF Project Office on a schedule basis as deemed necessary.

The Business Management organization shall perform an annual assessment of the participant's management systems. The assessment scope and content will be tailored to an evaluation of implementation or execution and relate to some or all the management system elements listed in the following subsections.

5.1.1 Management System Elements

The constituent elements of the management system are detailed in the following subsections. The major elements discussed are listed below:

- Business Management
 - Baseline management
 - WBS
 - Logic diagram
 - Baseline schedules
 - Baseline cost
 - Estimating
 - Management reserve
 - Contingency management
 - Baseline change control system
 - Control system status
 - Reporting, reviews, meetings, and commitment control
 - Review and comment coordination
 - Project-specific procedures
- Work authorization management
- Resource management
- Information resource management
- Configuration management.

5.1.2 Supporting Documents and References

The following documents and systems fulfill the requirements for project management, wholly or in part:

- Management control system
- QAPP
- Multi-Function Waste Remediation Facility Draft Project Management Plan (DOE-RL 1993)
- Multi-Function Waste Tank Facility Master Procurement Plan for GFE.
- TWRS Projects integrating procedures.

5.2 BUSINESS MANAGEMENT

5.2.1 Baseline Management

5.2.1.1 Baseline Management Systems. The baseline management systems used for the MWTF Project will provide systematic approaches and conform to the requirements of WHC-CM-2-5, *Management Control System*. The primary goal of the management systems is to ensure that work performed has sound technical, cost, and schedule baselines, and that a formal system is in place to authorize and control work. All changes to the baseline are made in compliance with WHC-IP-0944, *Tank Waste Remediation System Projects Integrating Procedures*, TWRS-PIP-2.2, "Baseline Change Control," Rev. 0 (WHC 1994) and DOE Notice 4700.5, *Project Control System Guidelines* (DOE 1992a).

5.2.1.1.1 Participant Baseline Management Systems. The Business Management/Project Support organization will develop, implement, and maintain, as necessary, its own baseline management systems in conformance to the project guidelines, plans, and procedures to establish, maintain, and control its cost, schedule, and technical baselines. These systems will be assessed by the Project Office. Surveillances may be performed on an ad hoc basis, as deemed necessary.

In addition, the participants' organizations will provide the requisite data in the specified formats and at the designated frequencies in accordance with reporting requirements.

5.2.1.1.2 Project Integrating Contractor Baseline Management Systems. The Business Management/Project Support organization will develop, implement, and maintain the baseline management systems required for the preparation, establishment, control, and maintenance of the MWTF Project cost, schedule, and technical baselines. These baselines shall conform to the established MWTF Project work scope, cost, and timing.

The Business Management/Project Support organization shall perform assessments of the participants' baseline management systems.

5.2.1.1.3 Supporting Documents and References. The following documents provide the basis for the processes and procedures necessary to accomplish the tasks defined in this section:

- WHC-CM-2-5, *Management Control System*
- • DOE Order 1332.1A, *Uniform Reporting System* (DOE 1985)
- TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994)
- DOE Notice 4700.5, *Project Control System Guidelines* (DOE 1992a)
- DOE Order 4700.1, *Project Management System* (DOE 1987).

5.2.2 Work Breakdown Structure

To define the reporting and control relationships among the participants involved in the MWTF Project, a WBS was established to delineate those relationships and the links between the technical baseline and the cost and schedule baselines. A WBS has two components: (1) the code hierarchy, and (2) the associated dictionary. The WBS dictionary contains the primary definition of the work scope of each WBS element.

There are two work scope levels for the MWTF Project. The first level will be the MWTF project summary work breakdown structure (PSWBS) and the second will be the CWBS specific to each participant. The PSWBS is used by the Project Office for reporting to the RL MRF Project Office, and it is approved and controlled by the RL MRF Project Office. A CWBS is used by each participant to monitor, control, and report its own work to the Project Office. The CWBS level shall be coordinated by the Business Management/Project Support organization.

5.2.2.1 Participant WBS. The Project Office management staff shall develop its own CWBS and CWBS dictionary. These elements shall be submitted to the RL MRF Project Office for review and approval. This CWBS shall be used to assign, control, and report work. The highest level of the CWBS hierarchy shall be equal to the lowest level of the PSWBS. The Business Management/Project Support organization will use the upper-level CWBS for reporting. The Business Management/Project Support organization shall control all changes to its CWBS through its internal change control procedures.

5.2.2.2 Project Integrating CWBS. The Business Management/Project Support organization will develop the PSWBS and its associated dictionary. These documents will be submitted to the RL MRF Project Office by the project manager for review and approval. The PSWBS will be controlled by the RL MRF Project Office. The PSWBS and the PSWBS dictionary shall be subject to the change control process.

The PSWBS assists in establishing management control over the execution of the various baselines by assigning a responsible organization to each element of the PSWBS. The PSWBS structure is provided in Figure 5-1 and the CWBS is provided in Table 5-1.

Figure 5-1. Multi-Function Waste Tank Facility Project Summary Work Breakdown Structure

PROJECT SUMMARY WORK BREAKDOWN STRUCTURE

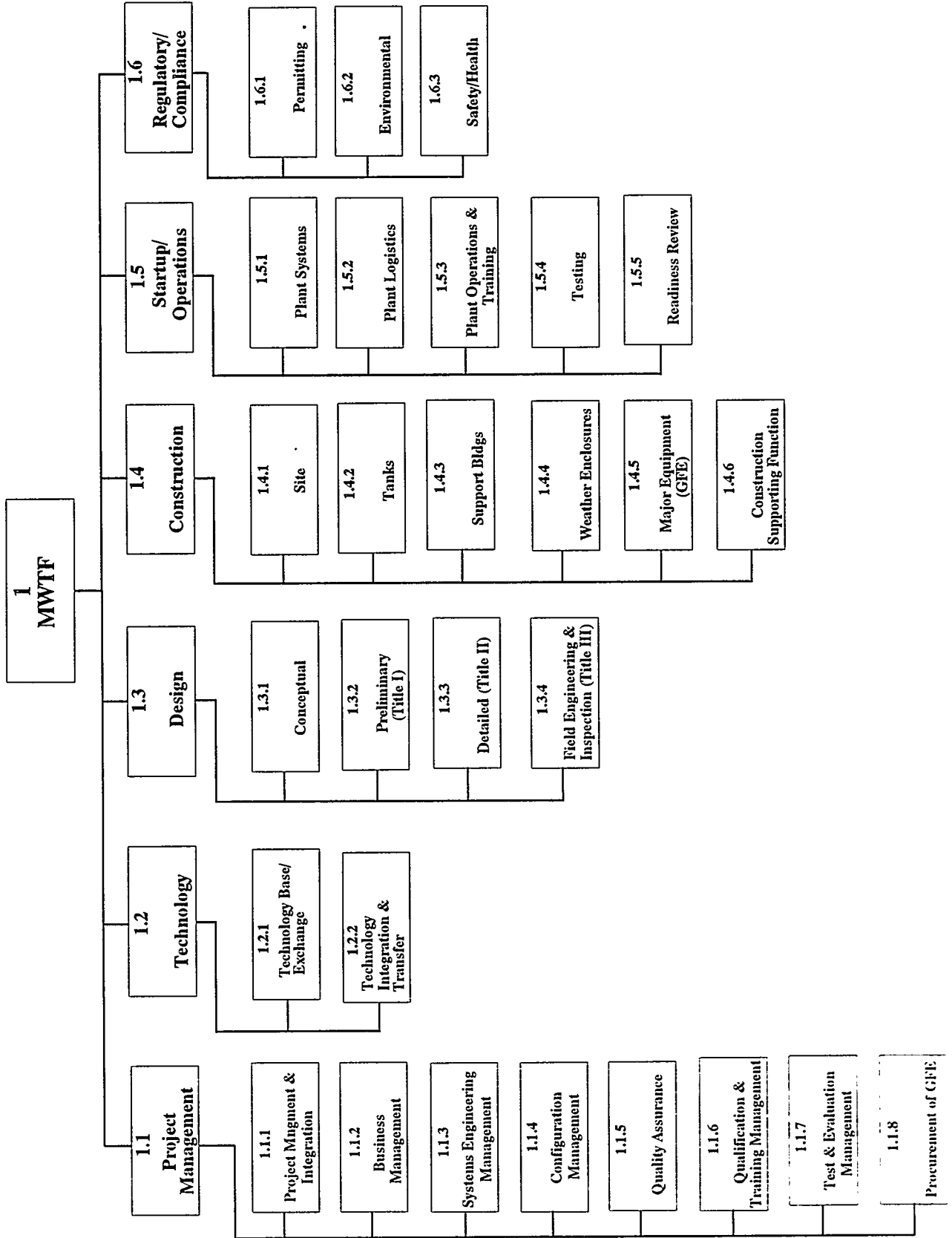


Table 5-1. Westinghouse Hanford Company Multi-Function Waste Tank Facility Project Office Contractor Work Breakdown Structure.
(sheet 1 of 2)

PSWBS number	Description
1.0	U.S. Department of Energy, Richland Operations Office
1.1	Project Management
1.1.1	Project Management and Integration
1.1.2	Business Management
1.1.3	Systems Engineering Management
1.1.4	Configuration Management
1.1.5	Quality Assurance
1.1.6	Qualification and Training Management
1.1.7	Test and Evaluation Management
1.1.8	Procurement of GFE
1.2	Technology
1.2.1	Technology Base/Exchange
1.2.2	Technology Integration and Transfer
1.3	Design
1.3.1	Reference Conceptual Design/Advanced Conceptual Design
1.3.2	Preliminary Design
1.3.3	Detailed Design (Title II)
1.3.4	Field Engineering and Inspection
1.4	Construction
1.4.1	Site
1.4.2	Tanks
1.4.3	Support Buildings
1.4.4	Weather Enclosures
1.4.5	Major Equipment (Government-Furnished Equipment)
1.4.6	Construction Supporting Function
1.4.7	Safety Analysis
1.5	Startup/Operations
1.5.1	Plant Systems
1.5.2	Plant Logistics
1.5.3	Plant Operations and Training
1.5.4	Testing
1.5.5	Startup Readiness Review

Table 5-1. Westinghouse Hanford Company Multi-Function Waste Tank Facility Project Office Contractor Work Breakdown Structure.
(sheet 2 of 2)

PSWBS number	Description
1.6	Regulatory Compliance
1.6.1	Permitting
1.6.2	Environmental
1.6.3	Safety/Health

PSWBS = Project summary work breakdown structure

5.2.2.3 Supporting Documents. The following documents provide the basis for the establishment and functioning of the WBS as defined in this Management Plan, as well as meet, wholly or in part, the Project Office requirements for a WBS:

- Project Office CWBS codes
- Project Office CWBS dictionary sheets
- MWTF PSWBS codes
- MWTF PSWBS dictionary sheets.

5.2.3 Baseline Schedules

The Business Management/Project Support organization is responsible for developing integrated MWTF Project baseline schedules. These integrated schedules will include appropriate and required interface points among all participants as appropriate. The schedules shall identify resources required to perform scheduled work. The Business Management/Project Support organization ensures that baseline schedules reference all MWTF Project milestones. Business Management/Project Support provides the status of the baseline schedules, performs critical path analyses, monitors schedule variances against RL MRF Project Office thresholds, and reports variances requiring corrective actions to the appropriate project management level. Corrective actions will be monitored to ensure implementation.

There shall be at least four schedule types used for the MWTF Project. The following list displays the schedule types and their hierarchy.

- Level 0 - Project summary schedule
 - The highest-level summary schedule for the MWTF Project. This schedule contains one activity for each Level 1 PSWBS element.
- Level 1 - Project master schedule
 - A high-level schedule in which activities are summarized at each Level 2 PSWBS element and grouped within each Level 1 PSWBS element.

- Level 2 - Contractor master schedule
 - A high-level schedule in which activities are summarized at the highest-level CWBS elements and grouped within each Level 2 PSWBS element.
- Level 3 - Cost account summary schedule (as appropriate)
 - A schedule that contains activities which are summarized at each Level 2 CWBS element (cost account) and grouped within each Level 1 CWBS element.
- Level 4 - Detailed cost account schedule (as appropriate)
 - A schedule that contains detailed activities within each Level 2 CWBS element (cost account). Activities at this level are resource loaded and reconciled with the estimate to form the basis for the time-phased budget.

More detailed schedules may be developed as an option of the participant, or as deemed necessary by the WHC MWF Project Office. The schedules developed and used will conform to project control system.

5.2.3.1 Participant Baseline Schedules. The participant shall be responsible for developing and maintaining the detailed baseline schedules, which shall contain sufficient detail so the participant can monitor and control its work. The information contained in these schedules shall be designed so it can be electronically summarized to higher levels of the WBS. Reporting of the participant schedule shall be at the upper level of the CWBS.

5.2.3.2 Project Integrating Contractor Baseline Schedules. The Business Management/Project Support organization shall develop and maintain the project master schedule, which shall be in conformance to the project summary schedule. The project master schedule shall depict the total project at Level 2 of the PSWBS and shall contain all the major milestones and selected key milestones. The project master schedule shall be developed and maintained by the Business Management/Project Support organization with approval required by the RL MRF Project manager. This schedule is the operative schedule between the RL MRF Project Office and the Project Office. The project master schedule is synthesized and status is input from contractor master schedule data. The Business Management/Project Support organization shall review contractor master schedules for adequacy of details, milestone integration, and resource loading.

The contractor master schedules provide the primary schedule interface between the Project Office and the participants. Each contractor master schedule contains all major and key milestones appropriate to the respective participant and models that participant's portion of the project at Level 4 of the PSWBS. Each contractor master schedule reflects the reporting requirements of the specific participant.

Changes in the yearly funding requirements may require the Project Office to reevaluate work scope and schedule commitments. Baseline schedules are then revised to reflect current conditions in accordance with the approved RL MRF Project Office funding profile guidance.

5.2.3.3 Supporting Documents. In addition to project control system guidelines, the Project Office requirements for baseline schedules will be met, wholly or in part, by the following:

- Project master schedule
- Project Office contractor master schedule
- Milestone logs
- Milestone description sheets
- TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994).

5.2.4 Baseline Cost

Cost baselines shall be developed and maintained for the Project Office by the Business Management/Project Support organization. These baselines shall consist of time-phased cost profiles. Changes to cost baselines are subject to change control as detailed in TWRS-PIP-2.2.

Control of the MWTF Project includes the Business Management/Project Support organization's performance of baseline cost analyses to identify cost variances requiring corrective action. The organization reports cost variances to the appropriate project management level and monitors corrective action implementation.

5.2.4.1 Participant Cost Baselines. The participants shall establish a cost baseline by developing and maintaining cost account plans at the appropriate CWBS levels. This work shall be performed by the participants in a manner consistent with WHC's internal control system procedures contained in WHC-CM-2-5, *Management Control System*. If conflicts exist, the Project Office shall develop, implement, and maintain project-specific procedures and systems that conform to the project criteria.

5.2.4.2 Project Integrating Contractor Cost Baselines. The Business Management/Project Support organization shall prepare and maintain time-phased PSWBS cost profiles by cost category and participant. The RL MRF Project Office has approval authority over these cost profiles. The cost profiles shall be time phased consistent with resource-loaded schedules developed under the guidance provided in Section 5.2.4 and the funding guidance provided by the RL MRF Project Office. This guidance is assessed semiannually through the annual planning and budgeting cycle. Any changes in the yearly funding requirements as shown in the current budget authorization/budget outlay will require the Project Office to reevaluate work scope and schedule commitments to reflect current conditions, and to ensure the PSWBS cost profiles and the budget authorization/budget outlay are revised in accordance with the approved RL MRF Project Office funding profile guidance.

5.2.4.3 Supporting Documents. The Project Office requirements for cost baselines and their control will be met, wholly or in part, by the following:

- MWF PSWBS dictionary
- TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994)
- WHC-CM-2-5, *Management Control System*
- Construction Project Data Sheet
- ADS.

5.2.5 Estimating

Estimating shall be performed in conformance to DOE requirements concerning cost estimating and contingency development policies and responsibilities. Escalation rate guidance will be provided through use of the *U.S. Department of Energy Material Labor Escalation Study for Richland Operations Office for FY 1992* (ICF KH 1992) unless otherwise directed by the RL MRF Project Office.

5.2.5.1 Participant Estimating. The Project Office organization will develop estimates for WHC work as a step in the development of cost baselines. This work shall be performed in conformance to the applicable DOE Orders, DOE cost guides, and applicable WHC procedures.

5.2.5.2 Project Integrating Contractor Estimating. The Business Management/Project Support organization shall integrate the participant estimates to develop the cost baselines and to prepare the Construction Project Data Sheet.

5.2.5.3 Supporting Documents. The Project Office requirements for estimates and their control will be met, wholly or in part, by project control system guidelines.

5.2.6 Management Reserve

The Project Office shall provide for management reserve (as deemed appropriate) intended to cover costs of approved in-scope work not previously planned or where actual costs exceed planned expenditures identified, e.g., increases in overhead rates, increases in wage rates, etc.

5.2.6.1 Project Office Management Reserve. The Business Management/Project Support organization shall establish procedures for use and control of management reserve. The participants' management reserves are not a part of the Project Office management reserve. The Project Office management reserve program is subject to review and approval by the RL MRF Project Office.

5.2.7 Contingency Management

The Business Management/Project Support organization shall coordinate/control development of contingency allowance for various levels of the WBS and the project manager will approve these levels in concert with the RL MRF Project Office. Contingency is a special provision in the project budget to cover unforeseeable elements of cost within the defined project scope, such as estimate uncertainties resulting from design evolution,

material pricing, labor productivity, and fluctuation in work forces; and to estimate error or omission, field rework, etc. Contingency funds are not intended to cover additions to the project scope. Management reserve funds are not a part of contingency funds.

The basic policies and requirements for the management of contingency are detailed as follows.

- Contingency shall be established for individual work elements, regardless of funding type, and shall be capable of being summarized by WBS.
- Contingency allocation and funding authorization shall be structured, formally documented, and formally controlled. The RL MRF Project Office project manager has the responsibility for controlling MWTF Project contingency.
- Contingency usage shall be routinely reviewed and analyzed. Monthly reports on the status of the contingency funds shall be prepared and issued.

It is recognized that the costs for some project activities cannot be estimated as precisely as others. Therefore, the contingency for these elements will be larger, in terms of percentage, than those for more precisely defined activities. As a result, the method used to develop the contingency amount for each project activity or element shall be appropriate to that activity or element. Because contingency is developed for each project activity/element, it can be time phased along with the other activity costs. Contingency use curves for the life of the project by FY and WBS shall be developed and maintained from this time phasing. These curves will be used for contingency allocation and control.

The development of contingency shall be formally documented and will provide a traceable path to cost elements, design media, and the WBS.

Contingency allocation shall be established during the annual planning and budgeting cycle when funding is allocated to the project for the FY with projections provided for the out years. These current FY allocations and out-year projections shall be consistent with the baseline, time-phased contingency curves. Contingency shall be allocated by Level 1 of the PSWBS.

The RL MRF project manager will determine the amount of contingency to be provided each FY to the Project Office.

5.2.8 Baseline Change Control System

The MWTF Project baselines are controlled by TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994). This procedure sets threshold levels and approval requirements for baseline changes. The scope of TWRS-PIP-2.2 includes cost, schedule, and technical changes.

For the MWTF Project Office, all technical changes are documented on an Engineering Change Notice. A change request is used to document cost and

schedule changes and to provide approval for technical changes above Level 5. All technical changes are controlled under engineering configuration management via WHC-CM-6-1, *Standard Engineering Practices*. The WHC cost and schedule changes are controlled with a change request via TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994).

5.2.8.1 Supporting Documents. The Project Office requirements for a baseline change control system will be met, wholly or in part, by the following:

- WHC-CM-2-5, *Management Control System*
- WHC-CM-6-1, *Standard Engineering Practices*
- TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994).

5.2.9 Control System Status

The MWTF Project is an MSA; therefore, it must conform to the requirements of project control system guidelines. These requirements will be met by the Project Office through the use of integrated and detailed procedures necessary to operate and maintain those systems. An integral element of these systems and procedures is the status and reporting per schedule of the MWTF Project control systems' databases so the data within the systems reflect the current state of the project.

5.2.9.1 Participant Control System Status. The participant shall develop, implement, and maintain project control systems, including their associated procedures, which will provide the means for the Project Office to status its control systems (i.e., track actual progress versus baseline [planned] progress). Progress tracked shall include the financial (cost) and the time (schedule) facets of progress. Progress shall be determined by established earned value techniques. Status of the progress will be reported at least monthly. An integral portion of this status-reporting function will be trend and variance analyses. Reports will include the requisite information for those cost accounts where the variance is greater than the established thresholds, as well as any significant trends.

The participant control system will be assessed at least annually to ensure it complies with project requirements. The system will be subject to the same audits and surveillances as other management systems.

5.2.9.2 Project Integrating Contractor Control System Status. The Business Management/Project Support organization will develop, implement, and maintain a project control system that ensures cost, scope, and schedule control systems are statused through performance measurement and control techniques detailed in project control system guidelines. The status shall be provided monthly, in a timely manner, and in accordance with project procedures on reporting. The status shall incorporate the monthly data supplied by the participants. An integral portion of the status task shall be trend and variance analyses. Trending of cost and schedule shall be done so possible problem areas can be identified early enough to ensure that meaningful corrective action can be initiated. The review of trend analysis and various reports shall be the responsibility of the Business Management/Project Support organization.

Variance analysis shall be performed to highlight those project elements that exceed established thresholds, and, as a result, may require management attention/action (i.e., management by exception).

The Project Office will provide the RL MRF Project Office with reports on the status of cost, schedule, and funding in the formats required at the appropriate level of the PSWBS. These reports, tabular and graphical, shall include estimates-to-complete, milestone status, and other information desired by various major categories, e.g., participant, funding type, PSWBS, etc.

The systems and procedures used by the Project Office shall consist of established WHC systems and procedures except in those instances where a unique requirement of the MWTF Project mandates a project-specific procedure or system addition.

The Project Office shall perform audits and surveillances of the participants' control systems to ensure their conformance to the requirements of the MWTF Project.

5.2.9.3 Supporting Documents. The Project Office requirements for baseline status will be met, wholly or in part, by WHC-CM-2-5, *Management Control System*.

5.2.10 Reporting, Reviews, Meetings, and Commitment Control

The frequency and content of management reporting, meetings, and reviews shall be established by mutual agreement between the Tank Waste Projects (TWP) Division and the Project Office. Management reporting shall comply with the requirements of project control system guidelines and DOE Order 1332.1A, *Uniform Reporting System* (DOE 1985).

Management meetings shall be attended by representatives of the TWP, the Project Office management staff, and other participants as required. An additional element of the management reporting/meeting function is that of commitment/action item reporting and status, which shall be used by all participants to assist in controlling the project.

5.2.10.1 Participant Reporting, Reviews, Meetings, and Commitment Control. The project manager's office personnel shall provide reports and attend meetings and reviews as outlined in the appropriate project procedures, and provide commitment/action item reporting and status as required.

Reporting formats, media, and frequency shall be established within the limits established by various DOE documents and the needs of the Project Office. Ad hoc reports will be generated as requested in the specified formats and media.

5.2.10.2 Supporting Documents. In addition to project control system guidelines, the Project Office requirements for reporting, reviews, meetings, and commitment/action item tracking will be met, wholly or in part, by the following:

- WHC-CM-2-5, *Management Control System*
- DOE Order 1332.1A, *Uniform Reporting System* (DOE 1985).

5.2.11 Review and Comment Coordination

The Project Office shall coordinate review and comment activities associated with technical planning, work scope definition, and document submittals to the RL MRF Project Office. The Project Office will disposition comments on documents before submittal to the RL MRF Project Office. Comment and review techniques and comment disposition practices are based on good business practices, records management requirements, and WHC-CM-6-1, *Standard Engineering Practices*.

Project procedures are administered by the Project Administration and Technical Support organization, which will coordinate the development, review, approval, and controlled distribution of project procedures.

5.2.11.1 Supporting Documents. The Project Office requirements for coordinating project review and comment cycles for technical and work scope documents will be met, wholly or in part, by WHC-CM-2-5, *Management Control System*.

5.3 WORK AUTHORIZATION MANAGEMENT

The Project Office develops and implements the integration work and funding authorization for the MWTF Project for approved work plans and changes to project baselines. In addition, the MWTF Project Office project manager, with support from the Business Management/Project Support organization, is responsible for the development, implementation, and maintenance of internal work and funding authorization processes for its approved participant work scope.

5.3.1 Participant Work Authorization Management

Work and funding authorization for approved Project Office FY work plans is provided to WHC through MWTF Project authorization/modifications issued by RL. The Project Office prepares and submits requests for project authorization to RL in accordance with its approved work plan. If partial authorization is provided by the RL MRF Project Office due to funding availability, the Project Office must notify the RL MRF Project Office of the need for additional funding before the current funding authorization is exceeded. Obligation Notices and Authorized Funding Plan cost ceilings authorized by the RL MRF Project Office shall be monitored by the Business Management/Project Support organization and any impacts to authorized project funding shall be identified.

Internal work and funding authorization processes will be implemented and maintained by the Project Office for WHC participant work scope and funding authorized by RL. These internal processes are detailed in WHC-CM-2-5, *Management Control System*, and Project Office project-specific procedures, and include the issuance and control of cost account authorizations, work orders, and other authorization documentation.

5.3.2 Integrating Contractor Work Authorization Management

The Project Office, as the Integrating Contractor, develops and implements work and funding authorization processes for the MWTF Project consistent with RL site baseline management requirements and RL program/project guidance and direction. The Project Office provides work authorization for approved changes that do not require RL MWTF Project Office approval. The Project Office also shall review and oversee the participant internal work authorization processes.

5.3.3 Supporting Documents

The requirements for work authorization management will be met, wholly or in part, by WHC-CM-2-5, *Management Control System*.

5.4 RESOURCE MANAGEMENT

Resource management shall be exercised by the Project Office to ensure the optimal use of resources as well as the existing resources at the Hanford Site and to ensure that needed resources are available when required.

5.4.1 Participant Resource Management

The participant shall develop short- and long-term staffing plans. These plans shall be consistent with the resource-loaded schedules, which define the staff hours required to perform the work as scheduled. The staffing plans will provide the basis for projecting near- and long-term facility space and office equipment requirements. These space and equipment requirements will help establish the strategies to be used in their acquisition. The participant shall be accountable to record, report, and track all MWTF Project capital equipment and property under its jurisdiction.

The participant shall prepare and implement project-specific procedures for resource management if it is found that WHC procedures do not cover unique aspects of the MWTF Project.

5.4.2 Integrating Contractor Resource Management

The Project Office shall develop and maintain project-wide, short- and long-term staffing plans. These plans, based on resource-loaded schedules, shall conform to DOE-RL-89-0015, *Hanford Site Development Plan* (Rinne 1990)

and be included in that development plan unless project-unique requirements dictate otherwise. In the latter case, appropriate MWTF Project documents shall be prepared and issued. These staffing plans are the foundation of any facilities acquisition plan or office equipment procurement program. An annual review of these plans, staffing, facility, and office equipment shall be conducted. In conjunction with this annual internal review, the Project Office will review and audit the participants' resource management plans.

5.4.3 Supporting Documents

The Project Office requirements for resource management will be met, wholly or in part, by DOE-068, *Hanford Site Information Technical Resources Long-Range Site Plan* (DOE-RL 1992).

5.5 INFORMATION RESOURCE MANAGEMENT

The Project Administration organization shall be responsible for the information resource management for the MWTF Project, which encompasses the physical equipment and operating processes needed for the manual or automated generation, manipulation, collection, processing, maintenance, control, and/or distribution of information in a variety of forms. The term "information resources" includes plant systems, technical and scientific applications, and business systems.

5.5.1 Information Systems Management

Information systems used by the Project Office shall adhere to Hanford Site standards and WHC business practices except where unique MWTF project needs dictate otherwise.

5.5.1.1 Participant Information Systems Management. The Project Office shall meet specific management criteria when requesting, maintaining, controlling, and managing information resources. The Project Administration organization shall review its information system needs and uses to establish future requirements. The Project Office shall establish the specific lines of communication and data links and formats that will be used for data and information transmittals. The Project Office shall adhere to Hanford Site standards and practices and consider information system criteria in its reviews when developing information system plans.

5.5.1.2 Project Integrating Contractor Information Systems Management. The Project Administration organization shall review and comment on participants' information system submittals for conformance to Hanford Site standards. Participant management of information resources shall consider the following:

- Data administration requirements
- Implementation plans for major items of automated data processing equipment (ADPE)
- Acquisition plans for non-major ADPE

- A statement of strategy that covers ADPE with a purchase equivalent value of <\$25,000
- An analyses of benefits and costs when information technology resources exceed thresholds
- Computer security requirements
- Software management criteria
- Compilation of an IRM inventory report
- Telecommunication systems compliance with standards
- Major items of ADPE software, and services >\$1 million to be included in DOE-068, *Hanford Site Information Technical Resources Long-Range Site Plan* (DOE-RL 1992)
- The ADS to be completed and revised as needed to include major information technology resources.

5.5.2 Data Administration

It is RL policy that data resources used with RL and Hanford Site contractor information systems shall be administered to provide for data consistency, completeness, accuracy, and protection.

5.5.2.1 Participant Data Administration. The MWTF Project data that are shared by two or more participants in the execution of MWTF Project activities, or that will be transferred to the Integrating Contractor for operation of the MWTF, shall be included in each affected participant's Data Management Program.

The MWTF Project data not shared among MWTF Project participants are required to be included in the participant's Data Management Program.

5.5.3 ADP Management

Automated data processing systems used by the Project Office shall adhere to Hanford Site standards and WHC business practices. The ADP management will encompass ADP planning documents, computer security, software management, and hardware management as summarized in the following subsections.

5.5.3.1 ADP Planning Documents. Automated data processing planning documents shall pertain to the acquisition and management of computing resources. The requirements for ADP planning documents cover all general-purpose ADPE without regard to cost, use, or acquisition method. General-purpose ADPE includes acquisitions or free use of ADP hardware, software, related resources, and services.

5.5.3.1.1 Participant ADP Documents. The Project Office will provide input to the WHC statement of strategy for the Project Office ADPE and software requirements.

5.5.3.1.2 Project Integrating Contractor ADP Planning Documents. Policies and procedures that address the management and use of computing resources shall be implemented, and existing resources available to the DOE shall be managed, in such a way as to maximize the effective use of those resources by the MWTF Project.

The Project Office will review and comment on ADP planning documents before participant submittal of those documents to the RL MRF Project Office. A copy of the Project Office comments, including a recommended disposition, will be forwarded with the submittal by the participant to the RL MRF Project Office.

5.5.3.2 Computer Security. Computer security programs are to be established to protect against waste, fraud, and abuse of government-owned computer systems and facilities.

5.5.3.2.1 Participant Computer Security. The Project Office shall have defined business practices that result in the acquisition and construction of computer systems and facilities that satisfy applicable DOE computer security requirements.

5.5.3.2.2 Project Integrating Contractor Computer Security. The Project Office will support the unclassified computer security program for the MWTF Project by conducting a risk assessment of all MWTF Project computer systems.

5.5.3.3 Software Management. Software is a valuable information technology resource and one in which the DOE has a considerable investment. As such, software shall be appropriately managed as would any resource of high value and importance to the operation of the DOE.

The term "software" denotes software proposed for use, software under development, and software in use and/or being maintained. Software management requirements apply to software developed in-house, licensed by commercial vendor, obtained from another organization, or acquired by other means. This includes, but is not necessarily limited to, administrative or business-oriented software, system software, scientific or engineering software, and manufacturing-oriented software used on the MWTF Project. These four categories of software are defined as follows:

- Administrative or business-oriented software
 - Administrative functions, such as payroll, accounting, and financial application software
 - Business management, such as inventory, ordering, scheduling, transportation, and materials management
 - Program management, such as project management applications and automated office support

- System software
 - Utility packages and/or systems, including sets of mathematical routines, sorts, merges, and graphics
 - Operating systems
 - Compilers
 - Program libraries
 - Database management systems
- Scientific or engineering software
 - Scientific, technical, experimental, and modeling software
 - Engineering development and analysis
 - Control systems (scientific/engineering/research)
- Manufacturing-oriented software
 - Computer-integrated manufacturing software
 - Computer-aided design/computer-aided manufacturing software
 - Control systems (manufacturing) software.

Software specific to the MWTF Project that would be exempt from the requirements of DOE Order 1330.1D, *Computer Software Management* (DOE 1992b), include the following:

- Software acquired and used with general-purpose ADPE that is integrally embedded within the instrumentation associated with an experiment or device
- Software acquired and used with general-purpose ADPE that is not integrally embedded but acquired as part of a larger non-ADP turn-key system provided by one contract and in which the selection or supplier of the software chosen is not at the discretion of the DOE or participant.

5.5.4 Telecommunications Management

The acquisition of telecommunications systems shall satisfy present and future requirements; support the design and construction of the MWTF; accommodate the full-scale integration of telecommunications disciplines; and provide the required degree of reliability, capacity, and interoperability. Where feasible, the MWTF Project shall require the standardization of requirements and practices to be consistent with existing network facilities on the

Hanford Site. Telecommunications support shall be provided through the use of existing network systems or through the acquisition of additional network systems to meet MWTF Project needs.

Telecommunication facilities and services used by the Project Office shall adhere to Hanford Site standards and WHC business practices except in those instances where unique project needs dictate otherwise.

5.5.4.1 Participant Telecommunications Management. The Project Office shall review and quantify its telecommunications requirements for the MWTF Project. Following this review and quantification process, the Project Office will review the results to ensure project compatibility, timeliness, and cost-effectiveness of the proposed solutions.

5.5.4.2 Project Integrating Contractor Telecommunications Management. The Project Office will coordinate the interface between the MWTF Project and existing Hanford Site network facilities.

The telecommunications proposal is the keystone to implementing telecommunications support for the MWTF, which ensures compliance with DOE Order 5300.1C, *Telecommunications* (DOE 1992c). The proposal provides a vehicle for the approval of the design and planning phase, implements the procurement of equipment, and provides a reference document for acceptance and testing. A minimum of four telecommunications proposals are expected to be developed. The Project Office will assist the participants in generating the needed telecommunications proposals.

5.5.5 Document Control

The Project Office shall have an effective document control program that provides full traceability of program requirements through management plans, procedures, etc. This program shall address, at a minimum, the following requirements:

- Types of documents requiring control
- Organizations responsible for issuance, review, approval, and changes
- Methods for user access to documents
- Traceability of documents, including change traceability
- Insurance that a record copy of controlled documents is maintained
- Provisions for consistent, auditable implementation of document control functions
- Definition of participants' document control responsibilities
- Provisions for personnel training

- Documentation requirements for operation of a document control program
- Organizational responsibilities for a document control program
- Method for controlling inadvertent use of void or superseded copies
- Identification of controlled and uncontrolled copies
- Established distribution point for controlled documents and for the receipt, logging, reproduction, distribution status, and file control of documents.

5.5.5.1 Participant Document Control. The Project Office shall operate and maintain a document control program. This document control program shall conform to the requirements detailed in the preceding sections.

5.5.6 Records Management

The records management program used by the Project Office shall provide full traceability of the program requirements through management plans, procedures, etc. The program shall address, at a minimum, the following requirements:

- Organizational responsibility for records management functions
- Procedural requirements for records generation and processing
- Description of the measures necessary for records protection
- Establishment of records receipt requirements, e.g., accountability, completeness, legibility, record status, storage during processing, etc.
- Definition by class of QA records (i.e., lifetime, nonpermanent)
- Establishment of lifetime for nonpermanent records that are considered QA records and of essential or vital record status
- Method of correcting records
- Ability to produce a project records list
- Definition of participants' records management responsibilities
- Responsibility for records disposition
- Control requirements for records in process
- Responsibility, mechanism, and timing for transmittal of records for retention
- Index requirements for automated records retrieval

- Establishment of records storage requirements for QA records
- Defined retrieval times for record types from storage, i.e., establish routine retrieval times in response to onsite and offsite requests
- Definition of an MWTF Central Records Facility and appropriate operating practices.

5.5.6.1 Participant Records Management. The records management program for the Project Office shall conform to the requirements of the preceding section as well as any other requirements deemed necessary for efficient, traceable operation of the program.

5.5.6.2 Project Integrating Contractor Records Management. The Project Office will provide a records management program for the MWTF Project.

5.5.7 Supporting Documents

The Project Office requirements for IRM will be met by the following documents:

- WHC-CM-2-6, *Data Administration Standards*
- WHC-CM-2-5, *Management Control System*
- WHC-CM-4-7, *Management Control Process for Unclassified Computer Systems*
- RL-ADP-89-02, *Hanford Site Information Resource Management: An Architecture for the 1990's* (WHC 1989)
- RLO-ADP-1, *Hanford Site Data Administration Guide* (Wagner 1989).

5.6 SYSTEMS ENGINEERING MANAGEMENT

The MWTF Project, as an MSA, shall conform to the TWRS Program Systems Engineering Management Plan, DOE/RL-92-59.

5.6.1 Participant Systems Engineering Management

The Project Office shall prepare, implement, and maintain the necessary systems engineering project-specific procedures to cover the scope of work.

The Project Engineering organization in conjunction with the Technical Studies/Project Integration organization, shall ensure the system engineering process provides clear definitions of the following:

- Review of project technical objectives and the interface coordination among engineering disciplines

- Development and maintenance of the FDC and the SDRD, and the incorporation of information from systems integration
- Review of detailed design based on preliminary design, the FDC, the SDRD, and system integration
- Review of design and technology evaluations and optimization studies to provide management with the necessary information to make decisions
- Detailed test review and evaluation program requirements, e.g., conformance to the MWTF Project test and evaluation plan, technical expertise, coordination, and system performance verification.

5.6.2 Integrating Contractor Systems Engineering Management

The Project Engineering organization provides technical information required for environmental permit applications, environmental compliance assessments, safety analyses and reviews, readiness reviews, and site interface activities. The Systems Engineering organization reviews all process systems test results to verify the MWTF will meet functional design requirements and to ensure that the technical baseline for the process systems is correctly maintained throughout construction and startup. Systems Engineering is responsible for defining and maintaining the process flowsheets, which define the expected process, performance, operating conditions, stream flows, etc., for processing of the various planned feed types.

The Project Engineering organization also is responsible for preparing facility and plant systems functional design requirements and reviewing the A-E developed facility and plant systems design. The Systems Engineering organization supports the development for the A-E.

Other systems and facilities for which Systems Engineering is responsible for development of functional design requirements are site layouts and interfaces; building structures; canister storage, heating, ventilating, and air conditioning; electrical; laboratories; fire protection; health protection; and radiation monitoring.

Systems Engineering performs surveillances of the A-E design activities. These periodic surveillances cover all elements of the A-E design for specific detailed design packages.

Systems Engineering supports the project organization in evaluating the A-E's performance relative to technical work, cost, and schedule. Systems Engineering evaluates all changes to the FDC and SDRD. As a precursor to changes to the FDC and SDRD, or at the request of the RL MRF Project Office, Systems Engineering may perform engineering studies.

Systems Engineering reviews results of work performed by the Technology organization. Reports and data important to design are forwarded to the A-E via the WHC Project Engineering manager. Systems Engineering also establishes guidance for use of the development reports/data by the A-E.

5.7 CONFIGURATION MANAGEMENT

The MWTF Project Engineering organization will be responsible for configuration management on the MWTF Project. The Project Office shall use formal configuration management on the MWTF Project.

5.7.1 Participant Configuration Management

The Project Office shall establish a system for controlling the technical baseline of its MWTF Project work.

The MWTF Project shall describe how configuration management will be performed on the MWTF Project. The Project Office configuration management shall be developed in conformance to project control system guidelines and ensure that the following requirements are met.

- Maintain current configuration requirements of the approved technical baseline.
- Provide for and ensure proper control and documentation of technical reviews, peer reviews, and changes.
- Develop procedures for implementation of the configuration management plan requirements.
- Monitor organizational implementation and compliance to the configuration management plan.
- Approve the release and issuance of technical documents, including controlled distribution and controlled changes.
- Participate in QA surveillances, reviews, and inspections for adherence to configuration management requirements.
- Establish requirements for functional tests of the equipment, systems, and functional characteristics specified in the technical baseline requirements.
- Define the technical baseline documentation.
- Establish configuration item identification standards for unique coding of components, parts, structures, and hardware.
- Establish labeling and marking standards that accommodate verification of the configuration item, including markings after product modification.
- Establish, implement, and maintain an approval designator/safety classification system in accordance with applicable DOE Orders.
- Identify requirements for change packages deemed necessary based on research and development, systems engineering, value engineering, other participants' input, etc.

- Establish technical change control with provisions for hardware and computer software change control.
- Establish and maintain an MWTF document hierarchy.

5.7.2 Integrating Contractor Configuration Management

The Project Office shall provide guidance to the participants in the preparation and implementation of their configuration management systems. The Project Office shall perform a configuration management audit of each participant on an annual basis with ad hoc configuration management surveillances performed as deemed necessary.

Configuration management project procedures shall be prepared, implemented, and maintained by the Project Office to ensure uniform application of the specified configuration management principles at the MWTF Project.

5.7.3 Supporting Documents

The Project Office requirements for configuration management will be met, wholly or in part, by the following documents:

- Multi-Function Waste Tank Facility Project Configuration Management Plan (to be issued)
- WHC-CM-6-3, *Drafting Standards Manual*
- WHC-CM-6-1, *Standard Engineering Practices*
- WHC-CM-1-3, *Management Requirements and Procedures*
- TWRS-PIP-2.2, "Baseline Change Control" (WHC 1994).

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6.0 QUALITY ASSURANCE

The MWTF Project shall have a QA program that satisfies the requirements contained in DOE Order 5700.6C, *Quality Assurance* (DOE 1991b); ANSI/ASME NQA-1-1989, *Quality Assurance Program Requirements for Nuclear Facilities* (ANSI/ASME 1989); and other applicable high-level waste management requirements established by the U.S. DOE-Office of Civilian Radioactive Waste Management.

The Project Office shall have responsibility for managing the project-wide QA program and ensuring that participants establish QA programs that meet requirements. The TWRS Project QA engineers assigned to the project (hereafter referred to as the MWTF QA organization) are responsible for oversight of the overall QA program and providing review and approval of participants' QA programs, plans, and procedures. The MWTF QA organization is responsible for developing the QAPP document and approving the Project Office implementing procedures.

The MWTF QA organization is a matrix organization to the Project Office from the WHC TWRS Projects QA organization.

6.1 PROJECT OFFICE QUALITY ASSURANCE

The MWTF QA organization shall be responsible for performing and documenting its review and acceptance of participant's QA plans and procedures.

The MWTF QA organization shall provide the administration for scheduling quality-related audits and surveillances of all participants, including the Project Office. This review of quality performance of individual participants shall provide a basis for the overall project total quality commitment.

The MWTF QA organization shall establish the administrative process for identification, documentation, issuance, and closure of all project surveillance and corrective action reports. The MWTF QA organization shall maintain the corrective action report log and use it to track and determine trends in these reports in accordance with procedures on adverse condition tracking and trending.

The Project Office QA Program implementing procedures are contained within the WHC-CM-4-2, *Quality Assurance Manual*.

6.2 PROJECT OFFICE QAPP

The Project Office maintains a QAPP that documents the QA program and identifies the QA Program implementing procedures. This QAPP satisfies the applicable WHC QA requirements contained in the DOE Order 5700.6C and ANSI/ASME NQA-1-1989.

A partial listing of requirements for the QAPP follows.

- Describe how the Project Office manages, ensures, verifies, and documents total MWTF Project quality.
- Provide detailed QA requirements to participants.
- Contain the requirements that the Project Office review and approve participants' QA plans and selected QA procedures.
- Provide a consistent project-wide method of addressing activities such as nonconformances, corrective actions, and QA trend analysis reporting.
- Identify specific requirements for establishing the quality classifications or categories for documents, components, systems, and activities that may affect safety, reliability, or performance criteria.
- Provide for the formal approval of the QAPP by the RL MRF Project Office before issuance for MWTF Project use.
- Provide the system and methodology for the Project Office to verify each participant's degree of compliance with project QA requirements.
- Provide for Project Office audits and surveillances.
- Provide details on preparation of procedures for resolution of participant questions and concerns relating to quality; in particular, those questions and concerns that may require an external agency's interpretation.
- Provide details on preparation of procedures for "stop work" orders initiated by either the Project Office or a participant.
- Delineate the project nonconformance control system and its interfaces with participants.

6.3 SUPPORTING DOCUMENTS AND REFERENCES

The Project Office requirements for QA are defined, wholly or in part, by the following supporting and reference documents:

- ANSI/ASME NQA-1-1989, *Quality Assurance Program Requirements for Nuclear Facilities* (ANSI/ASME 1989)
- DOE Order 5700.6C, *Quality Assurance* (DOE 1991b)
- DOE Order 5000.3B, *Occurrence Reporting and Processing of Operations Information* (DOE 1993)
- WHC-CM-2-5, *Management Control System*

- WHC-CM-4-2, *Quality Assurance Manual*
- WHC-CM-1-4, *Corrective Action Management Manual*.

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7.0 REGULATORY COMPLIANCE/SAFETY

The Project Office shall prepare documentation that meets the DOE's requirements for environmental permitting and safety and health.

The DOE requires environmental planning review as an integral part of project management. Specific subjects to be addressed include NEPA compliance, environmental permitting requirements, environmental monitoring and reporting, and environmental audits.

A PSAR and an FSAR will be prepared for the MWTF Project to identify hazards and assess risks associated with the facility and the means for their elimination and control. The SARs will be written to address the requirements of DOE Orders related to safety analyses and WHC procedures that implement these orders.

7.1 PROJECT OFFICE REGULATORY COMPLIANCE

An interim Environmental Impact Statement (EIS) was prepared for the MWTF Project before detail design activities were undertaken. The draft EIS completed its public comment period on September 20, 1994, and the final EIS is to be published in March, 1995.

Throughout project design, changes to the plant design will be evaluated for their impact to the environment and to existing environmental documentation.

The Projects matrix support organization prepared the environmental permit applications required for the MWTF Project. Permit applications were prepared in compliance with applicable laws and regulations such as the RCRA and the *Clean Air Act of 1977*.

The Washington State Department of Ecology (Ecology) is the regulating authority that will issue RCRA and *Clean Air Act of 1977* permits. Ecology has the lead in coordinating permit requirements and reviews with other regulatory organizations, such as the U.S. Environmental Protection Agency and the Washington State Department of Health.

The permits identify all applicable environmental requirements for construction and operation of the MWTF. A list of permits shown in the following matrix.

Regulatory changes will be reviewed by the Project Office, and their impacts to the MWTF will be evaluated. Any change in regulatory requirements having a significant impact on the technical baseline documents will be communicated to the RL MRF Project Office in a timely manner.

<u>Permit/approval</u>	<u>Status</u>
NEPA (EIS)	Draft issued for public review, August 1994

RAEP	Submitted to Washington State Department of Health, September 1994
NESHAPS	Submitted to U.S. Environmental Protection Agency, September 1994
NOC	Submitted to Washington State Department of Ecology, September 1994
SWDP	Will expand permit from project W-049H to handle nonhazardous condensate from MWTF
SEPTIC SYSTEM DESIGN	In preparation
RCRA PART A	Submitted to Washington State Department of Ecology, May 1994
RCRA PART B	Will be prepared August 1995 in conjunction with Project W-058
SEPA	Washington State involvement with NEPA will satisfy SEPA requirements
ENGINEERING REPORTS, SPECS, O&M MANUAL	Not required (no waste water dumped to ground)

7.2 SAFETY

The approach to be utilized for integrating the MWTF Project responsibilities for safety, including safety documentation and independent review requirements, and the direction for implementing safety requirements are established in the Safety Management Plan in Appendix I.

A PSAR will be prepared by the Safety organization, with approval by WHC management and appropriate DOE organizations. The PSAR will serve as the vehicle for establishing that safety issues have been satisfactorily addressed in the design and operating plans.

The PSAR will identify the principal design criteria in sufficient detail to provide reasonable assurance that safe operation can be achieved; and it will identify and demonstrate conformance to applicable guides, codes, and standards. If a deviation from current DOE design criteria occurs, it will be evaluated by the Project Office and then forwarded to the DOE along with a recommendation. The DOE will review the deviation and the Project Office recommendation and approve the document and its acceptance with the RL Safety and Environmental Division. The PSAR will provide early identification of potential health, safety, or environmental problems; and assess design features, administrative controls, and operational safety requirements necessary to prevent or mitigate potential accidents.

The PSAR is a decision document in the process that authorizes construction of the MWTF Project to commence. Once the PSAR is approved by the DOE-HQ, it will not be revised annually and reviewed/approved by original

approving organization. The WHC Configuration Control organization specifies the processes to be used to document commitments made in the PSAR and to describe design, safety analysis, and safety analysis changes that occurred after the PSAR approval and before issuance of the first draft of the FSAR.

The FSAR will be prepared by the Safety organization and approved by WHC management and the appropriate DOE organizations before initial hot (radio-active) operation. The FSAR will describe and provide the safety analysis of the final plant design. The FSAR will include or reference detailed operation safety requirements and applicable codes, standards, and guides.

7.3 SUPPORTING DOCUMENTS

The Project Office requirements for regulatory compliance will be met, wholly or in part, by the following:

- WHC-CM-4-46, *Nonreactor Facility Safety Analysis Manual*
- WHC-CM-7-5, *Environmental Compliance*.

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8.0 QUALIFICATION AND TRAINING MANAGEMENT

The MWTF Project manager shall maintain a Project Office qualification and training plan.

8.1 PARTICIPANT QUALIFICATION AND TRAINING MANAGEMENT

The MWTF Project manager shall prepare, implement, and maintain a qualification and training plan. The training programs may be extensions of existing programs or new programs created for the Project Office. These plans and programs shall be submitted to the RL MRF project manager for review and approval, and they shall be subject to annual audits, at a minimum.

8.2 INTEGRATING CONTRACTOR QUALIFICATION AND TRAINING MANAGEMENT

The Project Office shall perform audits and surveillances of the participants' qualification and training programs as specified in the project procedures.

8.3 SUPPORTING DOCUMENTS

The Project Office requirements for qualification and training will be met, wholly or in part, by the following:

- WHC-SD-W236A-TR-001, *Multi-Function Waste Tank Facility Qualification and Training Plan* (WHC 1993b).

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9.0 TEST AND EVALUATION MANAGEMENT

The project Startup/Testing organization shall prepare, implement, and maintain a test and evaluation plan. This plan shall identify the testing approach and requirements in support of plant design, equipment procurement, construction, startup, and plant operations.

9.1 TEST AND STARTUP PLAN

This test and evaluation plan shall be updated periodically to reflect the status of the MWTF Project. Additional test plans, tiered below the test and evaluation plan, shall be prepared for the various phases of the MWTF Project as necessary to meet the testing requirements. The test and evaluation plan shall be reviewed and approved by the WHC MWTF Project Office.

The test and evaluation plan and subtiered test plans shall address the following:

- The rationale for the kind, amount, and schedule of tests (tests should be categorized by CWBS)
- Relation of testing to technical risks, operational issues and concepts, performance criteria, reliability, maintainability, and acquisition phase key decisions
- Explanation of the relationships among component, subsystem, and integrated system tests, and initial operational tests
- Critical path tests and evaluations and near- and long-term plans by acquisition phase, including specific test objectives
- Outline of test and evaluation management responsibilities of participating organizations, arrangements between participating organizations for test data sharing, and responsibilities for test management decisions
- Preparation of a summary-level milestone chart, by project phases, that displays the integrated time sequence of tests that relate to key project milestones
- Definition of procedural requirements for test activities
- Operational tests and evaluations to be performed in the demonstration, production, and operational phases
- Relation of test conditions and expected results to operational effectiveness and suitability of acquired systems
- A summary description of, and justification for, unique resources required for the MWTF Project

- Identification of the actual number of articles and support elements required for each testing phase
- Identification of each subsystem to be tested and the total quantity to be tested
- Identification of testing facilities and categorization of government- and nongovernment-owned facilities
- Demonstration that the MWTF and equipment operating procedures relate to technical manuals and approved test procedures
- Delineation of those testing and operating procedures to be used in the testing program that require DOE approval, e.g., procedures with no relationship to technical manuals or approved test procedures
- Delineation of action points and the action to be taken for test and evaluation activities with the need for traceability being a prime consideration
- Provision of summary test results emphasizing performance characteristics, issues, and requirements for additional testing or analysis
- Provision of solutions to technical issues and demonstration of satisfactory engineering progress toward the resolution of those issues.
- Review of procurement specifications for GFE prior to award, review of vendor submittals and assure vendor support during installation and startup.

The test and evaluation plan and subtiered test plans shall be prepared in conformance to the preceding requirements.

9.2 SUPPORTING DOCUMENTS

The Project Office requirements for testing and evaluation will be met, wholly or in part, by the following documents:

- MWTF Project test and startup plan
- Acceptance test plan and subtiered test plans
- Preoperational test plan and subtiered test plans
- Operational test plan and subtiered test plans.

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10.0 ENVIRONMENTAL, SAFETY, AND HEALTH (ES&H) PROTECTION IMPLEMENTATION

The project management policy, objectives, and goals for ES&H programs to be implemented in the design, construction, demonstration, and startup of the MWTF.

10.1 PROJECT OFFICE ES&H PROTECTION

The ES&H requirements will be incorporated through MWTF Project baseline criteria documents, environmental compliance documentation, and SARs. Project Office overview of the A-E's design products will consider ES&H principles. Change control policies and procedures will adequately assess design changes for ES&H impacts.

10.2 ENVIRONMENTAL PROTECTION PROGRAM

The Regulatory organization shall prepare documentation that meets DOE requirements for environmental permitting. Specific details of the documentation are provided in Section 7.0 of this Management Plan.

Project Office review and WHC overview activity plans are described in the following subsections.

10.2.1 NEPA Compliance

See Section 7.0 of this Management Plan.

10.2.2 Environmental Permitting

See Section 7.0 of this Management Plan.

10.2.3 Facility Design Review

The Systems Engineering organization will be involved in periodic technical surveillances of A-E design activities. Technical surveillance activities shall consider if the current design media accurately reflect the environmental criteria established in baseline criteria documents and environmental permit documents.

10.2.4 Operational Environmental Monitoring Plan

An MWTF Project operational environmental monitoring plan shall be a part of a Hanford Site environmental plan, administered by WHC. The Regulatory organization is responsible for providing the MWTF Project input for the site plan.

10.2.5 Environmental Reporting Requirements

See Section 7.0 of this Management Plan.

10.3 SAFETY AND HEALTH

The Regulatory organization shall prepare and maintain safety analysis documentation. Refer to Section 7.0 of this Management Plan.

The WHC and Project Office review and overview activities are described in the following subsections.

10.3.1 SAR

A PSAR will be prepared by the Regulatory organization. Details of the plan for development, review coordination, approval, and maintenance of the PSAR and FSAR and other required safety analysis documentation are defined in Section 7.0 of this Management Plan.

10.3.2 MWTF

The Project Office will use existing WHC procedures or develop project-specific procedures to cover the following functional activities:

- Safety reviews and appraisals
- Occurrence reporting requirements
- Facility emergency plan
- Safety training for Project Office staff.

10.4 SUPPORTING DOCUMENTS

The Project Office requirements for ES&H protection implementation will be met, wholly or in part, by the following:

- WHC-CM-4-46, *Nonreactor Facility Safety Analysis Manual*
- WHC-CM-7-5, *Environmental Compliance*.

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12.0 GLOSSARY

ABBREVIATIONS AND ACRONYMS

A-E	- Architect-Engineer
ACDR	- Advanced Conceptual Design Report
ADP	- Automatic Data Processing
ADPE	- Automatic Data Processing Equipment
ADS	- Activity Data Sheets
AFC	- Approval for Construction
ALARA	- As low as reasonably achievable
ANSI	- American National Standards Institute
ASME	- American Society of Mechanical Engineers
ATP	- Acceptance Test Procedure
CDR	- Conceptual Design Report
CM	- Construction Management
CSER	- Criticality Safety Evaluation Report
CWBS	- Contractor Work Breakdown Structure
DBA	- Design-basis accident
DOE	- Department of Energy
DOE-RL	- Department of Energy - Richland Operation Office
ECCEL	- Employing Consolidated and Cost Effective Leadership
EIS	- Environmental Impact Statement
ES&H	- Environmental, Safety, and Health
ESQ	- Emergency, safety, and quality services
FDC	- Functional Design Criteria
FSAR	- Final Safety Analysis Report
FY	- Fiscal Year
GFE	- Government Furnished Equipment
HP	- Health Physics
HSF	- Health, safety, and fire (protection)
HWVP	- Hanford Waste Vitrification Plant
ICF KH	- ICF Kaiser Hanford Company
IPM	- Initial Pretreatment Module
IRM	- Information Resource Management
LOI	- Letter of Instruction
MP	- Management Plan
MRF	- Multi-Function Waste Remediation Facility
MSA	- Major System Acquisition
MWTF	- Multi-Function Waste Tank Facility
NEPA	- National Environmental Policy Act
NESHAPS	- National Emissions Standards for Hazardous Air Pollutants
NOC	- Notice of Construction
OTP	- Operational Test Procedures
PNL	- Pacific Northwest Laboratory
PSAR	- Preliminary Safety Analysis Report
PSE	- Preliminary Safety Evaluation

- PSWBS - Project Summary Work Breakdown Structure
- QA - Quality Assurance
- QAPP - Quality Assurance Program Plan
- RAEP - Radioactive Air Emissions Report
- RCRA - Resource Conservation and Recovery Act
- RFC - Release for Construction
- SAR - Safety Analysis Report
- SARP - safety analysis report for packaging
- SDD - system design description
- SDRD - Supplemental Design Requirements Document
- SEPA - State Environmental Protection Act
- SMP - Safety Management Plan
- SWDP - State Waste Discharge Permit
- TAPS - Toxic Air Pollutants
- TSR - Technical Safety Requirement
- TWP - Tank Waste Projects
- TWRS - Tank Waste Remediation System
- TWRSPS - Tank Waste Remediation System Project Safety
- WBS - work breakdown structure
- WHC - Westinghouse Hanford Company

**APPENDIX 1
SAFETY MANAGEMENT PLAN
MULTI-FUNCTION WASTE TANK FACILITY**

I. INTRODUCTION

The Safety Management Plan (SMP) establishes the approach to be utilized for the Multi-Function Waste Tank Facility (MWTF) Project for integrating the Project's responsibilities for safety, including safety documentation and independent review requirements with the design, construction and start-up activities. The SMP covers the project activities for the MWTF. A graded approach will be used for the safety analysis requirements of the project based on the complexity and the potential safety hazards associated. The SMP will be revised as appropriate to identify the safety and safety documentation requirements.

The SMP provides direction for implementing the various safety requirements of Department of Energy (DOE) Orders and Westinghouse Hanford Company (WHC) MRPs, including but not limited to DOE 5480.5, 5480.9, 5480.23, 5482.1B, RLIP 4700.1A MRP 5.23, and MRP 5.46.

Section II of the SMP addresses the safety analysis requirements of DOE 5480.23 to assure that the activities associated with these requirements are integrated with the design, construction and startup activities. Section III provides direction for implementing the applicable requirements of DOE Orders and the MRPs for Project line management safety responsibilities. Section III also provides the program plan for an independent safety review program of the design, construction and startup activities.

The safety analyses and independent review ensure that the design will lead to a facility which can be managed in a manner that presents no undue risk to the health and safety of employees, visitors, or members of the public, and adequately protect the environment. These safety analyses and reviews also help ensure that the design and construction of these facilities are accomplished in a manner that ensures compliance with DOE 6430.1A and other DOE mandatory standards and industry good practices.

II. SAFETY ANALYSIS**A. General Discussion**

The objective of this section is to describe the various safety analysis requirements for the MWTF Project and to provide details on the Project participant's responsibilities and the integration of the safety analyses with the design activities.

B. Project Management Responsibility for Safety Analysis

WHC policy for responsibility for safety analyses is stated in WHC-CM-4-46. "It is the responsibility of the...Project Management...to ensure that

facility safety analysis are properly performed, documented, reviewed, and approved... Use of support organizations to prepare safety analysis documents does not relieve line management from the responsibility for technical cognizance or technical adequacy...". The preparation and issuance of the safety analysis documentation is the responsibility of the WHC MWTF Project organization. This effort is supported by the Safety Analysis and Engineering Department which helps assure a consistent approach and scope to the safety responsibility for developing designs which meets all applicable safety criteria. As part of this responsibility, ICF Kaiser Hanford (ICF KH) will perform various design analyses that support the safety analysis documentation. This effort is discussed further in Section II.C below.

C. Safety Analysis Process

The safety analysis activities are integrated with the engineering design process to ensure that potential accidents are prevented, controlled or mitigated. The safety analysis activities are initiated early in the design process and continue through the life of the project to: provide input to the design criteria, assist in the selection of design alternatives, assist in the resolution of design issues, and prepare input to the safety analysis documentation. Safety analyses performed early in the design process will be utilized to allow redesign to eliminate potential accidents at minimal cost. The following paragraphs provide a brief discussion of the safety analysis activities during each phase of the facility design and construction. Section D provides a summary description of the major safety analysis documentation.

Site Evaluation - Site evaluations were performed by WHC to select a location for the MWTF East and West Sites, reference WHC-SD-236A-SE-001 and WHC-SD-236A-SE-002. Safety Analysis input and review of the siting alternatives included the considerations for site selection specified in DOE Order 6430.1A. These considerations included: special siting requirements for facilities using or processing hazardous materials; health, safety and environmental protection requirements; hazardous operations and consequences of potential accidents in adjacent facilities; natural hazards; and the radiological siting requirements.

Engineering Studies - The engineering studies provide information on the facility inventory of radioactive and other hazardous materials. Assessments will be performed by the ICF KH to select the process for organic destruction. These assessments will include consideration of potential hazards associated with each of the processes. The quantity and form of the radioactive and other hazardous materials for the selected process provide the basis for the facility Hazard Category and the determination of applicable design criteria. Additional engineering studies will be performed for selection of design and process alternatives as necessary.

Technical Baseline Criteria The Technical Baseline Criteria for the MWTF are prepared by the WHC MWTF Project and consist of Functional and Operational Requirements, Conceptual Design Criteria and the Project Design Criteria. Safety criteria shall be located in a distinct section

of the criteria documents. Design requirements for the control of the hazards identified in the facility Hazard Category are established in the Project Design Criteria. The Project Design Criteria will provide explicit references to Safety related (-99 and Division 13) sections of DOE 6430.1A and other design criteria to identify those portions which are specifically applicable to the MWTF.

Conceptual Design Hazards analyses will be performed by ICF KH with input from WHC for assessing design alternatives considered during the conceptual design for the MWTF. These analyses will identify significant hazards and options for control of these hazards. These analyses provide the screening of the potential accident scenarios to be evaluated in the facility safety analysis and will begin to form the project safety basis¹ required by DOE Order 5480.23.

Definitive Design Safety analyses performed by WHC during the definitive design will establish the project safety basis and evaluate design refinements against the facility Hazard Category and the CDR. The Preliminary Safety Analysis Report (PSAR) has been prepared and will be issued prior to construction. There is a continuous interaction between the safety analysis and the design activities to ensure that the design and related analysis are accurately reflected in the safety analysis and to ensure that safety issues identified through the safety analysis or the design review process are addressed in the design. The safety analyses provides the bases for the safety classification of major systems, structures and components. WHC has obtained the services of Pacific Northwest Laboratory (PNL) and ARES Corporation to write the Human Factors Engineering Report. ICF KH will perform design analyses to verify design compliance with safety related criteria. These analyses include the following:

- a) Seismic analyses (including 3/1 or 2/1 concerns)
- b) Design Basis Fire Analysis
- c) Shielding Analysis
- d) ALARA analysis
- e) others to be determined.

In addition, ICF KH will perform design analyses identified as a result of the safety analysis activities. These analyses may include the following:

¹ Safety basis is defined in DOE Order 5480.23 as "the combination of information related to the control of hazards at a nuclear facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely. This definition is very similar to the definition of an "authorization basis" provided in DOE Order 5480.21. DOE Order 5480.21 also provides guidance for determining if a change has an impact on the authorization basis which is useful for determining impacts to the safety basis.

- a) Process hazards assessments
- b) Facility response to a Design Basis Accident (DBA).

Construction Design changes that occur during construction will be evaluated for consistency with the project safety basis. The Criticality Safety Evaluation Report (CSER), Final Safety Analysis Report (FSAR), Technical Safety Requirements (TSRs) and any necessary Safety Analysis Reports for Packaging (SARPs) will be issued and approved prior to start of hot operation. The preparation and release of the CSER, FSAR, TSRs and any necessary SARPs is the responsibility of the WHC MWTF Project organization until the facility has been turned over to operations. Following the turnover, the safety documentation is the responsibility of the WHC Operations organization. The Safety Analysis and Engineering Department and the Packaging Safety Engineering Group provide support to the Project and Operating organizations for the preparation and maintenance of the safety documentation.

D. Major Safety Analysis Documentation

The major safety analysis documents are the Hazard Category, the Preliminary Safety Evaluation (PSE), the PSAR, the FSAR, the TSRs, the Criticality Safety Evaluation Report (CSER) and the Safety Analysis Report for Packaging (SARP) if required. The Hazard Category, PSE, PSAR and FSAR are prepared in accordance with the requirements of WHC-CM-4-46. The CSER will be prepared in accordance with the requirements of WHC-CM-4-29 and the SARP will be prepared as required by WHC-CM-2-14. The safety analysis documentation will be prepared and issued in conjunction with the design activities.

PSE A PSE is required for all line item projects except those involving only hazards which are routinely encountered and accepted by the vast majority of the public. The PSE for MWTF identifies the hazards associated with the facility operation, analyzes potential accidents and evaluates the adequacy of proposed barriers to prevent or mitigate the consequences of the potential accidents. A preliminary safety classification of major structures, systems and components is included in the PSE. The PSE (SD-W236-PSE-001), was developed during conceptual design and was issued in August 1991.

PSAR The PSAR (SD-W236A-PSAR-001) will be approved prior to start of construction. The WHC MWTF Project organization is responsible for the preparation and issuance of the PSAR. ICF KH will provide input and review of the design related information in the PSAR. The PSAR addresses the requirements prescribed in DOE Order 5480.23 and documents the safety basis for the facility consistent with the level of design detail available. The purpose of the PSAR is to demonstrate that there is reasonable assurance that the operation can be conducted with an acceptably low risk of impacts to the environment and to the health and safety of the employees and the public. The PSAR identifies the potential hazards associated with the facility operation and analyzes the adequacy of design features to eliminate, control or mitigate the identified hazards. The PSAR includes a preliminary evaluation of the criticality safety of equipment and operations involving fissionable

materials. The PSAR includes a Safety Equipment List identifying the Safety Class 1 and 2 structures, systems and major components as required by WHC-CM-1-3, MRP 5.46, "Safety Classification of Systems, Components and Structures". A preliminary list of items requiring Technical Safety Requirements is included in the PSAR. The PSAR, Chapter 8, contains information generated by the Hazards and Operability Document, WHC-SD-W236A-PHA-002. Aspects of the design related to the facility safety which require development of additional information are identified as items requiring further resolution in the PSAR. The WHC MWTF Project organization will track the status of these items and ensure that the technical information is developed prior to the release of any related design media for procurement or construction. The PSAR will be approved prior to the start of construction. Following initial issuance of the PSAR, any changes resulting from the identification of safety issues or changes to the facility design or operation are evaluated for impacts to the safety basis as described in the PSAR. Changes to the safety basis will be documented and approved by the OC prior to the release of affected design media for procurement or construction. Information for closure of items requiring further resolution and changes to the safety basis will be incorporated in a revision of the PSAR or the FSAR as appropriate.

CSER The CSER evaluates the criticality safety of the equipment and operations involving fissionable material for normal and credible abnormal conditions. The CSER will confirm that the equipment design and/or administrative controls meet or exceed the margin of safety required by DOE Order 5480.5. The CSER will be issued and approved prior to operations involving fissionable materials.

FSAR The FSAR will be based on the completed Title II design and any design changes that occur during facility construction. The FSAR will address the requirements prescribed in DOE Order 5480.23 and documents the final safety basis for the facility. The purpose of the FSAR is to demonstrate that the operation of the MWTF can be conducted with an acceptably low risk of impacts to the environment and to the health and safety of the employees and the public. The FSAR will include or reference a Safety Equipment List identifying the Safety Class 1 and 2 structures, systems and components as required by WHC-CM-1-3, MRP 5.46, "Safety Classification of Systems, Components and Structures". The FSAR will be issued and approved prior to the start of facility operation. Subsequent changes in the facility design or operation as described in the FSAR will be evaluated using the Unreviewed Safety Question (USQ) process described in DOE Order 5480.21.

TSR The TSRs are those requirements that define the conditions, safe boundaries, and the management or administrative controls necessary to ensure the safe operation of a nuclear facility and to reduce the potential risk to the public and facility workers from uncontrolled releases of radioactive materials or from radiation exposures due to inadvertent criticality. The TSRs will be developed based on the operational limits established in the FSAR to assure that facility operation is maintained within the bounds assumed in the safety

analyses. A preliminary list of items requiring TSRs is included in the PSAR. The final TSRs will be contained in a separate document which is issued and approved by DOE prior to facility hot operation. The final TSRs will be summarized and referenced in the FSAR.

SARP Safety analysis for the packaging and shipping of hazardous materials (including radioactive material) are documented in one or more SARP. The SARPs typically cover such items as shipment of laboratory samples onsite or offsite and the transport of failed equipment for repair or disposal. Existing SARPs cover many of the shipments and containers in use on the Hanford site. One or more new SARPs may be required if a new shipping container is utilized to support the MWTF operation or if the facility shipments are not covered by existing SARPs.

III. SAFETY REVIEW RESPONSIBILITIES AND AUTHORITIES

A. General Discussion

The objective of this section is to describe the various DOE Contractors' line management safety responsibilities for the MWTF Project relating to design and/or construction and to provide details of the responsibilities and authorities of the contractors' independent safety group(s).

B. Project's Line Management Safety Responsibility

In accordance with MRP 5.23 of WHC-CM-1-3, the WHC MWTF Project organization has overall responsibility for "Ensuring that applicable safety codes and standards are applied in the siting, design, construction...of nuclear facilities, including those contained in or referenced in DOE 5480.4 and all other applicable DOE orders and U.S. Department of Energy Richland Operations Office (RL) supplements, with due consideration for facility decontamination and decommissioning."

To meet these requirements, WHC MWTF Project management is responsible for assuring the adequacy of the safety content of WHC developed design related documents. ICF KH will establish a Safety Review Group to monitor and assess how well the safety design requirements are met in the design, construction and testing of the MWTF. In addition, where the Project staff are responsible for the review of design media, they are responsible to assure that the design meets all applicable safety criteria, codes and standards. The Safety Analysis and Engineering Department will provide design review support to the Project organization to review the design for consistency with the hazards analyses and safety documentation.

To that end it is the responsibility of WHC MWTF Project management to assure qualification of engineering staff performing the above review and maintain a training program such that the safety responsibilities addressed in this section will be met. ICF KH shall also provide a qualification and training program to assure adequacy of safety related design and peer review activities.

MRP 5.23 further states that the Project organization is responsible for, "Preparing safety analyses, including required operational safety requirements, for new facilities or significant modifications to existing nuclear facilities under their cognizance and maintaining these current with the design/construction evolutions. The manager to whom the project is assigned ensures that the nuclear facility design, operation, and construction are addressed appropriately in a safety analysis."

The specific responsibilities of the Project for safety analyses are detailed in Section II.

It is further determined by MRP 5.23 that the Project is responsible for submitting design criteria and other project documents and drawings to the appropriate independent review organizations for review and approval.

C. OCs Independent Safety Organization (OCIS) Responsibility

The WHC Nuclear Safety organization's responsibilities with respect to Projects, are defined in WHC-CM-1, "Comprehensive independent safety reviews shall be conducted of nuclear facility design criteria, nuclear safety features, equipment and facility designs, environmental considerations and/or impacts, and any other design documents to assure compliance with applicable safety codes, standards, and good safety practice. These reviews shall be conducted during the siting and design stages of nuclear facilities."

The Tank Waste Remediation System Projects Safety (TWRSPS) group provides the independent safety review of MWTF Project safety-related documentation prepared by WHC. Such documentation includes project baseline criteria documents, safety analysis documentation (Hazard Category PSE, PSAR and FSAR), acceptance test procedures (ATPs) and operating test procedures (OTPs), and WHC prepared safety analyses of changes to the safety basis (see Section II). Safety-related documents prepared by other project participants which require WHC review or approval shall also be reviewed by OCIS where required by WHC-CM-1 or WHC-CM-1-3, MRP 5.46. All documentation directly supporting these contractor documents, shall be available to TWRSPS during the review. However, reviews of the supporting documentation is not required. In lieu of reviews of all supporting documentation, "selected technical surveillances" of these documents and other safety-related documents not requiring WHC review or approval are performed to ensure compliance with safety and health protection standards and requirements.

The TWRSPS group also performs audits, and surveillances of selected project participants including WHC (DOE 5480.5, DOE 5482.1B) to ensure compliance with safety standards, regulatory requirements, and DOE Orders. These are conducted in accordance with the WHC Nuclear Safety and TWRSPS procedures.

The TWRSPS group is responsible for review and/or approval, at a minimum of the specific documents noted below. A lead engineer will be assigned by the TWRSPS group manager to the MWTF project to act as a single point of contact for review by all relevant Safety disciplines. Guidance, consultation and interpretation of safety related Orders, national standards and design criteria are additional roles of the TWRSPS group. TWRSPS is responsible for

insuring appropriate interface between the Project and the Health Physics (HP) and Industrial Health, Safety and Fire Protection (HSF) organizations.

1. Criteria/ Criteria Changes

The TWRSPS group manager or his delegate has approval authority for the technical baseline criteria documents. The TWRSPS group also has the responsibility to assure that appropriate portions of these documents are adequately reviewed by other safety disciplines. The lead engineer has the authority to request changes to these documents and the Project will provide an administrative means of managing the request.

2. Engineering Studies

The TWRSPS group will provide for adequate review of engineering studies prepared by WHC. This responsibility includes assuring that engineers with adequate experience in appropriate disciplines are available to conduct reviews in a timely fashion. The TWRSPS group will provide, when possible, continuity between selected reviewers and Project design systems.

3. PSE/Hazard Category

The TWRSPS group shall review and approve the PSE and Hazard Category documents as part of the review of the CDR.

4. Conceptual Design Report

As this is a document which the WHC Project Management will approve, the TWRSPS group will also review and approve the CDR.

5. PSAR/FSAR/SARP/CSER

The TWRSPS group will review and approve the PSAR, FSAR and CSER. The SARP will be reviewed and approved by the WHC Safety organization responsible for Packaging and Shipping. However, TWRSPS group will remain the point of contact for those documents and transmit them to the appropriate organization.

6. Safety Analyses of Changes to the Safety Basis

As described in Section II, following initial issuance of the PSAR, any changes resulting from the identification of safety issues or changes to the facility design or operation shall be evaluated by the WHC Project organization for impacts to the safety basis as described in the PSAR. The WHC Project is also responsible for maintaining a controlled and auditable list of safety issues, concurrent with baseline changes, and the relationship to schedules of applicable construction and procurement packages. The Safety Analysis and Engineering Department provides support to the Project organization for these activities. Changes to the safety basis will be documented and approved by the TWRSPS group

prior to construction or procurement of affected safety class structures, systems or components.

7. Approval/Release For Construction/Procurement

In accordance with RLIP 4700.1A, IV, 1., g., (3), "Contractor documents shall bear evidence by a representative of the OC's safety staff indicating a complete safety review as required by their procedures." Prior to WHC Project Management sign off of the Approval for Construction (AFC) of safety related construction or procurement packages, the TWRSPS group will provide auditable documentation to the effect that the safety related portions of that package, and associated baseline drawings, design analyses and safety analyses have been fully reviewed to assure the design meets all required safety criteria and all safety related hold points are identified in the AFC.

The TWRSPS group will also provide auditable documentation prior to WHC Project Management sign off of the Release for Construction (RFC). This will provide auditable assurance that all safety related hold points identified in the AFC have been adequately resolved and no further safety issues have been identified with respect to that construction or procurement package.

8. ATPs/OTPs

The TWRSPS group has the authority and responsibility for review and approval of ATPs and OTPs.

9. Operational Readiness Review

The WHC Director, Emergency, Safety, and Quality Services (ESQ) has the authority for concurring in the selection of the readiness review board chairperson and members and for concurring with the "Declaration of Readiness". The responsibilities of the Director, ESQ include making available ESQ personnel to participate as voting members of the Readiness Review Board, for reviewing and approving the readiness plans and for providing for the conduct of audits and appraisals of the readiness review process including verification of completion of post-startup findings.

D. Independent Safety Design Review Organization Responsibility

The independent safety design review authority is assigned to the TWRSPS group. This assignment is separate from above assigned responsibilities and authorities inherent to the OC's independent safety organization. The independent safety design review group will provide for the review and approval of all of the following safety related documents:

1. Baseline Drawings
2. Baseline Drawing Changes
3. Design Analyses-Calculations
4. Project Design Guides

5. Construction Drawings
6. Construction/Procurement Specs.
7. Safety Equipment List
8. Safety Class Justification Assessments
9. SDDs
10. ATPs

E. Construction Safety

ICF KH has the responsibility for construction site safety. The Primary oversight responsibility for monitoring the technical performance and compliance with 5480.9 belongs to WHC. DOE-RL is responsible for providing support in the oversight responsibility.

WHC has been delegated authority to perform the occupational safety and health surveillances at the construction sites on behalf of RL. The inspections, which the Order assigns to RL in its role as Project Manager, shall be achieved both through a weekly walk-around inspection of the worksite, and through a review of the Project Safety Plan, subcontractor safety plans, and other safety program documentation. WHC is to document the findings of these inspections for the Project files, with a copy furnished immediately to the Project Office, Construction Branch.

Performance of these inspections does not in any way reduce ICF KH's responsibilities, contractual obligations, and sole liability for maintenance of safe working conditions on the Project construction site.