13 STA 4 JAN 26 1995

ENGINEERING DATA TRANSMITTAL

1. EDT 609437

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
Distribution	Effluent Treatment and Laboratory Projects	N/A
5. Proj./Prog./Dept./Div.:	**6. Cog. Engr.:**	**7. Purchase Order No.:**
Project W-178	D. I. Buckles	N/A
8. Originator Remarks: For release of the Project Management Plan.		**9. Equip./Component No.:** N/A
		10. System/Bldg./Facility: 219-S Facility
11. Receiver Remarks:		**12. Major Assm. Dwg. No.:** N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: 01/27/95

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	WHC-SD-W178-PMP-001		0	Project Management Plan	Q	1		

16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)

(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.
1	1	Cog.Eng. D. I. Buckles	D. I. Buckles	1/19/95	R3-35	B. B. Sidhwaney			G3-17	3	6
1	1	Cog. Mgr. D. P. Hughes		1/23/95	R3-35	Project Files			R1-28	3	6
1	1	QA See Signature Page			E6-03	Central Files			L8-04	3	
3	6	Safety P. A. Moorman			T6-04	OSTI (2)			L8-07	3	
3	6	Env. M. A. Hall			T5-03						
3	6	C. B. McVey			H4-21						
3	6	L. D. Goodwin			T6-12						

18.	19.	20.	21. DOE APPROVAL (if required) Ctrl. No. (see signature page)
D.J. Buckles D. I. Buckles 1/19/95 Signature of EDT Originator Date	Authorized Representative for Receiving Organization Date	D. P. Hughes 1/23/95 Cognizant Manager Date	[x] Approved [ ] Approved w/comments [ ] Disapproved w/comments

BD-7400-172-2 (04/94) GEF097

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RELEASE AUTHORIZATION

Document Number:	WHC-SD-W178-PMP-001, REV.0
Document Title:	Project Management Plan for Project W-178, 219-S Secondary Containment
Release Date:	January 26, 1995

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

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Chris Willingham — January 26, 1995

SUPPORTING DOCUMENT

1. Total Pages 30

2. Title	3. Number	4. Rev No.
Project Management Plan for Project W-178, 219-S Secondary Containment	WHC-SD-W178-PMP-001	0

5. Key Words	6. Author
PMP for W-178, 219-S Secondary Containment Upgrade	Name: D. I. Buckles D. I. Buckles 1/19/95 Signature Organization/Charge Code 7FB80 / YA178

7. Abstract

Project Management Plan

8. RELEASE STAMP

OFFICIAL RELEASE
BY WHC
DATE JAN 26 1995
STA 4

PROJECT MANAGEMENT PLAN
FOR 219-S SECONDARY CONTAINMENT UPGRADE
PROJECT 95L-EWW-178

Prepared by
Westinghouse Hanford Company
December 1994

for the
U.S. Department of Energy
Richland Operations Office
Richland, Washington

PREPARED BY: D. I. Buckles — Project Engineer — 1/9/95 Date

WHC APPROVALS: D.P. Hughes — Manager, Effluent Treatment and Laboratory Projects — 1/11/95 Date

J.R. Kelly — Manager, Environmental and Effluent Treatment Projects — 1/12/95 Date

R. P. Marshall — Manager, Laboratory Engineering — 1/17/95 Date

C. B. McVey — Laboratory Programs — 1/17/95 Date

L.D. SALSBERRY
~~B. H. McGillicuddy~~ — Manager, Quality Engineering Construction Projects — 1/17/95 Date

DEPARTMENT OF ENERGY APPROVAL:

Russell M Warren — Project Management Division — 1/23/95 Date

CONTENTS

CONTENTS (cont)

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
ICF KH	ICF Kaiser Hanford
IMT	Integrated Management Team
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, *Hanford Federal Facility Agreement and Consent Order*
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-178, the 219-S Secondary Containment Upgrade, which is a 1995 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 Operations 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.

The scope of this project will provide the 219-S Facility with secondary containment for all tanks and piping systems. Tank 103 will be replaced with a new tank which will be designated as Tank 104. Corrosion protection shall be installed as required per WAC-173-303-640 (4) (e) (ii). The cells shall be cleaned and the surface repaired as required.

The 219-S Waste Handling Facility (219-S Facility), located in the 200 West Area, was constructed in 1951 to support the 222-S Laboratory Facility. The 219-S Facility has three tanks, TK-101, TK-102, and TK-103, which receive and neutralize low level radioactive wastes from the 222-S Laboratory. For purposes of the laboratory, the different low level waste streams have been designated as high activity and intermediate activity. The 219-S Facility consists of two cells, A and B. Cell B was constructed with two vaults, one for Tank 103 and one as a contingency in case Tank 103 should fail. Tanks 101 and 102 in Cell A were fabricated in 1943 for another Hanford project, but were excessed when that project was abandoned before construction. Tank 103 was fabricated in 1950 for this specific facility. These tanks are considered a treatment, storage, and/or disposal unit under Washington Administrative Code (WAC) 173-303. The Part A Permit Application for this TSD unit is contained in the Hanford Site Dangerous Waste Part A Permit Application. (Reference: DOE-RL, Hanford Facility Dangerous Waste Part A Permit Application, DOE-RL-88-21, Vol. 1-3, as amended, U.S. Department of Energy, Richland Operations Office, Richland, Washington.)

The 219-S Facility accumulates and treats the liquid waste from 222-S Laboratory prior to transferring it to SY Tank Farm in the 200-W Area. Transfers are normally made by pipeline from the 219-S Facility to the 241-SY Tank Farm. Presently transfers are being made by tanker truck to the 200-E Area Tank Farms due to the diversion box catch tank which has been removed from service.

The 222-S Laboratory is expected to be needed for another 40 years to support Hanford missions. Any failure or shutdown of the 219-S Facility would also shutdown 222-S Laboratory activities.

1.0 PROJECT OBJECTIVES

1.1 PURPOSE OF PROJECT

The purpose of this project is to retrofit the 219-S Facility with secondary containment for all tanks and piping systems so that it meets current double-containment regulatory requirements. Project W-178 will correct the following deficiencies:

- Provide the 219-S Facility with secondary containment for all tanks and piping systems. Tank 103 will be replaced with a new tank which will be designated as Tank 104. Corrosion protection shall be installed as required per WAC-173-303-640 (4) (e) (ii). The cells shall be cleaned and the surface repaired as required.

- New tank support shims shall be designed and installed, as required. A leak detection system which will detect the failure of the primary containment or any release of hazardous waste or accumulated liquid in the secondary containment system. A leak detection system capable of detecting a release within 24 hours, (WAC 173-303-640 (4) (e)), shall be installed with appropriate alarms.

- Replace required piping from the interior cell walls to individual tanks and piping for tank to tank interconnections. Piping from Tank 102 to the discharge pump shall be supplied by this project.

1.2 TECHNICAL OBJECTIVES

The technical objective of this project is to meet requirements identified in the project FDC, WHC-SD-W178-FDC-001, Revision 1, or subsequent revisions as approved by DOE.

1.3 SCHEDULE OBJECTIVES

The overall objectives are to complete construction by January of 1997 and to turn the system over to the operating facility in March 1997.

Major activity start and completion dates are shown below:

TABLE 1 - SCHEDULE OBJECTIVES

WBS / Activity		Start Date	Completion Date
1.0	Engineering	Jan 1, 1995	Feb 28, 1997
1.1	Definitive Design	Jan 1, 1995	Oct 31, 1995
1.2	Engineering & Inspection	Oct 1, 1995	Feb 28, 1997
2.0	Procurement	Jun 1, 1995	Dec 31, 1995
3.0	Onsite Construction Contractor	Oct 1, 1995	Feb 28, 1997
4.0	Project Management Operating Contractor	Jan 1, 1995	Mar 31, 1997
	ATP/OTP & System Turnover	Feb 1, 1997	Mar 31, 1997

1.4 COST OBJECTIVES

The total estimated cost (TEC) for the project is $2,600,000. This validated cost estimate is based on the conceptual design cost estimate, Revision 2, dated April 6, 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**	**$ 585,000**	**$190,000**	**$ 775,000**
1.1	Definitive Design	440,000	160,000	600,000
1.2	Field Engineering & Inspection	145,000	30,000	175,000
2.0	**Procurement**	**100,000**	**25,000**	**125,000**
3.0	**Construction**	**1,220,000**	**325,000**	**1,545,000**
3.1	On-site Construction Contractor	1,160,000	320,000	1,480,000
3.3	Construction Burial Fees	60,000	5,000	65,000
4.0	**Project Integration - OC**	**135,000**	**20,000**	**155,000**
	Total	**$2,040,000**	**$560,000**	**$2,600,000**

2.0 PROJECT DESCRIPTION

Upgrading the 219-S Facility will consist of three construction phases to keep the facility operational.

Phase I Construction

During Phase 1, Tank 101 will receive waste and Tank 102 will treat the waste to maintain service to the 222-S Laboratory.

A stainless steel liner, Tank 104, support piping system, and a temporary transfer pump for Tank 104 will be installed in the spare space in Cell B. The stainless steel lining in Cell B will include provision for a new sump. A sump liquid transfer system will consist of two 3-way motor-operated ball valves, pump, and piping. The piping will drain the existing Cell B sump and the newly installed sump. Compressed air for the temporary transfer pump and the electrical power for two motor-operated valves in Cell B will be provided and connected. Electric power for the new Tank 104 liquid level detection system will also be provided.

Electrical solenoid controls for the new air diaphragm transfer pump and the new sump pump will be installed.

Phase II Construction

During Phase II, the new Tank 104 will accept high and intermediate level waste using temporary flex hoses for its piping system. Tank 103 will receive and treat the waste pumped from Tank 104. A temporary transfer pump and flex hose system will transfer waste from Tank 103 to a tank truck loading station.

Electrical and instrumentation wires and conduit will be disconnected from Tanks 101 and 102 and removed to the cell walls before the tanks are removed. After the tanks are removed, NDE will be performed to verify the structural integrity of the tanks.

Pipe lines to Tanks 101 and 102 will be disconnected and the tanks removed. A stainless steel liner and a new sump will be installed in Cell A. A sump liquid transfer system will consist of two 3-way motor-operated ball valves, pump, and piping. The piping will drain the existing Cell A sump and the newly installed sump to Tanks 101 and 102. Tanks 101 and 102 will be reinstalled and seismically restrained by a sway strut and ring assemblies. After the tanks are reinstalled, new electrical and instrumentation wires and conduit will be installed and connected. The 222-S Laboratory will be served by Tanks 103 and 104 through Phase II construction.

Phase III Construction

During Phase III, Tank 104 will receive high activity waste and Tank 101 will receive intermediate activity waste. Tank 102 will receive and treat the waste from Tanks 101 and 104.

Temporary piping installed in Phases I and II will be disconnected and the new Cell A piping system will be completed isolating Tank 103. Temporary piping to Tanks 103 and 104 will be disconnected and permanent piping connected to Tank 104. The existing motor-driven pump will be reinstalled to transfer neutralized waste from Tank 102. Tank 103 will be removed from service, emptied, and the piping disconnected. Electrical power to the Tank 103 agitator and transfer pump will be disconnected. Electrical power for the new sump pump, Sump 7 pump, transfer pump, and for the two new motor-operated valves will be installed and connected. Blind flanges and flange covers will be installed on Tank 103 as required. The 222-S Laboratory will be served by Tanks 101, 102, and 104 after Phase II construction.

Removal of existing steam jetting equipment and steam piping is included in the scope of this project and can occur during any phase of construction. A diaphragm pump system will replace the steam jet system.

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 Project Management Division (PMD) has responsibility for overall management of Project W-178. 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-178, 219-S Double Containment Upgrade, Project Integrator," letter number 9302062, dated February 26, 1993. As the designated PI, WHC is responsible for the integration and management of Project W-178. 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-178 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-178. 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--ICF KH
- Engineering--ICF KH
- Construction/Construction Management--ICF KH
- 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-178 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-178 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-178. Their responsibilities for the project are described in Sections 3.3.2.1 through 3.3.2.5.

3.3.2.1 Functional Criteria. It is the responsibility of the sponsoring program to provide the Functional Design Criteria (FDC) for Project W-178. The approved FDC for this project is WHC-SD-W178-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 need for a Preliminary Safety Evaluation (PSE) for Project W-178 was determined to be not required in August of 1992. It was documented by memo from Facility Safety Documentation to J. J. Beyer, "Preparation of Safety Documentation for Project W-178, 219-S Double Containment Upgrade," 29300-92-5, dated August 6, 1992. 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. 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

ICF KH performed the conceptual design of the project. On the basis of the CDR and the approved Functional Design Criteria, ICF KH 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 ICF KH Cost Estimating group or other ICF KH organizations will be identified and assigned by LOI as required.

3.3.5 Construction

ICF KH will provide all of the construction services necessary, including inspection and quality engineering, to complete W-178. Due to the amount of work involving radiological exposure, this will be accomplished through Construction Forces (CF).

ICF KH is responsible to the PI for cost, schedule and technical compliance to the requirements of this project. Performance of CF is provided by the existing 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.

3.3.6 Quality Performance/Assessment and Inspection

The daily inspection of construction activities is the responsibility of the ICF KH 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 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 ICF KH 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

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 ICF KH 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-178 project is divided into major work activities and with the exception of Project Management, follows the CDR estimate.

1.0 ENGINEERING

- 1.1 DEFINITIVE DESIGN
- 1.2 FIELD ENGINEERING AND INSPECTION

2.0 PROCUREMENT

3.0 CONSTRUCTION

4.0 PROJECT MANAGEMENT/INTEGRATION

4.0 PROJECT MANAGEMENT/INTEGRATION

4.2 TECHNICAL BASELINE

This projects Functional Design Criteria (FDC), WHC-SD-W178-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 Design (Issue LOI to start design)	January 1, 1995
Start Procurement	June 1, 1995
Start Construction (Issue LOI to start construction)	October 1, 1995
Complete Construction (Physical construction complete)	January 31, 1997
Project Completion (Official Acceptance of Construction)	March 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-RL. Revision 2 to the project cost estimate is the current cost baseline for Project W-178. The funding baseline for the project is the approved BA/BO schedule (Attachment A). 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.

ICF KH will be authorized to control contingency usage via Class IIIa Change Requests up to a cumulative total of $50,000 for Engineering and $125,000 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-178 are defined as follows:

TABLE 4 - CHANGE CONTROL THRESHOLDS

Change Request Class	Change Request Description	Approval Action Required
I	Any changes to: • TEC • Project completion date • Technical baseline (FDC) • RL Controlled milestones • Approved WBS • Schedule impacts > 3 weeks • Use of contingency ≥ $250K	DOE-HQ (as required) RL Program, WMD (as required) RL Projects, PMD WHC CCB WHC PI
II	• Contingency use ≥ $25K < $250K • Schedule impact > 1 week < 3 weeks	WHC CCB WHC PI
III	• Contingency use ≥ $10K < $25K • Schedule impact < 1 week	WHC PI
IIIa	• Contingency use < $10K per CR for a cumulative contingency authorization total by major WBS as follows: 1.0 Engineering - $50K 3.0 Construction - $125K 4.0 Project Mngmt. - $0	ICF KH

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-178 WHC CCB membership is:

TABLE 5 - WHC CHANGE CONTROL BOARD

Function Organizational Position	Member
Chairman 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-178 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-178. 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-178 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-W178-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-178. 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

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-178 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

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-178 has no specialty or long lead material requirements that would require the preparation of a procurement plan. A separate WBS element for procurement was used. All procurements will be made by construction forces.

8.0 REFERENCES

Project-Specific Documents

1. WHC-SD-W178-FDC-001, Revision 1, Functional Design Criteria for 219-S Secondary Containment Upgrade, April 1993.

2. WHC-SD-W178-CDR-001, Conceptual Design Report for 219-S Secondary Containment Upgrade, May 1993.

3. WHC-SD-W178-ES-001, Engineering Study for 219-S Secondary Containment Upgrade, March 1991.

ATTACHMENT A

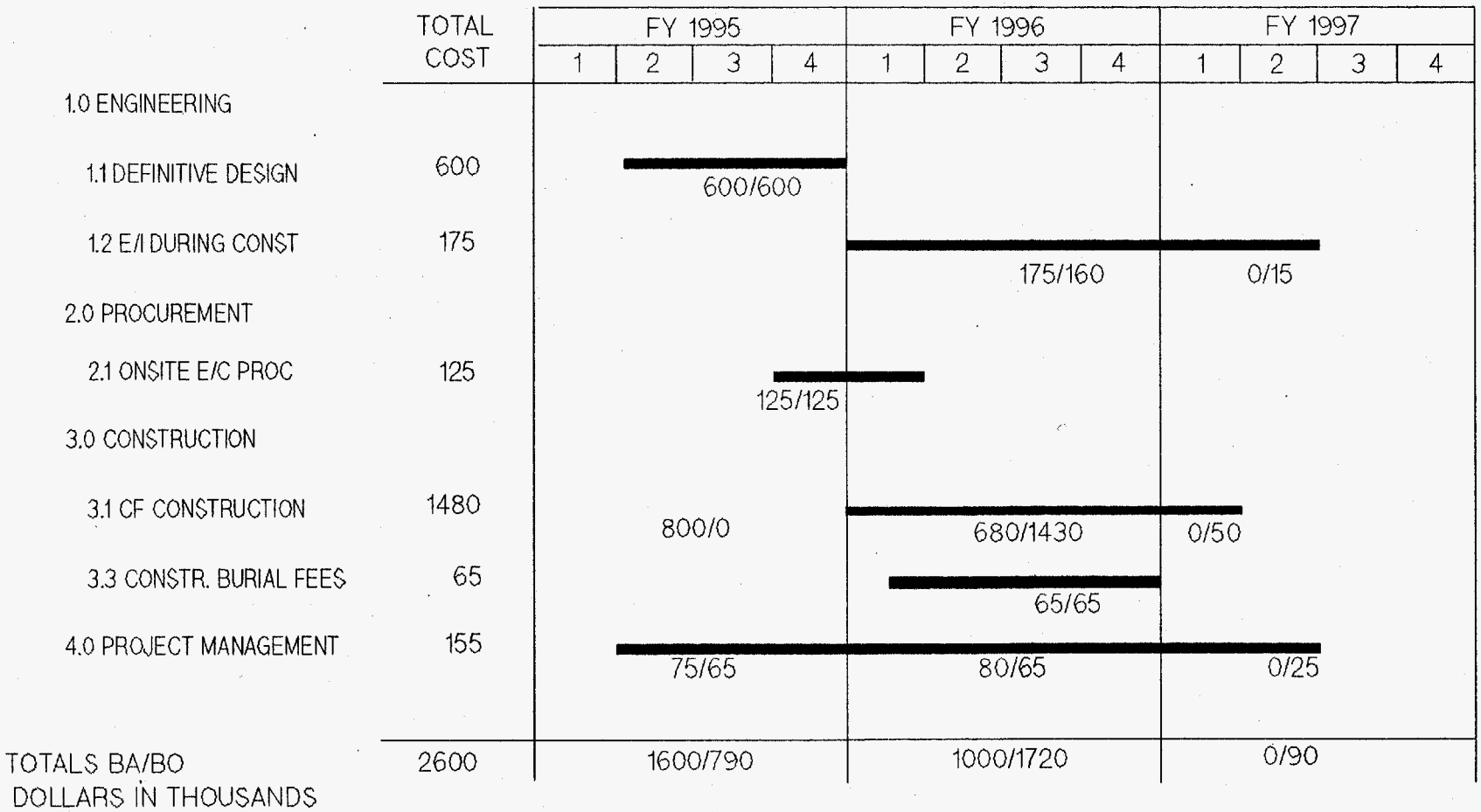
BA/BO SCHEDULE

ATTACHMENT A

PROJECT W-178

219-S SECONDARY CONTAINMENT UPGRADE

BA/BO SCHEDULE



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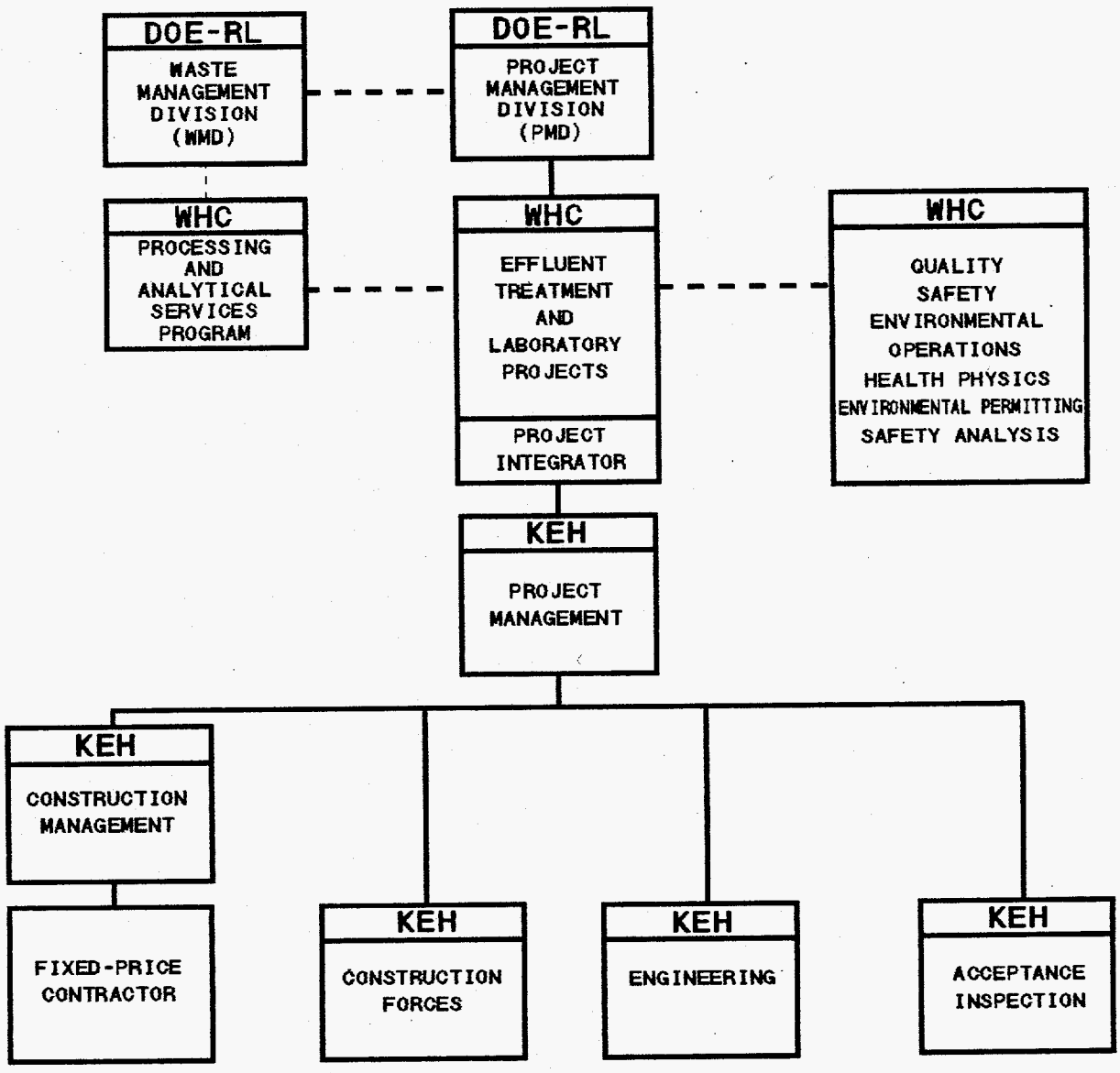
ATTACHMENT B

PROJECT W-178 ORGANIZATIONAL CHART

ATTACHMENT B

PROJECT W-178 ORGANIZATIONAL CHART



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ATTACHMENT C

W-178 INTEGRATED MANAGEMENT TEAM MATRIX

ATTACHMENT C

INTEGRATED MANAGEMENT TEAM ORGANIZATION ROLES AND RESPONSIBILITIES FOR PROJECT 95L-EWW-178, SECONDARY CONTAINMENT UPGRADE FOR THE 219-S FACILITY

Project 95L-EWW-189, Secondary Containment Upgrade for the 219-S Facility will be managed by the Integrated Management Team (IMT) concept. This attachment provides a summary of the roles and responsibilities for the engineering and construction of this project by the IMT. These roles and responsibilities will be documented in more detail in the Project Management Plan.

The following performing organizations are the major project participants:

• Project Integrator (PI)	Westinghouse Hanford Company
• Programs	Westinghouse Hanford Company
• Operations	Westinghouse Hanford Company
• Engineering	ICF Kaiser Hanford
• Construction Procurement	ICF Kaiser Hanford
• Construction and Construction Inspection	ICF Kaiser Hanford
• Quality/Performance Assessment	Westinghouse Hanford Company

PROJECT INTEGRATOR

The PI has overall responsibility for project implementation and is the ultimate decision making authority within the IMT. The PI is accountable to RL Project Manager for cost, schedule and scope of the 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 shall be assigned to the performing organizations by the PI. ICF Kaiser Hanford (ICF KH) project management shall be responsible to the PI for all project activities performed by ICF KH organizations.