DISTRIBUTION SHEET

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Project Title/Work Order Project Management Plan, WHC-SD-W087-PMP-001, Revision 1, for Project 93L-EWW 087, "222-S Radioactive Liquid Waste Line Replacement"		EDT No. N/A ECN No. 614633

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
JJ Beyer	R3-35	(3)			
PK Clark	S7-55	x			
LD Goodwin	T6-12	x			
DP Hughes	R3-35			x	
JR Kelly	R3-28			x	
CB McVey	H4-24	x			
CE Norton	E6-03	x			
BB Sidhwaney	G3-17	x			
RN Warren	A5-18	x			
Project Files	R1-28	x			
Central Files (2)	L8-04	x			
O.S.T.I. (2)	L8-07	(2)			

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COMPLETE

1. ECN 614633

Proj.
ECN

ENGINEERING CHANGE NOTICE

Page 1 of 6

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐		3. Originator's Name, Organization, MSIN, and Telephone No. JJ Beyer, Effluent Treatment and Laboratory Projects, R3-35, 372-2332		4. Date 09/07/94	
		5. Project Title/No./Work Order No. 222-S Radioactive Liquid Waste Line Replacement/ 93L-EWW-087		6. Bldg./Sys./Fac. No. 219-S, 222-S, 244-S	
		8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-W087-PMP-001, rev. 0		9. Related ECN No(s). N/A	
				7. Impact Level Q	
				10. Related PO No. N/A	
11a. Modification Work ☐ Yes (fill out Blk. 11b) ☒ No (NA Blks. 11b, 11c, 11d)		11b. Work Package No. N/A		11c. Modification Work Complete N/A _____ Cog. Engineer Signature & Date	
				11d. Restored to Original Condition (Temp. or Standby ECN only) N/A _____ Cog. Engineer Signature & Date	
12. Description of Change Direct revision to Revision 1, of Project Management Plan to incorporate the revised cost and schedule baselines per Change Request W087-007. See continuation sheet for page changes and attached revision.					
13a. Justification Criteria Change ☒ Design Improvement ☐ Environmental ☐ (mark one) As-Found ☐ Facilitate Const. ☐ Const. Error/Omission ☐ Design Error/Omission ☐					
13b. Justification Details Fiscal Year 1994 budget shortfall required the revision of the cost and schedule baselines. See continuation sheet for itemized justifications.					
14. Distribution (include name, MSIN, and no. of copies) See Distribution Sheet.				RELEASE STAMP OFFICIAL RELEASE BY WHC DATE DEC 22 1994 4	

ENGINEERING CHANGE NOTICE				Page 2 of 6		1. ECN (use no. from pg. 1) 614633													
15. Design Verification Required ☐ Yes ☒ No		16. Cost Impact <table style="width: 100%;"> <tr> <td colspan="2" style="text-align: center;">ENGINEERING</td> <td colspan="2" style="text-align: center;">CONSTRUCTION</td> </tr> <tr> <td>Additional</td> <td>☒ \$ 30k</td> <td>Additional</td> <td>☒ \$ 270k</td> </tr> <tr> <td>Savings</td> <td>☐ \$</td> <td>Savings</td> <td>☐ \$</td> </tr> </table>				ENGINEERING		CONSTRUCTION		Additional	☒ \$ 30k	Additional	☒ \$ 270k	Savings	☐ \$	Savings	☐ \$	17. Schedule Impact (days) Improvement ☐ Delay ☒ 90	
ENGINEERING		CONSTRUCTION																	
Additional	☒ \$ 30k	Additional	☒ \$ 270k																
Savings	☐ \$	Savings	☐ \$																
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	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐														
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐														
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐														
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐														
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐														
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐														
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐														
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐														
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐														
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐														
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐														
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐														
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐														
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐		☐														
Environmental Report	☐	Inspection Plan	☐		☐														
Environmental Permit	☐	Inventory Adjustment Request	☐		☐														
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															
20. Approvals																			
Signature		Date	Signature		Date														
OPERATIONS AND ENGINEERING																			
Cog Engineer JJ Beyer		12/15/94	ARCHITECT-ENGINEER																
Cog. Mgr. DP Hughes		12/15/94	PE																
QA CE Norton		12/20/94	QA																
Safety			Safety																
Security			Design																
Environ.			Environ.																
Programs CB McVey		12/15/94	Other																
Tank Waste Remediation System																			
Facilities Operations																			
Restoration & Remediation																			
Operations & Support Services																			
IRM																			
Other JR Kelly		12/16/94	DEPARTMENT OF ENERGY Signature or Letter No.		12/16/94														
			Russell M. Warren ADDITIONAL																

12. Description of Change (continued)

- (1) Page iv, last ¶. Replace paragraph with the following:
"The funding profile for this project has undergone major changes in FY 93 and FY 94. The impact of the FY 93 change was addressed in Change Request W087-005. The impact of the FY 94 change is addressed in Change Request W087-007."
- (2) Page 1, Section 1.2. Update FDC reference to Revision 2.
- (3) Page 2, Section 1.3. Replace schedule objective dates with the following:

TABLE 1 - SCHEDULE OBJECTIVES

WBS / Activity	Start Date	Completion Date
1.1 Definitive Design	Jul 1, 1993	Mar 31, 1995
1.1.1 Design Cross Country Pipeline	Jul 1, 1993	Aug 31, 1994
1.1.2 Design Drain Lines	Jun 1, 1994	Mar 31, 1995
1.2 Engineering & Inspection	Sep 1, 1994	Dec 31, 1996
3.1 Onsite Construction Contractor - CPAF	Apr 1, 1995	Oct 31, 1996
3.2 Offsite Construction Contractor - Fixed Price	Sep 1, 1994	Sep 30, 1995
3.3 Operating Contractor Construction	May 1, 1995	Feb 29, 1996
4.0 Project Management Operating Contractor	Jul 1, 1993	Jan 31, 1997
Official Acceptance of Construction (I, II, and III)	Nov 1, 1996	Jan 31, 1997

- (4) Page 3, Section 1.4. Replace cost objectives and breakdown with the following:

WBS / Activity	Estimated Cost & Escalation	Contingency	Total
1.0 Engineering	\$1,540,000	\$290,000	\$1,830,000
1.1.1 Design Cross-Country Pipeline	400,000	0	400,000
1.1.2 Design Drain Lines	430,000	80,000	510,000
1.2 Field Engineering & Inspection	710,000	210,000	920,000
3.0 Construction	\$10,716,000	\$4,030,000	\$14,746,000
3.1 Construction - CPAF	8,536,000	3,300,000	11,836,000
3.2 Construction - Fixed-Price	1,660,000	470,000	2,130,000
3.3 Construction - OC	520,000	260,000	780,000
4.0 Project Integration - OC	\$400,000	\$40,000	\$440,000
Total	\$12,656,000	\$4,360,000	\$17,016,000

- (5) Page 4, Section 2.0. Delete last two sentences of the first paragraph. Delete third bullet.
- (6) Page 6, Section 3.3.2.2. Delete the words "Processing and" from the first sentence.

- (7) Page 11, Section 4.3, Table 3. Replace the table with the following:

TABLE 3 - MILESTONES

Milestone Description	Date
Start Phase I Design (219-S to 244-S) (Issue LOI to start design)	July 1, 1993
Start Phase II Design (222-S to 219-S) (Issue LOI to start design)	June 1, 1994
Start Offsite Contractor Construction (Phase I) (Issue LOI to start construction)	September 1, 1994
Complete Phase I Design (219-S to 244-S) (Approval of design media)	August 31, 1994
Complete Phase II Design (222-S to 219-S) (Approval of design media)	March 31, 1995
Complete Construction (Physical construction complete)	October 31, 1996
Project Completion (Official Acceptance of Construction)	January 31, 1997

- (8) Page 11, Section 4.4, second ¶. Add the following after the second sentence:
"Revision 2 to the project cost estimate is the current cost baseline as approved through Change Request W087-007."
- (9) Page 20, Section 8.0. Update reference 4. to Revision 2, March 1994.
- (10) Attachment A. Replace with the Revised BA/BO Schedule attached.
- (11) Page 14, Table 5, delete J.R. Kelly and C.B. McVey from WHC Change Control Board.

13b. Justification (continued)

- (1) Reflects the source for the current cost and schedule baselines.
- (2) Reflect most current revision number.
- (3) Reflects new baseline dates per Change Request W087-007.
- (4) Reflects new baseline cost per Change Request W087-007.
- (5) FDC Revision 2 removed these specific requirements to allow more flexibility to the designer.
- (6) Program organization title has changed.
- (7) Reflects new baseline dates per Change Request W087-007.
- (8) Reflects the new baseline cost estimate.
- (9) Reflects most current revision number.
- (10) Reflects new baseline BA/BO per Change Request W087-007.
- (11) Reflects current philosophy of "empowering" personnel at the working level.

RELEASE AUTHORIZATION

Document Number: WHC-SD-W087-PMP-001; REV 1

Document Title: Project Management Plan for Project 93L-EWW-087,
"222-S Radioactive Liquid Waste Line Replacement"

Release Date: 12/20/94

**This document was reviewed following the
procedures described in WHC-CM-3-4 and is:**

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara M. Broz

December 20, 1994

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SUPPORTING DOCUMENT		1. Total Pages 41
2. Title Project Management Plan for Project 93L-EWW-087, "222-S Radioactive Liquid Waste Line Replacement"	3. Number WHC-SD-W087-PMP-001	4. Rev No. 1
5. Key Words 222-S, W-087, PMP KMB 12/20/94	6. Author Name: JJ Beyer Signature Organization/Charge Code 7FB80/YW87M	
7. Abstract Direct revision, to rev.1, of the Project Management Plan for Project 93L-EWW-087, "222-S Radioactive Liquid Waste Line Replacement."		
8. RELEASE STAMP <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> OFFICIAL RELEASE BY WHC DATE DEC 22 1994 <i>sta. 4</i> </div>		

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LIST OF TERMS

A/E	Architect/Engineer
ADM	Action Description Memorandum
ATP	Acceptance Test Procedure
BA/BO	Budget Authorized/Budget Outlay
CCB	Change Control Board
CDR	Conceptual Design Report
CM	Construction Manager
CPAF	Cost Plus Award Fee
CR	Change Request
DOE	U.S. Department of Energy
DOE-HQ	U.S. Department of Energy-Headquarters
EA	Environmental Assessment
E/C	Engineer/Constructor Contractor
FDC	Functional Design Criteria
FP	Fixed Price
FSAR	Final Safety Analysis Report
FY	Fiscal Year
IMT	Integrated Management Team
KEH	Kaiser Engineers Hanford
LI	Line Item
MRM	Management Review Meeting
NEPA	National Environmental Policy Act
OAC	Official Acceptance of Construction
ORR	Operational Readiness Review
OTP	Operations Test Procedure
PA	Project Authorization
PE	Project Engineer
PI	Project Integrator
PMD	RL Project Management Division
PMP	Project Management Plan
PSAR	Preliminary Safety Analysis Report
PSWBS	Project Summary Work Breakdown Structure
PSE	Preliminary Safety Evaluation
QA	Quality Assurance
QAPP	Quality Assurance Program Plan
RCRA	Resource Conservation and Recovery Act
RL	U.S. Department of Energy, Richland Field Office
TBD	To Be Determined
TEC	Total Estimated Cost
TPC	Total Project Cost
TPA	Tri-Party Agreement, <i>Hanford Federal Facility Agreement and Consent Order</i>
WBS	Work Breakdown Structure
WHC	Westinghouse Hanford Company

INTRODUCTION

This Project Management Plan (PMP) establishes the organizational responsibilities, control systems, and procedures for managing the execution of project activities for Project W-087, the 222-S Radioactive Liquid Waste Line Replacement, which is a 1993 Line Item Project. The PMP provides the road map for the project to meet programmatic requirements within the cost and schedule baselines established herein. This PMP describes the management methods and responsibilities of the project participants and satisfies the U.S. Department of Energy (DOE) Order 4700.1 which sets forth policies and requirements to be followed in the management of all U.S. Department of Energy, Richland Field Office (RL) projects. Use of this document is described in the "Project Management Manual," WHC-CM-6-2, and the "Project Department Procedures," WHC-CM-6-12.

This project is intended to replace the old piping in the 222-S tunnels and the existing transfer piping outside of these tunnels so that it meets the double-containment requirements outlined in WAC-173-303-640. The 222-S Laboratory in the 200-West Area was constructed in 1951 and is used today to support several Hanford missions including, waste fractionization and encapsulation, waste concentration, grout processing, and tank farm activities. Low-level wastes from laboratory activities are collected and routed through the 222-S tunnels to an underground concrete-encased piping system leading to the 219-S Waste Handling Facility. Past practice had been to route the waste, after approximately 3,000 gallons had been accumulated and treated in 219-S, through the D-Cell jumper at the 202-S Facility through an underground line to the 241-S-151 Tank Farm diversion box. Due to the questionable condition and lack of double containment for this piping, the routing through the 202-S Facility is no longer used. Currently, the waste is stored and treated at the 219-S and is then transferred by truck to the Tank Farms.

The 222-S Laboratory is expected to be needed for another 40 years to support Hanford missions. Any failure or shutdown of the radioactive waste lines due to the present system inadequacies would also shutdown 222-S Laboratory activities.

The funding profile for this project has undergone major changes in FY 93 and FY 94. The impact of the FY 93 change was addressed in Change Request W087-005. The impact of the FY 94 change is addressed in Change Request W087-007 and is used for the cost and schedule baselines in this PMP.

1.0 PROJECT OBJECTIVES

1.1 PURPOSE OF PROJECT

The purpose of this project is to replace the old piping in the 222-S tunnels and the existing transfer piping outside of these tunnels so that it meets current double-containment regulatory requirements. Project W-087 will correct the following deficiencies:

- The existing radioactive liquid waste line system does not meet current state and federal regulation and U.S. Department of Energy (DOE) orders for double containment and leak detection [(Washington Administrative Code 173-303-640, *Resource Conservation and Recovery Act*, and DOE Order 6430.1A)].
- The existing system is forty years old. Leaks have developed in the service tunnel area resulting in increased radiation exposure to maintenance and operations personnel.
- The existing waste-drain piping outside the service tunnel is installed in concrete encasements. This design does not comply with the Safety Class 3 natural forces requirements of Standard Design Criteria, SDC 4.1.
- Due to the questionable condition and lack of double containment for the underground lines from the 219-S Waste Handling Facility through the D-Cell jumper in the 202-S Facility to the 244-S Tank Farm Catch Station, the waste is now pumped from the 219-S into a tanker and transported to the AP Tank Farms in the 200-East Area.

1.2 TECHNICAL OBJECTIVES

The technical objective of this project is to meet requirements identified in the project FDC, WHC-SD-W087-FDC-001, Revision 2, or subsequent revisions as approved by DOE.

1.3 SCHEDULE OBJECTIVES

The overall objectives are to complete construction by October of 1996 and to turn the system over to the operating facility in December 1996.

Major activity start and completion dates are shown below:

TABLE 1 - SCHEDULE OBJECTIVES

WBS / Activity	Start Date	Completion Date
1.1 Definitive Design	Jul 1, 1993	Mar 31, 1995
1.1.1 Design Cross Country Pipeline	Jul 1, 1993	Aug 31, 1994
1.1.2 Design Drain Lines	Jun 1, 1994	Mar 31, 1995
1.2 Engineering & Inspection	Sep 1, 1994	Dec 31, 1996
3.1 Onsite Construction Contractor - CPAF	Apr 1, 1995	Oct 31, 1996
3.2 Offsite Construction Contractor - Fixed Price	Sep 1, 1994	Sep 30, 1995
3.3 Operating Contractor Construction	May 1, 1995	Feb 29, 1996
4.0 Project Management Operating Contractor	Jul 1, 1993	Jan 31, 1997
ATP/OTP & System Turnover	Nov 1, 1996	Jan 31, 1997

1.4 COST OBJECTIVES

The total estimated cost (TEC) for the project is \$17,016,000. This validated cost estimate is based on the revised baseline cost estimate, Revision 2, dated May 5, 1994. A simplified cost breakdown is shown on Table 2.

TABLE 2 - TEC COST BREAKDOWN

WBS / Activity		Estimated Cost & Escalation	Contingency	Total
1.0	Engineering	\$1,540,000	\$290,000	\$1,830,000
1.1.1	Design Cross-Country Pipeline	400,000	0	400,000
1.1.2	Design Drain Lines	430,000	80,000	510,000
1.2	Field Engineering & Inspection	710,000	210,000	920,000
3.0	Construction	\$10,716,000	\$4,030,000	\$14,746,000
3.1	Construction - CPAF	8,536,000	3,300,000	11,836,000
3.2	Construction - Fixed-Price	1,660,000	470,000	2,130,000
3.3	Construction - OC	520,000	260,000	780,000
4.0	Project Integration - OC	\$400,000	\$40,000	\$440,000
Total		\$12,600,000	\$4,400,000	\$17,016,000

2.0 PROJECT DESCRIPTION

Project W-087 will replace the radioactive waste-drain piping from the hot cells in 222-S to the 219-S Waste Handling Facility and provide a new waste transfer route from the 219-S to the 244-S Catch Station. All drain piping in the 222-S tunnels and external to the buildings will be pipe-in-pipe encasements with leak detection. Spare encased pipe lines will be provided for all new piping.

In addition to providing the new piping between facilities the following will also be provided:

- Pipeline leak detection will be provided at the encasement low points in the 219-S and the 244-S.
- The steam jet system for transfers from the 219-S will be replaced by a new pump and controls.
- Sump pumps T4, T7, and T8 in the 222-S service tunnel area will be replaced with new pumps and controls.
- A cathodic protection system will be provided for new underground piping that is in earth contact.
- A new connector head and jumper system will be installed at the 244-S.
- The project will provide for the demolition and proper disposal of the piping and equipment being replaced by the project and selected out of service piping.

The 222-S Laboratory is expected to be needed for another 40 years to support Hanford missions. Any failure or shutdown of the radioactive waste lines due to present design inadequacies would also shut down activities at the 222-S Laboratory. This would adversely affect program schedules vital to Hanford's ability to meet the Tri-Party Agreement.

3.0 MANAGEMENT ORGANIZATION AND RESPONSIBILITY

Principal project participants' responsibilities and authority and the activities which are required of each participating organization throughout the duration of the project are detailed in DOE-RLIP 4700.1A and are summarized below. See Attachment B for a project organizational chart.

3.1 U.S. DEPARTMENT OF ENERGY - RICHLAND FIELD OFFICE (RL)

The RL office of Assistant Manager for Environmental Management (AME) has assigned the responsibility for overall management of Project W-087 to the Project Management Division (PMD). Other RL divisions will provide input and support to the PMD as required in accomplishing the goals of the project. The RL project engineer will be responsible for coordinating with all RL divisions and staff, as necessary, and the coordination of activities of participating prime contractors. General RL management roles and responsibilities are listed in RLIP-4700.1A, "Project Management System," Chapter III, Paragraph 3.

3.2 OPERATING CONTRACTOR RESPONSIBILITIES

The Westinghouse Hanford Company (WHC) has been designated as the Project Integrator (PI) for this project by RL as documented by letter from L.C. Williams of RL, to the President of WHC, subject "Project W-087, Radioactive Liquid Waste Line Replacement, Project Integrator," letter number 9206608, dated September 08, 1992. As the designated PI, WHC is responsible for the integration and management of Project W-087. The WHC Effluent Treatment and Laboratory Projects organization has been assigned by WHC to provide project integration for the RL. The WHC management roles and responsibilities as the Operating Contractor are listed in RLIP 4700.1A, Chapter III Paragraph 4.a.

3.3 INTEGRATED MANAGEMENT TEAM

Project W-087 utilizes the concept of an Integrated Management Team (IMT) to execute required project tasks. This section identifies the roles and responsibilities of the IMT for the design, procurement and construction of this project. The total project includes all activities, expense and capital, required to successfully complete the project.

The WHC Project Engineer has been designated Project Integrator (PI) for Project W-087. The PI is accountable for the total project and oversees the specific responsibilities of the performing organizations who have clearly defined responsibilities and accountability. The performing organizations of the IMT include all project participants performing various aspects of the project. It is the intent of the IMT approach to project management to streamline the day-to-day operations and interactions by minimizing organizational overlap and duplication.

The following performing organizations are the major project participants:

- Project Integrator (PI)--WHC
- Programs--WHC
- Operations--WHC
- Acceptance Inspection--KEH
- Engineering--KEH
- Construction/Construction Management--KEH
- Quality/Performance Assessment--WHC

The IMT concept establishes project accountability and responsibility at the Project Integrator level. Attachment C is an integrated management team responsibility matrix. The following sections identify and describe those performing organizations required to support the design and construction of the project. Their individual roles and responsibilities are identified respectively.

3.3.1 Project Integrator

The WHC Project Engineer has been assigned PI responsibilities for Project W-087 by RL. The PI has overall responsibility for project implementation and is the ultimate decision making authority within the IMT. The PI is accountable to the RL PM for cost, schedule, and scope of the W-087 project and is responsible for performing the overview of all project activities to ensure that quality work is completed in an efficient, safe, environmentally sound, and cost-effective manner. Specific responsibilities will be assigned to the performing organizations by the PI. The resources required to fulfill these responsibilities will be provided by the individual organizations with specific accountability.

3.3.2 Programs and Operations

The WHC sponsoring program is the Analytical Services Program. This program and the 222-S Laboratory Operating Facility are the end users of Project W-087. Their responsibilities for the project are described in Sections 3.3.2.1 through 3.3.2.4.

3.3.2.1 Functional Criteria It is the responsibility of the sponsoring program to provide the Functional Design Criteria (FDC) for Project W-087. The approved FDC for this project is WHC-SD-W087-FDC-001. The maintenance of this document, and any subsequent revisions, are the direct responsibility of the Processing and Analytical Laboratories Program. Any revisions, deviations or variations to the project FDC must comply with the established Change Control requirements described in Section 4.5 of this Project Management Plan.

3.3.2.2 Project Support. The Analytical Services Program provides the expense funding for project support. The performing organizations that have project support responsibilities are funded as part of the programmatic budget.

3.3.2.3 Operations. Project support from the operations organization is needed to assure that the operational objectives of the facility are achieved. Support for design reviews, submittal reviews, procedure development, readiness review (if required) and operator training are some of the responsibilities of this organization. Interface with the project team and contractors during design and construction is essential.

3.3.2.4 Permitting Interface. The Program Manager will provide any required interface with the permitting organizations and the regulatory agencies. This interface will be executed with the direct involvement of the PI and these activities will be evaluated against the project baselines and critical path.

3.3.2.5 Permitting Plan. A project specific permitting plan will be developed by WHC Environmental Permitting to identify:

- General Permitting Requirements
- Permits and Approvals (air, industrial wastewater, hazardous waste)
- Project Constraints
- Permitting Plans (air, wastewater, dangerous waste)
- Integrated Permit Schedule.

3.3.3 Project Integration

The resources needed will vary with the size, type and method of performance of each specific task. The resources are described in Sections 3.3.3.1 through 3.3.3.3.

3.3.3.1 Baseline Management. The scope, schedule and cost baseline management for aspects of this project are evaluated and monitored by the Project Integrator. Revisions and/or changes required to any of these baseline elements must be approved by the PI. The formal revisions to these elements are executed as part of the Change Control Process defined in Section 4.0, Management and Control, of this Project Management Plan. The PI will utilize resources from within WHC and KEH to accomplish this overview.

3.3.3.2 Safety Analysis. The Preliminary Safety Evaluation (PSE) for project W-087 is WHC-SD-W087-PSE-001 and was completed in May of 1991. The existing facility safety documentation is SD-CP-HIE-001, "222-S Laboratory Facilities Hazards Identification Evaluation." In compliance with new WHC requirements, a complete rewrite of SD-CP-HIE-001 is planned with an estimated completion date in the spring of 1994. This revision will follow the format and content of a Final Safety Analysis Report (FSAR). During definitive design WHC will generate a supplemental Engineering Change Notice (ECN) against the facility safety document that will be governing during the construction phase of the project. This ECN will be in place prior to the start of construction activities. After construction, the ECN will be incorporated into the facility safety document prior to operation of the new system.

3.3.4 Engineering

The KEH performed the conceptual design of the project. On the basis of the CDR and the approved Functional Design Criteria, KEH will perform the definitive design.

3.3.4.1 Document Control. The engineering responsibilities for this project include the document control function for engineering activities.

3.3.4.2 Submittal Control. The engineering responsibilities for this project include submittal processing and control. Each submittal package will be identified from the Performance Specification and numbered for tracking. A log and master file system will be maintained for all submittals. The log will also include the scheduled date for submission based on the project schedule as well as the required date submittal comments must be returned.

3.3.4.3 Other Activities. Any additional engineering services that would require the use of the KEH Cost Estimating group or other KEH organizations will be identified and assigned by LOI as required.

3.3.5 Construction

KEH will provide all of the construction services necessary, including inspection and quality engineering, to complete W-087. This will be accomplished through a combination of fixed price construction and on-site construction forces (CF) performed by KEH. Specific responsibility and accountability is detailed in Sections 3.3.5.1 and 3.3.5.2.

KEH is responsible to the PI for cost, schedule and technical compliance to the requirements of this project. Performance through use of fixed price contractors or construction forces is provided by the existing Construction and Construction Management Programs. On-site construction by CF is managed as an integral part of the overall construction program. Site safety and environmental compliance for all construction activities are the responsibility of the construction organization and are managed as part of these programs.

3.3.5.1 Fixed Price Construction Contractor (FPC). The FPC is responsible for procurement of piping and installation of piping through clean areas. For project W-087 this constitutes the cross-country piping from the 219-S to the 244-S but not including the tie-in to these facilities. The contractor will be selected through the competitive bid process. The FPC will be accountable to KEH for the cost, schedule and technical compliance of their scope of work. The FPC will also be accountable to perform their activities in accordance with approved safety and environmental programs which fall within the overall site programs. Acceptance testing, as required, will be performed to assure functional requirements are achieved.

3.3.5.2 Construction Forces (CF). Construction forces will perform selected construction activities generally related to work in potentially contaminated areas. Construction forces will be responsible through KEH Project Management to the WHC Project Integrator for cost, schedule and technical compliance for their scope of work. The CF will comply with all applicable safety and environmental programs through compliance to existing KEH programs.

3.3.6 Quality Performance/Assessment and Inspection

The daily inspection of construction activities is the responsibility of the KEH Construction organization (Section 3.3.5). The overall Quality Assurance functions will be provided by WHC and are described in Section 5.0 of this Project Management Plan. Inspection services are provided through the use of fixed price contractors and the CF for first line inspections, and the Acceptance Inspection (AI) for overview and acceptance for the Government. Quality is assured through performance of construction to approved quality plans, structured inspection programs, and audits and surveillances.

3.3.6.1 Acceptance Inspection (AI). Acceptance Inspection for the Government is performed by KEH for all project procurement and construction activities. AI will assure conformance to the technical requirements through a planned inspection program which is based on overview inspections of the various vendors'/contractors' work being performed. Each primary vendor and contractor will perform inspection of their own work while AI will perform inspections of critical components and characteristics based on a determination during detailed design of significant items requiring verification. In addition, AI will overview selected vendor/contractor inspections to assure conformance to the overall inspection program. AI retains the organizational independence to act as the Government's inspection agency through the KEH corporate program. This program adheres to the requirements of NQA-1, DOE orders and EPA/530-SW-86-031.

3.3.6.2 Daily Inspection. Daily inspections of on-going construction and procurement activities are the responsibilities of, and will be performed by, the organization executing the work. These inspections are intended to provide assurance that the design requirements are properly incorporated into the work and the inspections necessary to verify the design are performed on a timely basis. All inspections will conform to a plan developed and approved during detailed design and to the requirements set forth in the project Quality Assurance Program Plan (QAPP).

3.3.6.3 Performance Assessment. WHC is the performing organization for the overall Quality Assurance functions which consists of the assessment of other performing organizations compliance to the requirements of this project. This is accomplished through audits, surveillances and other appropriate oversight activities to assure compliance with the project QAPP. Section 5.0 of this Project Management Plan further describes the Quality Assurance functions for this project.

In addition to the oversight activities required to assure compliance with the Quality Assurance Program requirements this organization will perform performance assessments. These assessments will review project requirements and will evaluate compliance to those requirements. Examples of assessments that may be performed would be safety documentation, environmental permitting, construction methods, readiness review etc. The PI will determine the specific areas to be assessed. The results of the assessment shall be provided directly to the PI.

4.0 PROJECT MANAGEMENT AND CONTROL

4.1 WORK BREAKDOWN STRUCTURE

The W-087 project is divided into major work activities and with the exception of Project Management, follows the CDR estimate and Change Request W087-005 as follows:

1.0 ENGINEERING

1.1 DEFINITIVE DESIGN

- 1.1.1 DESIGN FOR THE CROSS-COUNTRY PIPELINE**
- 1.1.2 DESIGN FOR THE 222-S/219-S DRAIN LINES**

1.2 FIELD ENGINEERING AND INSPECTION

3.0 CONSTRUCTION

3.1 ONSITE CONSTRUCTION FORCES (CF)

- 3.1.3 219-S & 244-S MODIFICATIONS AND TIE-INS**
- 3.1.4 222-S TO 219-S DRAIN LINE MODIFICATIONS**
- 3.1.5 CF CRAFT BURNOUT**
- 3.1.6 ESCORTS**
- 3.1.7 DECONTAMINATE 222-S TUNNELS AND 222-S/219-S PIPE TRENCH**

3.2 FIXED PRICE CONSTRUCTION CONTRACTOR FOR CROSS-COUNTRY PIPELINE

3.3 OPERATING CONTRACTOR CONSTRUCTION FOR BURIAL BOXES

4.0 PROJECT MANAGEMENT/INTEGRATION

4.2 TECHNICAL BASELINE

This projects Functional Design Criteria (FDC), WHC-SD-W087-FDC-001, establishes the technical baseline. The FDC may be further expanded as appropriate by a separate Supplemental Design Requirements Document (SDRD) or by Letter of Instruction (LOI) to further define specific design requirements. Changes to the FDC and SDRD require Project Change Control Board (CCB) approval as defined in Section 4.5.

Other documents serve to further define the project scope over limited periods of time. Examples of these are: design media, contracts with constructors and equipment fabricators, statements of work, letters of instruction and the construction management plan. Each of these documents serves to define an agreement on scope of work between two organizations. These documents are not controlled through the CCB.

4.3 SCHEDULE BASELINE

Project integrated schedules identify all activities required to ensure the success of the project and support the Project Master Schedule. These schedules will be used during all phases of the project to monitor and manage ongoing and related activities. Table 1 in Section 1.3 of this PMP identifies the specific dates for the project schedule objectives. The following are milestones to support the project completion:

TABLE 3 - MILESTONES

Milestone Description	Date
Start Phase I Design (219-S to 244-S) (Issue LOI to start design)	July 1, 1993
Start Phase II Design (222-S to 219-S) (Issue LOI to start design)	June 1, 1994
Start Offsite Contractor Construction (Phase I) (Issue LOI to start construction)	September 1, 1994
Complete Phase I Design (219-S to 244-S) (Approval of design media)	August 31, 1994
Complete Phase II Design (222-S to 219-S) (Approval of design media)	March 31, 1995
Complete Construction (Physical construction complete)	October 31, 1996
Project Completion (Official Acceptance of Construction)	January 31, 1997

4.4 COST BASELINE

The Project Authorization (PA) authorizes funding for the project. The PA requires that work be performed consistent with the scope, cost estimate, and schedule baselines. Changes to the cost baseline that require additional funding will require a modification to the PA. A modification to the PA will be prepared each year as additional budget authority is made available.

The total project cost (TPC) for the project is approved and controlled by DOE-HQ. The TEC is initially established with the conceptual design, reference 2, and becomes baseline after formal validation by DOE-HQ. Revision 2 to the project cost estimate is the current cost baseline as approved through Change Request W087-007. The funding baseline for the project is the approved BA/BO schedule. The funding baseline represents the amount and timing of funding required to complete the project within the scope, cost, and schedule baselines.

4.5 CHANGE CONTROL REQUIREMENTS

Change Control Board (CCB) action is initiated to address changes to the project scope, schedule or cost that exceed the thresholds defined in this section. All changes are approved and documented using the Change Request form (CR). Change Requests shall be completed immediately upon the identification of a prospective change as described in Section PM-14 of WHC-CM-6-2, Project Management. If a CR is prepared based on preliminary information, the final impact assessment information will be evaluated to assure that the original preliminary impacts and associated threshold approval authority were not exceeded. In the event the final impacts exceed the impacts approved with the preliminary information, a follow-up change request will be submitted.

Contingency usage will be tracked with a running total. After 75% of the overall project contingency, as established in the CDR, has been used, all further requests for the use of contingency will require RL approval.

Kaiser Engineers Hanford company will be authorized to control contingency usage via Class IIIa Change Requests up to a cumulative total of \$50,000 for Engineering and \$250,000 for Construction. These stand alone Change Requests must be in increments of \$10,000 or less as shown in Table 4.

The cost and schedule thresholds for Project W-087 are defined as follows:

TABLE 4 - CHANGE CONTROL THRESHOLDS

Change Request Class	Change Request Description	Approval Action Required
I	Any changes to: <ul style="list-style-type: none"> • TEC • Project completion date • Technical baseline (FDC) • RL Controlled milestones • Approved WBS • Schedule impacts > 3 weeks • Use of contingency within each major WBS element $\geq$ \$250K 	DOE-HQ (as required) RL Program, WMD (as required) RL Projects, PMD WHC CCB WHC PI
II	<ul style="list-style-type: none"> • Contingency use within each major WBS element $\geq$ \$25K < \$250K • Schedule impact > 1 week < 3 weeks 	WHC CCB WHC PI
III	<ul style="list-style-type: none"> • Contingency use within each major WBS element $\geq$ \$10K < \$25K • Schedule impact < 1 week 	WHC PI

IIIa	<ul style="list-style-type: none">• Contingency use < \$10K per CR for a cumulative contingency authorization total by major WBS as follows:<ul style="list-style-type: none">1.0 Engineering - \$50K3.0 Construction - \$250K4.0 Project Mngmt. - \$0	KEH PM
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NOTES:

- 1) It is not permissible to break a large change into several smaller changes to reduce the classification. Each project change shall be identified on a single, stand alone CR.
- 2) All Class II, III and IIIa change requests will be copied for information to the RL PM.
- 3) The cumulative use of contingency is reported in the Quarterly Management Review Meetings.

The Project W-087 WHC CCB membership is:

TABLE 5 - WHC CHANGE CONTROL BOARD

<u>Function</u> Organizational Position	Member
<u>Chairman</u> Projects Level 4 Manager	D. P. Hughes

Other members may be added as appropriate to evaluate each individual change.

4.6 PERFORMANCE MONITORING AND REPORTING

The techniques utilized to monitor performance are responsive to requirements outlined in DOE Order 4700.1, *Project Management System*. These techniques are centered around:

- Clear definition of technical objectives
- Organization of the project around a common WBS and clear assignment of responsibility for each element of the project
- Establishment of realistic, attainable schedule and budgetary work plans that reflect scheduling of defined work in the sequence which will be performed to meet specific schedule milestone dates; and budgeting cost for each project element according to the sequence of tasks necessary to complete the work by the date scheduled
- Objective, timely measurement and analysis of cost performance data
- Identification of variances soon enough to facilitate formulation and execution of recovery plans
- Monitoring of recovery plans to assure that the desired results are achieved
- Tracking of all changes which may impact scope, cost, or schedule baselines.

4.6.1 Monitoring the Scope Baseline

During design, technical baseline monitoring is performed through participation in design reviews. Design reviews are conducted during the design phases to verify that the evolving design conforms to the FDC and, as appropriate, the specific work scope documents. These reviews are scheduled at specific points during the definitive design phases of the project. Project W-087 will have 30% and 90% design reviews. They are intended to (1) verify that the design is in conformance with the approved baseline requirements, (2) ensure technical agreement on the design approach, (3) verify adequacy of the design definition, and (4) review progress. Design review meetings will bring together the key technical project participants.

During fabrication, construction, and installation of equipment, monitoring of the adherence to the technical baseline will be performed through the management of contracts. This includes drawings, specifications and reports prepared as a result of the on-site inspection of fabricators and constructors by the acceptance inspection agency.

During test phases, monitoring of adherence to the technical baseline is performed through comparison of test results with the specified design requirements.

4.6.2 Monitoring the Cost Baseline

Assurance that the approved cost estimates are sufficient to complete the project will be accomplished through periodic reviews of new data consisting of actual costs and trend information that will help predict future costs. Reviews shall assure that the following requirements are met:

- Cost estimate formats shall be consistent with the approved PSWBS. All scope included in the PSWBS shall be included in the estimate.
- The scope and schedule basis for each cost estimate will be identified. Assumptions used in estimating will be documented.
- Pricing based upon detailed drawing take-off is the preferred method of estimating. Vendor quotes will be obtained for high cost items and specially fabricated equipment. Where drawing detail is insufficient for quantity take-offs, parametric techniques will be used. The technique of using an allowance (based on estimator experience) without reference to a known quantity will be minimized.
- Labor rates and labor productivity will be based on local rates and experience.
- All known or anticipated costs are included in the base estimate and are not included in the contingency.

- Contingency will cover unknown costs such as scope design refinements, changes in market conditions, minor labor rate change, and work stoppages due to weather. The contingency allowance is not expected to cover impacts due to items such as long labor strikes, weather disasters, changes in FY budgets, scope additions, and new regulations or imposed criteria outside of the control of the project.

The project will provide for the generation, reporting, and analysis of cost performance information as follows:

- The project participants will utilize and maintain internal cost performance management information that provide cognizant managers with timely, objective cost performance data. Methods for resolving conditions causing deviation from current plans and forecasted deviations from future plans must also be provided. Evaluation reviews will be conducted to assure that management has sufficient visibility to control cost. The Earned Value Method for cost performance will be utilized for the ongoing monitoring of project objectives.
- RL will require a quarterly cost report that integrates all elements of the project.

If cost performance evaluations identify variances in excess of the established thresholds, analyses must be performed to determine their cause and the appropriate corrective action. Variance analysis provides the opportunity to identify problems and obtain whatever guidance and resources are required for their resolution.

Estimates at completion (EAC) will be developed periodically throughout the design and construction of the project. EAC forecasts should represent the sum of the actual cost and estimates to complete with consideration given to: (1) latest performance data, (2) current assessment of changed conditions, (3) current, realistic pricing factors and rates, and (4) knowledgeable forecasts of conditions that are likely to exist in the future (based on rational supportable analyses). An updated EAC for the project will be presented at the project quarterly meetings.

4.6.3 Monitoring the Schedule Baseline

Actual project progress will be tracked against the baseline schedule milestones on a monthly basis. Schedule status is monitored by each performing organization, and the regular reports are reviewed by the PI and the appropriate management. Appropriate corrective action will be initiated to rectify schedule variances as they are identified. Recovery plans shall be developed for all schedule slippages unless specifically approved by the PI.

4.6.4 Quarterly Reports

An integrated quarterly report will be submitted by the PI to RL and will contain information in the areas listed below.

- Major accomplishments
- Issues and corrective actions
- Cost performance
- Schedule status
- Contingency use

The information contained in these reports will be obtained from the same data base that supports day-to-day management by the project participants.

4.7 PROJECT MEETINGS

The PI has lead responsibility to conduct periodic status reviews which are conducted with all project participants responsible for providing support to Project W-087. The meeting will focus on cost status, schedule status, and problem areas or potential problem areas. The meeting will cover: (1) significant progress and work status, (2) significant problems and planned solutions, (3) contingency status and (4) cost and schedule status. Subsequent meetings will highlight previously identified problems and their current status, as well as the disposition of previously identified priority efforts.

A quarterly management review meeting will be conducted by the PI with RL and will be scheduled with the other Laboratory projects. The meeting agenda will be based on the items from the quarterly report as noted in Section 4.6 of this PMP. At the discretion of the PI, the meeting can be held more frequently if there are significant issues to address.

5.0 QUALITY ASSURANCE

The overall QA for the project will be planned and implemented in accordance with DOE Order 5700.6C, ASME NQA-1 (latest edition) and other applicable quality standards; i.e., EPA technical guidance document. Quality activities will be graded based on the potential impact on environmental, safety, health, reliability and continuity of operations. The services required to support Project W-087 will be provided by WHC and will be responsible directly to the PI.

5.1 QUALITY ASSURANCE PROGRAM PLAN

All project related activities shall establish and implement appropriate quality assurance requirements identified in the Project Specific Quality Assurance Plan (QAPP). The QAPP for this project is WHC-SD-W087-QAPP-001. Conditions adverse to quality are identified in nonconformance reports, audit reports, surveillance reports, and corrective action request. Investigation and corrective actions in response to these adverse conditions shall be completed in a timely manner.

5.2 DESIGN AND CONFIGURATION CONTROL

The construction contractor(s) are responsible for establishing, implementing, and documenting an inspection program in accordance with approved specifications and drawings.

5.3 DOCUMENT CONTROL

Design documents such as specifications, drawings, etc., shall be controlled by the project specific procedures developed to support Project W-087. The individual design agencies shall maintain control of the design and construction documents (i.e., specifications, drawings, etc.) through acceptance of construction. A Project Records Checklist shall be initiated to identify those records required for the final project file.

5.4 QUALITY ASSURANCE RECORDS

Each organization that maintains QA records will be required to control them in accordance with the applicable requirements of NQA-1 and EPA/530-SW-86-031.

5.5 AUDITS

Internal and external audits are to be performed by the Quality Assurance/Performance Assessment organization to assure project compliance with QA program requirements. These will be performed in accordance with the QAPP.

6.0 ENVIRONMENTAL ASSURANCE

6.1 NEPA DOCUMENTATION

DOE-RL submitted an Action Description Memorandum (ADM) via memorandum to the Office of Waste Management, EM-30/HQ, in January 1992 recommending that the preparation of an Environmental Assessment (EA) was the appropriate NEPA documentation. EM-30/HQ concurred with this recommendation and notified the Washington State Department of Ecology of this determination via letter in May of 1992. A draft Environmental Assessment (EA)/Finding of No Significant Impact (FONSI) has been prepared for W-087 and was submitted to DOE for review in December of 1992.

6.2 ENVIRONMENTAL COMPLIANCE

The project will be required to conform to environmental regulations 40 Code of Federal Regulations 264 Subpart J and WAC 173-303-640. Project activities will be performed in accordance with WHC-CM-7-5, Environmental Compliance Manual.

6.3 PERMITTING

The drain lines to the 219-S will be part of the RCRA Part B Permit Application for the 222-S Laboratory Facility. The cross-country pipelines from 219-S to the 244-S will be part of the RCRA Part B Permit for the Tank Farms. A project specific permitting plan will be developed by WHC prior to the design phase of the project.

6.4 WASTE DISPOSAL PLAN

A waste disposal plan defining the methods for disposal of project generated waste will be developed and approved by WHC prior to the start of construction.

7.0 PROCUREMENT PLAN

Project W-087 has no specialty or long lead material requirements that would require the preparation of a procurement plan. A separate WBS element for procurement was not used. All procurements will be made by the construction contractors.

8.0 REFERENCES

Project-Specific Documents

1. WHC-SD-W087-PSE-001, *Preliminary Safety Evaluation for the 222-S Radioactive Liquid Waste Lines Upgrade*, May 1991.
2. WHC-SD-W087-CDR-001, *Conceptual Design Report for the 222-S Radioactive Liquid Waste Lines Upgrade*, July 1991.
3. WHC-SD-W087-ES-001, *Engineering Study for the 219-S Liquid Waste Transfer Line*, June 1989.
4. WHC-SD-W087-FDC-001, Revision 2, *Functional Design Criteria for the Radioactive Liquid Waste Lines Replacement*, March 1994.

ATTACHMENT A
BA/BO SCHEDULE

BA/BO Schedule PROJECT W-087

222-S RADIOACTIVE LIQUID WASTE LINE REPLACEMENT

TOTAL COST	FY 1993				FY 1994				FY 1995				FY 1996				FY 1997			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1.0 ENGINEERING																				
1.1 DEFINITIVE DESIGN (ON SITE A-E)																				
1.1.1 PHASE I (219-S TO 244-S)				320/90				80/310												
1.1.2 PHASE II (222-S TO 219-S)							510/200				0/310									
1.2 ENG/INSPECTION (ON SITE A-E)							100/50				420/400					400/380			0/90	
3.0 CONSTRUCTION																				
3.1 ONSITE CONSTRUCTION CONTRACTOR 11,836																				
3.2 OFFSITE CONSTRUCTION CONTRACTOR 2,130																				
3.3. OPERATING CONTRACTOR CONST 780								1,976/140								4,370/7300			0/96	
											154/1,990									
																700/500			80/280	
4.0 PROJECT MANAGEMENT (OC) 440																				
				30/10				100/100								150/140			0/30	
TOTALS BA/BO DOLLARS IN THOUSANDS 17,016				350/100				2,766/800								5,000/8,100			0/216	

ATTACHMENT B
PROJECT W-087 ORGANIZATIONAL CHART

ATTACHMENT B

PROJECT W-087 ORGANIZATIONAL CHART

087ORG.GAL 12-15-94 APK

ATTACHMENT C

W-087 INTEGRATED MANAGEMENT TEAM MATRIX

**HANFORD CONSTRUCTION PROJECTS
DIVISION OF RESPONSIBILITY MATRIX
INTEGRATED MANAGEMENT TEAM CONCEPT
(REV. 0)**

01/10/92

PROJECT PARTICIPANT KEY:	
DOE	U.S. Department of Energy Field Office, Richland (RL)
Ops	Contractor organization responsible for operation of completed project
Proj Sponsor	Contractor organization charged with management of finished program activities for RL program office
Proj Integ	Project Integrator as assigned by RL
Perform Org	Organization responsible for performance of specific assigned task

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HANFORD CONSTRUCTION PROJECTS DIVISION OF RESPONSIBILITY MATRIX INTEGRATED MANAGEMENT TEAM CONCEPT (REV. 0)

02/04/92

TASK DESCRIPTION	INVOVEMENT				DOE
	Ops/Prog Sponsor	Proj Integ	Perform Org		
PROJECT MANAGEMENT AND INTEGRATION					
Long Range Program/Strategic Plans	P				R
Update Activity Data Sheet for Active Projects	A	R	P		
Project Management Plan	A(6)	P,A,T			A
Project Master Schedule		P			
Project Summary Work Breakdown Structure		P			
Project QA Plan	A(7)	A,T	P		R,A(3)
Project Security Plan	A	A	P		
System Engineering Management Plan	A	A,T	P		A(5)
Configuration Management Plan	A	A,T	P		A(5)
Automated Data Processing Configuration Management Plan	A	A,T	P		A
Request for Project Authorization/Modification	A	P,A,T			A
Class 1 Change Requests	A(8)	P,A,T	C		A
Class 2 Change Requests		P,A,T	C		
Class 3 Change Requests		P,A			
TPA Change Requests			P,A		
Other Project Cost Identification & Definition	P,A,T	C	C		A
Other Project Cost Control	C,A(9)	P,A	C		A
Cost Reporting & Variance Analyses - Total Project	**	**			
Cost Reporting & Variance Analyses - Assigned Scope		P,A	P		S

** = Case-by-Case Basis

3 = This Item Only

9 = MSAs Only

6 = Program Sponsor Approval of Project Objectives, Scope, Cost and Schedule Baselines, and WBS

7 = Program Sponsor and QA

8 = Thresholds of Class 1 Cfts Requiring Program Sponsor Approval Defined in PMP

9 = Approval Reflects Programmatic Agreement to Fund

A = Approval P = Prepares/Performs/Acquires R = Reviews C = Contributes S = Surveillance T = Transmits

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HANFORD CONSTRUCTION PROJECTS DIVISION OF RESPONSIBILITY MATRIX INTEGRATED MANAGEMENT TEAM CONCEPT (REV. 0)

02/04/92

TASK DESCRIPTION	INVOVEMENT			DOE
	Ops/Prog Sponsor	Proj Integ	Perform Org	
PROJECT MANAGEMENT AND INTEGRATION (CONT'D)				
Document Control - Assigned Scope				
Records Management - Assigned Scope			P	S
Training/Qualification/Certification Records - Assigned Scope			P	
Engineering Configuration Control - Assigned Scope			P	S
Project Records/File List		P	C	
Maintain FDC/SPRD	P.A.T	A(10)		A(4)
Project Status Reporting to DOE-RL Programs	P	C		
Report to DOE-RL PMD (Monthly/Quarterly)		P		
Cultural Resource Review			P	
Non-Conformance Reports - Assigned Scope			P	
Work Breakdown Structure - Assignment Scope			P	
Technical Interface with Performing Engineering and Construction Org		P		S
QA Audits & Surveillance of Participants (per Assigned Scope)			P	P
QA Audits & Surveillance-Internal			P	P
Safety Oversight & Appraisal of Sub-Contractor Safety Programs (per Assigned Scope)	S		P	S
Project Input to Program Integration Schedule		P		
Project Input to Site Utilization Plan		P		
Tri-Party Agreement Milestone Identification/Scheduling/Reporting	P.T	C(*)		A

* = As Requested

4 = DOE Approval of SPRD Only if Required by PMP

5 = Program Sponsor Approval of Project Objectives, Scope, Cost and Schedule Baselines, and WBS

10 = Revisions Only

A = Approval P = Prepares/Performs/Acquires R = Reviews C = Contributes S = Surveillance T = Transmits
 I = Initiates

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HANFORD CONSTRUCTION PROJECTS DIVISION OF RESPONSIBILITY MATRIX INTEGRATED MANAGEMENT TEAM CONCEPT (REV. 0)

02/04/92

TASK DESCRIPTION		INVOLVEMENT			POE
ENVIRONMENTAL PERMITTING AND DOCUMENTATION		Ops/Prog Sponsor	Proj Integ	Perform Org	
Environmental Permitting Plan		A	A(11)	P(12)	R
NEPA Documentation (GX, EA, EIS)		A, T	A(11)	P	A
Regulatory Permit Applications (Clean Air Act, NPDES, WAC 216, etc.) (13)		A, T	A(11)	P	A(14)
Project Documentation Supporting Permit Applications (15)		A, T	A(11)	P	A(14)

** - Case-by-Case Basis

11 - For Consistency with Project Requirements

12 - WIC Environmental Permitting Organization

13 - WIC Environmental Permitting Organization Serves as Central Hanford Site Interface Representing

All Contractors with Permitting Regulators

14 - Submitted Through DOE to Regulators

15 - Examples Include Environmental Monitoring Plan, Environmental Monitoring Procedures, Best Available

Technology Review, 30% and 80% Design, and Construction Test Plan

DO NOT WRITE
IN THESE SPACES

A - Approval P - Prepares/Performs/Acquires R - Reviews C - Continues S - Surveillance T - Transmits

HANFORD CONSTRUCTION PROJECTS DIVISION OF RESPONSIBILITY MATRIX INTEGRATED MANAGEMENT TEAM CONCEPT (REV. 0)

02/04/92

TASK DESCRIPTION		INVOLVEMENT			DOE
DEFINITIVE DESIGN		Ops/Rtgg Sponsor	Proj. Inleg	Perform Org	
Letter of Instruction for A/E			P.A		A
Alarm Plan/Checklist		A(16)	A	P	
Design Dwg. Specs. & Supporting Documents for Construction Packages (for Assign'd Scope)		A(17)	A(18)	P	R.A(3)
Constructibility Review			A	P	
Preliminary Safety Analysis		A.T	A	P	A
Automated Data Processing Acquisition Plans (for Assigned Scope)				P	A
In-Process Design Review (to p. 30% & 80%)		C	R(18)	P	C.S
Safety & Environmental Design Criteria Interpretation Authority		P.A	A		S
Design Verification-Independent (for Assigned Scope)		A(19)		P.A	S
Engineering Change Notices - Assigned Scope		A(17)	A	P	
Acceptance Inspection Plan		C.R(17)	A(20)	P	

3 - Line Items Only

16 - For Operations, Safety, Environmental, and Technical Interface with Existing Facility and/or Site

17 - For Operability/Maintainability/Functionality. Media Subject to Technical Review and/or

Compliance Oversight Defined in FMP and QA Plan

18 - For Conformance with Design Criteria

19 - Case-By-Case Basis as Defined by QA Plan

20 - For Budget and Schedule and Compliance with QA Plan

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HANFORD CONSTRUCTION PROJECTS DIVISION OF RESPONSIBILITY MATRIX INTEGRATED MANAGEMENT TEAM CONCEPT (REV. 0)

02/04/92

TASK DESCRIPTION	INVOLVEMENT				DOE
	Ops/Prog Sponsor	Proj Integ	Perform Org		
PROCUREMENT					
-Pre-Procurement Plans (General)		P.A.T			R.A(21) A(21)
-Procurement Plan (for Assigned Scope)			P		
-Care & Maintenance Instructions (for Assigned Scope)			P		
Factory Acceptance Test Specification	A(**)	A(**)	P		R
Factory Acceptance Testing/Reporting			P		S
Sole Source Justifications (for Assigned Scope)			P.A		A(21)
Spare Parts Requirements	A(**)	A(**)	P		
Procurement Solicitation Packages (for Assigned Scope)			P		S.A(21) S.A(21)
Vendor Qualification (for Assigned Scope)	A(**)		P		
Insulation Procedures	A(**)	A	A		S
Vendor Submittals	A(**)	A(**)	P		R(**) S.A(21)
Subcontract For Cost Estimates			P		
Procurement			P		

** = Case-by-Case Basis

21 = Only for Those Procurements Exceeding Performing Organization DOE Authorization and A/E and B/A Procurements

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HANFORD CONSTRUCTION PROJECTS DIVISION OF RESPONSIBILITY MATRIX INTEGRATED MANAGEMENT TEAM CONCEPT (REV. 0)

02/04/92

TASK DESCRIPTION	INVOLVEMENT				DOE
	Ops/Proj Sponsor	Proj Integ	Peripm Org		
CONSTRUCTION					
Acceptance Test Procedures	A(16)	A	P		R
Permits - General Construction Related	A(16)	P.A			
Excavation Permit	A(16)	P.A			
Tie-In Permit	A(16)	P.A			
Core Drill Permit	A(16)	P.A			
Hazardous Work Permit	A(16)	P.A			
Radiation Work Permit	A(16)	P.A			
Asbestos Work Permit	A(16)	P.A			
Facility Modification Work Permit	A(16)	P.A			
Utility/Bulldozing System Outage Permit	A(16)	P.A			
Restricted Area Entry Permit	A(16)	P.A			
Roofed Area Entry Permit	A(16)	P.A			
Construction Procedures (Welding Procedures, etc...)			P		
Subcontractor Construction Plan			P		
Construction Method of Performance		C.A	P		A
Detailed Construction Schedules	A(16)	A	P		
Process Control Packages for Force Account Work		P	P		
Letter of Instruction for Construction			P		
Construction Performance & Installation			P		
Engineering During Construction (Design Clarif., Data Submittals, ECNs)			P		S
Non-Conformance Reports (Assigned Scope)	A(17)	A(18)	P		

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Compliance Oversight Defined in FMP and QA Plan

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**HANFORD CONSTRUCTION PROJECTS
DIVISION OF RESPONSIBILITY MATRIX
INTEGRATED MANAGEMENT TEAM CONCEPT
(REV. 0)**

02/04/02

TASK DESCRIPTION	INVOVEMENT				DOE
	Ops/Prop Sponsor	Hrly Inleg	Perform Org		
CONSTRUCTION (CONT'D)					
Surveys					
Site Safety Walkthrough			P		
Hazardous Waste Disposal Satellite Accumulation Location	S(16)	S	P		
Acceptance Testing Performance			P		
Government Acceptance Inspection	S(16)	A	P		
Utility Tie-Ins	S	A	P		C
	A	A	P		

16 - For Operations, Safety, Environmental, and Technical Interface with Existing Facility and/or Site

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