

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 644866

Proj.
ECN

2. ECN Category (mark one) Supplemental <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. R. P. Raven, LMHC ESH & QA, R1-51, 373-1505	4. USQ Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Date January 2, 1998	
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15. Design Verification Required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	16. Cost Impact <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;">ENGINEERING</td> <td style="width: 50%; text-align: center;">CONSTRUCTION</td> </tr> <tr> <td style="text-align: center;">Additional <input type="checkbox"/> \$</td> <td style="text-align: center;">Additional <input type="checkbox"/> \$</td> </tr> <tr> <td style="text-align: center;">Savings <input type="checkbox"/> \$</td> <td style="text-align: center;">Savings <input type="checkbox"/> \$</td> </tr> </table>	ENGINEERING	CONSTRUCTION	Additional <input type="checkbox"/> \$	Additional <input type="checkbox"/> \$	Savings <input type="checkbox"/> \$	Savings <input type="checkbox"/> \$	17. Schedule Impact (days) N/A Improvement <input type="checkbox"/> Delay <input type="checkbox"/>
ENGINEERING	CONSTRUCTION							
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Savings <input type="checkbox"/> \$	Savings <input type="checkbox"/> \$							

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	<input type="checkbox"/>	Seismic/Stress Analysis	<input type="checkbox"/>	Tank Calibration Manual	<input type="checkbox"/>
Functional Design Criteria	<input type="checkbox"/>	Stress/Design Report	<input type="checkbox"/>	Health Physics Procedure	<input type="checkbox"/>
Operating Specification	<input type="checkbox"/>	Interface Control Drawing	<input type="checkbox"/>	Spares Multiple Unit Listing	<input type="checkbox"/>
Criticality Specification	<input type="checkbox"/>	Calibration Procedure	<input type="checkbox"/>	Test Procedures/Specification	<input type="checkbox"/>
Conceptual Design Report	<input type="checkbox"/>	Installation Procedure	<input type="checkbox"/>	Component Index	<input type="checkbox"/>
Equipment Spec.	<input type="checkbox"/>	Maintenance Procedure	<input type="checkbox"/>	ASME Coded Item	<input type="checkbox"/>
Const. Spec.	<input type="checkbox"/>	Engineering Procedure	<input type="checkbox"/>	Human Factor Consideration	<input type="checkbox"/>
Procurement Spec.	<input type="checkbox"/>	Operating Instruction	<input type="checkbox"/>	Computer Software	<input type="checkbox"/>
Vendor Information	<input type="checkbox"/>	Operating Procedure	<input type="checkbox"/>	Electric Circuit Schedule	<input type="checkbox"/>
OM Manual	<input type="checkbox"/>	Operational Safety Requirement	<input type="checkbox"/>	ICRS Procedure	<input type="checkbox"/>
FSAR/SAR	<input type="checkbox"/>	IEFD Drawing	<input type="checkbox"/>	Process Control Manual/Plan	<input type="checkbox"/>
Safety Equipment List	<input type="checkbox"/>	Cell Arrangement Drawing	<input type="checkbox"/>	Process Flow Chart	<input type="checkbox"/>
Radiation Work Permit	<input type="checkbox"/>	Essential Material Specification	<input type="checkbox"/>	Purchase Requisition	<input type="checkbox"/>
Environmental Impact Statement	<input type="checkbox"/>	Fac. Proc. Samp. Schedule	<input type="checkbox"/>	Tickler File	<input type="checkbox"/>
Environmental Report	<input type="checkbox"/>	Inspection Plan	<input type="checkbox"/>	N/A	<input type="checkbox"/>
Environmental Permit	<input type="checkbox"/>	Inventory Adjustment Request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
N/A		

20. Approvals

Signature	Date	Signature	Date
<u>OPERATIONS AND ENGINEERING</u>		<u>ARCHITECT-ENGINEER</u>	
Design Authority: <i>[Signature]</i>	1/8/98	PE	
Cog. Eng. N/A		QA	
Cog. Mgr. N/A		Safety	
QA Dir., ESH&QA EE Mayer	1/8/98 <i>[Signature]</i>	Design	
Safety		Environ.	
Environ. RP Raven	1/8/98 <i>[Signature]</i>	Other	
Other Author, RP Raven	1/8/98 <i>[Signature]</i>		
Author's Mgr. BG Erlandson	1/8/98 <i>[Signature]</i>		
		<u>DEPARTMENT OF ENERGY</u>	
		Signature or a Control Number that tracks the Approval Signature	
		<u>ADDITIONAL</u>	

Tank Waste Remediation System Environmental Program Plan

Prepared for the U.S. Department of Energy



Fluor Daniel Hanford, Inc.
Richland, Washington

Hanford Management and Integration Contractor for the
U.S. Department of Energy under Contract DE-AC-0696-RL13200

Tank Waste Remediation System Environmental Program Plan

R.P. Raven

Lockheed Martin Hanford Company, Richland, WA 99352
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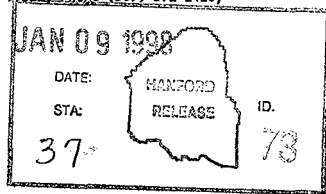
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Prepared for the U.S. Department of Energy



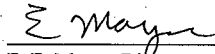
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Document Title: Tank Waste Remediation System Environmental Program Plan

Approved by:



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Environmental, Safety, Health, and Quality Assurance
Lockheed Martin Hanford Corporation

1/8/98
Date

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LIST OF TERMS

CFR	<i>Code of Federal Regulations</i>
DOE	U.S. Department of Energy
DST	double-shell tank
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ES&H	environmental, safety, and health
FDH	Fluor Daniel Hanford, Inc.
FEMP	Facility Effluent Monitoring Plan
FY	fiscal year
LAW	low-activity waste
LMHC	Lockheed Martin Hanford Corporation
NEPA	<i>National Environmental Policy Act of 1969</i>
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOC	notice of construction
PHMC	Project Hanford Management Contract
PNNL	Pacific Northwest National Laboratories
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RL	U.S. Department of Energy, Richland Operations Office
S/RID	standards/requirements identification documents
SST	single-shell tank
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
TSD	treatment, storage, and disposal
TWRS	Tank Waste Remediation System
WAC	<i>Washington Administrative Code</i>
WDOH	Washington State Department of Health
WMH	Waste Management Federal Services of Hanford, Inc.

TANK WASTE REMEDIATION SYSTEM ENVIRONMENTAL PROGRAM PLAN

1.0 INTRODUCTION

Line management is responsible for the integration of environmental requirements into work planning. This Environmental Program Plan has been developed in support of the Integrated Environmental, Safety, and Health Management System (FDH 1997c) and consistent with the goals of DOE/RL-96-92, *Hanford Strategic Plan* (RL 1996a), and the specifications and guidance for ANSI/ISO 14001-1996, *Environmental management systems--Specification with guidance for use* (ANSI/ISO 1996). This plan is a "part of an overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining the environmental policy" (ANSI/ISO 1996).

2.0 ENVIRONMENTAL POLICY

It is the policy of Lockheed Martin Hanford Corporation (LMHC) that the corporation and our employees will be stewards of the environment. Protection of the environment, including protection of natural, archeological, cultural, and historical resources, and the public health, is a primary consideration in our activities. The LMHC is committed to achieving environmental excellence by systematically integrating environmental, safety, and health (ES&H) principles across DE-AC06-96RL13200, *Project Hanford Management Contract (PHMC)* (RL 1996b).

To foster environmental stewardship, LMHC will do the following:

- Consider the impacts of our activities on the environment
- Comply with applicable laws, regulations, and directives
- Work together with Fluor Daniel Hanford, Inc. (FDH); other major subcontractors; U.S. Department of Energy, Richland Operations Office (RL); regulators; stakeholders; and the Indian Tribes to achieve the common goal of environmental excellence

- Work with our customers and stakeholders to influence the development of responsible laws, regulations, and innovative programs to safeguard the environment and maintain a cost-effective and flexible business approach to completing the cleanup mission
- Integrate pollution prevention, resource conservation, waste minimization, and environmental impact considerations into our planning, decision-making, designs, training, and daily work activities
- Define and mitigate existing adverse environmental conditions and anticipate, eliminate, or mitigate future environmental impacts using a risk-based graded approach before they pose a threat to our environment
- Promptly report environmental incidents and deficiencies
- Continually assess our performance and implement opportunities to improve the environment
- Communicate our goals and progress to our employees, customers, and stakeholders.

This environmental policy places responsibility on top management for implementing the environmental program and reviewing performance against this policy. This environmental policy is a firm commitment of the LMHC management team to integrate environmental stewardship into daily operations.

The mission of the Tank Waste Remediation System (TWRS) Environmental Program is to do the following:

- Identify, document, and interpret environmental requirements as they apply to TWRS activities
- Establish compliance programs (i.e., develop procedures, permits, and reports necessary to maintain a compliant program)
- Assess compliance with applicable requirements, document, and correct deficiencies
- Support day-to-day operations activities (e.g., emissions monitoring and waste management)
- Provide strategic planning necessary to bring new facilities or processes on line.

3.0 ORGANIZATIONAL RESPONSIBILITIES

The LMHC manages the TWRS Project under contract to FDH. The LMHC TWRS Environmental organization reports to the LMHC Director of ES&H and Quality Assurance and is composed of two groups; Environmental Policy and Permitting and Operations Compliance. A third group, Generator Services, is matrixed to TWRS Environmental. Generator Services is a component of Waste Management Federal Services of Hanford, Inc. (WMH) and provides solid waste services to TWRS.

Individual programs and projects within TWRS directly fund environmental activities for implementation of requirements including the development of facility-specific permits, reports, and resolution of compliance issues. The TWRS Management Systems Function provides funding for implementation of TWRS crosscutting activities including requirements management, planning and scheduling of assessments, and corrective action management.

4.0 PLANNING

4.1 ENVIRONMENTAL IMPACT ASSESSMENT

4.1.1 National Environmental Policy Act of 1969

The environmental impacts of the TWRS Project have been assessed in two recent Environmental Impact Statements (EIS): DOE/EIS-0189, *Tank Waste Remediation System, Hanford Site, Richland, Washington, Final Environmental Impact Statement* (DOE and Ecology 1996), and DOE/EIS-0212, *Final Environmental Impact Statement, Safe Interim Storage of Hanford Tank Wastes* (Ecology and RL 1995).

Environmental impacts of field level work are assessed on an activity-by-activity basis as a part of the work planning process. Most routine work in the tank farms is covered by RL sitewide categorical exclusions for routine maintenance. Work that is not routine undergoes an environmental review and completion of documentation in accordance with site procedures.

4.1.1.1 Tank Waste Remediation System Environmental Impact Statement. The environmental impacts from the TWRS Project were evaluated by the U.S. Department of Energy (DOE) in the TWRS EIS (DOE and Ecology 1996). The TWRS EIS (DOE and Ecology 1996) addressed the management and disposal of current and projected waste stored in the 177 underground storage tanks (i.e, single- and double-shell tanks [SST and DST] and in approximately 60 active and inactive miscellaneous underground

storage tanks that were associated with Hanford Site tank farm operations). In addition, the TWRS EIS (DOE and Ecology 1996) evaluated the management and potential disposal of approximately 1,930 cesium and strontium capsules currently on loan or stored at the Hanford Site.

In 62 FR 8693, "Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, WA," DOE selected the Phased Implementation, which entails the use of private contractors for specific portions of the TWRS scope. Phased implementation comprises the demonstration phase (Phase 1) and the full implementation phase (Phase 2). Phase 1 encompasses the following actions:

1. Continuing to safely manage tanks. This activity includes the replacement of certain waste transfer piping and routine maintenance activities for tank farm instrumentation, ventilation, and electrical systems. Safe storage also includes ongoing activities including conducting environmental and safety-related monitoring, removing pumpable liquids from the SSTs, mitigating flammable gas safety hazards, and transferring currently stored waste and newly generated waste using the replacement cross-site transfer line, rail cars, and tanker trucks
2. Constructing and operating demonstration facilities
3. Collecting additional information through tank waste and vadose zone characterization
4. Performing demonstrations of technologies that have the potential to reduce uncertainties associated with the TWRS Project (e.g., Hanford Tank Initiative).

In the TWRS EIS Record of Decision (62 FR 8693), DOE commits to the following *National Environmental Policy Act of 1969* (NEPA) reviews:

1. Formal NEPA reviews of the entire TWRS Project will take place at the following stages:
 - a. Before proceeding into Privatization Phase 1, Part B (scheduled for May 1998)
 - b. Prior to the start of hot operation of Privatization Phase 1, Part B (scheduled for December 2002)
2. NEPA analysis of the upgrade of certain instrumentation, tank ventilation, and electrical systems to upgrade the regulatory compliance status of the current tank farm facilities (i.e., Project W-314) (Completed)

3. Further NEPA documentation for site selection of privatization facilities
4. Further NEPA documentation addressing the onsite disposal of low-activity waste (LAW)
5. Further NEPA documentation addressing SST and DST system closure.

4.1.1.2 Safe Interim Storage Environmental Impact Statement. The environmental and human health impacts associated with the construction and operation of facilities and systems to continue the safe management of high-level, mixed radioactive wastes stored in tanks were evaluated in DOE/EIS-0212 (Ecology and RL 1995). In 60 FR 61687, "Record of Decision: Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA," DOE stated its decision to:

1. Operate the existing cross-site transfer system until replaced by a new cross-site transfer system that consists of buried, double-wall, insulated pipes (i.e., Project W-058)
2. Continue to operate the mixer pump installed in tank 241-SY-101 to mitigate the unacceptable accumulation of hydrogen and other flammable gases
3. Defer the decision on retrieval of solids from tank 241-SY-102 and limit transfers through that tank to noncomplexed wastes
4. Not build new DSTs at that time to mitigate the flammable gas safety issue.

4.1.2 Related Laws

The laws listed below are evaluated in conjunction with a NEPA evaluation of a proposed action. In addition, these reviews are required prior to granting a field excavation permit.

4.1.2.1 National Historic Preservation Act. In response to the *National Historic Preservation Act*, RL entered into a programmatic agreement with the Washington State Historic Preservation Office (DOE/RL-96-77, *Programmatic Agreement Among the U.S. DOE-RL, the Advisory Council on Historic Preservation, and the Washington State Historic Preservation Office for the Maintenance, Deactivation, Alteration and Demolition of the Built Environment on the Hanford Site* [RL 1996c]. The draft agreement commits to completing data collection and development of historical property inventory forms or extended historical property inventory forms for seven TWRS

facilities. Each of the facilities was selected for its historical contribution, unique construction, or process application. The seven facilities are:

- 209-E/200E, Critical Mass Laboratory
- 241-AW/200E, DST Tank Farm
- 241-T/200W, SST Tank Farm
- 241-TX/200W, SST Tank Farm
- 241-TY/200W, SST Tank Farm
- 244-WR/200W, Storage
- 2707-AR/200E, Change House.

4.1.2.2 Section 106 Process - Cultural Resource Review. The RL approved a cultural resources exemption for the 18 TWRS tank farms in 1994 (9405630, *Cultural Resources Exemption of the Tank Farm Areas* [Crist 1994]). The basis for this exemption was the extensive disturbance caused by the installation of 177 DSTs and SSTs. The exemption covers construction and maintenance performed within 150 meters (500 ft) of the 18 fenced tank farm areas and includes relocation of mobile offices. The exemption does not cover removal of tanks or demolition of permanent structures.

Excavation permits are required for activities that use mechanical means to dig below grade and for hand digging greater than 30 cm (12 in.) in depth. The excavation permit process requires a cultural resources review for projects not covered by the exemption.

Cultural Resource Reviews are conducted by the Hanford Cultural Resources Laboratory, Pacific Northwest National Laboratories (PNNL).

4.1.2.3 Endangered Species Act of 1973. Title 50, *Code of Federal Regulations* (CFR), Part 17, "Endangered and Threatened Wildlife and Plants," specifies the requirements for conducting reviews to determine whether a proposed project will have an impact on special status plant and animal species. A blanket biological review is conducted annually for general maintenance activities inside the 200 East and 200 West Area tank farms. The objective of the survey is to identify plant and animal species protected under the *Endangered Species Act of 1973*; candidates for protection and species listed as threatened, endangered, candidate, sensitive or monitor species by the State of Washington; and species protected under the *Historic Migratory Bird Treaty Act of 1918*. Recommendations are generally limited due to the highly disturbed nature of the area, but some recommendations are provided relative to protection of bird species.

Biological reviews are also required as part of the excavation permit process for activities not covered in the annual biological review process. Biological reviews are performed by PNNL.

4.1.2.4 Wetland/Floodplain Requirements. A floodplain/wetland assessment must be conducted for proposed actions taking place within a floodplain/wetland and should be performed in conjunction with the NEPA process. However, since TWRS activities are not conducted within floodplain/wetlands, this requirement should not be applicable to TWRS projects under normal circumstances.

4.2 REQUIREMENTS MANAGEMENT

Integration of applicable environmental requirements with current and planned TWRS activities is necessary to satisfy legal and contractual commitments and is important to the implementation of a comprehensive environmental program. Requirements activities include the identification of applicable requirements, assessment of impacts, maintenance of requirements documents, and implementation through TWRS operations and administrative documents and procedures.

Effective management of requirements involves routine interaction with FDH's interpretive authority, RL programs, TWRS organizations, and regulators. Compliance of the TWRS Project with applicable environmental regulations is dependent upon having a structured approach to evaluating new and existing environmental requirements.

4.2.1 Project Hanford Management Contract Environmental Requirements Management Process

The Project Hanford Management Contract (PHMC) Environmental Triage System is the starting point for entrance of environmental requirements into TWRS. The Triage System is located on the Hanford Intranet and performs the following key functions that ensure environmental requirements reach TWRS:

- Screening
- Evaluating
- Reviewing.

Although the Triage System is under development during fiscal year (FY) 1998, the screening function is being performed and is available for use.

The screening and evaluating functions are performed by FDH. New and modified regulations are screened for potential applicability to Hanford Site PHMC contractors and sub-contractors. The potentially applicable new or modified regulations are then evaluated for potential impacts to PHMC projects and Hanford Site contractors. This analysis is simultaneously posted in the Triage System (at <http://apdev07.rl.gov/entr/default.asp>) and sent to project reviewers for an evaluation of impacts.

The TWRS reviewers access the triage system and examine the requirement and its respective regulatory analysis. If no regulatory analysis is provided, the TWRS reviewers will still evaluate the requirement for its impact on TWRS. The TWRS reviewers respond to the evaluator by posting their comments/feedback on the Triage System. If the requirement is not applicable to TWRS, the evaluators are so notified.

The evaluator then coordinates the reviewers' comments/feedback and modifies the regulatory analysis, if necessary. The final regulatory analysis is available for review on the Intranet. The final regulatory analysis, comment responses, and/or implementation plan are presented to the PHMC Environmental Managers and Environmental Compliance Officers for their approval.

4.2.2 Lockheed Martin Hanford Corporation Environmental Requirements Management Process

When an environmental requirement is applicable to TWRS, the LMHC environmental subject matter expert will modify standards/requirements identification documents (S/RIDs) to incorporate the change. Depending on the urgency of the regulatory change, the S/RIDs can be updated immediately or during the regularly scheduled quarterly update. The environmental subject matter expert will help determine the implementing process for the new requirement and will ensure that implementing documentation resulting from the S/RIDs change is updated.

4.3 ENVIRONMENTAL PERMIT PREPARATION

Appendix A of this document contains a preliminary schedule for permit application preparation or modifications required for the PHMC to support the privatization effort. When these schedules are updated, they will be incorporated into the project baseline.

4.3.1 Resource Conservation and Recovery Act of 1976

Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA) have issued WA7890008967, *Hanford Facility RCRA Permit* (Ecology and EPA 1994), which contains requirements for final status treatment, storage, and disposal (TSD) units at the Hanford Site. The Hanford Site is considered a single RCRA facility with numerous TSD units. There are two options for bringing a TSD unit into compliance, one for continued operation and one for closure. An individual dangerous waste permit application or closure plan has been or will be submitted for each TSD unit. Table 1 provides a list of TWRS-operated TSD units, the date of the most

Table 1. Tank Waste Remediation System Treatment, Storage, and Disposal Units.

TWRS facility	Part A submitted (latest rev.)	Part B submitted	Interim status closure plan submitted	Comments
DST System	10/1/96 ^a	4/13/93 ^b	N/A	Part B, Rev 1 scheduled for 6/99 submittal.
SST System	10/1/96 ^a	N/A	11/30/96 ^c	Submit Tank Closure/Post-Closure Plan for selected closure demonstrations
204-AR Waste Unloading Facility	10/1/96 ^a	6/99 submittal	N/A	Part B, Rev 1 scheduled for 6/99 submittal
Grout Treatment Facility	10/1/96 ^d	on hold - project canceled	N/A	(LMHC custody of non-DW vaults)
216-B-63 Trench	10/1/96 ^a	N/A	6/30/95 ^e (TPA M-20-36)	Targeted for transfer to BHI
Hanford Waste Vitrification Plant	10/1/96 ^e	project on hold	N/A	(FDH custody of Part. A)
2727-WA Sodium Reactor Experiment Sodium Storage and Treatment Facility (decommissioned)	10/1/96 ^a	Part A withdrawal requested 6/89 (TPA M-20-45) ^f	N/A	Facility is TWRS custodianship, Part A is being withdrawn by Waste Management Hanford (requested 6/89, TPA M-20-45)

^aRL, 1993, *Hanford Facility Dangerous Waste Part A Permit Application*, DOE/RL-88-21, 3 vols., U.S.Department of Energy, Richland Operations Office, Richland, Washington.

^bRL, 1991, *Double-Shell Tank System Dangerous Waste Permit Application*, DOE/RL-90-39, Rev. 0, 3 vols., U.S.Department of Energy, Richland Operations Office, Richland, Washington.

^cRL, 1996d, *Single-Shell Tank Closure Work Plan*, DOE/RL-89-16, Rev. 1, U.S.Department of Energy, Richland Operations Office, Richland, Washington.

^dRL, 1996e, *Grout Treatment Facility Dangerous Waste Permit Application*, DOE/RL-88-27, Rev. 5, U.S.Department of Energy, Richland Operations Office, Richland, Washington.

^eRL, 1996f, *Hanford Waste Vitrification Plant Dangerous Waste Permit Application*, DOE/RL-89-02, Rev. 5, U.S.Department of Energy, Richland Operations Office, Richland, Washington.

^fEcology et al, 1996, *Hanford Federal Facility Agreement and Consent Order*, 2 vols., Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

BHI = Bechtel Hanford, Inc.

DST = double-shell tank.

DW = dangerous waste.

FDH = Fluor Daniel Hanford, Inc.

LMHC = Lockheed Martin Hanford Corporation.

N/A = not applicable.

SST = single-shell tank.

TPA M = Tri-Party Agreement Milestone.

TWRS = Tank Waste Remediation System.

recent revision of the Part A permit application, and submittal date for the Part B permit application or closure plan.

The TWRS *Resource Conservation and Recovery Act of 1976* (RCRA) permitting is completed in accordance with schedules found in the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1996) Action Plan and the Hanford Site RCRA Permit (Ecology and EPA 1994).

4.3.1.1 Continued Operation. If there are plans to continue operation of the unit, a dangerous waste Part B permit application will be submitted to Ecology. The unit will continue to operate in compliance with interim status facility standards until the unit specific Part B permit application is included in the Hanford Facility RCRA Permit. Where TSD units do not meet interim status standards, necessary actions are identified to bring these units into compliance and are documented in Appendix D of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) (Ecology et al. 1996).

Upon approval of a unit specific dangerous waste Part B permit application, Ecology will revise the Hanford Facility RCRA Permit to include the Part B permit application in Part III of the permit. The permit will be submitted to the public for review and comment and then the permit is issued to the RL and FDH. The unit specific section in Part III of the Hanford Facility RCRA Permit will contain specific operational requirements.

The TWRS operates RCRA facilities under interim status requirements and the Tri-Party Agreement (Ecology et al. 1996) and is in the process of preparing a Part B permit application for the DST System, which includes the 204-AR Waste Unloading Facility, to obtain final status. TWRS Environmental is responsible for the maintenance of TWRS Part A permit applications and preparation of Part B permit applications.

4.3.1.2 Closure. The TSD units that will cease operation in the near term will be operated in compliance with interim status standards until closure. The TWRS TSD units that cannot be operated in compliance with interim status standards have identified actions necessary to bring these TSD units into compliance in Appendix D of the Tri-Party Agreement (Ecology et al. 1996). Before closure, the unit must develop and submit a closure plan. The SST System is pursuing this path.

4.3.2 Air

The LMHC TWRS Environmental organization develops or directs the development of radioactive and nonradioactive air emission permits needed to conduct routine maintenance, operations, and characterization activities. Key environmental documents are maintained, including WHC-EP-0479-1, *Facility Effluent Monitoring Plan for Tank Farm Facility* (Bachand and Crummel 1995), National Emission Standards for Hazardous Air Pollutants (NESHAP) stack designation, notices of construction (NOC) for specific activities, and input for a Hanford Site air operating permit and other reports. Applications to Ecology and the Washington State Department of Health (WDOH) are generally required to obtain approval for a given project.

The TWRS has several major and minor stacks. The TWRS, like other site projects, is not in compliance with NESHAP monitoring requirements for many of the major stacks and, therefore, entered into a *Federal Facility Agreement and Consent Order for NESHAP Compliance* (EPA 1994). The NESHAP Consent Order outlines the schedule for stack monitoring upgrades necessary to achieve compliance. The NESHAP Consent Order (EPA 1994) will be incorporated into a Hanford Site air operating permit. The TWRS stacks are listed in Table 2.

The TWRS receives multiple regulatory approvals each year for air emissions related to construction or new projects. The regulatory approvals and a compilation of their terms and conditions are found in Table IIB-1, "Regulations and Regulated Emissions," of DOE/RL-95-07, *Hanford Site Air Operating Permit Application* (RL 1995).

4.3.2.1 Radioactive Air Emissions (Notice of Construction) Applications. The WDOH administers the Radioactive Air Emissions Program as stated in *Washington Administrative Code* (WAC) 246-247, "Radiation Protection--Air Emissions." Approval to construct must be obtained prior to construction or facility modification. Routine activities are not considered to be facility modifications and, therefore, do not require NOC approval.

The WDOH NOCs must address the following topics:

- Best Available Radionuclide Control Technology
- Demonstration of compliance with radionuclide emission standards in 40 CFR 61, "National Emission Standards for Hazardous Air Pollutants," Subpart H, "National Emission Standards for Emission of Radionuclides Other Than Radon From DOE Facilities," or WAC 173-480, "Ambient Air Quality Standards and Emissions Limits for Radionuclides," whichever is more stringent, for emissions including those resulting from startup, shutdown, maintenance activities, or process upsets

- Other topics as specified in WAC 246-247-110, "Appendix A-- Application information requirements."

Once a NOC application is submitted, WDOH must inform RL within 30 days if additional information is required. Within 60 days of receipt of required information, the WDOH must issue an approval or denial to construct.

4.3.2.2 National Emission Standards for Hazardous Air Pollutants Program Notice of Construction Application. The EPA administers the NESHAP Program in the State of Washington in accordance with 40 CFR 61, Subpart H, and addresses radioactive emissions.

Table 2. Tank Waste Remediation System Stacks.

Stack Number	Facility	Stack Number	Facility	Stack Number	Facility
TWRS Major Stacks - NESHAP Compliant					
296-A-12	244-AR Vessel Vent	296-A-42	Aging Waste Project W-030	296-C-06	241-C-106
296-U-11	244-U DCRT				
TWRS Major Stacks - Addressed in NESHAP Compliance Agreement (EPA 1994)					
296-A-17	AY/AZ Primary Tank	296-P-26	AY/AZ Tank Backup Ventilation	296-A-25	244-A DCRT
296-B-28	244-BX DCRT	296-C-5	244-CR Vault	296-P-16	241-C-103/6 Tanks
296-S-22	244-S DCRT	296-T-18	244-TX DCRT		
TWRS Minor Stacks					
296-A-13	244-AR Cell and Canyon	296-A-18	241-AY-101 Annulus	296-A-19	241-AY-102 Annulus
296-A-20	241-AZ-101/102 Annulus	296-A-26	204 AR Rail Car Unloading	296-A-27	AW Primary Tanks
296-A-28	AW Annuli	296-A-29	AN Primary Tanks	296-A-30	AN Annuli
296-A-40	AP Primary Tanks	296-A-41	AP Annuli	296-A-43	Aging Waste Bldg (W-030)
296-C-07	241-C-103 Vapor Mixer System	296-P-22	SY Annuli	296-P-23	SY Primary Tanks
296-S-25	SY Replacement Exhauster	296-P-31	209-E Building	296-P-32	RMCS #2
296-P-33	RMCS # 3	296-P-34	RMCS #4	296-S-15	RMCS in SX Farm

Table 2. Tank Waste Remediation System Stacks.

Stack Number	Facility	Stack Number	Facility	Stack Number	Facility
296-P-35 through 296-P-40	Blue Max	296-P-41	241-A-101 Portable Exhauster	296-S-15	SX Tanks
296-S-18	242-S Evaporator	296-T-17	242-T Evaporator	296-W-03	213-W Waste Compactor

EPA, 1994, *Federal Facility Agreement and Consent Order for NESHAP Compliance*, Environmental Protection Agency, Seattle, WA.

DCRT = double-contained receiver tank.
 NESHAP = National Emission Standards for Hazardous Air Pollutants.
 RMCS = rotary mode core sampling.
 TWRS = Tank Waste Remediation System.

A NESHAP NOC must address the following topics:

- Proposed nature of the source
- Proposed size of the source
- Proposed design of the source
- Operating design capacity
- Method of operation (including process flow diagram)
- Emissions control system
- Emissions release rates
- Offsite doses
- References.

The permitting process is the same as that specified in the WDOH NOC approval process. Specific background documentation requirements for the Approval to Construct include engineering studies, functional design criteria, conceptual design reports, and advanced conceptual design reports; and supporting documentation may include source-term estimates, emissions estimates, and design information.

4.3.2.3 Toxic Air Pollutant Notice of Construction Application. An NOC approval from Ecology is required prior to the establishment of any new source or emission unit or modification. Ecology administers the program in accordance with WAC 173-460, "Controls for New Sources of Toxic Air Pollutants."

A Toxic Air Pollutant NOC must include the following information:

- Project location
- Process description

- Design and operating parameters
- Emissions-type and quantity
- Anticipated construction schedule
- Best available control technology assessment
- Demonstration that proposed emissions will not cause a violation of state or national ambient air quality standards
- Prevention of Significant Deterioration applicability form
- References.

Once an NOC application is submitted, Ecology must notify DOE if the application is complete or additional information is required. Ecology must make a final determination within 30 days of submittal date or date on which additional information is provided.

4.3.3 Water

The TWRS discharges noncontact cooling water and other uncontaminated water to the Treated Effluent Disposal Facility for disposal. The Treated Effluent Disposal Facility has Permit No. ST-4502, *State Waste Discharge Permit 200 Area Treated Effluent Disposal Facility (W049-H)* (Ecology 1995), for disposal. Liquid effluent discharged to the Treated Effluent Disposal Facility must comply with Ecology (1995) waste acceptance criteria.

Test water from maintenance, hydrotest, and construction is discharged to the ground in compliance with Permit No. 91NM-177, *State Ground Discharge Permit for Hanford Site Test Water* (Ecology 1991), for disposal. The TWRS complies with the terms and conditions of this permit for water disposal.

4.4 DOCUMENT REVIEW

The Cognizant Engineer or technical authority identifies the need for environmental review of documents, procedures, etc., in accordance with the guidance in PHMC and LMHC procedures. The TWRS personnel involved in planning and performing activities that are not routine are responsible for ensuring the activity is screened for environmental compliance. The TWRS Environmental organization provides

comments to the Cognizant Engineer or technical authority regarding the environmental requirements for the work in question. The TWRS Environmental management or qualified personnel provide environmental reviews and approvals.

4.5 PLANNING

The Hanford Annual Budget submittal is covered by HNF-MD-016, *Annual Budget Submittal* (FDH 1997a), and is the result of annual budget targets applied to the Site by the DOE. The final documents are provided to the DOE for eventual submittal to the U.S. Congress. The process for developing the annual budget and the supporting documents that contain technical, schedule, and cost data is covered by HNF-MD-017, *Multi-Year Work Plan* (FDH 1997b). The Hanford Annual Budget Submittal will result in a required update of the current fiscal year multi-year work plan based on the budgetary constraints imposed upon the baseline.

The PHMC also prepares summary documents that identify that portion of the total Annual Budget Submittal that is identified for implementation of ES&H programs and requirements. These ES&H Risk Assessments together with the contractor prioritization provide the DOE and Congress sufficient detail to support risk-based budget planning and decisions.

5.0 IMPLEMENTATION AND OPERATION

5.1 SUBCONTRACTOR MANAGEMENT

To ensure the appropriate level of TWRS subcontractor awareness of environmental issues and regulations, the function of "subcontractor management and oversight" was established. Subcontractor management functions include (1) communication of requirements and (2) assessments, inspections, and/or surveillance to ensure subcontractor compliance with environmental requirements.

5.2 TRAINING, AWARENESS, AND COMPETENCE

5.2.1 Environmental Training and Awareness

The LMHC provides environmental training to their employees through both Hanford General Employee Training and facility-specific training. Hanford General

Employee Training provides training for general environmental awareness, waste minimization, and pollution prevention.

Facility- and job-specific training is provided by LMHC in HNF-SD-WM-TR-026, *Tank Waste Remediation System Dangerous Waste Training Plan* (Pohto 1997) for compliance with the training requirements of WAC 173-303, "Dangerous Waste Regulations," Section 330, "Personnel training." Job-specific training is identified in HNF-IP-0974, *Tank Waste Remediation System Dangerous Waste Training Requirements Matrices* (Hopkinson 1997). Updates to the Plan and Matrices are provided through Engineering Change Notice to document holders. The Plans address training requirements for personnel working at the LMHC-managed TSD units facilities in the 200 East Area, 200 West Area, and 600 Area.

The TWRS training program is designed to prepare employees to operate and maintain the tank farms in a safe, effective, efficient, and environmentally sound manner. In addition to preparing employees to operate and maintain the tank farms under normal conditions, the training program ensures that employees are prepared to respond in a prompt and effective manner should abnormal or emergency conditions occur. Emergency response training is consistent with emergency responses outlined in the Building Emergency Plans.

5.2.2 Environmental Qualification

The LMHC requires technical staff authorized to provide environmental approvals to undergo a qualification program as described in HNF-IP-0842, *TWRS Administration*, Volume III, "Training," Section 10.3, "Technical Staff Qualification" (LMHC 1997). This qualification program will ensure that technical staff personnel possess the knowledge and skills necessary to perform their assigned duties in a safe, efficient, and cost-effective manner. The Facility Environmental Professional qualification process ensures candidates can demonstrate knowledge of environmental specific requirements (e.g., air emissions, NEPA, Tri-Party Agreement [Ecology et al. 1996]) and demonstrate the ability to perform specific environmental work tasks (e.g., perform satellite accumulation areas assessment, NEPA screening, work package review, facility walk downs).

5.3 OPERATIONAL CONTROL

5.3.1 Procedure Upgrades to Reflect Changed Requirements or Permit Conditions

As permit conditions are imposed on TWRS and as new or changed regulations become effective, the TWRS Environmental organization will work with the affected organization to (1) brief their personnel about the changed requirement, (2) modify procedures, and (3) modify other affected documentation. In conjunction with working with the affected organization to properly implement the new requirement, the LMHC TWRS Environmental organization will initiate modifications to the facility S/RIDs.

Procedure modification in TWRS is governed by administrative procedures. An effective process to quickly modify procedures to implement compliance requirements is the procedure change authorization process. This process can be used to clarify the implementation of existing requirements. New requirements that significantly change work practices follow a more comprehensive administrative process.

Field implementation of regulatory approvals related to air permits is found in HNF-IP-0842, Volume VI, "Environmental," Section 1.2, "Field Implementation of Environmental Notices of Construction for Air Emission Units Operated by TWRS" (LMHC 1997).

5.3.2 Implementation of Hanford Facility Resource Conservation and Recovery Act Permit

The conditions of the *Hanford Facility RCRA Permit* (Ecology and EPA 1994) that apply to the specific units are defined in the Permit Applicability Matrix, Attachment 3 to the permit. The tank farms, while RCRA Interim Status facilities, are required to comply with the following conditions of Ecology and EPA (1994):

- I.A.1.a through I.A.1.b - "Effect of Permit"
- II.U.1 through II.U.4 - "Mapping of Underground Lines"
- II.V - "Marking of Underground Lines"
- II.X.1 through II.X.2 - "Schedule Extensions."

5.3.3 Solid Waste Management

The WMH is contracted by FDH to manage waste after it is generated by a facility or activity. The LMHC manages satellite accumulation areas and waste-generating activities and provides access to WMH for containers, inspections, and field verification.

The WMH is responsible for the operation and management of the less than 90-day pads and low-level waste/transuranic management areas at the 209E Building. The WMH develops portfolios, performs any necessary waste sampling and field verification, and schedules shipments to TSD facilities. The LMHC provides oversight for waste management activities in TWRS.

5.3.4 Double-Shell Tank System Waste Analysis

The WHC-SD-WM-EV-053, *Double-Shell Tank Waste Analysis Plan* (Mulkey 1996), is used to ensure the collection of adequate information for the safe handling of waste entering the DST System. The DST Waste Analysis Plan relies on documents like the Compatibility Data Quality Objectives to determine what information is required for safe handling of the incoming waste. Waste transfers from non-tank farm facilities are evaluated to ensure compliance. Each generator must provide a waste profile that documents waste composition and identifies applicable regulatory requirements.

5.4 POLLUTION PREVENTION AND WASTE MINIMIZATION

The WMH, under contract to FDH, develops and implements the Pollution Prevention and Waste Minimization Program. The LMHC implements Pollution Prevention and Waste Minimization through procedures governing the generation of waste and the re-use of equipment and supports development of pollution-prevention opportunity assessments.

5.5 UNDERGROUND STORAGE TANK MANAGEMENT

The LMHC operates four underground diesel fuel tank systems subject to the requirements of WAC 173-360, "Underground Storage Tank Regulations." Underground petroleum storage tank systems are expected to meet material, design, corrosion, leak-detection, spill, and overfill requirements of this regulation. Tank

systems not meeting these requirements must be upgraded or closed no later than December 22, 1998. Three of the four tanks and the four piping runs do not meet the requirements of WAC 173-360 and will either be upgraded or removed before December 22, 1998.

5.6 EMERGENCY PREPAREDNESS AND RESPONSE

The TWRS Environmental organization administers the TWRS Emergency Preparedness program. This program is responsible for interfacing between the Site Emergency Preparedness contractor (Dyncorp Tri-Cities Services, Inc.), the integrating contractor (FDH), and the Operations organization. The TWRS Emergency Preparedness organization has developed scenarios and objectives for medium- to large-scale drills based on the TWRS hazards assessment and has an annual schedule to execute these exercises. The TWRS Emergency Preparedness organization is also responsible for updating its program manuals and WHC-IP-0263-TF, *Tank Farms Building Emergency Plan* (Rowland 1994) and for training the members of the TWRS Emergency Response Organization, including Personnel Accountability Aides, Staging Area Managers, Building Emergency Directors and Radiological Control and Safety support personnel. The TWRS Emergency Preparedness organization also works with the TWRS Training organization to ensure training objectives for drill exercises are identified and met. The Emergency Preparedness organization develops scenarios as a part of Operational Readiness Reviews and restart operations.

6.0 REPORTS, NOTIFICATIONS, AND RECORDS

6.1 ENVIRONMENTAL REPORTS

Environmental reports are required by various regulations. Generally these reports are sitewide in nature. The TWRS Environmental organization prepares inputs to these reports. Appendix B of this document outlines the reports and the types of information required to be submitted by the Hanford Site. Completion dates are estimates based on FY 1997 activities.

6.2 SPILL AND RELEASE REPORTING

Spills and releases are immediately reported to the Tank Farm Operations Shift Manager, who then initiates and coordinates response actions. One of the response actions the Shift Manager takes is to notify the TWRS Environmental Operations Compliance organization. The TWRS Environmental Operations Compliance

organization informs the LMHC ES&H and Quality Assurance Director and notifies FDH, Environmental Integration of the spill or release. The FDH is responsible for determining the reportability of spills and reporting them to RL and the regulatory agencies.

6.3 RECORDS

Timely environmental recordkeeping and reporting is required to demonstrate regulatory compliance. Environmental regulations require that certain documents, procedures, and data are retrievable within specified periods of time. The TWRS Environmental organization supports regulator requests for such records. A new TWRS procedure is being developed to clearly identify what these documents are and where they are stored. In addition, TWRS is participating in a sitewide initiative to scan these records into a computer database.

7.0 VERIFICATION AND CORRECTIVE ACTIONS

7.1 ENVIRONMENTAL MONITORING

Environmental monitoring of the Hanford Site consists of (1) effluent monitoring and (2) environmental surveillance including groundwater monitoring. Effluent monitoring for TWRS facilities is performed by LMHC either at the facility or at the point of release to the environment. Environmental surveillance consists of sampling and analyzing environmental media on and off the Hanford Site to detect and quantify potential contaminants and to assess their environmental and human health significance. Environmental surveillance of the Hanford Site is conducted by the PNNL under contract to the DOE.

7.1.1 Effluent Monitoring

Liquid and airborne effluent that may contain radioactive or hazardous constituents are monitored. The LMHC performs monitoring mainly through analyzing samples collected near points of release into the environment. Tank Farms has a FEMP (Bachand and Crummel 1995), which is associated with DOE/RL-91-50, *Environmental Monitoring Plan, U.S. Department of Energy, Richland Operations Office* (RL 1997), as required by DOE Order 5400.1, *General Environmental Protection Program*, for any operation that involves hazardous materials and radioactive substances that could impact employee or public safety or the environment.

The Facility Effluent Monitoring Plans (FEMPs) assess effluent monitoring systems and evaluate whether they are adequate to ensure the public health and safety. The FEMPs ensure long-range integrity of the effluent-monitoring systems by requiring updates whenever new processes or operations introduce new hazardous materials or significant radioactive materials. The FEMPs are reviewed annually and are updated at a minimum of every three years. A FEMP is required for several tank farm facilities because of the NESHAP regulations specified in 40 CFR 61, Subpart H.

7.1.2 Near Field Monitoring

Several types of environmental media are sampled near nuclear facilities to monitor the effectiveness of waste management and restoration activities and effluent treatment and control practices. Environmental monitoring is defined as routine monitoring near facilities that have the potential to discharge or have discharged, stored, or disposed of radioactive or hazardous contaminants. Monitoring locations are associated mostly with major nuclear facilities such as tank farms.

Much of the monitoring program consists of collecting and analyzing environmental samples and methodically surveying areas near waste sites and facilities releasing effluents and waste streams. The program also evaluates acquired analytical data, determines the effectiveness of facility effluent monitoring and controls, and detects and monitors unusual conditions. The program implements applicable portions of DOE Orders 5400.1; 5484.1, *Environmental Protection, Safety, and Health Protection*; 5400.5, *Radiation Protection to the Public and the Environment*; and 5820.2A, *Radioactive Waste Management*. The program is conducted by FDH and WMH under the PHMC (RL 1996b) for DOE.

7.1.3 Groundwater Monitoring

The DSTs have not leaked to the environment. Therefore, the DST system is not a unit for which groundwater monitoring is required by WAC 173-303-645 (1)(b), "Release from regulated units." (i.e., not operated as a dangerous waste surface impoundment, waste pile, land treatment unit, or a landfill as defined in WAC 173-303-040, "Definitions."). Groundwater monitoring requirements found in WAC 173-303-806 (4)(a)(xx), "Final facility permits." required for this unit.

Some SSTs have leaked to the environment; therefore, the unit requires groundwater monitoring in accordance with WAC 173-303-645. The SST System is subdivided into waste management areas for groundwater monitoring as required by interim status regulations specified in 40 CFR 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities," Subpart F, "Groundwater Monitoring."

Elevated contaminant levels have been detected for the following seven waste management areas, and they are undergoing Phase I assessment monitoring:

- A-AX Waste Management Area (i.e., A and AX SST Farm)
- B-BX-BY Waste Management Area (i.e., B, BX and BY SST Farms)
- C Waste Management Area (i.e., C SST Farm)
- TX-TY Waste Management Area (i.e., TX and TY SST Farm)
- T Waste Management Area (i.e., T SST Farm)
- S-SX Waste Management Area (i.e., S and SX SST Farm)
- U Waste Management Area (i.e., U SST Farm).

7.2 COMPLIANCE ASSESSMENT/CORRECTIVE ACTION MANAGEMENT

The LMHC Environmental organization has a responsibility for verifying that LMHC activities are conducted in an environmentally safe and sound manner and in compliance with applicable environmental protection program requirements. The compliance verification program provides timely information needed to identify items or areas requiring (or potentially requiring) attention and allows appropriate corrective actions to be identified and implemented by responsible management.

The environmental compliance verification program has been developed to ensure this responsibility is fulfilled. The program is a multi-level program designed to provide LMHC management with information needed to ensure environmental protection. It is implemented in accordance with the requirements of DOE orders and plans and uses the following compliance verification processes.

7.2.1 Surveillance/Compliance Inspections

Surveillance/Compliance Inspections are performed by the TWRS Environmental organization adhering to a schedule that is compiled monthly. The inspection program is implemented under HNF-IP-0842, Volume VI, Section 2.1, "Scheduling, Planning, and Conducting Surveillance/Compliance Inspections" (LMHC 1997). The Surveillance/Compliance Inspections are coordinated with other assessment-type programs and are performed in parallel to reduce the impact on facility resources.

7.2.2 Functional Appraisals

A procedure for functional appraisals is currently being developed. The procedure will be incorporated into HNF-IP-0842, Volume VI (LMHC 1997). An

assessment schedule will be developed and implemented. Previously, informal functional assessments were conducted using an internal checklist.

The LMHC conducts routine inspections of tank farm facilities to maintain compliance and to evaluate operations and maintenance activities. These routine inspections are documented in various ways including operator round sheets and container deficiency reports. Periodic inspections are also conducted by Environmental Field Representatives to identify deficiencies. Identified deficiencies are reported verbally or by informal documentation to the facility management for correction. In the future, these inspections will be considered part of the Surveillance Compliance Inspection Program, with deficiencies documented accordingly.

Independent assessments are conducted by the FDH Facility Evaluation Board annually and are documented via written report to the company president. Environmental programs are specifically evaluated by the Facility Evaluation Board.

8.0 DECONTAMINATION AND DECOMMISSIONING

Planning to support TWRS decontamination and decommissioning activities is recognized as a programmatic function of TWRS Environmental organization. As detailed design criteria are developed for decontamination and decommissioning, they will be factored into permitting schedules. The RCRA closure plans will be the framework to document closure decisions.

9.0 REFERENCES

Code of Federal Regulations

40 CFR 61, "National Emission Standards for Hazardous Air Pollutants," *Code of Federal Regulations*, as amended.

40 CFR 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities," *Code of Federal Regulations*, as amended.

50 CFR 17, "Endangered and Threatened Wildlife and Plants," *Code of Federal Regulations*, as amended.

Acts

Endangered Species Act of 1973, as amended, 16 USC 1531 et seq.

Historic Migratory Bird Treaty Act of 1918, as amended, 16 USC 703 et seq.

National Environmental Policy Act of 1969, as amended, 42 USC 4321 et seq.

National Historic Preservation Act, as amended, 16 USC 470 et seq.

Resource Conservation and Recovery Act of 1976, as amended, 42 USC 6901 et seq.

U.S. Department of Energy Orders

DOE Order 5400.1, *General Environmental Protection Program*, U.S. Department of Energy, Washington, D.C.

DOE Order 5400.5, *Radiation Protection to the Public and the Environment*, U.S. Department of Energy, Washington, D.C.

DOE Order 5484.1, *Environmental Protection, Safety, and Health Protection*, U.S. Department of Energy, Washington, D.C.

DOE Order 5820.2A, *Radioactive Waste Management*, U.S. Department of Energy, Washington, D.C.

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60 FR 61687, 1995, "Record of Decision: Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA" *Federal Register*, Vol. 60, pp. 61687-61692 (December 1).

62 FR 8693, 1997, "Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, WA" *Federal Register*, Vol. 62, pp. 8693-8704 (February 26).

Washington Administrative Code

WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, as amended.

WAC 173-360, "Underground Storage Tank Regulations," *Washington Administrative Code*, as amended.

WAC 173-460, "Controls for New Sources of Toxic Air Pollutants," *Washington Administrative Code*, as amended.

WAC 173-480, "Ambient Air Quality Standards and Emissions Limits for Radionuclides," *Washington Administrative Code*, as amended.

WAC 246-247, "Radiation Protection--Air Emissions," *Washington Administrative Code*, as amended.

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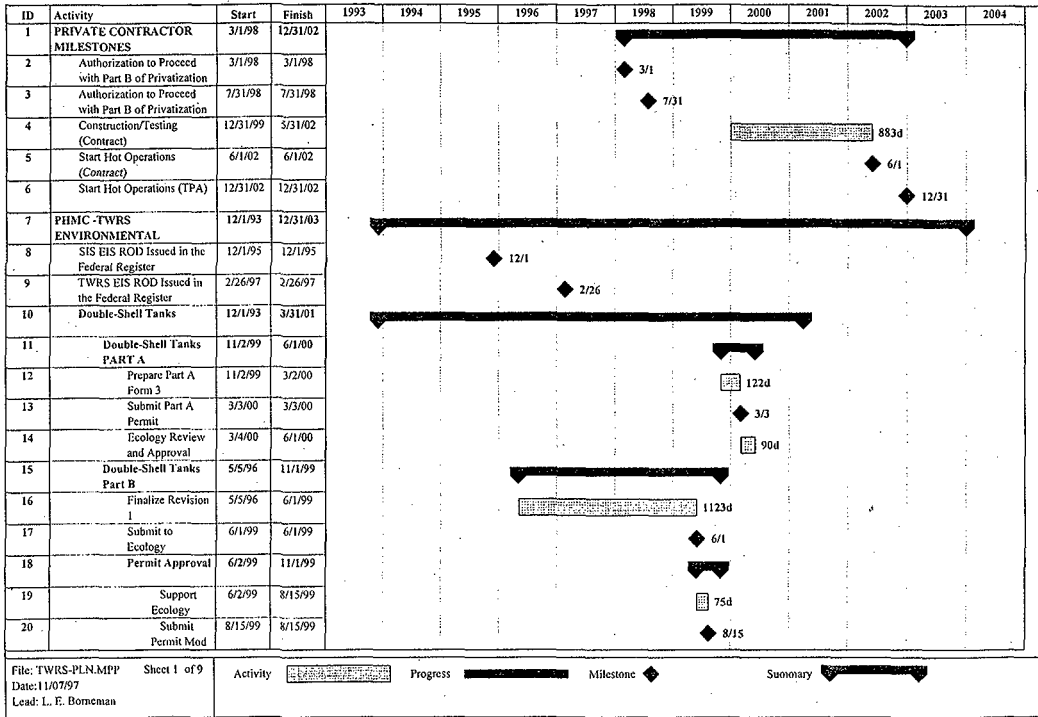
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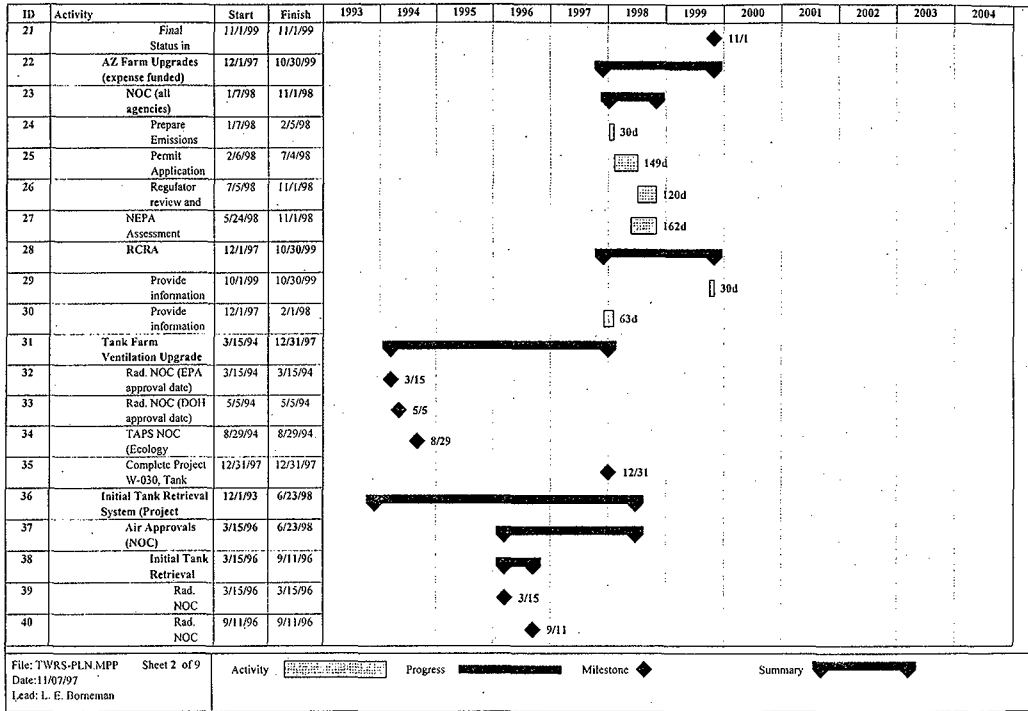
APPENDIX A

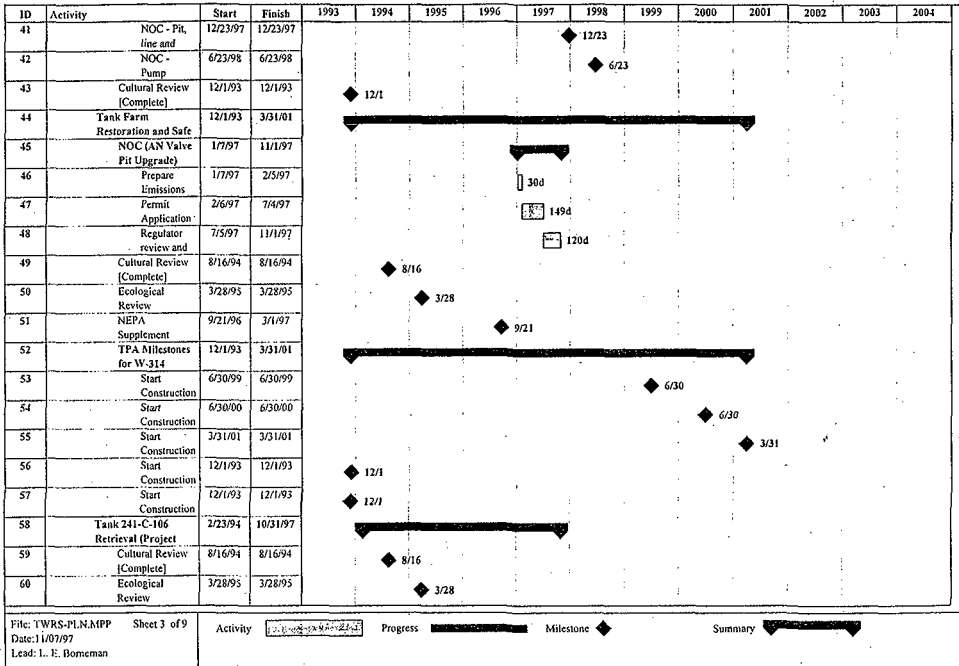
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PROJECT HANFORD MANAGEMENT CONTRACT
PERMIT MODIFICATION SCHEDULE**



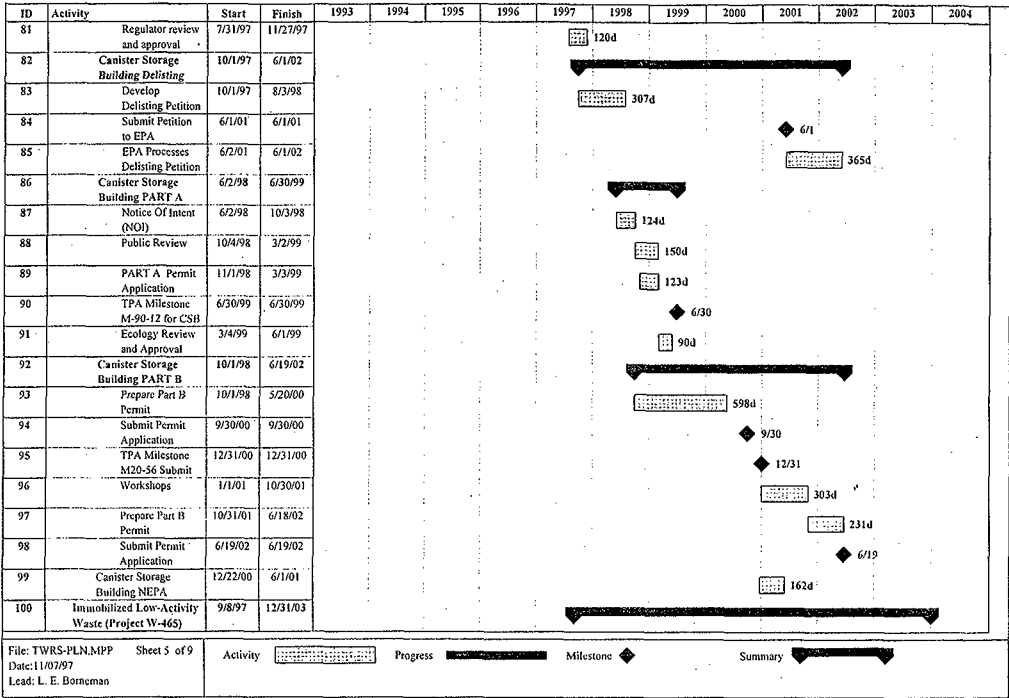
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 Date: 11/07/97
 Lead: L. E. Bomanan

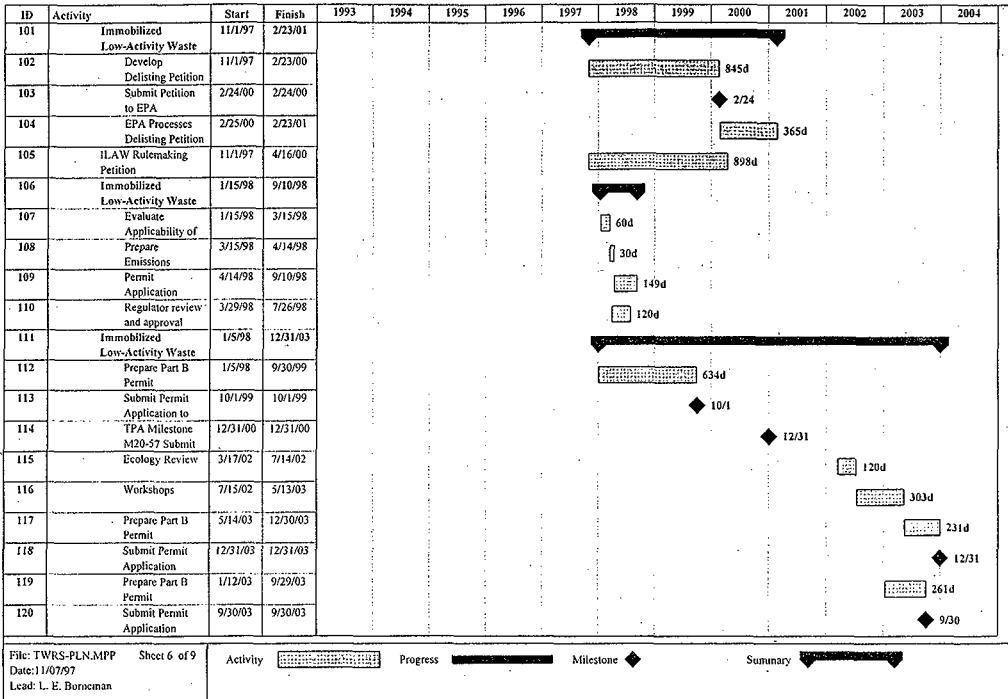
Activity Progress Milestone Summary





ID	Activity	Start	Finish	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
61	NOC Phase I	2/23/94	2/28/94		■										
62	Rad. NOC (EPA)	2/23/94	2/23/94	◆	2/23										
63	Rad. NOC (DOH)	2/23/94	2/23/94	◆	2/23										
64	TAPS NOC (Ecology)	2/28/94	2/28/94	◆	2/28										
65	NOC Phase II	2/23/94	10/6/95	■	■	■	■								
66	Rad. NOC (EPA)	2/23/94	2/23/94	◆	2/23										
67	Rad. NOC (DOH)	7/31/95	7/31/95			◆	7/31								
68	TAPS NOC (Ecology)	10/6/95	10/6/95			◆	10/6								
69	Initiate Sluicing of C-106 TPA	10/31/97	10/31/97						◆	10/31					
70	AW Jumper Manifold Upgrade	2/25/94	3/28/95	■	■	■	■								
71	Ecological Review	3/28/95	3/28/95			◆	3/28								
72	Cultural Review (Complete)	8/16/94	8/16/94		◆	8/16									
73	NEPA Assessment -	2/25/94	2/25/94	◆	2/25										
74	PHMC Infrastructure Project (Project W-519)	12/1/97	5/31/98					■	■						
75	Ecological Review	4/2/98	5/31/98						■	60d					
76	Cultural Review	4/2/98	5/31/98						■	60d					
77	NEPA Supplement Analysis of TWRS EIS	12/1/97	5/11/98						■	162d					
78	Solidified High-Level Waste Interim Storage	4/1/97	6/19/02	■	■	■	■	■	■	■	■	■	■	■	■
79	Canister Storage Building AIR	4/1/97	11/27/97	■	■	■	■	■	■						
80	Evaluate Applicability of	4/1/97	7/30/97					■	121d						
File: TWRS-PLN.MPP Sheet 4 of 9		Activity	■	Progress	■	Milestone	◆	Summary	■						
Date: 11/07/97															
Lead: L. E. Boneman															





ID	Activity	Start	Finish	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
121	TPA Milestone M20-58 Submit	12/31/03	12/31/03												◆ 12/31
122	Immobilized Low-Activity Waste	9/8/97	9/30/98						■						
123	Notice Of Intent (NOI) to RL	9/8/97	1/9/98						■ 124d						
124	Public Review	1/19/98	6/17/98						■ 150d						
125	Prepare PART A Permit	2/15/98	6/17/98						■ 123d						
126	Submit Part A Permit	7/2/98	7/2/98						◆ 7/2						
127	Ecology Review and Approval	7/3/98	9/30/98						■ 90d						
128	NEPA/SEPA	3/15/98	6/1/01						■						
129	SEPA Briefing	3/15/98	4/8/98						■ 25d						
130	Immobilized Low-Activity	12/22/00	6/1/01												
131	Immobilized Low-Activity Waste Disposal (Project)	12/31/00	12/31/03												
132	RCRA	1/12/03	12/31/03												
133	Prepare Part B Permit	1/12/03	9/29/03												
134	Submit Permit Application	9/30/03	9/30/03												
135	TPA Milestone M20-58 Submit	12/31/03	12/31/03												◆ 12/31
136	Air	12/31/03	12/31/03												◆ 12/31
137	NEPA - Disposal EIS	12/31/00	12/31/03												
138	Effluent Treatment Facility	8/14/00	6/1/02												
139	Effluent Treatment Facility Delisting	11/6/00	6/1/02												
140	PHMC Receives Input from	11/6/00	11/6/00												◆ 11/6

File: TWRS-PLN.MPP Sheet 7 of 9

Date: 11/07/97

Lead: L. E. Dorneman

Activity



Progress



Milestone



Summary



ID	Activity	Start	Finish	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
141	Revise Delisting Petition	11/7/00	5/31/01												
142	Submit Revised Petition to EPA	6/1/01	6/1/01									206d			
143	EPA Processes Delisting Petition	6/2/01	6/1/02									6/1			
144	Effluent Treatment Facility HF RCRA	12/5/00	7/1/01										365d		
145	PHMC Receives Input from	12/5/00	12/5/00									12/5			
146	HF Permit Text Revision	12/6/00	6/30/01										207d		
147	Submit Permit Modification to	7/1/01	7/1/01										7/1		
148	Effluent Treatment Facility PART A	3/1/01	9/29/01												
149	Prepare Part A Form 3	3/1/01	6/30/01										122d		
150	Submit Part A Permit	7/1/01	7/1/01										7/1		
151	Ecology Review and Approval	7/2/01	9/29/01										90d		
152	Effluent Treatment Facility SWDP (216)	8/14/00	6/1/01												
153	PHMC Receives Input from	8/14/00	8/14/00										8/14		
154	Permit Revision	8/13/00	2/12/01										182d		
155	RL - Submit Supplemental	2/13/01	2/13/01										2/13		
156	Final Permit Modification	6/1/01	6/1/01										6/1		
157	Effluent Treatment Facility/Liquid	12/6/00	10/1/01												
158	PHMC Receives Input from	12/6/00	12/6/00										12/6		
159	Prepare Emissions	12/7/00	1/5/01										30d		
160	Permit Application	1/6/01	6/3/01											149d	

File: TWRS-PLN.MPP Sheet 8 of 9
 Date: 11/07/97
 Lead: L. E. Borneman

Activity Progress Milestone Summary

ID	Activity	Start	Finish	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
161	Regulator review and approval	6/4/01	10/1/01												
162	NEPA Supplemental	12/22/00	6/1/01									162d			
163	Treated Effluent Disposal Facility	8/14/00	6/1/01												
164	Treated Effluent Disposal Facility	8/14/00	6/1/01												
165	PHMC Receives Input from	8/14/00	8/14/00									8/14			
166	Permit Revision	8/15/00	2/12/01									182d			
167	RL - Submit Supplemental	2/13/01	2/13/01												
168	Final Permit Modification	6/1/01	6/1/01												
169	NEPA Supplemental Analysis	12/22/00	6/1/01									162d			

File: TWRS-PLN.MPP	Sheet 9 of 9	Activity	Progress	Milestone	Summary
Date: 11/07/97					
Lead: L. E. Borneman					

APPENDIX B
INFORMATION NEEDED TO SUPPORT SITEWIDE REPORTING

Information Needed to Support Sitewide Reporting. (4 Sheets)

Report	Information needed	Coordinating contractor	Required by contract or regulations	Certifications	Approximate due dates
Annual LDR Report	Waste inventories and narrative descriptions of TSD units storing mixed LDR waste	PHMC	TPA milestone M-26-01	None	To PHMC 1/31 To RL 4/15 To EPA/ Ecology 4/30
Hanford Site Environmental Report	Compliance with environmental regulations, current site activities, accomplishments, and issues. Releases of radionuclides in air/water, hazardous substances, unplanned environmental releases, inventories of chemicals effluent monitoring activities and environmental surveillance activities	PNNL	DOE Order	None	To RL by 7/31 of each year
EPCRA Tier II Emergency and Hazardous Chemical Inventory	Provide periodic input on inventory of hazardous materials with annual verification/certification of information	PHMC	Regulations	Contractors - Internal Certification RL - Certification	To PHMC 1/13 To RL 1/31 To Regitor 3/3
EPCRA Toxic Chemical Release Inventory Report	Annual input on use and releases of toxic chemicals	PHMC	Regulations	Contractors - Internal Certification RL - Certification	To PHMC 4/14 To RL 6/1 To Regitor 6/25
Annual Dangerous Waste Report	Provide information on waste generation and waste management activities	PHMC	Regulations	Contractors - Internal Certification RL - Certification	To PHMC 1/13 To RL 1/31 To Regitor 3/1
PCB Annual Document Log	Information on TSCA-regulated PCB waste is required for the document log including waste weights and descriptions, container ID numbers, manifest information for PCBs sent offsite for disposal, and date of disposal.	PHMC	TSCA Regulations	None (Not sent to regulators)	To FDH - 4/15 To RL - 6/15

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Information Needed to Support Sitewide Reporting. (4 Sheets)

Report	Information needed	Coordinating contractor	Required by contract or regulations	Certifications	Approximate due dates
PCB Annual Status Report on Storage of PCBs	Report requires container ID numbers, PCB waste weights and descriptions, PCB out-of-service dates, and programmatic information on current or alternative PCB disposal technologies and data on TSCA-regulated PCB waste that contains radioactive constituents and PCB waste that contains both radioactive and RCRA constituents.	PHMC	Compliance Agreement with EPA	None	To RL - 11/4 To HQ - 12/31 To EPA - 2/8
RCRA Section 3016 Biennial Report	Data on environmental monitoring, hydrogeologic site characterization, environmental contamination, and response actions is required. Also information on RCRA TSD Facilities that managed hazardous waste on or after November 19, 1980, including programmatic data and facility descriptions.	PHMC	Regulations	None	To RL - 12/15 To HQ - 1/15 To EPA - 1/31
Effluent Information System-Onsite Discharge Information System	DOE requires its sites to annually compile and send radionuclide release data, for both liquid and airborne discharges, by April 1 of each year.	PHMC	DOE Order	None	To INEL - 3/31
Environmental Releases	This report presents data for radioactive and nonradioactive substances released into the environment during each calendar year. Information includes general descriptions of facilities, summary of nonroutine releases and spills.	PHMC	Contract	None	To RL - 10 days after the end of quarter. Internal document only.
Radionuclide Air Emissions Report	This report includes information on radionuclides emitted to the atmosphere from Hanford Site facilities, an assessment of the offsite dose to any member of the public, and descriptions of point sources	PHMC	Regulatory	FDH - certifies RL - certifies	To RL 6/14 To EPA 6/30 To DOE 6/30

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Information Needed to Support Sitewide Reporting. (4 Sheets)

Report	Information needed	Coordinating contractor	Required by contract or regulations	Certifications	Approximate due dates
Nonradioactive Air Emission-Inventory Information	Annually transmit a report on nonradioactive air emissions to Ecology containing information on operations having the potential to emit combustion products from fossil fuels.	PHMC	Regulations	None	Submitted to Ecology 105 days after January 1st.
Document DOE/RL-96-50*	Report for the Mapping and Marking of Dangerous Waste Underground Pipelines submitted to Ecology to meet conditions II.U & V described above. Private contractors will need to comply with the detailed methods identified	PHMC	Requirement in HF RCRA permit	None	Document submitted in 1996. Will be updated on an as-needed basis
Annual Hanford Site Environmental Permitting Status Report	A report that is prepared annually and contains a summary of all environmental permits. This document is referenced in the RCRA Permit and is included in the Facility Operating Record.	PHMC	RCRA Permit Condition	None	PHMC - 7/30 Ecology - 9/30
Projections of Anticipated Costs for Closure and Postclosure	Annual information required for any TSD unit that is in final status, undergoing closure, has been closed, or is in postclosure care during the preceding fiscal year. Detailed cost estimates for closure or postclosure care, including any monitoring or maintenance being performed or anticipated.	PHMC	RCRA Permit Requirement	Subcontractors - Internal Certification Prime contractors - Certification RI - Certification	TWRS will not have TSD units incorporated in the HF RCRA Permit until 1999 in accordance with Permit Modification Schedule, Rev. 3.0

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Information Needed to Support Sitewide Reporting. (4 Sheets)

Report	Information needed	Coordinating contractor	Required by contract or regulations	Certifications	Approximate due dates
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DOE = U.S. Department of Energy
 Ecology = Washington State Department of Ecology.
 EPA = U.S. Environmental Protection Agency
 EPCRA = *Emergency Planning and Community Right-to-Know Act of 1986.*^b
 FDH = Fluor Daniel Hanford, Inc.
 HF = Hanford Facility.
 HQ = U.S. Department of Energy Headquarters
 INEL = Idaho National Engineering Laboratory, Idaho Falls, ID.
 LDR = land disposal restrictions.

PCB = polychlorinated biphenyl.
 PHMC = Project Hanford Management Contract.
 PNNL = Pacific Northwest National Laboratory.
 RCRA = *Resource Conservation and Recovery Act of 1976.*^c
 RL = U.S. Department of Energy, Richland Operations Office.
 TPA = Tri-Party Agreement.^d
 TSCA = *Toxic Substances Control Act of 1976.*^e
 TSD = treatment, storage and disposal.
 TWRS = Tank Waste Remediation System.

^aRL, 1996, *Hanford Facility RCRA Permit Condition II.U.1 Report: Mapping of Underground Piping*, DOE/RL-96-50, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

^b*Emergency Planning and Community Right-to-Know Act of 1986*, as amended, 42 USC 11001 et seq.

^c*Resource Conservation and Recovery Act of 1976*, as amended, 42 USC 6901 et seq.

^dEcology, EPA, and DOE, 1996, *Hanford Federal Facility Agreement and Consent Order*, 2 vols., Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

^e*Toxic Substances Control Act of 1976*, as amended, 15 USC 2601 et seq.

APPENDIX C
IMPLEMENTING INSTRUCTIONS

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Implementation of Lockheed Martin Hanford Corporation Environmental Program. (6 Sheets)

Document section	Title	Implementing Instructions
1.0	Environmental Policy	
3.0 3.1 3.1.1	Planning Environmental Impact Assessment NEPA	HNF-PRO-452, <i>NEPA, SEPA, Cultural and Natural Resources.</i>
3.1.1.1	TWRS EIS	DOE/EIS-0189, <i>Tank Waste Remediation System, Hanford Site, Richland, Washington, Final Environmental Impact Statement</i> (DOE and Ecology 1996) 62 FR 8693, "Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, WA."
3.1.1.2	SIS EIS	DOE/EIS-0212, <i>Final Environmental Impact Statement, Safe Interim Storage of Hanford Tank Wastes</i> (Ecology and RL 1996). 60 FR 61687, "Record of Decision: Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA."
3.1.2.1	<i>National Historic Preservation Act of 1969</i>	DOE/RL-96-77, <i>Programmatic Agreement Among U.S. DOE-RL, the Advisory Council on Historic Preservation, and the Washington State Historic Preservation Office for the Maintenance, Deactivation, Alteration and Demolition of the Built Environment on the Hanford Site</i> (RL 1996).
3.1.2.2 3.1.2.3	Section 106 Process - Cultural Resource Review <i>Endangered Species Act of 1973</i>	HNF-PRO-452. Letter 9405630, <i>Cultural Resources Exemption of the Tank Farm Areas</i> (Crist 1994). Letter 96-200-061, <i>Blanket Biological Review for Projects Required for General Maintenance Activities Inside the Tank Farms, 200 East and 200 West Areas</i> (Brandt 1996). HNF-PRO-473, <i>Performing Excavation Activities.</i>

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Implementation of Lockheed Martin Hanford Corporation Environmental Program. (6 Sheets)

Document section	Title	Implementing Instructions
3.2.1 3.2.2	PHMC Environmental Requirements Management Process LMHC Environmental Requirements Management Process	HNF-IP-0842, <i>TWRS Administration</i> , Volume VI, "Environmental," Section 2.X, "Environmental Requirements Management" (Under Development).
3.4	Document Review	WHC-CM-7-5, <i>Environmental Compliance</i> , Section 13, "Environmental Issue Identification, Review, and Interface Requirements."
3.6	Budget Planning	HNF-MD-016, <i>Annual Budget Submittal</i> (FDH 1997a). HNF-MD-017, <i>Multi-Year Work Plan</i> (FDH 1997b). WHC-CM-2-5, <i>Management Control System</i> , Section 3.7, "Fiscal Year Budget Cycle."
4.2	Training, Awareness, and Competence	HNF-SD-WM-TR-026, <i>Tank Waste Remediation System Dangerous Waste Training Plan</i> (Pohto 1997). HNF-IP-0974, <i>Tank Waste Remediation System Dangerous Waste Training Requirements Matrices</i> (Hopkinson 1997). HNF-IP-0842, <i>TWRS Administration</i> , Volume III, "Training," Section 10.3, "Technical Staff Qualification" (LMHC 1997). HNF-IP-0842, Volume III, Section 7.2, "Conduct of On-The-Job Training" (LMHC 1997)
4.3 4.3.1	Operational Control Procedure Upgrades to Reflect Changed Requirements or Permit Conditions	HNF-IP-0842, Volume VI, "Environmental," Section 1.2, "Field Implementation of Environmental Notices of Construction for Air Emission Units Operated by TWRS" (LMHC 1997).
4.3.2	Implementation of Hanford Site Wide RCRA Permit	WA7890008967, <i>Hanford Site RCRA Permit</i> (Ecology and EPA 1994)
3.32	Regulatory Approvals for Air Permits	DOE/RL-95-07, <i>Hanford Site Air Operating Permit Application</i> (RL 1995).

Implementation of Lockheed Martin Hanford Corporation Environmental Program. (6 Sheets)

Document section	Title	Implementing Instructions
4.3.3 4.3.3.1 4.3.3.2 4.3.3.3	Solid Waste Management Lead Management Plan Contaminated Equipment Reusable Equipment	HNF-PRO-455, <i>Solid Waste Management</i> . HNF-IP-0842, Volume VI, Section 1.1, "Lead Management Plan" (LMHC 1997). HNF-IP-0842, Volume VI, Section 3.3, "Reusable Equipment" (LMHC 1997). HNF-IP-0842, Volume VI, Section 4.2, "Waste Generating Plan" (LMHC 1997). TO-100-002, <i>Preparing Waste Containers/Packages and Establishing Satellite Accumulation Areas</i> . TO-100-010, <i>Waste Truck Support Services</i> . TO-100-045, <i>Perform Inspections of Active Packages, Satellite Accumulation Areas, Storage Areas, and Related Tasks</i> . TO-100-052, <i>Perform Waste Generation, Segregation, and Accumulation</i> . TO-100-053, <i>Perform Sampling, Repackaging and Shielding of Waste Packages</i> . TO-100-056, <i>Operate the Low Level Waste and Non-Regulated Storage Pads and Perform Supporting Tasks</i> . TO-100-065, <i>Operate and Inspect the Less Than 90 Day Storage Pads and Related Tasks</i> . TO-100-210, <i>Perform Dispatch/Container Document System Duties</i> . WHC-SD-WM-PLN-098, <i>TWRS Contaminated Equipment Management Plan</i> (WHC 1996).
4.3.4	Double-Shell Tank System Waste Acceptance	WHC-SD-WM-EV-053, <i>Double-Shell Tank Waste Analysis Plan</i> (Mulkey 1996).
4.4	Pollution Prevention and Waste Minimization	HNF-PRO-462, <i>Pollution Prevention</i> .
4.5	Underground Storage Tank Management	WAC 173-360, "Underground Storage Tank Regulations."
4.6	Emergency Preparedness and Response	WHC-IP-0263-TF, <i>Tank Farms Building Emergency Plan</i> (Rowland 1994).
5.2	Spill and Release Reporting	HNF-PRO-453, <i>Environmental Notification and Reporting</i> , Section 2.1, "Spill and Release Reporting."
5.3	Records	HNF-PRO-453, Section 2.5, "Record and Reporting Requirements."

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Implementation of Lockheed Martin Hanford Corporation Environmental Program. (6 Sheets)

Document section	Title	Implementing Instructions
6.1.1	Effluent Monitoring	WHC-EP-0479-1, <i>Facility Effluent Monitoring Plan for Tank Farm Facility</i> (Bachand and Crummel 1995).
6.2	Compliance Assessments/Corrective Action Management	HNF-IP-0842, Volume VI, Section 2.1, "Scheduling, Planning, and Conducting Surveillance/Compliance Inspections" (LMHC 1997). HNF-IP-0842, Volume VI, Section 2.x, "Functional Assessment" (under development). HNF-IP-0842, Volume VI, Section 2.x, "Management Appraisals" (under development).

Acts

Endangered Species Act of 1973, as amended, 16 USC 1531 et seq.

National Environmental Policy Act of 1969, as amended, 42 USC 4321 et seq.

Federal Register

60 FR 61687, 1995, "Record of Decision: Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA," *Federal Register*, Vol. 60, pp. 61687-61692 (December 1).

62 FR 8693, 1997, "Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, WA," *Federal Register*, Vol. 62, pp. 8693-8704 (February 26).

Procedures

HNF-PRO-452, *NEPA, SEPA, Cultural and Natural Resources*, Fluor Daniel Hanford, Inc., Richland, Washington.

HNF-PRO-453, *Environmental Notification and Reporting*, Fluor Daniel Hanford, Inc., Richland, Washington.

HNF-PRO-455, *Solid Waste Management*, Fluor Daniel Hanford, Inc., Richland, Washington.

HNF-PRO-462, *Pollution Prevention*, Fluor Daniel Hanford, Inc., Richland, Washington.

HNF-PRO-473, *Performing Excavation Activities*, Fluor Daniel Hanford, Inc., Richland, Washington.

Washington Administrative Code

WAC 173-360, "Underground Storage Tank Regulations," *Washington Administrative Code*, as amended.

Controlled Manuals

WHC-CM-2-5, Section 3.7, "Fiscal Year Budget Cycle," *Management Control System*, Westinghouse Hanford Company, Richland, Washington.

WHC-CM-7-5, *Environmental Compliance*, Section 13.0, "Environmental Issue Identification, Review, and Interface Requirements," Westinghouse Hanford Company,

Richland, Washington.

Implementation of Lockheed Martin Hanford Corporation Environmental Program. (6 Sheets)

Document section	Title	Implementing Instructions
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Tank Farm Procedures

- TO-100-002, *Preparing Waste Containers/Packages and Establishing Satellite Accumulation Areas*, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- TO-100-010, *Waste Truck Support Services*, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- TO-100-045, *Perform Inspections of Active Packages, Satellite Accumulation Areas, Storage Areas, and Related Tasks*, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- TO-100-052, *Perform Waste Generation, Segregation, and Accumulation*, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- TO-100-053, *Perform Sampling, Repackaging and Shielding of Waste Packages*, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- TO-100-056, *Operate the Low Level Waste and Non-Regulated Storage Pads and Perform Supporting Tasks*, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
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C-5

Implementation of Lockheed Martin Hanford Corporation Environmental Program. (6 Sheets)

Document section	Title	Implementing Instructions
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EIS = Environmental Impact Statement.
 FR = Federal Register.
 LMHC = Lockheed Martin Hanford Corporation.
 NEPA = National Environmental Policy Act.
 PHMC = Project Hanford Management Contract.

RCRA = Resource Conservation and Recovery Act.
 RL = U.S. Department of Energy, Richland Operations Office.
 SEPA = State (of Washington) Environmental Policy Act.
 SIS = safe interim storage.
 TWRS = Tank Waste Remediation System.

APPENDIX D
GUIDANCE AND REQUIREMENTS TO
DELIVERABLES CROSSWALK

TWRS Environmental Program Plan

Table D-1. Guidance and Requirements to Deliverables Crosswalk -
TWRS Environmental Program Plan.

Guidance or Requirement	Status	Implementing Location
A.1 DOE Letter to H. J. Hatch, FDH, from W. J. Taylor, DOE, dated August 8, 1997, #9757162A (36 ITEM CHECKLIST)		
32. Environmental permits and safety authorization bases are in place as required for authorization-to-proceed decision.	I	Section 4.3
A.3 DOE Letter H. J. Hatch, FDH, from William J. Taylor, DOE, dated December 2, 1997, #9761291		
5. Provide specific information to address the ten areas in Paragraph 4.2.4 of the August 8 DOE letter of direction		
j. Deliver to DOE or make available for DOE review, Draft Program Plans	I	Entire Document
B.1 DOE Order 430.1, "Good Practice Guide," GPG-FM-002		
2.2.6 ES&H Program Plan	I	Entire Document.
2.3.6 Environment, Safety and Health Criteria	I	Entire Document.
2. Permits, Licenses, and Regulatory Approval	I	Section 4.3 and Appendix A
2.4.6 Environment, Safety and Health Criteria	I	Entire Document.
4. Permits, Licenses, and Regulatory Approval	I	Section 4.3 and Appendix A
2.5.6 Environment, Safety and Health Criteria	I	Entire Document.
3. D&D Plans	I	Appendix A and Section 8.0
B.2 DOE Order 425.1, "Start-Up and Restart of Nuclear Facilities," Section 4.d.(1)-(20)		
425.1 Core Requirement (14) - ES&H Site-Wide Safety Culture	I	Entire Document
C.1 Interface Control Documents		
9. Land for Siting		
3. Establish baseline site and environmental conditions through a third party.	I	Section 4.1
4. Ensure that site-use satisfies requirements through the environmental checklist process at the initiation of Part B.	I	Section 4.1

Table D-1. Guidance and Requirements to Deliverables Crosswalk -
TWRS Environmental Program Plan.

Guidance or Requirement	Status	Implementing Location
16. ⁹⁰Sr/Transuranics/Entrained Solids		
1. Receive the 90Sr/TRU, Entrained Solids, and transfer line flush water.	I	Section 5.3.4
22. Air Emissions - Permits	I	Section 4.3.2 and Appendix A
D.1 Detailed Instructions for Assessment of RTP - Appendix C, November 14, 1997		
30. Show that the PHMC Team is on schedule for completing regulatory-compliance-related documents supporting the private contractor(s).	I	Appendix A
D.2 Plan for Determining PHMC-Team's RTP for Waste Feed Delivery (Table 2).		
PHMC provide deliverables necessary to support RTP, as follows:		
28. W-151 Notification of Startup (EPA)	I	Appendix A and Section 4.3
29. Retrieval Permit Incorporate Comments	I	Appendix A and Section 4.3
D.3 Plan for Determining PHMC-Team's RTP for Waste Feed Delivery - Document Checklist (Table 3)		
16. Plans support post-closure monitoring from 2034 to 2064.	I	Sections 4.3.1.2 and 8.0
20. Plans are to receive the Tc/Sr/TRU and entrained solids back from the single-LAW-processing-plant private contractor.	I	Section 5.3
37. Plans assume residual waste in the tanks will be classified as "Incidental Waste" by the NRC to support closure plans and performance assessments.	I	Section 4.3.1.2
39. Plans assume an EIS (or supplemental EIS) will be required for closure, and landfill closure in the 200 areas will be authorized.	I	Section 4.3.1.2 and Appendix A
57. Plans include performing alternative analyses needed to support the ATP decision and TWRS Program review per EIS ROD.	I	Section 4.3.1.1
61. Plans include completion of SST Retrieval System CDR, including sys def, leak detection mitigation and monitoring as required per TPA.	I	Sections 2.0, 4.2 and 4.3

Table D-1. Guidance and Requirements to Deliverables Crosswalk -
 TWRS Environmental Program Plan.

Guidance or Requirement	Status	Implementing Location
68. Plans include PHMC interface w/ DOE, EPA and Mgmt Sys Div (MSD) on closure strategy dev / closure EIS.	I	Sections 2.0, 4.3.1.2, 8.0, and Appendix A
D.8 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix C, Infrastructure (Management Baseline) Checklist.		
45. Show acceptable environmental permits and safety bases are in place. (1.3.1-1.3.2)	I	Section 4.3 and Appendix A
47. Indicate that support is planned/budgeted for RL preparation of NEPA docs. (1.3.5)	I	Section 4.1.1
D.11 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix E, Infrastructure Feed Tank Transfer (Management Baseline) Checklist.		
89. Show acceptable environmental permits and safety bases are in place. (1.3.1-1.3.2)	I	Appendix A
91. Indicate that support is planned/budgeted for RL preparation of NEPA docs. (1.3.5)	I	Section 4.1.1
E.1 TWRS Waste Disposal Division Planning Guidance dated July 7, 1997 (Updated December 12, 1997)		
Complete design activities and safety studies to support the installation of mixer pumps in AP-102, AP-104 and AN-105.	I	Section 4.3 and Appendix A
The Storage and Disposal project will ensure the requirements in paragraph 3.4.2 are met.	I	Section 2.0

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