Spent Nuclear Fuels Project

FY 1995 Multi-Year Program
Plan WBS #1.4

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MYPP Approval Sheet

Transition Program Division
U. S. Department of Energy
Richland Operations Office

Program: Spent Nuclear Fuel Project

Program WBS Number: 1.4

Exceptions: This FY95 MYPP has restricted interim approval. The Line Item Workscope (WBS 1.4.1.1.2) is not authorized at this time, pending Congressional reprogramming. Work scope will be reevaluated pending the RL FY95 budget reprioritization in October 1994.

This program has restricted interim approval subject to the above exceptions.

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This document was reviewed following the
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APPROVED FOR PUBLIC RELEASE

* * * * *

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September 27, 1994

(Date)

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1.A. Program Vision/Mission

The mission of the EM Spent Nuclear Fuel (SNF) program is to safely, reliably, and efficiently manage, condition, transport, and store Department of Energy (DOE) - owned SNF, so that it meets acceptance criteria for disposal in a permanent repository. In completing this mission, EM, while working with stakeholders, will protect the environment and the health and safety of workers and the public while fully complying with all applicable Federal, State, and local laws, orders and regulations.

The Hanford Mission for the SNF Project is to:

"Provide safe, economic, and environmentally sound management of the Hanford Site spent nuclear fuel in a manner which stages it to final disposition."¹

¹ Strategic Plan for Managing Spent Nuclear Fuel on the Hanford Site, Draft, March 1994

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1.B. Program Mission Strategy

The Hanford Site Spent Nuclear Fuel strategic plan for accomplishing the project mission.

- **Establish near-term safe storage in the 105-K Basins.**
- **Complete National Environmental Policy Act (NEPA) process to obtain a decision on how and where spent nuclear fuel will be managed on the site.**
- **Define and establish alternative interim storage on site or transport off site to support implementation of the NEPA decision.**
- **Define and establish a waste package qualified for final disposition.**

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1.B.1. Technical Functions/Requirements

The technical baseline for Spent Nuclear Fuel is in the process of being developed utilizing a systems engineering functional analysis. A draft Spent Nuclear Fuel Project Functions and Requirements Document, issued August 1994, represents a draft SNF technical baseline.

Resource estimates developed in this MYPP do not reflect the Functions & Requirements in the draft issued in August 1994.

The Hanford site system engineering process and practices leading to a technical performance baseline, follows the processes and practices defined in the Hanford Site Systems Engineering Management Plan, HS-SEMP and the Hanford Systems Engineering Manual, HS-SEM.

1.B.1-1

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1.B.2. Program Objectives

The major components of the Spent Nuclear Fuel (SNF) Project problem statement include:

- The K-Basin facilities are not adequate for interim storage of the Hanford SNF. They do not meet DOE regulations and have significant safety, operation, compliance, and public concern issues.
- Not all SNF is known to be in a safe condition. The condition of the N-Reactor and single pass reactor SNF is in question.
- There is no clear path forward to final disposition for the SNF located at Hanford.

In response to these problems the four basic objectives of the SNF Project:

- Upgrade Conduct Of Operations to comply with DOE orders.
- Provide safe existing storage, identify and resolve vulnerabilities, and remedy unsafe conditions.
 - Organize and manage to ensure that safety and security envelopes are maintained at all times.
 - Stabilize and consolidate in new facilities as required.
- Obtain public acceptance for both near-term and long-term programs.
 - Proactively interact with stakeholders to obtain their advice and ensure their buy-in.
 - Involve stakeholders in a manner which develops trust.
 - Develop an agreed-upon regulatory strategy.
- Design, construct, operate, and maintain interim storage facilities until final disposition of SNF is determined.
- Stage the SNF for final disposition once direction is received.

1.B.2-1

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 6/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1	5 WBS ELEMENT TITLE K-Basins Operations and Transition	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Truax	8 DATE 6/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The facilities at 105-K have exceeded their intended design life. The current operational state of the facilities at 105-K is a potential threat to the environment. Continued operation of the facilities is required until all spent nuclear fuel and related contaminated material is removed. Major renovations are required to provide the necessary safe operational state. This element includes necessary operations and upgrades of the two temporary fuel holding facilities at 105 KE and 105 KW until the material is removed. Transition is required to ready the basins for final turnover to the accepting stakeholder. Third Level Tasks under this element include:		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT K-Basins Operations & Transition	2 DATE 6/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.1	5 WBS ELEMENT TITLE Operations	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/B. Carlisle	8 DATE 6/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This WBS element includes all tasks related to safe operations of the K-Basin Facilities during facility upgrades, fuel removal, and transition activities. Operations will include the following activities: <ul style="list-style-type: none"> • Facilities Management • Maintenance (Preventative and Corrective) • Surveillance and Monitoring • Training All activities pertaining to the removal of fuel residing at the facility are excluded from this WBS element.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/25/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.1.1	5 WBS ELEMENT TITLE Project Management Support	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/B. Carlisle	8 DATE 08/25/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The Project Management Support Cost Account (1.4.1.1.1.1) is where performance will be evaluated and reported, for the listed work packages. This cost account is the primary Managerial overseer of the K-Basins Operations (1.4.1.1.1). The following is a list of Work Packages that make up this Cost Account: 1.4.1.1.1.01.01 Project Mgmt. Support 1.4.1.1.1.01.02 Plant Tracking & Scheduling 1.4.1.1.1.01.03 Training 1.4.1.1.1.01.04 Q A Support 1.4.1.1.1.01.05 Records Management 1.4.1.1.1.01.06 SNF Inventory Controls		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/25/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.1.2	5 WBS ELEMENT TITLE Environmental Safety & Health (ES&H)	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/B. Carlisle	8 DATE 08/25/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The ES&H Cost Account (1.4.1.1.1.02) is where performance will be evaluated and reported, for the listed work packages. This cost account is the primary overseer of the Compliance requirements set by either DOE or any other government agency that effects Spent Nuclear Fuels in any way. The following is a list of work packages that make up this cost account: 1.4.1.1.1.02.01 Facility Compliance 1.4.1.1.1.02.02 Radiological Controls 1.4.1.1.1.02.03 OSR Compliance/Implementation 1.4.1.1.1.02.04 Integrity Assessment & Surveillance 1.4.1.1.1.02.05 Industrial Hygiene 1.4.1.1.1.02.06 Security 1.4.1.1.1.02.07 Environmental Monitoring & Compliance		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/25/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.1.3	5 WBS ELEMENT TITLE Facility Controls	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/B. Carlisle	8 DATE 08/25/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The facility controls cost account (1.4.1.1.1.3) is where performance will be evaluated and reported, for the listed work packages. This cost account is the primary overseer of the day to day operations of the facility. The following is a list of Work Packages that make up this Cost Account: 1.4.1.1.1.03.01 Maintain Facility Conditions 1.4.1.1.1.03.02 Surveillance 1.4.1.1.1.03.03 Plant Engineering 1.4.1.1.1.03.04 Preventative maintenance 1.4.1.1.1.03.05 Facility Assessment 1.4.1.1.1.03.06 Conduct of Operations 1.4.1.1.1.03.07 Materials & Equipment Controls 1.4.1.1.1.03.08 Facility Work Control		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/25/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.1.4	5 WBS ELEMENT TITLE Waste Handling	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/B. Carlisle	8 DATE 08/25/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The waste handling cost account (1.4.1.1.1.4) is where performance will be evaluated and reported, for the listed work packages. This cost account is the primary overseer of the disposal of hazardous, low level, radioactive, and non hazardous waste as well as storage/offsite disposal. The following is a list of Work Packages that make up this Cost Account: 1.4.1.1.1.04.01 Waste Disposal 1.4.1.1.1.04.02 Waste Handling 1.4.1.1.1.04.03 Operations Analysis		

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1 PROJECT TITLE/PARTICIPANT K-Basins Operations & Transition	2 DATE 6/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.2	5 WBS ELEMENT TITLE Essential Systems Recovery	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Nelson	8 DATE 6/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>The time needed to maintain the K-Basins in an operational mode is conditional on the completion schedule for interim or temporary fuel storage facilities. Keeping 105-K operational will require major facility upgrades and recovery of essential systems. This WBS element includes the activities identified as required to keep the basins in (1) a safe configuration; and (2) in compliance with applicable codes prior to removal of fuel and transition.</p> <p>The tasks identified for this WBS element include:</p> <ul style="list-style-type: none"> • Fire Protection Upgrade • Electrical Systems Upgrades • Heat Exchanger Removal • Ninety-Day RCRA Storage Pad 		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/12/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.2.1	5 WBS ELEMENT TITLE Water Supply	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Nelson	8 DATE 08/12/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Design and construction of water treatment plan and distribution system for the 100 K area. Sub-elements include: Raw river water feed system; electrical modifications; water plant and ancillary systems; modifications to water distribution systems (sanitary and fire water); and, alarm/control system to support and operate the water plant and five water supply system. Activities include: Project management; other project costs (OPC); quality assurance support; engineering; construction; and procurement.		

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WORK BREAKDOWN STRUCTURE DICTIONARY			
1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.	
Spent Nuclear Fuel Project	08/12/94	1.4.1	
4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE		
1.4.1.1.2.2	Electrical System		
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE	
	0/E. Nelson	08/12/94	
9 APPROVED CHANGES			
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER	
		EWS135040	
12 ELEMENT TASK DESCRIPTION			
A. COST CONTENT			
Labor, Material, Subcontracts			
B. TECHNICAL CONTENT/WORK STATEMENT			
Provide engineering, procurement, and construction services associated with the elimination of the 4260V distribution system. This shall include the removal of 13.8KV/4160 volt and 4160V/480 volt transformers and the installation of new 13.8KV/480 volt transformers. In addition, the modification also includes reconfiguration of MCC's 3, 4, and 5. This is accomplished by feeding the present operating 480V loads from new distribution panels. This task will also include procurement of new equipment i.e., 13.8KV/480V transformers, 480V distribution panels, cables and other applicable hardware.			
This package contains task data for Project Management, other project costs (OPCs), Quality Assurance, Engineering, Construction and Procurement.			

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1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/12/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.2.3	5 WBS ELEMENT TITLE Fire Protection	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Nelson	8 DATE 08/12/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT 1. Install an automatic suppression system in building 190KE to protect the proposed Maintenance Shop and Office Facility and warehouse storage. This system will provide coverage for the ground level of 190KE only. 2. Install fire detection, alarm, and communication systems for compliance with Life Safety Code requirements in buildings 105KE, 105KW and 190KE. 3. Complete the installation of automatic suppression systems for office areas in buildings 105KE and 105KW. Approximately 60% of the required floor area is already covered.		

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1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/11/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.2.4	5 WBS ELEMENT TITLE Maintenance Shop/Support Facility	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Nelson	8 DATE 08/11/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT 1. Design and build/modify structures, systems and components in the 190K-east facility to furnish the K-basins maintenance organization with a maintenance shop/support facility. 2. Design and build structures, systems and components exterior to the 190K-east to provide for; equipment storage, gas bottle storage, and flammable material. 3. Modify existing 190K-east facility to furnish shop space, separation and security barriers, warehouse space, welding area, refrigeration repair and work dispatch facilities.		

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WORK BREAKDOWN STRUCTURE DICTIONARY			
1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.	
K-Basins Operations & transition	6/94	1.4.1	
4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE		
1.4.1.1.3	Transition		
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE	
	0/B. Carlisle	6/94	
9 APPROVED CHANGES			
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER	
		EW3135040	
12 ELEMENT TASK DESCRIPTION			
A. COST CONTENT		Labor, Material, Subcontracts	
B. TECHNICAL CONTENT/WORK STATEMENT			
Transition involves the activities required to move the K-Basins from its current operational state to a standby state, ready for stakeholder acceptance.			
The tasks associated with Transition will be identified when the stakeholder acceptance criteria are sufficiently defined.			
The current stakeholder is assumed to be EH-60.			

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2	5 WBS ELEMENT TITLE K Basins Fuel Consolidation	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Gerber	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The purpose of this element is to: (1) characterize the nominal and off-normal feed material to support the design basis for any process or interim storage facility on the path forward to ultimate disposition; (2) confirm readiness of KE Basin facility systems and personnel readiness to perform tasks involving fuel and sludge movement; (3) confirm and/or augment knowledge of the state of fuel and sludge storage in KE Basin; (4) provide operational and technical bases for subsequent K Basin SNF materials; (5) provide cold testing facilities to support fuel and sludge equipment development; (5) provide a cold training facility for basin operators; and (7) provide equipment development to support these activities. Lower level elements of this work scope are: 1.4.1.2.1 Studies/Characterization 1.4.1.2.2 Fuel & Sludge Retrieval/Packaging		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.1	5 WBS ELEMENT TITLE Studies/Characterization	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. Omberg	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>The purpose of this activity is to characterize the nominal and off-normal feed material to support the design basis for any process or interim storage facility on the path forward to ultimate disposition.</p> <p>This activity includes research, studies, visual examinations, physical examinations, and feature tests necessary to characterize the fuel, sludge, water, and debris currently stored in the 105-K Basins.</p> <p>Cost accounts included in this activity are:</p> <ul style="list-style-type: none"> • Basin-Related Characterization • Laboratory-Related Characterization <p>The product of the Studies / Characterization effort is raw scientific and engineering data as well as evaluated information or interpretation of this data. This data and information supports the design and safety of pilot projects as well as unrestricted campaigns to remove fuel, sludge, debris, and water from the 105-K Basins.</p>		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.1.1	5 WBS ELEMENT TITLE Basin-Related Characterization	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. Onberg	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>The purpose of this cost account is to perform characterization activities with a strong engineering or field (i.e., 105-K Basins) interaction and orientation. These activities will be performed principally by WHC which is responsible for engineering as well as Basin safety and operation.</p> <p>This is in contrast to characterization activities with a strong scientific or laboratory (i.e., Hot Cell) interaction and orientation. These activities are delineated under WBS 1.4.1.2.1.2 and will be performed principally by PNL which is responsible for Hot Cell safety and operation.</p> <p>Consistent with the division of responsibility as noted above, the Basin-Related characterization cost account includes the following Task Packages</p> <ul style="list-style-type: none"> • Qualitative In-situ Data • Sample shipping to and from Hot Cells • Engineering Interpretation of Characterization Data • Data Quality Objectives 		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.1.2	5 WBS ELEMENT TITLE Laboratory-Related Characterization	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/Turner	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>The purpose of this cost account is to perform characterization activities with a strong scientific, laboratory, or Hot Cell interaction and orientation. These activities will be performed principally by PNL which is responsible for Hot Cell safety and operation.</p> <p>This is in contrast to characterization activities with a strong engineering, field, or Basin interaction and orientation, which are performed under WBS 1.4.1.2.1.1. The latter activities will be performed principally by WHC which is responsible for Basin safety and operation.</p> <p>Consistent with the division of responsibility as delineated above, the Laboratory-Related Characterization cost account includes the following Task Packages</p> <ul style="list-style-type: none"> • Hot Cell Operations • Hot Cell Examinations • Interim Storage Technology Support <p>The product of the characterization effort is laboratory scientific data as well as evaluated scientific information or interpretation of this data. This data and information supports the technology required for the selection of interim storage options as well as the technology required for ultimate disposition of the fuel.</p>		

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1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.2	5 WBS ELEMENT TITLE Fuel & Sludge Retrieval/Packaging	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. Wiemers	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This element is intended to: (1) confirm readiness of KE Basin facility systems and personnel readiness to perform tasks involving fuel and sludge movement; (2) confirm and/or augment knowledge of the state of fuel and sludge storage in KE Basin; (3) provide operational and technical bases for subsequent K Basin SNF materials; (4) provide cold testing facilities to support fuel and sludge equipment development; (5) provide a cold training facility for basin operators; and (6) provide equipment development to support these activities. Lower level elements of this scope of work are: <div style="margin-left: 40px;"> 1.4.1.2.2.1 Pilot Run 1.4.1.2.2.2 Cold Test Facility 1.4.1.2.2.3 Fuel Repackaging 1.4.1.2.2.4 Sludge Retrieval and Packaging 1.4.1.2.2.5 Debris Removal 1.4.1.2.2.6 Basin Water Treatment 1.4.1.2.2.7 Dose Reduction </div>		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		
2 DATE 08/31/94		3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.2.1		
5 WBS ELEMENT TITLE Pilot Run		
7 REVISION NO AND AUTHORIZATION 0/J. Frederickson		8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER EW3135040
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT A Pilot run for the fuel encapsulation process in the 105KE Basin has been developed to respond to comments received during encapsulation, readiness review for a performance based readiness review process. Additionally, the pilot run has been initiated to obtain information from the stored canisters of spent nuclear fuel (SNF) in the 105KE Basin in the 100K Area of the Hanford site in Richland, Washington.		

WBS ELEMENT CODE 1.4.1.2.2.1	WBS ELEMENT TITLE Pilot Run
<p data-bbox="183 254 545 277">ELEMENT TASK DESCRIPTION (Cont)</p> <p data-bbox="183 323 1390 438">The activities of the Pilot Run are to: (1) evaluate equipment and procedures developed for the current baseline encapsulation process; (2) familiarize operators with the encapsulation equipment and procedures, and with canister handling operations in general; and (3) support evaluation and/or development of other process alternatives by examining the present status of the SNF materials and storage canisters.</p> <p data-bbox="183 459 727 483">Lower level elements of this scope or work are:</p> <ul data-bbox="280 527 800 737" style="list-style-type: none">1.4.1.2.2.1.01 Project Management1.4.1.2.2.1.02 Process Engineering1.4.1.2.2.1.03 Characterization Support1.4.1.2.2.1.04 Pre-Pilot Facility Engineering1.4.1.2.2.1.05 Operations Support1.4.1.2.2.1.06 Readiness Assessment1.4.1.2.2.1.07 ES&H1.4.1.2.2.1.08 QA1.4.1.2.2.1.09 Pilot Run Clean-Up	

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.2.2	5 WBS ELEMENT TITLE Cold Test Facility	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Frederickson	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <p>Labor, Materials, Subcontracts: The allocation of general 305 Building operating costs to be born by this WBS element will be based on the percentage of the existing 305 Building test pit and general purpose floor/equipment space required by the K Basins Mock-Up (KBMU) cold test facility. Costs which are specific to operation and maintenance of the KBMU pool and its support equipment will be born entirely by this WBS element.</p> B. TECHNICAL CONTENT/WORK STATEMENT <p>The 305 Building in the 300 Area has been designated as the K Basin Mock-Up (KBMU) cold test facility for the K Basins Fuel Consolidation project. This WBS element provides funding required to maintain and operate the KBMU within the 305 Building. In addition to supporting equipment development and testing activities, the KBMU will support K Basin operator training activities.</p> <p>Lower level elements of this scope of work are:</p> <ul style="list-style-type: none"> 1.4.1.2.2.2.01 Administration 1.4.1.2.2.2.02 Engineering Support 1.4.1.2.2.2.03 Craft Support 1.4.1.2.2.2.04 Utilities 		

WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/31/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.2.2.3		5 WBS ELEMENT TITLE Fuel Repackaging			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/J. Frederickson		8 DATE 08/31/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Materials, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
This task includes the necessary staff including designers, analysts, engineers, technicians, management and other support personnel to accomplish the following for the K-Basin fuel recovery operation:					
<ul style="list-style-type: none"> • Equipment Design including controls and control systems • Equipment procurement/fabrication • Equipment Cold Test at the 305 Building Cold Test Facilities (CTF) • Equipment redesign, procurement, and/or qualification • Equipment installation at K-Basin • Equipment checkout at K-Basin • Operator training at CTF (305 Building) and K Basins • K Basin Operations Support 					

WBS ELEMENT CODE 1.4.1.2.2.3	WBS ELEMENT TITLE Fuel Repackaging
<p data-bbox="185 263 545 287">ELEMENT TASK DESCRIPTION (Cont)</p> <p data-bbox="185 308 1398 472">The equipment will include the canister retrieval, canister repackage, primary container, primary container handling, loading and sealing, oversize receipt from sludge retrieval, SNM identification, primary container decontamination and surge storage awaiting transport. Also included is equipment for the venting of the primary containers at the storage facility if needed. Instrumentation and control for the equipment is included in this task. This task will utilize characterization information to develop representative source terms, shielding studies, heat load studies, and dose studies to develop an ALARA sensitive system design.</p> <p data-bbox="185 493 729 517">Lower level elements of this scope of work are:</p> <ul data-bbox="282 538 781 725" style="list-style-type: none">1.4.1.2.2.3.01 Project Management1.4.1.2.2.3.02 Engineering Studies/Analyses1.4.1.2.2.3.03 Design1.4.1.2.2.3.04 Engineering Support1.4.1.2.2.3.05 Procurement1.4.1.2.2.3.06 Facility Modifications1.4.1.2.2.3.07 Installation1.4.1.2.2.3.08 Fuel Repackaging Operations	

WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/31/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.2.2.4		5 WBS ELEMENT TITLE Sludge Retrieval and Packaging			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/Alderman		8 DATE 08/31/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Materials, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
The cost account provides the necessary staff and equipment to retrieve and package KE Basin sludge, including management, engineers, designers, analysts, technicians, crafts, operators, and support personnel. Work packages describe the following functions:					
<ul style="list-style-type: none"> • Project Management • Engineering Studies and Analysis • Equipment Design • Support Engineering • Procurement • Facility Modifications • Installation • Operations 					

WBS ELEMENT CODE 1.4.1.2.2.4	WBS ELEMENT TITLE Sludge Retrieval and Packaging
<p data-bbox="185 254 548 279">ELEMENT TASK DESCRIPTION (Cont)</p> <p data-bbox="185 300 1406 373">Equipment to be provided include vacuum heads, pumps, separators, and canisters. Final sludge form will be compatible with the primary container for transportation and temporary storage. Equipment chosen must meet seismic and criticality requirements and result in operations sensitive to ALARA needs.</p> <p data-bbox="185 394 1347 441">As no formal direction has been provided for the SNFP, this cost account is based upon the following assumptions:</p> <ul data-bbox="282 462 1354 600" style="list-style-type: none">• Sludge is to be treated, handled, and processed as spent nuclear fuel.• All sludge and fuel are to be removed from the K Basins by 2002.• The sludge will be removed to the pre-interim storage location in a wet condition as proposed in the expedited fuel removal proposal.	

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.2.5	5 WBS ELEMENT TITLE Debris Removal	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Frederickson	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide operations support for KE Basin sludge retrieval and packaging. This task involves the identification, removal, decontamination, size reduction and packaging up of the debris in the K-Basins. The packaged debris will be held in storage and then sent to disposal. The debris is made up mostly of carbon steel shapes in racks and structure below the water line of the basin. Equipment and processing needed will include the following: <ul style="list-style-type: none"> • Cutting/dislodging • Removal • Decontamination • Size reduction • Packaging • Packaging handling/storage • Controls and instrumentation Lower level elements of this scope of work are: <ul style="list-style-type: none"> 1.4.1.2.2.5.01 Project Management 1.4.1.2.2.5.02 Engineering Support 1.4.1.2.2.5.03 Procurement 1.4.1.2.2.5.04 Operations Support 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.2.6	5 WBS ELEMENT TITLE Basin Water Treatment/Disposition	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/M. Wiemers	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT <p>The purpose of this activity is to design processes and construct the facilities necessary to dispose of water in the 105-K Basins consistent with the TPA milestones. This includes both the one-time water disposition campaign assuming all fuel and sludge are removed by 2002 as well as the feed-and-bleed option assuming the fuel and sludge remains in the Basin in 1996.</p> <p>This activity includes all engineering studies, characterization activities, project management, design, procurement, facility modification, and equipment procurement and installation necessary to dispose of contaminated basin water.</p> <p>Cost accounts included within this activity are:</p> <ul style="list-style-type: none"> • Engineering studies • Characterization support • Project management • Design • Engineering support • Procurement • Facility modifications • Installation • Operations 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 8/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.2.2.7	5 WBS ELEMENT TITLE Dose Reduction	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontractors B. TECHNICAL CONTENT/WORK STATEMENT This cost account includes the necessary staff including designers, analysts, engineers, technicians, management and other personnel to accomplish the following for the 105 K-East Basin dose reduction: <ul style="list-style-type: none"> • Project Management • Engineering Studies/Analyses • Design • Procurement • Facility Modifications • Installation 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.3	5 WBS ELEMENT TITLE Other Hanford Fuel	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Gerber	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This activity integrates fuel characterization, packaging, transportation, and storage activities for Hanford Site SNF not currently located at the 105-K Basins. Lower level elements of this work scope are: 1.4.1.3.1 Characterization 1.4.1.3.2 Other Hanford Fuel Packaging and Storage		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.3.1	5 WBS ELEMENT TITLE Characterization	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION O/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>The purpose of this activity is to establish a characterization path forward for SNF on the Hanford Site. Important to this is the objective to characterize SNF sufficient for a NRC license application consistent with the DOE objective of applying for such a license in 2001.</p> <p>This WBS element includes all activities necessary to characterize all fuel on the Hanford Site other than N Reactor fuel stored in the 105-K Basins.</p> <p>Tasks included within this cost account are:</p> <ul style="list-style-type: none"> • Acquire and archive existing SNF data • Define path forward of acquisition of all site SNF • Establish readiness for license application • Develop schedule and order for Hanford SNF disposition 		

WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/31/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.3.1.1		5 WBS ELEMENT TITLE Other Hanford Fuel Characterization			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION O/R. Omberg		8 DATE 08/31/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Materials, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
The purpose of this cost account is to establish a characterization path forward for SNF on the Hanford site. Important to this is the objective to characterize SNF sufficient for a NRC license application consistent with the DoE objective of applying for such a license in 2001.					
This cost account includes all activities necessary to characterize all fuel on the Hanford site other than W Reactor fuel stored in the 105-K Basins.					
Tasks Packages included within this cost account are:					
<ul style="list-style-type: none"> • Acquire and archive existing SNF data • Define path forward of acquisition of all site SNF • Establish readiness for license application 					

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.3.1.2	5 WBS ELEMENT TITLE Process Engineering/Design	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide process engineering/design as necessary to support management of Hanford Site SNF not currently located at the 105-K Basins. Tasks identified for this WBS element include: <ul style="list-style-type: none"> • Develop process flow diagrams for each SNF type. • Develop SNF management trade off studies for each SNF type to assess near-term, interim and ultimate disposition options. 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.3.2	5 WBS ELEMENT TITLE Other Fuel Packaging and Storage	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This activity integrates fuel packaging, transportation, and storage activities for Hanford Site SNF not currently located at the 105-K Basins.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4	5 WBS ELEMENT TITLE Pre-Interim Fuel Storage	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Gerber	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The purpose of this element is to design and build a Pre-Interim Storage Facility for spent nuclear fuel, operate the facility, and finally transition the facility from an operational surveillance condition at the conclusion of the facility (storage, processing) mission. The facility surveillance condition represents a safe, low cost configuration for the facility which is a safe, low cost configuration for the facility which is maintained until decontamination and decommissioning activities are initiated. Lower level elements of this work scope are: 1.4.1.4.1 Process Engineering/Design 1.4.1.4.2 Facility Construction 1.4.1.4.3 Start-Up 1.4.1.4.4 Transportation System 1.4.1.4.5 Operations 1.4.1.4.6 Transition		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.1	5 WBS ELEMENT TITLE Process Engineering/Design	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/M. Wiemers	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>The purpose of this element is to establish an initial technical, cost, and schedule baseline for the Pre-Interim Storage Facility. It will also provide project engineering support for the subsequent project designing and building the facility. This element will consist of engineering studies supporting evaluation of storage alternatives and analyses developing design criteria, design concepts and associated cost, schedule, and budget estimating and engineering support to transition into this project. They are titled:</p> <ul style="list-style-type: none"> 1.4.1.4.1.1 Engineering Studies 1.4.1.4.1.2 Design 1.4.1.4.1.3 Engineering Support to Project <p>This task includes the entire transportation system to make the fuel from the KE Basin to the temporary storage facility.</p>		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.1.1	5 WBS ELEMENT TITLE Engineering Studies	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Frederickson	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This element will evaluate different pre-interim storage alternatives and provide analyses including heat removal, criticality, seismic, and dose rates which will provide criteria for conceptual design. Preliminary permitting and safety evaluations will also be performed.		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.1.2	5 WBS ELEMENT TITLE Design	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Frederickson	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This element will provide design concepts for the Pre-Interim Storage Facility. Included in this effort will be high-level functions and requirements, process flow diagrams, engineering flow diagrams, arrangement drawings, cost estimate, and schedule.		

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1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.1.3	5 WBS ELEMENT TITLE Engineering Support to Project	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Frederickson	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This element will provide engineering support to the Pre-Interim Storage Construction Project. Its primary functions will be to provide transfer of technical information to the construction project and provide process engineering support to the construction project as required.		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		
2 DATE 08/31/94		3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.2		
5 WBS ELEMENT TITLE Facility Construction		
7 REVISION NO AND AUTHORIZATION 0/G. Hansrote		8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION		
11 BUDGET AND REPORTING NUMBER EW3135040		12 ELEMENT TASK DESCRIPTION
A. COST CONTENT Labor, Material, Subcontracts		
B. TECHNICAL CONTENT/WORK STATEMENT Provide design, procurement, and construction services for a temporary fuel storage facility, to support the removal and passivation of the spent nuclear fuel stored in the 105 KE/KW basins. Tasks identified in this WBS element include: - Project Management - Architect-Engineering Services - Procurement of Equipment and Services - Construction Management - Construction of Facilities and Infrastructure - Project Documentation and Records		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.2.1	5 WBS ELEMENT TITLE Project Management	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide Project Management to design and construct a Near Term Storage Facility to retain K Basin spent nuclear fuel prior to stabilization. Tasks identified in this WBS element include: <ul style="list-style-type: none"> ■ Project Management ■ Business Management ■ Quality Assurance 		

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1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.	
Spent Nuclear Fuel Project	08/94	1.4.1	
4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE		
1.4.1.4.2.2	Design		
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE	
	0/LE Nilsen	09/94	
9 APPROVED CHANGES			
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER	
		EW3135040	
12 ELEMENT TASK DESCRIPTION			
A. COST CONTENT			
Labor, Material, Subcontracts			
B. TECHNICAL CONTENT/WORK STATEMENT			
Provide Architect-Engineering (A/E) services to perform Preliminary Design, Detailed Design, and Field Engineering services for a Near-Term Storage Facility for the K Basin spent nuclear fuel prior to stabilization.			
Tasks identified in this WBS element include:			
- Title I Preliminary Design			
- Title II Detailed Design			
- Title III Field Engineering Services			
- A/E Support			
- Special Studies			

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.2.3	5 WBS ELEMENT TITLE Procurement of Equipment and Services	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide equipment and other services to support the construction of a Near-Term Storage Facility to store K Basin spent nuclear fuel prior to processing in a stabilization facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Capital Equipment - CENRTC Equipment - Spare Parts/Equipment 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.2.4	5 WBS ELEMENT TITLE Construction Management	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide construction management for a Near-Term Storage Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> ■ Construction Management ■ Cost and Schedule Control ■ Material and Equipment Management ■ Site Infrastructure Management 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.2.5	5 WBS ELEMENT TITLE Construction of Facilities and Infrastructure	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts ¹ B. TECHNICAL CONTENT/WORK STATEMENT Construct the facilities and infrastructure for the Near-Term Storage Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> ■ Infrastructure Construction ■ Facility Construction ■ Site Utilities ■ ADP Equipment 		

2.A.2. WBS Dictionary		
WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.2.6	5 WBS ELEMENT TITLE Project Documentation and Records	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide for the collection and retention of project documentation required to safely operate and maintain the Near-Term Storage Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Engineering Design Media - As-Built Records - P&ID's, Fluor Diagrams - Compliance and Inspection Records. 		

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WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.4.3.1		5 WBS ELEMENT TITLE Start-Up Management			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION <p>A. COST CONTENT Labor, Material, Subcontracts</p> <p>B. TECHNICAL CONTENT/WORK STATEMENT Provide start-up management for the start-up of a Near-Term Storage Facility. Tasks identified in this WBS element include:</p> <ul style="list-style-type: none"> - Management - Business Management - Quality Assurance 					

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WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.4.3.3		5 WBS ELEMENT TITLE Test Equipment and Calibration			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
B. TECHNICAL CONTENT/WORK STATEMENT					
Provide test and calibration equipment to support start-up of the Near-Term Storage Facility.					
Tasks identified in this WBS element include:					
<ul style="list-style-type: none"> - Test and Calibration Equipment - Laboratory Support - Repair Facility Support 					

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2.A.2. WBS Dictionary			
WORK BREAKDOWN STRUCTURE DICTIONARY			
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94	
		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.4.3.5		5 WBS ELEMENT TITLE Procedure	
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	
		8 DATE 08/94	
9 APPROVED CHANGES			
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION			
A. COST CONTENT			
Labor, Material, Subcontracts			
B. TECHNICAL CONTENT/WORK STATEMENT			
Provide start-up procedures required to conduct start-up testing of the Near-Term Storage Facility. The procedures will be written to verify the facility will function as specified in the design criteria.			
Tasks identified with this WBS element include:			
<ul style="list-style-type: none"> ■ Procedures ■ Configuration Management ■ Records 			

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.4	5 WBS ELEMENT TITLE Transportation System	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/M. Wiemers	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This task includes the entire transportation system to make the fuel from the KE Basin to the temporary storage facility. The lower level element of this scope of work are: <div style="margin-left: 40px;"> 1.4.1.4.1.1 Project Management 1.4.1.4.1.2 Cask 1.4.1.4.1.3 Transporter </div>		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.4.1	5 WBS ELEMENT TITLE Project Management	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This task is the project management for the transportation system. This task includes: <ul style="list-style-type: none"> • Project Management Plans • Work Plans and their development • Cost and schedule • Progress reports 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.4.2	5 WBS ELEMENT TITLE Cask	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This task includes the design, development, fabrication, testing, and licensing of the cask. Equipment to load and unload the cask with fuel is also included. This cask is broken into the following elements: <div style="margin-left: 40px;"> 1.4.1.4.1.2.01 Engineering Studies 1.4.1.4.1.2.02 Design 1.4.1.4.1.2.03 Procurement 1.4.1.4.1.2.04 Operations </div>		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.4.3	5 WBS ELEMENT TITLE Transporter	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This task includes the haul route, right-of-ways, road crossings, route structures, hauling vehicles, hauling motive power, equipment to load and unload the transporter with casks, support equipment, and facilities for the transportation system operation and maintenance. The lower level elements of this scope of work are: <div style="margin-left: 40px;"> 1.4.1.4.1.3.01 Engineering Studies 1.4.1.4.1.3.02 Design 1.4.1.4.1.3.03 Engineering Support 1.4.1.4.1.3.04 Facility Modifications 1.4.1.4.1.3.05 Installation 1.4.1.4.1.3.06 Procurement 1.4.1.4.1.3.07 Operations </div>		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.5	5 WBS ELEMENT TITLE Operations	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Gerber	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, materials, subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This task element provides for the operation of the Pre-Interim Storage Facility. The task element includes all aspects of activities required for radioactive operations of the facility after start-up and continues until radioactive material (storage, processing) activities are complete. Lower level elements of this work scope, leading to completing safe and efficient radioactive facility operations throughout the (storage, processing) mission, are: 1.4.1.4.5.1 Project Management Support 1.4.1.4.5.2 Environment, Safety and Health Support 1.4.1.4.5.3 Facility Controls 1.4.1.4.5.4 Waste Handling		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.4.6	5 WBS ELEMENT TITLE Transition	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Gerber	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, materials, subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>This task element provides the activities required to transition the Pre-Interim Storage Facility from an operational surveillance condition at the conclusion of the facility (storage, processing) mission. The facility surveillance condition represents a safe, low cost configuration for the facility which is a safe, low cost configuration for the facility which is maintained until decontamination and decommissioning activities are initiated. This task includes all aspects of the facility transition, including removal of residual materials, reconfiguration of systems, waste disposal, and facility surveillance until decontamination and decommissioning is started.</p> <p>The longer level elements of this task, leading to a transition of the facility from an operating to surveillance configuration, are:</p> <ul style="list-style-type: none"> 1.4.1.4.6.1 Regulatory Issues 1.4.1.4.6.2 Release/Stabilization Criteria 1.4.1.4.6.3 Systems Deactivation 1.4.1.4.6.4 Waste Disposal 1.4.1.4.6.5 Post Transition Surveillance 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5	5 WBS ELEMENT TITLE Fuel Stabilization	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Gerber	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT The Spent Nuclear Fuel Project has assumed that a Fuel Stabilization Facility will be required for processing fuel to a stable storage form. The primary mission of the Fuel Stabilization Facility is processing of materials within the existing K Basins to a form required for interim storage. It is anticipated that the capability to support any synergistic processing or packaging requirements for Other Hanford Fuel (see WBS 1.4.3) will be integrated into the Fuel Stabilization Facility to provide effective utilization of the facility structure. However, the primary focus of the facility design will be to support stabilization requirements defined for N Reactor Fuel, Single Pass Reactor Fuel, Sludge, and debris which can not be accommodated by systems constructed by other Hanford Site programs.		

WBS ELEMENT CODE 1.4.1.5	WBS ELEMENT TITLE Fuel Stabilization														
ELEMENT TASK DESCRIPTION (Cont)															
B. TECHNICAL CONTENT/WORK STATEMENT															
<p>This element includes definition of the Fuel Stabilization Facility concept and all aspects of completing the facility design, construction, and operation, such that the current K Basin inventory is converted to a stable form for interim storage. Design flexibility will be included in the Fuel Stabilization Facility such that opportunities are maintained to modify the facility to support processing fuels into an alternate form for disposal, once the disposal form is defined.</p> <p>Lower level elements of this work scope, leading to construction and operation of a facility which processes K Basin materials to a form suitable for storage and/or disposal, are:</p> <table><tr><td>1.4.1.5.1</td><td>Process Engineering/Design</td></tr><tr><td>1.4.1.5.2</td><td>Process Technology</td></tr><tr><td>1.4.1.5.3</td><td>Facility Construction</td></tr><tr><td>1.4.1.5.4</td><td>Start-up</td></tr><tr><td>1.4.1.5.5</td><td>Transportation</td></tr><tr><td>1.4.1.5.6</td><td>Operations</td></tr><tr><td>1.4.1.5.7</td><td>Turn Over Activities</td></tr></table>		1.4.1.5.1	Process Engineering/Design	1.4.1.5.2	Process Technology	1.4.1.5.3	Facility Construction	1.4.1.5.4	Start-up	1.4.1.5.5	Transportation	1.4.1.5.6	Operations	1.4.1.5.7	Turn Over Activities
1.4.1.5.1	Process Engineering/Design														
1.4.1.5.2	Process Technology														
1.4.1.5.3	Facility Construction														
1.4.1.5.4	Start-up														
1.4.1.5.5	Transportation														
1.4.1.5.6	Operations														
1.4.1.5.7	Turn Over Activities														

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.1	5 WBS ELEMENT TITLE Process Engineering/Design	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT This task element develops the design of the Fuel Stabilization Facility. The initial focus of the task elements is definition of a design concept for Fuel Stabilization Facility which is used to develop documentation which initiates the project design process. The design concept is defined by developing a description of the facility design basis feed(s), product criteria, and a preliminary facility concept. This preliminary information is used as the project's baseline fuel stabilization system. Enabling assumptions used to develop the baseline are evaluated using engineering trade studies. Decisions which select among alternatives based on the trade studies are documented and used to update the project baseline. The primary tasks of this element, leading to completion of design definition documentation required to initiate the facility conceptual/definitive design and provide onsite engineering reviews during design, construction, and start-up, consist of: 1.4.5.1.1 - Design Basis Feed Development 1.4.5.1.2 - Process Product Criteria Development 1.4.5.1.3 - Process Concept Development 1.4.5.1.4 - Engineering Support to Project 1.4.5.1.5 - Engineering Support to Start-up 1.4.5.1.6 - DOE Complex Integration		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.1.1	5 WBS ELEMENT TITLE Design Basis Feed Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION O/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT Developing a description of the Stabilization Facility feed used as a design basis for the facility. The design basis feed description includes the nominal or overall average feed, bounding condition feeds for evaluating shielding and safety mitigation requirements, and estimates of the operational variations from nominal conditions which must be considered during design. The tasks of this element, leading to documented input for material balances which define the overall process design requirements, consist of: 1.4.5.1.01.01 - Develop Nominal Design Basis Feed Description 1.4.5.1.01.02 - Develop Bounding Design Basis Feed Descriptions 1.4.5.1.01.03 - Develop Operational Variability Basis Description		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.1.2	5 WBS ELEMENT TITLE Process Conduct Criteria Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT This element develops alternative product criteria for the stabilization process. The alternatives to be considered will include criteria which satisfy stabilization requirements for expedited temporary storage, interim storage, and disposal. The tasks in this element, leading to documented alternative product criteria for the fuel stabilization process to accomplish, consist of: 1.4.5.1.02.01 - Expedited Temporary Storage Criteria Definition 1.4.5.1.02.02 - Interim Storage Criteria Definition 1.4.5.1.02.03 - Disposal Form Criteria Definition These criteria define an acceptable product from the fuel stabilization process which is used in the functions and requirements document and concept development activities in WBS 1.4.5.1.3.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.1.3	5 WBS ELEMENT TITLE Process Concept Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION O/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT <p>This element develops a baseline concept for the fuel stabilization process and facility which is used as a preliminary basis for improving the project's technical baseline estimated cost and schedule. The baseline concept is defined by a flowsheet, including material balances, and a preliminary facility layout defining the cost and schedule basis. This element also investigates alternatives to the baseline flowsheet and facility concept which are used to validate or modify enabling assumptions required to generate the original project baseline. Documentation of the basis and process for selecting among alternatives is included as part of the tasks in this element, with the baseline updated as alternative selection decisions are documented. The concept development and alternative selection activities form the basis for preparing design definition documentation required to initiate the formal facility conceptual design.</p> <p>The elements of this activity, leading to completion of the documentation required to initiate the facility conceptual design, consist of:</p> <ul style="list-style-type: none"> 1.4.5.1.03.01 - Project Baseline Flowsheet Development 1.4.5.1.03.02 - Facility Concept Development 1.4.5.1.03.03 - Prepare Design Definition Documentation 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.1.4	5 WBS ELEMENT TITLE Engineering Support to Project	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT This element provides engineering support for the fuel stabilization facility project during design and construction activities. The support activities include providing technical support information to permitting plans and other project development activities, maintaining the flowsheet document as design decisions evolve and review of design details. <ul style="list-style-type: none"> • Design Requirements Document • Functions and Requirements Document • Conceptual Design Plan • Short Form Data Sheets 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.2	5 WBS ELEMENT TITLE Process Technology	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Ethridge	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT The process technology element will provide for laboratory, bench-scale, and pilot-scale investigations necessary to develop data supporting fuel stabilization design activities. Technology development requirements will be identified by the Process Engineering/Design activities. Development requirements will include data development in support of process flowsheet concepts which validate or modify process flowsheet assumptions, and equipment concept development tasks directed toward resolving equipment design issues identified during facility concept design efforts. These activities, leading to definition of a process concept with a minimum of open enabling assumptions prior to initiating the facility conceptual design, include: 1.4.5.2.1 - Process Flowsheet Data Development 1.4.5.2.2 - Equipment Concept Development		

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1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.2.1	5 WBS ELEMENT TITLE Process Flowsheet Data Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Ethridge	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT <p>The development of a project baseline process flowsheet will be completed by making a series of enabling assumptions when the appropriate data is unavailable in the literature. The process concept development activity will identify these assumptions. This task will develop test plans, procure test systems, perform tests, and document the test results to either validate or modify the assumptions used to develop the baseline flowsheet.</p> <p>The process concept development activity will also identify trade studies for unit operations which investigate alternatives to the baseline flowsheet. These trade studies may identify additional data required to complete the evaluation of alternatives. This task will also develop test plans, procure test systems, perform tests, and document the test results in support of the process flowsheet trade studies.</p> <p>This element leads to validation of the enabling assumptions used to develop the fuel stabilization facility process flowsheet.</p>		

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2.A.2. WBS Dictionary

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1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.2.2	5 WBS ELEMENT TITLE Equipment Concept Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Ethridge	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials B. TECHNICAL CONTENT/WORK STATEMENT <p>The facility concept development task will develop a preliminary design based on enabling assumptions when appropriate data is unavailable from the literature or prior site/industrial experience. The facility concept development task will identify key concepts with sufficient design uncertainty such that assumption validation is warranted. This task will develop test plans, procure test systems, perform tests, and document the test results to either validate or recommend modifications to the baseline facility design concept.</p> <p>The facility concept development activity will also identify trade studies for equipment and facility configuration alternatives with the potential to improve the baseline design concept. These trade studies may identify additional design uncertainties associated with the alternatives which require resolution in order to develop a viable comparison with the baseline concept. This task will develop test plans, procure test systems, perform tests, and document the test results for the identified equipment or configuration alternatives in support of these trade studies.</p> <p>This element leads to validation of the enabling assumptions used to develop the fuel stabilization preliminary design concept.</p>		

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2.A.2. WBS Dictionary			
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1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94	
		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.5.3.1		5 WBS ELEMENT TITLE Project Management	
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	
		8 DATE 08/94	
9 APPROVED CHANGES			
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION			
A. COST CONTENT			
Labor, Material, Subcontracts			
B. TECHNICAL CONTENT/WORK STATEMENT			
Provide Project Management for the design and construction of a Spent Nuclear Fuel Stabilization Facility to process K Basin and other spent nuclear fuels prior to interim storage.			
Tasks identified in this WBS element include:			
<ul style="list-style-type: none"> ■ Project Management ■ Business Management ■ Quality Assurance 			

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.3.2	5 WBS ELEMENT TITLE Design	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide Architect-Engineering (A/E) services to perform Preliminary Design, Detailed Design, and Field Engineering services for a Spent Nuclear Fuel Stabilization Facility to stabilize K Basin and other spent nuclear fuels prior to placement in an Interim Storage Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> Title I Preliminary Design Title II Detailed Design Title III Field Engineering Services A/E Support Special Studies 		

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPF

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		
2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.3.3		
5 WBS ELEMENT TITLE Procurement of Equipment and Services		
7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION		
11 BUDGET AND REPORTING NUMBER EW3135040		12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts
B. TECHNICAL CONTENT/WORK STATEMENT Provide equipment and other services to support the construction of a Spent Nuclear Fuel Stabilization Facility to stabilize spent nuclear fuel prior to storage in an Interim Storage Facility. Tasks identified in this WBS element include: - Capital Equipment - GENRITC Equipment - Spare Parts/Equipment		

2.A.2. WBS Dictionary					
WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.5.3.4		5 WBS ELEMENT TITLE Construction Management			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Material, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
Provide construction management for a Stabilization Facility.					
Tasks identified in this WBS element include:					
<ul style="list-style-type: none"> - Construction Management - Cost and Schedule Control - Material and Equipment Management - Site Infrastructure Management 					

WORK BREAKDOWN STRUCTURE DICTIONARY

2.A.2-73

2.A.2. WBS Dictionary					
WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.5.3.6		5 WBS ELEMENT TITLE Project Documentation and Records			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Material, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
Provide for the collection and retention of project documentation required to safely operate and maintain the Spent Nuclear Fuel Stabilization Facility.					
Tasks identified in this WBS element include:					
<ul style="list-style-type: none"> - Engineering Design Media - As-Built Records - P&ID's, Fluor Diagrams - Compliance and Inspection Records. 					

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WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.5.4.1		5 WBS ELEMENT TITLE Start-Up Management			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Material, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
Provide start-up management for the start-up of a Spent Nuclear Fuel Stabilization Facility.					
Tasks identified in this WBS element include:					
<ul style="list-style-type: none"> - Management - Business Management - Quality Assurance 					

[illegible]

2.A.2. WBS Dictionary		
WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.4.3	5 WBS ELEMENT TITLE Test Equipment and Calibration	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide test and calibration equipment to support start-up of the Spent Nuclear Fuel Stabilization Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Test and Calibration Equipment - Laboratory Support - Repair Facility Support 		

[illegible]

SPENT NUCLEAR FUEL PROJECT
FY 1995 MYPP
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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.4.5	5 WBS ELEMENT TITLE Procedures	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION		
11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide start-up procedures required to conduct start-up testing of the Spent Nuclear Fuel Stabilization Facility. The procedures will be written to verify the facility will function as specified in the design criteria. Tasks identified with this WBS element include: - Procedures - Configuration Management - Records		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.5	5 WBS ELEMENT TITLE Transportation	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/M. Wiemers	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This element will provide the transportation equipment and services required to move fuel and sludge from the temporary storage location to the fuel stabilization processing facility. Lower level elements of this scope of work include the following: <ul style="list-style-type: none"> • Fuel transportation operations • Transportation system equipment decontamination and maintenance facility operations 		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.5.1	5 WBS ELEMENT TITLE Cask Fuel/Sludge	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This WBS element is associated with the transportation casks operations. Included in this element are costs associated with the following tasks: <ul style="list-style-type: none"> • Cask leakage rate test and examination equipment operation and maintenance • Cask decontamination and maintenance • Cask consumables procurement • Cask SARP renewal and revision activities 		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.5.2	5 WBS ELEMENT TITLE Plant Transportation Systems	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This WBS element is associated with the transportation system operations. Included in this element are costs associated with the following tasks: <ul style="list-style-type: none"> • Transportation system operations. • Transportation system fleet maintenance. 		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.6	5 WBS ELEMENT TITLE Operations	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION O/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This task element provides for the operation of the Fuel Stabilization Facility. The task element includes all aspects of activities required for radioactive operations of the facility after start-up and continues until radioactive material (storage, processing) activities are complete. Lower level elements of this work scope, leading to completing safe and efficient radioactive facility operations throughout the (storage, processing) mission, are: <div style="margin-left: 20px;"> 1.4.1.5.6.1 Project Management Support 1.4.1.5.6.2 Environment, Safety and Health Support 1.4.1.5.6.3 Facility Controls 1.4.1.5.6.4 Waste Handling </div>		

SPENT NUCLEAR FUEL PROJECT**FY 1995 MYPP****WBS Number 1.4****2.A.2. WBS Dictionary****WORK BREAKDOWN STRUCTURE DICTIONARY**

1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.7		5 WBS ELEMENT TITLE Transition	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack		8 DATE 08/31/94
9 APPROVED CHANGES			
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>This task element provides the activities required to transition the Fuel Stabilization Facility from an operational surveillance condition at the conclusion of the facility (storage, processing) mission. The facility surveillance condition represents a safe, low cost configuration for the facility which is a safe, low cost configuration for the facility which is maintained until decontamination and decommissioning activities are initiated. This task includes all aspects of the facility transition, including removal of residual materials, reconfiguration of systems, waste disposal, and facility surveillance until decontamination and decommissioning is started.</p> <p>The longer level elements of this task, leading to a transition of the facility from an operating to surveillance configuration, are:</p> <ul style="list-style-type: none"> 1.4.1.4.6.1 Regulatory Issues 1.4.1.4.6.2 Release/Stabilization Criteria 1.4.1.4.6.3 Systems Deactivation 1.4.1.4.6.4 Waste Disposal 1.4.1.4.6.5 Post Transition Surveillance 			

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6	5 WBS ELEMENT TITLE Interim Storage Facility	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/E. Gerber	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The Spent Nuclear Fuel Project has assumed that a Fuel Interim Storage Facility will be required for management of Hanford Site SNF until final disposition. The primary focus of the facility design will be to support interim storage requirements defined for N Reactor Fuel and Single Pass Reactor Fuel. This element includes definition of the Interim Storage Facility concept and all aspects of completing the facility design, construction, and operation, for the current Hanford SNF Lower level elements of this work scope, leading to construction and operation of an Interim Storage Facility include: 1.4.1.6.1 Process Engineering/Design 1.4.1.6.2 Process Technology 1.4.1.6.3 Facility Construction 1.4.1.6.4 Start-up 1.4.1.6.5 Transportation 1.4.1.6.6 Operations 1.4.1.6.7 Transition		

SPENT NUCLEAR FUEL PROJECT

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.1	5 WBS ELEMENT TITLE Process Engineering/Design	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>This task element develops the design of the Interim Storage Facility. The initial focus of the task elements is definition of a design concept for Interim Storage Facility which is used to develop documentation which initiates the project design process. The design concept is defined by developing a description of the facility design basis feed(s), product criteria, and a preliminary facility concept. This preliminary information is used as the project's baseline interim storage system. Enabling assumptions used to develop the baseline are evaluated using engineering trade studies. Decisions which select among alternatives based on the trade studies are documented and used to update the project baseline.</p> <p>The primary tasks of this element, leading to completion of design definition documentation required to initiate the facility conceptual/definitive design and provide onsite engineering reviews during design, construction, and start-up, consist of:</p> <ul style="list-style-type: none"> 1.4.1.6.1.1 - Design Basis Feed Development 1.4.1.6.1.2 - Process Product Criteria Development 1.4.1.6.1.3 - Process Concept Development 1.4.1.6.1.4 - Engineering Support 		

SPENT NUCLEAR FUEL PROJECT

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.1.1	5 WBS ELEMENT TITLE Design Basis Feed Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Developing a description of the Interim Storage Facility feed used as a design basis for the facility. The design basis feed description includes the nominal or overall average feed, bounding condition feeds for evaluating shielding and safety mitigation requirements, and estimates of the operational variations from nominal conditions which must be considered during design. The tasks of this element, leading to documented input for material balances which define the overall process design requirements, consist of: 1.4.1.6.1.1.01 - Develop Nominal Design Basis Feed Description 1.4.1.6.1.1.02 - Develop Bounding Design Basis Feed Descriptions 1.4.1.6.1.1.03 - Develop Operational Variability Basis Description		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.1.2	5 WBS ELEMENT TITLE Interim Storage Criteria Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <ul style="list-style-type: none"> • Propose/identify applicable regulatory framework for interim storage (NRC licensable storage facility) • Delineate key regulatory requirements for fuel storage • Propose minimum parameters that must be met for interim storage • Distribute draft interim storage criteria for review • Incorporate review comments • Distribute interim storage criteria to allow completion of design concepts for facility/equipment necessary to interim store fuel 		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.1.3	5 WBS ELEMENT TITLE Concept Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>This element develops a baseline concept for the interim storage process and facility which is used as a preliminary basis for improving the project's technical baseline estimated cost and schedule. The baseline concept is defined by a flowsheet, including material balances, and a preliminary facility layout defining the cost and schedule basis. This element also investigates alternatives to the baseline flowsheet and facility concept which are used to validate or modify enabling assumptions required to generate the original project baseline. Documentation of the basis and process for selecting among alternatives is included as part of the tasks in this element, with the baseline updated as alternative selection decisions are documented. The concept development and alternative selection activities form the basis for preparing design definition documentation required to initiate the formal facility conceptual design.</p> <p>The elements of this activity, leading to completion of the documentation required to initiate the facility conceptual design, consist of:</p> <ul style="list-style-type: none"> 1.4.1.6.1.3.01 - Project Baseline Flowsheet Development 1.4.1.6.1.3.02 - Facility Concept Development 1.4.1.6.1.3.03 - Prepare Design Definition Documentation 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.1.4	5 WBS ELEMENT TITLE Engineering Support	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This element provides engineering support for the interim storage facility project during design and construction activities. The support activities include providing technical support information to permitting plans and other project development activities, maintaining the flowsheet document as design decisions evolve and review of design details.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.2	5 WBS ELEMENT TITLE Storage Technology	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The technology element will provide for bench-scale, and pilot-scale investigations necessary to develop data supporting interim storage design activities. Technology development requirements will be identified by the WBS element 1.4.1.6.1 Process Engineering/Design activities. Development requirements will include data development in support of storage integration concepts which validate or modify flowsheet assumptions, and equipment concept development tasks directed toward resolving equipment design issues identified during facility concept design efforts. These activities, leading to definition of a storage concept with a minimum of open enabling assumptions prior to initiating the facility conceptual design, include:		

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.3	5 WBS ELEMENT TITLE Facility Construction	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/G. Hansrote	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide design, procurement, and construction services for a Interim Storage Facility, to support the removal of the spent nuclear fuel stored in the 105 KE/KW basins prior to shipment to a final storage facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Project Management - Architect-Engineering Services - Procurement of Equipment and Services - Construction Management - Construction of Facilities and Infrastructure - Project Documentation and Records 		

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.3.2	5 WBS ELEMENT TITLE Design	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide Architect-Engineering (A/E) services to perform Preliminary Design, Detailed Design, and Field Engineering services for an Interim Storage Facility to store spent nuclear fuels prior to shipment to a Federal repository. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Title I Preliminary Design - Title II Detailed Design - Title III Field Engineering Services - A/E Support - Special Studies 		

WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.6.3.3		5 WBS ELEMENT TITLE Procurement of Equipment and Services			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Material, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
Provide equipment and other services to support the construction of an Interim Storage Facility to store spent nuclear fuel prior to shipment to a Federal repository.					
Tasks identified in this WBS element include:					
<ul style="list-style-type: none"> - Capital Equipment - CENRTC Equipment - Spare Parts/Equipment 					

2.A.2. WBS Dictionary		
WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.3.4	5 WBS ELEMENT TITLE Construction Management	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide construction management for a Interim Storage Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Construction Management - Cost and Schedule Control - Material and Equipment Management - Site Infrastructure Management 		

SPENT NUCLEAR FUEL PROJECT

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.3.5	5 WBS ELEMENT TITLE Construction of Facilities and Infrastructure	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Construct the facilities and infrastructure for the Interim Storage Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Infrastructure Construction - Facility Construction - Site Utilities - ADP Equipment 		

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2.A.2. WBS Dictionary		
WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.4	5 WBS ELEMENT TITLE Start-Up	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide start-up services to support an Interim Storage Facility, to receive spent nuclear fuel from 105 KE/KW basins. Start-up of the Interim Storage Facility will verify that the systems, as constructed, will meet the functional design requirements. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Start-Up Management - Start-Up Personnel - Test Equipment and Calibration - Spare Parts - Procedure - Start-Up Records 		

2.A.2. WBS Dictionary					
WORK BREAKDOWN STRUCTURE DICTIONARY					
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/94		3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.6.4.1		5 WBS ELEMENT TITLE Start-Up Management			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 08/94	
9 APPROVED CHANGES					
10 SYSTEM DESIGN DESCRIPTION			11 BUDGET AND REPORTING NUMBER EW3135040		
12 ELEMENT TASK DESCRIPTION					
A. COST CONTENT					
Labor, Material, Subcontracts					
B. TECHNICAL CONTENT/WORK STATEMENT					
Provide start-up management for the start-up of an Interim Storage Facility.					
Tasks identified in this WBS element include:					
<ul style="list-style-type: none"> - Management - Business Management - Quality Assurance 					

[illegible]

[illegible]

SPENT NUCLEAR FUEL PROJECT

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.4.4	5 WBS ELEMENT TITLE Spare Parts	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/LE Nilsen	8 DATE 08/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide spare parts and equipment to support the start-up of the Interim Storage Facility. Tasks identified in this WBS element include: <ul style="list-style-type: none"> - Spare Parts - Spare Equipment 		

WORK BREAKDOWN STRUCTURE DICTIONARY

2.A.2-105

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FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.5	5 WBS ELEMENT TITLE Transportation	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/H. Wiemers	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This element will provide the transportation equipment and services required to move stabilized fuel materials from the fuel stabilization facility to the interim storage facility. The lower level elements of this scope of work include the following: <ul style="list-style-type: none"> • Fuel transportation operations • Transportation system equipment decontamination and maintenance facility operations 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.5.1	5 WBS ELEMENT TITLE Cask Fuel/Sludge	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT The cost content will include all or some of the following cost elements: Labor, Materials, offsite contract and consultant support, on-site contractor support (PNL, KEH, HEHF), WHC overhead, infrastructure, and site-wide overhead (G&A/CSP). B. TECHNICAL CONTENT/WORK STATEMENT Perform those activities required to transport stabilized fuel and sludge from the processing facility to Interim Storage.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.5.2	5 WBS ELEMENT TITLE Plant Transportation Systems	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/F. Moore	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This WBS element is associated with the transportation system operations. Included in this element are costs associated with the following tasks: <ul style="list-style-type: none"> • Transportation system operations • Transportation system fleet maintenance 		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.7	5 WBS ELEMENT TITLE Final Disposition	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT <p>The scope of work for the Hanford Site Spent Nuclear Fuel Project concludes with the transportation and storage of spent nuclear fuel at the Hanford Site in an interim fuel storage facility. Disposition to an anticipated geologic depository is excluded from the scope of this project.</p> <p>The scope of the final disposition element of the Spent Nuclear Fuel Project WBS is to provide the interface with the long-term planning, alternative development, and technology development team focused on final disposition.</p> <p>The next lower level task under this element is:</p> <p style="margin-left: 20px;">1.4.7.1 Studies</p> <p>Additional lower level task elements will be added to the Final Disposition Activity Element as disposition plans mature.</p>		

SPENT NUCLEAR FUEL PROJECT

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.7.1	5 WBS ELEMENT TITLE Studies	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Studies are currently underway to determine the method of final disposition of a wide range of nuclear materials including spent nuclear fuel. The purpose of this WBS element is to provide an interface with this activity to ensure that the activities of the Spent Nuclear Fuel Project are appropriate in light of final disposition activities. This will be accomplished by developing a project baseline fuel disposition process system using enabling assumptions. the enabling assumptions will be evaluated to determine if the assumptions can be validated or should be modified. Each enabling assumption evaluation will be used as a decision date package which is used as input to a decision analysis process. As each enabling assumption is validated or modified, the decision is documented and the baseline project fuel disposition process will be updated.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.7.1.1	5 WBS ELEMENT TITLE Product Criteria Development	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Technical evaluations will be defined and completed to assess potential final disposal forms for Hanford Site SNF inventories. The technical evaluations will utilize the results of other DOE site evaluations and performance assessments in addition to commercial SNF studies to identify product criteria drivers known criteria and waste form Data needs necessary to define/validate product criteria. The criteria will be used to evaluate integrated fuel management options and provide initial input towards development of a path forward for ultimate fuel disposition, consistent with the DOE Integrated SNF Program goals and objectives.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.7.1.2	5 WBS ELEMENT TITLE Waste Form Evaluation	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Ethridge	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Waste form evaluations will be completed as defined by WBS 1.4.1.7.1.1, Product Criteria Development. The waste form evaluations will include research of baseline and alternative final waste form options, evaluation of test data, hot cell activities (for hot tests), and technical support for establishing waste form criteria. Regulatory drivers for final disposition will be taken into account.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuels Project	2 DATE 6/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.8	5 WBS ELEMENT TITLE Regulatory Integration/Public Involvement	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/G. Mooers	8 DATE 6/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This WBS Element includes all compliance and permitting activities for the Spent Nuclear Fuels Project. These activities are applicable to: <ul style="list-style-type: none"> • Facilities • Transportation • Packaging • Environmental quality (air, soils, water) Regulating agencies and stakeholders include: <ul style="list-style-type: none"> • DOE • NRC • DOT • DNFSB • EPA • Indian Nations • Washington State Department of Ecology Major compliance issues involve the Clean Air Act, NEPA, Federal Facilities Compliance and Tri-Party Agreements.		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4.1.8

2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Regulatory Integration & Public Involvement	2 DATE 8/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.8.1	5 WBS ELEMENT TITLE Environmental Science	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Luke	8 DATE 8/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The activities required for this subproject include: <ul style="list-style-type: none"> • Ensure consistent approach to NEPA documentation for all facilities containing Spent Nuclear Fuel. • Prepare and/or review, when required, the necessary NEPA documentation for SNFP. • Prepare Fact Sheets on issues regarding Environmental Regulations as they pertain to the Spent Nuclear Fuel Project (SNFP) and for SNFP customers (ie, RL, DOE-HQ). • Ensure consistent approach to Clean Air Act (CAA) & Clean Water Act (CWA) documentation for SNFP facilities. • Provide environmental regulatory input to the Systems Engineering Management Process. • Ensure preparation of and/or review all necessary CAA & CWA documentation. • Regulatory Agencies, SNFP Interface. • Prepare transmittal letters, meeting minutes, telephone conference memorandums, etc., as required by the project. • Provide support on all RCRA/NRC/CERCLA issues as they pertain to the SNF Project. • Provide oversight, guidance, and support in completion of TPA Milestones for the SNFP. 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Regulatory Integration & Public Involvement	2 DATE 8/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.8.2	5 WBS ELEMENT TITLE Public Involvement	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/V. Hoefer	8 DATE 8/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The Public Involvement function supports the successful completion of the Spent Nuclear Fuel Project by maintaining the timely, accurate, and open two-way flow of information with the public, news media, employees, tribal governments, and members of local, state, and federal governments. The Public Involvement function includes the following tasks: <ul style="list-style-type: none"> • Public Participation to bring public perspectives and values to the project decision process. (WBS 1.4.1.8.2.1) • Media Relations to foster the flow of timely, accurate, and reliable information to the news media to help the public become informed on project issues. (WBS 1.4.1.8.2.2) • Governmental Relations to build and maintain the confidence of local, state, federal government officials. (WBS 1.4.1.8.2.3) • Tribal Relations to consult with tribal governments on major project decisions. (WBS 1.4.1.8.2.4) • Community Relations to promote good will and understanding of project goals and issues among local, state, and regional business and civic communities. (WBS 1.4.1.8.2.5) • Employee Communications to help create a work environment that fosters employee pride and ownership in the project. (WBS 1.4.1.8.2.6) 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Regulatory Integration & Public Involvement	2 DATE 8/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.8.3	5 WBS ELEMENT TITLE Nuclear Safety & Licensing	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/K. D. Daschke	8 DATE 8/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The activities required for the project to stay in compliance with specific orders and regulations are included in this subproject. These activities include: <ul style="list-style-type: none"> • Project authorization basis support. • Develop and Maintain a joint DOE-RL and WHC Licensing file and project management structure. • Integration, coordination and facilitation of key project activities relating to safety and risk management. • Tracking, monitoring, and closure of technical and regulatory issues relating to safety analysis, basis of operations, risk/analysis management encountered during project execution, including identification, definition, scoping, resolution and closure. • Coordinate/facilitate activities between project line organizations and external entities relating to safety/risk management issues, including requests for information, technology transfer, technical and regulatory issues, communications, etc. • Maintains understanding and awareness of "standards" applicable to all aspects of the facility life cycle, including NRC Regulatory Guides, ANSI, ANS, DNFSB Recommendations, etc. • S/RIDs development and administrative support. • Develop, review, and approve a K-Basin facility specific Standards and Requirements Identification Document (S/RIDS) in accordance with the established DOE S/RIDs process. This process is a formal review and identification of all federal, state, and local requirements as well as all national consensus standards that may have a bearing on the construction, operation, and ultimate decommissioning of a facility. Upon approval the S/RIDs become the specific compliance criteria for a facility. • Perform a facility administrative assessment against the applicable requirements defined in the S/RIDs process. • Manage the QA oversight for Spent Nuclear Fuel Project activities. • Develop and maintain a Quality Assurance Program Plan for Spent Nuclear Fuel Project activities consistent with the requirements of 10 CFR 830.120. 		

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2.A.2-117

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Regulatory Integration & Public Involvement	2 DATE 8/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.8.4	5 WBS ELEMENT TITLE Regulatory Issues Response and Control	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/G. Proulx	8 DATE 8/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT This WBS element includes all tasks concerning the response and control of regulatory issues associated with the disposition of Hanford Site Spent Nuclear Fuel. Task scope involves definition, implementation and maintenance of a SNFP issues management process and related documentation. Liaison with various regulatory and/or oversight agencies will be conducted as appropriate for each identified regulatory issue. Response and control of regulatory issues shall encompass the following key elements: <ul style="list-style-type: none"> • Identification of regulatory issues through direct project involvement, review of technical documentation, pertinent correspondence, occurrence reports, etc. • Prioritization of identified regulatory issues based on Risk • Tracking of all regulatory issues including proactive liaison with appropriate regulatory agencies • Verification of regulatory issue resolution for thoroughness and completeness • Close-out of regulatory issues including submission of all necessary documentation, correspondence, and/or reports • Issue related regulator interface coordination/facilitation Accomplishment of the above listed elements will be facilitated through the use of a database for tracking of regulatory issues, and a library containing the necessary regulatory codes, standards, and/or documents.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Project Management	2 DATE 6/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9	5 WBS ELEMENT TITLE Project Planning	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Denning	8 DATE 6/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Material, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Project Planning is the activity which utilizes the knowledge of technical personnel combined with systems engineering professionals to define the project's planning parameters. The planning function defines the scope of work to be performed at the project level and determines the necessary changes in scope. The activities under Project Planning include the following: <ul style="list-style-type: none"> • Scope Determination/Definition • Risk Assessment • Order of Magnitude Schedule Development • Order of Magnitude Estimate Development • National Program 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.1	5 WBS ELEMENT TITLE Project Planning	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J Womack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <u>Labor:</u> Exempt Non-Exempt <u>Materials and Supplies</u> <u>Contract Support</u> <u>Overhead:</u> B. TECHNICAL CONTENT/WORK STATEMENT The primary goal of the Project Planning WBS element is to ensure that the Spent Nuclear Fuel Project is adequately defined and planned to effectively manage the project. This WBS element provides overall SNF Project planning and integration. Development of top level project logic and schedules that support the implementation of the SNF Project baseline will be provided. Participation in the development of program element plans to ensure consistency with the SNF Project Plans, systems analysis, and technical baseline are included in this WBS element.		

WBS ELEMENT CODE 1.4.1.9.1	WBS ELEMENT TITLE Project Planning
<p>ELEMENT TASK DESCRIPTION (Cont)</p> <p>B. TECHNICAL CONTENT/WORK STATEMENT (Cont)</p> <p>The initial phase of the project is the establishment of the Project Technical Strategy and the development of the baseline documentation utilizing the System Engineering WBS element (WBS 1.4.1.9.1.1). As requirements change or the System Engineering analysis results in additional information, project baseline information will be revised in a controlled manner. Project documentation will be updated as the SNF Project evolves. Coordination of the changes to baseline documentation will be provided by the Management Controls WBS element (WBS 1.4.1.9.2). The Project Planning WBS element will consist of three WBS sub-elements:</p> <ul style="list-style-type: none">• Systems Engineering & Technical Baseline (WBS 1.4.1.9.1.01)• Project Integration (WBS 1.4.1.9.1.02)	

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.1.1	5 WBS ELEMENT TITLE Systems Integration and Technical Baseline	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Womack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Provide systems engineering support for the Spent Nuclear Fuel Project (SNFP). Provide engineering integration functions for Engineering & Systems Integration (E&SI) organizations. Perform the integrated options Evaluation/Selection for SNFP. Tasks identified for this WBS element include: <div style="margin-left: 20px;"> Systems Integration <ul style="list-style-type: none"> • Systems Engineering Management & Technical Baseline Development • Engineering Integration </div> <div style="margin-left: 20px;"> Integrated Options Evaluation/Selection <ul style="list-style-type: none"> • Life cycle evaluation of storage, transportation, and fuel disposition options to support development of overall project baseline. </div>		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.1.2	5 WBS ELEMENT TITLE Project Integration	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. Womack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <div style="margin-left: 20px;"> <u>Labor:</u> Exempt Non-Exempt <u>Contract Support</u> <u>Overhead:</u> Department Overhead G&A </div> B. TECHNICAL CONTENT/WORK STATEMENT <p>This WBS sub-element establishes top level logics and schedules consistent with system engineering analysis. Will maintain the Project Work Breakdown Structure and baseline schedule hierarchy. Will provide performance measurement impact analysis.</p> <p>Major end item deliverables:</p> <ul style="list-style-type: none"> • Top level SNF Project logic and schedule consistent with Systems Engineering technical baseline • Program Plan • Develop SNF Work Breakdown Structure and supporting documents • Project Baseline Schedule Hierarchy 		

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 09/19/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.2	5 WBS ELEMENT TITLE Management Controls	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. L. Denning	8 DATE 09/19/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <u>Labor:</u> Exempt Non-Exempt <u>Overheads:</u> Departmental overhead G&A CSP Assessments B. TECHNICAL CONTENT/WORK STATEMENT <p>The primary goal of the Management Controls WBS element is to provide a structure and process for the systematic direction and financial control of the Spent Nuclear Fuel Project. Significant products required of this WBS element involve the administration of fiscal responsibilities and formalized planning, execution, and evaluation of work.</p> <p>The Management Controls WBS element will consist of four WBS sub-elements:</p> <ul style="list-style-type: none"> • Administration (WBS 1.4.1.9.2.1) • Baseline Management (WBS 1.4.1.9.2.2) • Funds Management (WBS 1.4.1.9.2.3) • Performance Reporting (WBS 1.4.1.9.2.4) 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY			
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project		2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.2.1		5 WBS ELEMENT TITLE Administration	
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION "00"/J. L. Denning	8 DATE 08/31/94
9 APPROVED CHANGES			
10 SYSTEM DESIGN DESCRIPTION		11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION			
A. COST CONTENT			
Labor:			
Exempt			
Non-Exempt			
Contract Consultants			
Material and Supplies			
Overhead:			
B. TECHNICAL CONTENT/WORK STATEMENT			
This WBS sub-element provides overall administrative management to execute the authorized programmatic work using the approved WBS and schedule. This WBS sub-element responds to customer requests for information regarding technical, schedule, and cost data documented in the approved Multi-Year Baseline.			
Major end item deliverables:			
• Trend analysis			
• Carryover analysis			
• Project development			
• Customer special requests			
• Project management			

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.2.2	5 WBS ELEMENT TITLE Baseline Management	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. L. Denning	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <div style="margin-left: 20px;"> <u>Labor:</u> <div style="margin-left: 20px;"> Exempt Non-Exempt </div> </div> <div style="margin-left: 20px;"> <u>Material and Supplies</u> </div> <div style="margin-left: 20px;"> <u>Overhead:</u> </div> B. TECHNICAL CONTENT/WORK STATEMENT <p style="margin-left: 20px;"> This WBS sub-element begins to put the Project into perspective by developing and documenting an executable technical, schedule, and cost baseline consistent with the Systems Engineering technical bases (WBS 1.4.1.9.1.1). Approved statements of work documented in the Multi-Year Program Plan form the basis that change control is utilized to manage the evolutionary changes to the baseline. Annual planning cycles provide an opportunity to update baseline documentation by compiling current change control documentation and establishing impacts due to funds allocation or technological advancements. This WBS sub-element interfaces with all WBS elements in SNF during the development of the technical, schedule, and cost baseline. Change Control Administration is contained in this WBS sub-element. It is through change control that baseline changes are tracked and documented. </p>		

WBS ELEMENT CODE 1.4.1.9.2.2	WBS ELEMENT TITLE Baseline Management
<p data-bbox="164 258 542 283">ELEMENT TASK DESCRIPTION (Cont)</p> <p data-bbox="164 304 1404 373">Effects of performance measurement indicators are processed in this WBS sub-element and provides the integration between performing organization status (all SNF WBS elements), the funds management organization (WBS 1.4.1.9.2.3) and Performance Reporting (WBS 1.4.1.9.2.4).</p> <p data-bbox="261 405 602 430">Major end item deliverables:</p> <ul data-bbox="261 451 927 590" style="list-style-type: none">• Multi-Year Program Plan• Project Management Plan• Integrated Activity Based resource loaded schedules• Resource requirement estimates• Change control process and administration• Trend analysis and performance indicators	

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 09/19/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.2.3	5 WBS ELEMENT TITLE Funds Management	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. L. Denning	8 DATE 09/19/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <u>Labor:</u> Exempt Non-Exempt <u>Material and Supplies</u> <u>Overhead:</u> B. TECHNICAL CONTENT/WORK STATEMENT This WBS sub-element provides financial planning, cost accounting, budget preparation, and budget reconciliation. Preparation of the financial data is based on data from the performance measurement baseline generated in the Baseline Management sub-element (WBS 1.4.1.9.2.2). Activity Data Sheet preparation and Budget request documentation will be provided by this WBS sub-element. Major end item deliverables: <ul style="list-style-type: none"> • Activity Data Sheet Coordination/Preparation • Spending forecasts and Estimate at Completion information • Financial Plans 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.2.4	5 WBS ELEMENT TITLE Performance Reports	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. L. Denning	8 DATE 08/31/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <u>Labor:</u> Exempt Non-Exempt <u>Material and Supplies</u> <u>Overhead:</u> B. TECHNICAL CONTENT/WORK STATEMENT <p>This WBS sub-element provides SNF Project evaluation and analysis of completed and ongoing work, provides recommendations for decision analysis, makes assessments of compliance with applicable requirements, compiles and documents indicators of baseline performance and resource consumption. Full evaluation reporting is provided through the Site Management System (SMS) and the Progress Tracking System (PTS).</p> <p>Major end item deliverables:</p> <ul style="list-style-type: none"> • Monthly Site Management System reports • Monthly Progress Tracking System report (ADS) • Monthly/quarterly senior management Project Review (WHC/DOE) • Award Fee/ Significant Events/ Non-Financial Reports 		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 09/19/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.3	5 WBS ELEMENT TITLE Procurement/Contract Administration	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. Olson	8 DATE 09/19/94
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <div style="margin-left: 40px;"> <u>Labor</u> Exempt Non-exempt </div> <div style="margin-left: 40px;"> <u>Overhead:</u> Departmental overhead G&A </div> B. TECHNICAL CONTENT/WORK STATEMENT <p>The Procurement/Contract Administration WBS element provides the Spent Nuclear Fuel Project with necessary material, equipment, and contractors. Procurement and contract requests will be administered utilizing the best commercial practices to acquire SNF Project goods and services consistent with applicable Federal and DOE acquisition regulations. The SNF Project will rely on the use of effective competition, broad-based vendor involvement, and privatization. This WBS element (WBS 1.4.1.9.3) provides an interface with all other SNF WBS elements and sub-elements.</p> <p>There is one WBS sub-element in the Procurement/Contract Administration WBS element:</p> <ul style="list-style-type: none"> • Acquisition Management (WBS 1.4.1.9.3.01) <p>LEGAL DRIVERS AND ORDER REQUIREMENTS:</p>		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.3.1	5 WBS ELEMENT TITLE Acquisition Management	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. Olson	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <div style="margin-left: 20px;"> <u>Labor</u> Exempt Non-exempt <u>Overhead:</u> Departmental overhead G&A </div> B. TECHNICAL CONTENT/WORK STATEMENT The Acquisition Management WBS sub-element provides the services necessary to implement all procurement and contract administrative activities. The acquisition process, through enhanced procurement planning, competition, increased efficiency with reduced costs, and contractor incentives, is intended to acquire all the goods and services required by the SNF Project.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.4	5 WBS ELEMENT TITLE Resource Planning/Transition	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. L. Denning	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <u>Labor:</u> Exempt Non-Exempt <u>Overhead:</u> Department overhead G&A CSP Assessments B. TECHNICAL CONTENT/WORK STATEMENT 		

WBS ELEMENT CODE 1.4.1.9.4	WBS ELEMENT TITLE Resource Planning/Transition
<p data-bbox="186 258 548 281">ELEMENT TASK DESCRIPTION (Cont)</p> <p data-bbox="186 327 607 350">B. TECHNICAL CONTENT/WORK STATEMENT</p> <p data-bbox="186 373 1406 554">The Resource Planning/Transition WBS element maintains required project resources to execute the approved performance measurement baseline documented in the Multi-Year Program Plan. This WBS element maintains the Human Resource interface to ensure an aggressive recruitment policy is in place to obtain the necessary labor mix to achieve success for the disposition of Spent Nuclear Fuel. As existing operable units transition out of the Spent Nuclear Fuel Project the effect on the labor force will be minimized utilizing acceptable labor reallocation plans. Non-labor resource requirements will be tracked and status provided in this WBS element. Resource Planning/Transition WBS element maintains an interface with all SNF WBS elements and sub-elements.</p> <p data-bbox="186 577 1133 600">The Resource Planning/Transition WBS element will consist of two WBS sub-elements:</p> <ul data-bbox="248 623 1133 646" style="list-style-type: none">• Human Resources 1.4.1.9.4.01• Training Oversight 1.4.1.9.4.02 <p data-bbox="186 669 615 693">LEGAL DRIVERS AND ORDER REQUIREMENTS:</p>	

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WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.4.1	5 WBS ELEMENT TITLE Human Resources	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. L. Denning	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <u>Labor:</u> Exempt		
 B. TECHNICAL CONTENT/WORK STATEMENT This WBS sub-element provides Human Resource services for SNF. This sub-element maintains project labor resources required to execute the performance measurement baseline. Provides an aggressive recruitment policy to obtain the necessary labor mix. This WBS sub-element provides the Human Resource interface to employees and company requirements, benefits, and services.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.4.2	5 WBS ELEMENT TITLE Training Oversight	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION "0"/J. L. Denning	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT <u>Labor:</u> Exempt <u>Overhead:</u> Department overhead G&A CSP Assessments B. TECHNICAL CONTENT/WORK STATEMENT This WBS sub-element maintains oversight on all Safety, Developmental, and Technical training required of SNF. This sub-element ensures that the correct mix of training is completed by SNF personnel to effectively perform their work assignments. This sub-element will provide or coordinate labor force re-training for displaced workers during transition of operable units to the Environment Restoration program. LEGAL DRIVERS AND ORDER REQUIREMENTS:		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.5	5 WBS ELEMENT TITLE National Program	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT The Department of Energy is developing a program that assures near-term SNF Management, provides interim storage, and provides for final SNF disposal. The Hanford Site will participate in DOE's Integrated SNF Program and provide interface between the national and Hanford Site programs. <div style="margin-left: 40px;"> 1.1 DOE Programmatic SNF EIS 1.2 FRR SNF EIS 1.3 EM-37 Systems Engineering 1.4 EM-37 Technology Integration 1.5 EM-37 Technical Database 1.6 EM-37 Program Support </div>		

2.A.2. WBS Dictionary	
WORK BREAKDOWN STRUCTURE DICTIONARY	
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94
3 IDENTIFICATION NO. 1.4.1	
4 WBS ELEMENT CODE 1.4.1.9.5.1	5 WBS ELEMENT TITLE DOE Programmatic SNF EIS
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack
8 DATE 08/31/94	
9 APPROVED CHANGES	
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040
12 ELEMENT TASK DESCRIPTION	
A. COST CONTENT Labor, Materials, Subcontracts	
B. TECHNICAL CONTENT/WORK STATEMENT Spent Nuclear Fuel Project support will be provided to ensure successful issuance of Record of Decision for the DOE Programmatic SNF Management EIS. Support will include issuance of a technical support document for Hanford Site input, technical information development for comment incorporation, input to cost estimate preparation, public scoping meeting support, and other general support to RL.	

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.5.2	5 WBS ELEMENT TITLE FRR SNF EIS	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION O/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Spent Nuclear Fuel Project support will be provided to ensure successful issuance of a Record of Decision for the EIS on the Proposed Policy for the Acceptance of U.S. Origin Foreign Research Reactor SNF. Support will include issuance of a technical support document for Hanford Site input, technical information development for comment incorporation, public scoping meeting support, and other general support to RL.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.5.3	5 WBS ELEMENT TITLE EM-37 Systems Engineering	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION O/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Hanford Site input/interface will be provided to support the DOE Integrated SNF Program systems analysis development.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.5.4	5 WBS ELEMENT TITLE EM-37 Technical Integration	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/J. Ethridge	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Technical input will be provided; information analyzed, as requested; and review performed in support of the DOE Integrated SNF Program technology integration activities.		

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2.A.2. WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.5.5	5 WBS ELEMENT TITLE EM-37 Technical Database	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/94
9 APPROVED CHANGES 		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT Technical input will be developed; information analyzed, as requested; and review performed in support of the DOE Integrated SNF Management Program fuels and facilities technical databases.		

2.A.2. WBS Dictionary		
WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Spent Nuclear Fuel Project	2 DATE 08/31/95	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.9.5.6	5 WBS ELEMENT TITLE EM-37 Program Support	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0/R. McCormack	8 DATE 08/31/95
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER EW3135040	
12 ELEMENT TASK DESCRIPTION A. COST CONTENT Labor, Materials, Subcontracts B. TECHNICAL CONTENT/WORK STATEMENT General program support will be provided to the DOE Integrated SNF Program. Support will include input/review to DOE Integrated SNF Program via national meetings and document development/reviews, preparation of monthly status reports to EM-37; and miscellaneous technical support.		

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2.B. Work Breakdown Structure Index and Programmatic Responsibility Assignment Matrix

PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
1.4.1.1	1.4.1.1.1	1.4.1.1.1.1	Project Management Support	B. S. Carlisle	K-Basins Operations
		1.4.1.1.1.2	Environmental Safety & Health	B. S. Carlisle	K-Basins Operations
		1.4.1.1.1.3	Facility Controls	B. S. Carlisle	K-Basins Operations
		1.4.1.1.1.4	K-Basins Waste Handling	B. S. Carlisle	K-Basins Operations
	1.4.1.1.2	1.4.1.1.2.1	Water Supply	E. A. Nelson	Spent Fuel Support Projects
		1.4.1.1.2.2	Electrical System	E. A. Nelson	Spent Fuel Support Projects
		1.4.1.1.2.3	Fire Protection	E. A. Nelson	Spent Fuel Support Projects
		1.4.1.1.2.4	Maintenance Shop Support Facility	E. A. Nelson	Spent Fuel Support Projects
	1.4.1.1.3	1.4.1.1.3.1	Regulatory Issues	B. S. Carlisle	K-Basins Operations
		1.4.1.1.3.2	Release / Stabilization Criteria	B. S. Carlisle	K-Basins Operations
		1.4.1.1.3.3	Systems Deactivation	B. S. Carlisle	K-Basins Operations
		1.4.1.1.3.4	Waste Disposal	B. S. Carlisle	K-Basins Operations
		1.4.1.1.3.5	Post Transition Surveillance	B. S. Carlisle	K-Basins Operations

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2.B. Work Breakdown Structure Index and Programmatic Responsibility Assignment Matrix					
PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
1.4.1.2	1.4.1.2.1	1.4.1.2.1.1	Basin Related Characterization	R. P. Omberg	Engineering and Systems Integration
		1.4.1.2.1.2	Laboratory-Related Characterization	F. R. Turner	Engineering and Systems Integration
	1.4.1.2.2	1.4.1.2.2.1	Pilot Run	J. R. Frederickson	Engineering and Systems Integration
		1.4.1.2.2.2	Cold Test Facility	J. R. Frederickson	Engineering and Systems Integration
		1.4.1.2.2.3	Fuel Repackaging	J. R. Frederickson	Engineering and Systems Integration
		1.4.1.2.2.4	Sludge Retrieval and Packaging	C. J. Alderman	Engineering and Systems Integration
		1.4.1.2.2.5	Debris Removal	J. R. Frederickson	Engineering and Systems Integration
		1.4.1.2.2.6	Basin Water Treatment / Disposition	M. J. Wiemers	Engineering and Systems Integration
		1.4.1.2.2.7	Dose Reduction	F. W. Moore	Engineering and Systems Integration

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2.B. Work Breakdown Structure Index and Programmatic Responsibility Assignment Matrix					
PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
1.4.1.4	1.4.1.4.1	1.4.1.4.1.1	Engineering Studies	J. R. Frederickson	Engineering & Systems Integration
		1.4.1.4.1.2	Design	J. R. Frederickson	Engineering & Systems Integration
		1.4.1.4.1.3	Engineering Support to Project	J. R. Frederickson	Engineering & Systems Integration
	1.4.1.4.2	1.4.1.4.2.1	Project Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.2.2	Design	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.2.3	Procurement of Equipment and Services	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.2.4	Construction Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.2.5	Construction of Facilities and Infrastructure	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.2.6	Project Documentation and Records	L. E. Nilsen	Spent Fuel Support Projects
	1.4.1.4.3	1.4.1.4.3.1	Start-Up Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.3.2	Start-Up Personnel	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.3.3	Test Equipment and Calibration	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.3.4	Spare Parts	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.4.3.5	Procedures	L. E. Nilsen	Spent Fuel Support Projects
	1.4.1.4.4	1.4.1.4.4.1	Project Management	F. W. Moore	Engineering & Systems Integration
		1.4.1.4.4.2	Cask	F. W. Moore	Engineering & Systems Integration

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2.B. Work Breakdown Structure Index and Programmatic Responsibility Assignment Matrix					
PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
1.4.1.5	1.4.1.5.1	1.4.1.5.1.1	Design Basis Feed Development	R. L. McCormack	Engineering & Systems Integration
		1.4.1.5.1.2	Process Product Criteria Development	R. L. McCormack	Engineering & Systems Integration
		1.4.1.5.1.3	Process Concept Development	R. L. McCormack	Engineering & Systems Integration
		1.4.1.5.1.4	Engineering Support to Project	R. L. McCormack	Engineering & Systems Integration
	1.4.1.5.2	1.4.1.5.2.1	Process Flowsheet Data Development	J. L. Ethridge	Applied Technology-PNL
		1.4.1.5.2.2	Equipment Concept Development	J. L. Ethridge	Applied Technology-PNL
	1.4.1.5.3	1.4.1.5.3.1	Project Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.3.2	Design	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.3.3	Procurement of Equipment and Services	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.3.4	Construction Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.3.5	Construction of Facilities and Infrastructure	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.3.6	Project Documentation and Records	L. E. Nilsen	Spent Fuel Support Projects
	1.4.1.5.4	1.4.1.5.4.1	Start-Up Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.4.2	Start-Up Personnel	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.4.3	Test Equipment and Calibration	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.5.4.4	Spare Parts	L. E. Nilsen	Spent Fuel Support Projects

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2.B. Work Breakdown Structure Index and Programmatic Responsibility Assignment Matrix					
PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
1.4.1.6	1.4.1.6.1	1.4.1.6.1.1	Design Basis Feed Development	R. L. McCormack	Engineering & Systems Integration
		1.4.1.6.1.2	Interim Storage Criteria Development	R. L. McCormack	Engineering & Systems Integration
		1.4.1.6.1.3	Concept Development	R. L. McCormack	Engineering & Systems Integration
		1.4.1.6.1.4	Engineering Support to Project	R. L. McCormack	Engineering & Systems Integration
	1.4.1.6.2		Storage Technology	R. L. McCormack	Engineering & Systems Integration
	1.4.1.6.3	1.4.1.6.3.1	Project Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.3.2	Design	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.3.3	Procurement of Equipment and Services	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.3.4	Construction Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.3.5	Construction of Facilities and Infrastructure	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.3.6	Project Documentation and Records	L. E. Nilsen	Spent Fuel Support Projects
	1.4.1.6.4	1.4.1.6.4.1	Start-Up Management	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.4.2	Start-Up Personnel	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.4.3	Test Equipment and Calibration	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.4.4	Spare Parts	L. E. Nilsen	Spent Fuel Support Projects
		1.4.1.6.4.5	Procedures	L. E. Nilsen	Spent Fuel Support Projects

[illegible]

FY 1995 MYPP

WBS Number 1.4 (Rev. C)

[illegible]

FY 1995 MYPP

SPENT NUCLEAR FUEL PROJECT
WBS Number 1.4 (Rev. C)

[illegible]

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4 (Rev. C)

FY 1995 MYPP

2.B. Work Breakdown Structure Index and Programmatic Responsibility Assignment Matrix

PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
1.4.1.9	1.4.1.9.1	1.4.1.9.1.1	Systems Integration & Technical Baseline	J. C. Womack	Engineering Systems and Integration
		1.4.1.9.1.2	Project Integration	J. L. Denning	Project Basins Control
	1.4.1.9.2	1.4.1.9.2.1	Administration	J. L. Denning	Project Basins Control
		1.4.1.9.2.2	Baseline Management	J. L. Denning	Project Basins Control
		1.4.1.9.2.3	Funds Management	J. L. Denning	Project Basins Control
		1.4.1.9.2.4	Performance Reporting	J. L. Denning	Project Basins Control
	1.4.1.9.3	1.4.1.9.3.1	Acquisition Management	J. R. Olson	Spent Nuclear Fuels Procurement
	1.4.1.9.4	1.4.1.9.4.1	Human Resources	J. L. Denning	Project Baseline Control
		1.4.1.9.4.2	Training Oversight	J. L. Denning	Project Baseline Control
	1.4.1.9.5	1.4.1.9.5.1	DOE Programmatic SNF EIS	R. L. McCormack	Engineering Systems and Integration
		1.4.1.9.5.2	FRR SNF EIS	R. L. McCormack	Engineering Systems and Integration
		1.4.1.9.5.3	EM-37 Systems Engineering	R. L. McCormack	Engineering Systems and Integration
		1.4.1.9.5.4	EM-37 Technical Integration	J. L. Ethridge	Applied Technology-PNL
		1.4.1.9.5.5	EM-37 Technical Database	R. L. McCormack	Engineering Systems and Integration
		1.4.1.9.5.6	EM-37 Program Support	R. L. McCormack	Engineering Systems and Integration
		1.4.1.9.5.7	Fuel Characterization	R. P. Omberg	Engineering Systems and Integration

1.4.1.1 K-Basins Operations and Transition

1.4.1.1 K-Basins Operations and Transition

1.4.1.2 K-Basins Fuel Consolidation

1.4.1.3 Other Hanford Fuel

3222
PKG REQS TO PNL
(324)
1.7.1.1.1.30

3224
PKG REQS TO
T-Plant
DISW121645

3226
PKG REQS TO
Solid Waste
DISW121515

3228
PKG REQS TO
PUREX (SPF)
PRXC010802

3105
1.4.1.3.1
Characterization

3221
PKG REQS TO PNL
(308, 325)

3227
PKG REQS TO PNL
(327)
1.7.1.1.2.03

3225
PKG REQS TO
PUREX (NAF)
PRXC010402

3223
PKG REQS TO FFTF
1.7.3.1

3212
T-Plant Ready to
Transport
DISW121645

3213
SWD Ready to
Transport
DISW121515

3214
PNL (324) Ready
to Transport
1.7.1.1.1.30

1.4.1.2 K-Basins Fuel Consolidation

2210
Ready for
Transport

1.4.1.4 Pre-Interim Fuel Storage

4504
Analytical Lab
Support
1YL101000000

4503
Analytical Lab
Support
1YL600000000

4105
1.4.1.4.1
Process
Engineering

4115
1.4.1.4.1
Process
Engineering

4205
1.4.1.4.2
Facility
Construction

4210
1.4.1.4.2
Facility
Construction

4305
1.4.1.4.3
Start-Up

4505
1.4.1.4.5
Operations

4605
1.4.1.4.6
Transition

4609
Transfer Liquid
Effluent
12212156

4610
RCRA Monitoring

4606
Transfer Solid
Waste
(D1SN121005)

4608
Transfer Liquid
Waste
(S006135)

4502
RCRA Monitoring

4110
Characterization
Data Received

4404
Transport
Infrastructure
(2F3M5A)

Plot Date 21SEP94
 Date Data 0300194
 Project Start 31AUG93
 Project Finish 31AUG93
 (c) Prisma Systems, Inc.

Westinghouse Hanford Company
 Hanford Spent Nuclear Fuel Project
 1.4.1.4 Pre-Interim Fuel Stor (Logic)

LEGEND
 [Symbol] [Symbol]
 [Symbol] [Symbol]
 [Symbol] [Symbol]

1.4.1.1 K-Basins Operations and Transition

1.4.1.2 K-Basins Fuel Consolidation

2105
1.4.1.2.1
Studies
Characterization

1.4.1.5 Fuel Stabilization

5505
1.4.1.5.5
Transportation

1.4.1.6 Interim Storage Facility

6404
RCRA Monitoring

1.4.1.9 Project Management

9105
1.4.1.9.1
Project Planning
(Pre-Decision)

1308
Transfer Liq
Waste
S006135

1.4.1.7 Final Disposition

7105
1.4.1.7.1 Studies

Plot Date 21SEP94
 Date Date 03OCT94
 Project Start 01APR89
 Project Finish 31AUG95
 (c) Primavera Systems, Inc

LEGEND	
BY W	DESCRIPTION
IN PROGRESS	
COMPLETE	
CONCEPT	

Westinghouse Hanford Company
 Hanford Spent Nuclear Fuel Project
 1.4.1.7 Final Disposition (Logic)

ACT	WIP	THRU	BY W

1.4.1.8 Regulatory Integration/Pub. Involvement

8305
1.4.1.8.3
Nuclear Safety
and Licensing

8410
Negotiate
Long-Term Fuel
Stor/dispos

8105
1.4.1.8.1
Environmental
Sciences

8405
1.4.1.8.4
Regulatory
Issues Response

8205
1.4.1.8.2 Public
Involvement

1.4.1.9 Project Management

9105
1.4.1.9.1
Project Planning
(Pre-Decision)

Plot Date: 21SEP94
Data Date: 03OCT94
Project Start: 01APR89
Project Finish: 31AUG95
(c) Primavera Systems, Inc.

LEGEND
SYMBOL
Description
☒ In progress
☐ Complete
☐ Suspended

Westinghouse Hanford Company
Hanford Spent Nuclear Fuel Project
1.4.1.8 RegInteg/Pub Involvm (Logic)

NO	DESCRIPTION	STATUS	APPROVED

1.4.1.6 Interim Storage Facility

6105
1.4.1.6.1
Process
Engineering

1.4.1.8 Regulatory Integration/Pub. Involvement

8410
Negotiate
Long-Term Fuel
Stor/dispos

1.4.1.9 Project Management

9405
1.4.1.9.4
Resource
Planning

9205
1.4.1.9.2
Management
Controls

9505
1.4.1.9.5
National Program
WHC/PNL

9510
Prvd Path Fwd
Expedite Spnt
Fuel Rmvl

9305
1.4.1.9.3
Procurement
/Contract

9107
Recv SNF Nat'l
Prog EIS

9106
June '95 WRAP 2B
Decision
(D1SW121505)

9108
1.4.1.9.1
Project Planning
(Post-Decision)

9105
1.4.1.9.1
Project Planning
(Pre-Decision)

9110
Issue SNF PMP
SNF-95-906

NO.	DESCRIPTION	START DATE	END DATE

Westinghouse Hanford Company
 Hanford Spent Nuclear Fuel Project
 1.4.1.9 Project Management (Logic)

Plot Date 21SEP94
 Plot Time 09:00:00
 Project Start: 01JUN90
 Project Finish: 31JUN95
 (c) Primavera Systems, Inc.

LEGEND

	Activity
	Resource
	Relationship

1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
------	------	------	------	------	------	------	------	------	------	------	------	------	------

1.4 1.1 K-Basins Operations and Transition

Plot Date 21SEP94 Data Date 30CT94 Project Start 1APR89 Project Finish 31AUG05	act id 	SNF3 Westinghouse Hanford Company Hanford Spent Nuclear Fuel Project Project Master Baseline Schedule	Sheet 1 of 9 <table border="1"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Revision	Checked	Approved																												
Date	Revision	Checked	Approved

Plot Date 21SEP94
Data Date 30CT94
Project Start 1APR89
Project Finish 31AUG05

act id
Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity
Connecting Activity on Sheet x

SNF3

Sheet 2 of 9

Westinghouse Hanford Company
Hanford Spent Nuclear Fuel Project
Project Master Baseline Schedule

Date	Revision	Checked	Approved

WMC-SP-1104

Plot Date 21SEP94
 Data Date 30CT94
 Project Start 1APR89
 Project Finish 31AUG05

act id
 Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity
 Connecting Activity on Sheet x

SNF3

Sheet 4 of 9

Westinghouse Hanford Company
 Hanford Spent Nuclear Fuel Project
 Project Master Baseline Schedule

Date	Revision	Checked	Approved

(c) Primavera Systems, Inc.

Plot Date 21SEP94
 Data Date 30CT94
 Project Start 1APR89
 Project Finish 31AUG05

act id
 Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity
 Connecting Activity on Sheet x

SNF3

Sheet 6 of 9

Westinghouse Hanford Company
 Hanford Spent Nuclear Fuel Project
 Project Master Baseline Schedule

Date	Revision	Checked	Approved

1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
------	------	------	------	------	------	------	------	------	------	------	------	------	------

1.4 1.8 Regulatory Integration/Pub. Involvement

8105

1.4.1.8.1 Environmental Sciences

8205

1.4.1.8.2 Public Involvement

8305

1.4.1.8.3 Nuclear Safety and Licensing

8405

1.4.1.8.4 Regulatory Issues Response and Control

8410

Negotiate Long-Term Fuel
Stor/dispos SNF-96-801

Plot Date 21SEP94
Data Date 30CT94
Project Start 1APR89
Project Finish 31AUG05

act id

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity
Connecting Activity on Sheet x

SNF3

Sheet 8 of 9

Westinghouse Hanford Company
Hanford Spent Nuclear Fuel Project
Project Master Baseline Schedule

Date	Revision	Checked	Approved

(c) Primavera Systems, Inc.

WHC-SP-1104

K-Basins Operations

1.4.1.1.1

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994												1995												
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
AA	Operations	30CT94	90CT95																									
A04	M/S-K-SNF-95-1BX COMP INSTL SEISMIC BAR DRS K-W		30DEC94																									
A01	M/S-M-SNF-95-1BU REPORT SEISMIC USQ COMP COR ACT		30JAN95																									
A02	M/S-K-SNF-95-1BV COMP INST SEISMIC BAR DRS K-E		30JAN95																									
A03	M/S-M-SNF-95-1BW COMPLETE ORR FOR K-BASINS OPRNS		31MAR95																									
A05	M/S-K-SNF-95-1BY SHIP INIT 3 N-FUEL ELM TO 327		15APR95																									
				11101																								
AA101	Project Management Support	30CT94	90CT95																									
AAA	Project Management Support	30CT94	30SEP96																									
AAA001	Deputy Management	30CT94	30SEP96																									
AAA002	K-Basins Management	30CT94	30SEP96																									
AAA003	Program & Administration Management	30CT94	30SEP96																									
AAA004	DOE Interface	30CT94	30SEP96																									
				11102																								
AA102	Plant Tracking & Scheduling	30CT94	90CT95																									
AAB	Plant Tracking & Scheduling	30CT94	30SEP96																									
AAB001	Management of the Intergrated Schedule	30CT94	29SEP95																									
AAB002	Manage the Plant Tracking System	30CT94	30SEP96																									
				11103																								
AA103	Training	30CT94	90CT95																									
AAC	Training	30CT94	29SEP95																									
AAC001	K-Basin General Training	30CT94	29SEP95																									
AAC002	K-Basins Operations Training	30CT94	29SEP95																									
AAC003	K-Basins Maintenance Training	30CT94	29SEP95																									
AAC004	K-Basins Technical Staff Training	30CT94	29SEP95																									
AAC005	K-Basins Power Operator Training	30CT94	29SEP95																									
				11104																								
AA104	QA Support	30CT94	90CT95																									
AAD	QA Support	30CT94	29SEP95																									
AAD001	Work Control Support	30CT94	29SEP95																									
AAD002	Procurement Support	30CT94	29SEP95																									
AAD003	Engineering Support	30CT94	29SEP95																									
AAD004	Procedure Review and Approval	30CT94	29SEP95																									
AAD005	Operational Readiness Review/Assessment	30CT94	29SEP95																									
AAD006	Perform Verification Inspections	30CT94	29SEP95																									
AAD007	QA Oversight	30CT94	29SEP95																									
AAD008	Plant Review Committee Member	30CT94	29SEP95																									
AAD009	Quality Assurance Program Plan	30CT94	29SEP95																									

Activity Classification: SUMMARY LEVEL

☐ MISSION ☐ SUBMISSION

☐ ACTIVITY ☐ COST ACCOUNT

☐ PROGRAM

☐ PROGRAM ELEMENT

Plot Date 21SEP94

Data Date 10CT94

Project Start 10CT92

Project Finish 22APR03

Activity Bar/Early Dates

Critical Activity

Progress Bar

Milestone/Flag Activity

SNF2

Sheet 1 of 7

Date

Revision

Checked

Approved

Spent Nuclear Fuels Project

Operations

1.4.1.1.1

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ACTIVITY ID DESCRIPTION		1994	1995	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
AA105	Records Management	30CT94													
AAE	Records Management	30CT94													
AAE001	Records Management	30CT94													
AA106	SNF Inventory Controls	30CT94													
AAF	SNF Inventory Controls	30CT94													
AAF001	Materials Accountability Database Info. Sys.	30CT94													
AAF002	K Basins Operations Campaign Letters	30CT94													
AAF003	Source Data Auditing & Field Files Maintenance	30CT94													
AAF004	SNF Inventory Controls Readiness Assessment Doc.	30CT94													
AAF005	Historical SNF Production Data	30CT94													
AAF006	Inventory Difference Documentation	30CT94													
AAF007	Annual Witnessed Inventory K Basins	30CT94													
AAF008	Custodian & Material Handler Verification	30CT94													
AA1	Project Management Support (Carlisle)	30CT94													
AB2	ES&H (Carlisle)	30CT94													
AB201	Facility Compliance	30CT94													
ABA	Facility Compliance	30CT94													
ABA001	Implement DNF&B Recommendation 90-2	30CT94													
ABA002	Implement DNF&B	30CT94													
ABA003	Amendments related to CFR	30CT94													
AB202	Radioisotopic Controls	30CT94													
AB21	Compliance assessment DOE n5480.6 & 5480.11	30CT94													
ABB	Radioisotopic Controls	30CT94													
ABB001	Unconditional Radioisotopic Release	30CT94													
ABB002	Required Radioisotopic Surveillances	30CT94													
ABB003	Job Specific Radiation Safety Coverage	30CT94													
ABB004	Administering a Radioisotopic Problem Reporting	30CT94													
ABB005	Preparing Radiation Work Permits	30CT94													
ABB006	Providing Emergency Response Capability for Rad	30CT94													
ABB007	Radioisotopic Access Control	30CT94													
ABB008	Basic Certification & Qualification Training	30CT94													
ABB009	Basic certification & qualification--supervisor	30CT94													
ABB010	Supplement training staff	30CT94													

WHC-SP-1104

Spent Nuclear Fuels Project Operations
1.4.1.1.1

Activity Bar/Entry Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

Pilot Date 21SEP94
Data Date 10CT94
Project Start 10CT92
Project Finish 22APR03
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PROGRAM ELEMENT

Activity Classification: SUMMARY LEVEL

Revision
Date
Checked
Approved

Sheet 2 of 7

ACTIVITY ID DESCRIPTION		EARLY START	FINISH	1994												1995														
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP															
ABB011	Supplement training technicians	30CT94	29SEP95																											
ABB012	Radio[ogiac] reviews of technical work documents	30CT94	29SEP95																											
ABB013	Reporting key radio[ogical] indicators	30CT94	29SEP95																											
ABB014	Coordination of JCS	30CT94	29SEP95																											
ABB015	Portable radiation monitoring equipment & instr	30CT94	29SEP95																											
ABB016	Workplace air sampling	30CT94	29SEP95																											
ABB017	Radioactive Source Control	30CT94	29SEP95																											
ABB018	Special Disposition of two californium Rad. Src.	30CT94	29SEP95																											
ABB019	Compliance assessment to CFR 835 & related guide	30CT94	29SEP95																											
ABB021	Management & supervision	30CT94	29SEP95																											
ABB022	Secretarial support	30CT94	29SEP95																											
ABB023	Procedure development & evaluation	30CT94	29SEP95																											
ABB024	Waste management minimization	30CT94	29SEP95																											
ABB025	Safety improvement & implementation	30CT94	29SEP95																											
ABB026	Radio[ogical] engnr. ALARA support	30CT94	29SEP95																											
ABB027	CCIP	30CT94	29SEP95																											
ABB028	Radio[ogical] control manual	30CT94	29SEP95																											
ABB029	Analytical labs upgrades	30CT94	29SEP95																											
ABB030	Interdepartmental Mission Role	30CT94	29SEP95																											
ABB031	Facility Orientation	30CT94	29SEP95																											
ABB032	RAD Characterization /K Basins	30CT94	29SEP95																											
ABB033	Lab De[iv]er[iv]le Activities	30CT94	29SEP95																											
ABB034	Lab Admin. & Quality Assurance	30CT94	29SEP95																											
ABB203	OSR Compliance/Implementation	30CT94	90CT95																											
ABC	OSR Compliance/Implementation	30CT94	30SEP96																											
ABCO01	Operation Readiness Reviews	30CT94	30SEP96																											
ABCO02	Safety Authorization Bases	30CT94	30SEP96																											
ABCO03	Safety Analysis	30CT94	30SEP96																											
ABCO04	Unreviewed Safety Questions	30CT94	30SEP96																											
ABC005	Plant Nuclear Safety Support	30CT94	30SEP96																											
AB204	Inteq[ri]ty Assessment & Surveillance	30CT94	90CT95																											
ABD	Inteq[ri]ty Assessment & Surveillance	30CT94	30SEP96																											
ABD001	Nuclear Safety Portion	30CT94	30SEP96																											
ABD002	Operation Safety Assessment	30CT94	30SEP96																											
ABD003	Fire Protection Assessments	30CT94	30SEP96																											
ABD004	Comprehensive Baseline Hazards Assessments	30CT94	30SEP96																											

Activity Classification: SUMMARY LEVEL		SUBMISSION		COST ACCOUNT		SNF2	
ACTIVITY		MISSION		COST ACCOUNT		SNF2	
Pilot Date 21SEP94		Data Date 10CT94		Project Start 10CT92		Project Finish 22APR03	
(c) Primavera Systems, Inc.							

Spent Nuclear Fuels Project Operations 1.4.1.1.1		Revision		Checked		Approved	
Date		Revision		Checked		Approved	
Sheet 3 of 7							

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994				1995								
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
				11204												
ABD005	Readiness/Operational Readiness Review	30CT94	30SEP96													
ABD006	Review of K Basins safety basis documents	30CT94	30SEP96													
				11205												
AB205	Industrial Hygiene	30CT94	90CT95													
ABE	Safety Support	30CT94	30SEP96													
ABE001	Document Reviews	30CT94	30SEP96													
ABE002	Hanford Occupational Exposure Assessments	30CT94	30SEP96													
ABE003	Fire Protection Site Evaluations	30CT94	30SEP96													
ABE004	Job Hazards Analysis	30CT94	30SEP96													
ABE005	Support Devel. /Improvement of Baseline Hazards	30CT94	30SEP96													
ABE006	Devel./Implement Accident Potential Training Prg	30CT94	30SEP96													
ABE007	Support Safety Issues	30CT94	30SEP96													
ABE008	Safety Self Assessments	30CT94	30SEP96													
ABE009	S/RIDs Devel./Evaluated Order Compliance	30CT94	30SEP96													
ABE010	SNFS Training/Travel	30CT94	30SEP96													
ABE011	Other SNFS Support	30CT94	30SEP96													
ABE012	Preparation/Implementation of 10CFR830 Plans	30CT94	30SEP96													
				11206												
AB206	Security	30CT94	90CT95													
ABF	Security	30CT94	30SEP96													
ABF001	Protection Program Plan	30CT94	30SEP96													
				11207												
AB207	Environmental Monitoring & Compliance	30CT94	90CT95													
ABG	Hazardous Waste Program	30CT94	30SEP96													
ABG001	Envir. and Facility compliance Admin.	30CT94	30SEP96													
ABG002	NEPA Planning & Doc. Devel.	30CT94	30SEP96													
ABG003	Regulatory File Implementation	30CT94	30SEP96													
ABG004	Effluent & Emissions Monitoring & Reporting	30CT94	30SEP96													
ABG005	Envir. Media Monitoring	30CT94	30SEP96													
ABG006	Envir. Permits: Preparation & Implementation	30CT94	30SEP96													
ABG007	Envir. Compliance Self Assessments & CA	30CT94	30SEP96													
ABG008	ECO Document Review/Approvals	30CT94	30SEP96													
				113												
AC3	Facility Controls (Carlisle)	30CT94	90CT95													
				11301												
AC301	Facility Compliance	30CT94	90CT95													
ACA	Maintain Facility Conditions	30CT94	30SEP96													
ACA001	Facility Inspection & General Housekeeping	30CT94	30SEP96													

Activity Classification: SUMMARY LEVEL		SUBMISSION		PROGRAM		PROGRAM ELEMENT																
MISSION		COST ACCOUNT																				
ACTIVITY																						
Plot Date	21SEP94	Activity Bar/Early Dates Critical Activity Progress Bar Milestone/Flag Activity	SNF2 Spent Nuclear Fuels Project Operations 1.4.1.1.1		Sheet 4 of 7 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>		Date	Revision	Checked	Approved												
Date	Revision						Checked	Approved														
Data Date	10CT94																					
Project Start	10CT92																					
Project Finish	22APR03																					
(c) Primavera Systems, Inc.																						

ACTIVITY ID DESCRIPTION		ACTIVITY	EARLY START	EARLY FINISH	1994												1995											
					OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP												
ACA002	Carpenter & Painter Support		30CT94	30SEP96																								
ACA003	Training		30CT94	30SEP96																								
ACA004	Instrumentation Facility Condition		30CT94	30SEP96																								
ACA005	Maintain Facility Conditions		30CT94	30SEP96																								
ACA006	Maintenance Management		30CT94	30SEP96																								
ACA007	Facility Conditions, Inspections, Cleanliness		30CT94	30SEP96																								
ACA008	Maintenance Implementation Plan		30CT94	30SEP96																								
ACA009	Maintain Facilities		30CT94	30SEP96																								
ACA010	Facility Modification		30CT94	30SEP96																								
AC302	Surveillance		30CT94	90CT95																								
ACB	Surveillance		30CT94	29SEP95																								
ACB001	System Operations		30CT94	29SEP95																								
ACB002	Janitorial Support		30CT94	29SEP95																								
ACB003	Third Party Inspections		30CT94	29SEP95																								
ACB004	Animal/Pest Control		30CT94	29SEP95																								
ACB005	Utilities/Allocations		30CT94	29SEP95																								
ACB006	Confined Spaces		30CT94	29SEP95																								
ACB007	Water Plant Operations		30CT94	29SEP95																								
ACB008	Corrective Action Management		30CT94	29SEP95																								
ACB009	Training		30CT94	29SEP95																								
ACB010	K-Basins Special Projects Cleanup Crew		30CT94	29SEP95																								
ACB011	Budget Tracking		30CT94	29SEP95																								
AC303	Plant Engineering		30CT94	90CT95																								
ACC	Plant Engineering		30CT94	22APR03																								
ACC001	Cognizant Engineering Support		30CT94	30SEP96																								
ACC002	Electrical Design Engineering		30CT94	30SEP96																								
ACC003	Field Engineering		30CT94	30SEP96																								
ACC004	Mechanical Design Engineering		30CT94	30SEP96																								
AC304	Preventative Maintenance		30CT94	90CT95																								
ACD	Preventative Maintenance		30CT94	30SEP96																								
ACD001	Corrective Maintenance		30CT94	30SEP96																								
ACD002	Vehicle Preventive Maintenance		30CT94	30SEP96																								
ACD003	Instrument Preventive Maintenance		30CT94	30SEP96																								
ACD004	Calibration & Recall Procedures		30CT94	30SEP96																								
ACD005	Predictive Maintenance		30CT94	30SEP96																								

11301

1994

1995

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11304

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PROGRAM ELEMENT

PROGRAM

SNF2

Sheet 5 of 7

Activity Classification: SUMMARY LEVEL

ACTIVITY

MISSION

SUBMISSION

COST ACCOUNT

Project Finish 22APR03

Project Start 10CT92

Date Date 21SEP94

10CT94

10CT94

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Activity Bar/Early Dates

Critical Activity

Progress Bar

Milestone/Flag Activity

Operations

Spent Nuclear Fuels Project

1.4.1.1.1

Date

Revision

Checked

Approved

ACTIVITY ID DESCRIPTION		ACTIVITY	EARLY START	FINISH	1994	1995	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ACD006	Measuring & Test Equipment		30CT94	30SEP96											
ACD007	Preventive Maintenance		30CT94	30SEP96											
ACD008	Performance Indicators		30CT94	30SEP96											
AC305	Facility Assessment		30CT94	90CT95											
ACE	Facility Assessment		30CT94	29SEP95											
AC306	Conduct of Operations		30CT94	90CT95											
ACF	Conduct of Operations		30CT94	29SEP95											
ACF001	Occurrence Reporting & Lessons		30CT94	29SEP95											
ACF002	Operating Procedures		30CT94	29SEP95											
ACF003	Operational Drill Program		30CT94	29SEP95											
ACF004	Lock & Tag Program		30CT94	29SEP95											
ACF005	K Basins Performance Indicators		30CT94	29SEP95											
ACF006	K Basins Operations Self Assessment		30CT94	29SEP95											
ACF007	Human Performance Enhancement		30CT94	29SEP95											
AC307	Material & Equipment Controls		30CT94	90CT95											
AC6	Material & Equipment Controls		30CT94	30SEP96											
AC6001	Property Control		30CT94	30SEP96											
AC6002	Procurement Control		30CT94	30SEP96											
AC6003	Rigging Certification Program		30CT94	30SEP96											
AC6004	Lubrication Program		30CT94	30SEP96											
AC6005	Spare Parts Program		30CT94	30SEP96											
AC6006	Hazardous Waste Program		30CT94	30SEP96											
AC308	Facilities Work Control		30CT94	90CT95											
ACH	Facilities Work Control		30CT94	22APR03											
ADA	Waste Handling (Carlsruhe)		30CT94	90CT95											
ADA01	Hazardous Waste		30CT94	90CT95											
ADA	Waste Disposal		30CT94	29SEP95											
ADA001	Hazardous Waste Disposal		30CT94	29SEP95											
ADA002	Low Level Solid Waste Disposal		30CT94	29SEP95											
ADA003	Radioactive Mixed Waste Disposal		30CT94	29SEP95											
ADA004	Landfill (Non-regulated waste disposal)		30CT94	29SEP95											

Activity Classification: SUMMARY LEVEL

MISSION

SUBMISSION

COST ACCOUNT

Activity Bar/Early Dates

Critical Activity

Progress Bar

Milestone/Flag Activity

Spent Nuclear Fuels Project

Operations

1.4.1.1.1

Sheet 6 of 7

Date

Revision

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Plot Date 21SEP94

Data Date 10CT94

Project Start 10CT92

Project Finish 22APR03

Essential Systems Recovery

1.4.1.1.2

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994												1995						
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP							
AEEL151	DOE DECISION - 4160V SYSTEM ELIMINATION	22AUG94		1.4.1.1.2.2.02 Other Project Costs																		
AEEL152	DOE DECISION POINT - FUNDS AVAILABLE	31AUG94																				
AEEL201	COMPLETE TRANSFORMER REQUIREMENTS SPECIFICATION	60CT94	200CT94	1.4.1.1.2.2.05 Procurement																		
AEEL202	TRANSFORMER SPECIFICATION REVIEW	210CT94	270CT94																			
AEEL206	SELECT TRANSFORMER VENDOR	280CT94	28DEC94																			
AEEL207	AWARD CONTRACT - XFMR VENDOR	29DEC94																				
AEEL208	FABRICATE XFMR & DELIVER TO SITE	29DEC94	24MAR95																			
AEEL211	TRANSFORMER SUBMITTAL REVIEWS & AS-BUILTS	17FEB95	24MAR95																			
AEEL215	NORMAL BID - ASSEMBLE BID PACKAGE	27JAN95	2FEB95																			
AEEL216	DESIGN	200CT94	12JAN95	1.4.1.1.2.2.04 Engineering																		
AEEL220	NORMAL BID - REVIEW & APPROVE BID PACKAGE	3FEB95	16FEB95	1.4.1.1.2.2.06 Procurement																		
AEEL225	NORMAL BID - BID SUBMITTALS	17FEB95	16MAR95																			
AEEL230	NORMAL BID - BID EVALUATIONS	17MAR95	30MAR95																			
AEEL231	DESIGN REVIEW NO. 1	60CT94	190CT94	1.4.1.1.2.2.04 Engineering																		
AEEL232	DESIGN REVIEW NO. 2	13JAN95	26JAN95																			
AEEL233	DESIGN REVIEW NO. 1 - COMPLETE		190CT94																			
AEEL234	DESIGN REVIEW NO. 2 - COMPLETE		26JAN95																			
AEEL235	NORMAL BID - AWARD	31MAR95	6APR95	1.4.1.1.2.2.06 Procurement																		
AEEL236	NORMAL BID - AWARD ELECTRICAL SYSTEM UPGRADE	7APR95																				
AEEL240	NORMAL BID - CONSTRUCTION & TESTING-4160V ELIM	7APR95	21SEP95	1.4.1.1.2.2.05 Construction																		
AEEL245	DISADV CONTR - ASSEMBLE PACKAGE	27JAN95	2FEB95	1.4.1.1.2.2.06 Procurement																		
AEEL250	DISADV CONTR - AWARD	3FEB95	16MAR95																			
AEEL251	DISADV CONTR - AWARD ELECTRICAL SYSTEM UPGRADE	17MAR95																				
AEEL255	DISADV CONTR - CONSTRUCTION & TESTING-4160V ELIM	17MAR95	31AUG95	1.4.1.1.2.2.05 Construction																		
AEEL257	DISADV CONTRACTR - CONSTR SUBMITTAL RVW & AS-BLTS	28APR95	31AUG95																			
AEEL258	NORMAL BID CONSTR SUBMITTAL REVIEW & AS-BUILTS	19MAY95	21SEP95																			
AEEL260	KAISER FAIR COST ESTIMATE	28SEP94	4NOV94	1.4.1.1.2.2.04 Engineering																		
AEFP031	AE SUBMIT COST ESTIMATE & SCHEDULE	27SEP94	240CT94	1.4.1.1.2.3.04 Engineering																		

Activity Classification: SUMMARY LEVEL

☐ MISSION

☐ ACTIVITY

☐ SUBMISSION

☐ COST ACCOUNT

☐ PROGRAM

☐ PROGRAM ELEMENT

Plot Date 22SEP94

Data Date 22AUG94

Project Start 10CT92

Project Finish 17JAN96

Activity Bar/Early Dates

Critical Activity

Progress Bar

Milestone/Flag Activity

INS1 DON3

Spent Nuclear Fuels Project

Essential Systems Recovery

1.4.1.1.2

Sheet 2 of 5

Date	Revision	Checked	Approved

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Studies/Characterization

1.4.1.2.1

ACTIVITY		ACTIVITY ID DESCRIPTION												ACTIVITY EARLY START		ACTIVITY EARLY FINISH	
BA121		STUDIES/CHARACTERIZATION												30CT94		29SEP95	
BA1		Basin-Related Characterization (umberq)												30CT94		29SEP95	
BA101		Qualitative In-situ Data												30CT94		30JUN95	
BA102		Sample Shipping												30CT94		29SEP95	
BA10201		Shipping Coordination & Management												30CT94		29SEP95	
BA10202		Package Design and Cask Acquisition												30CT94		29SEP95	
BA10203		Shipping Safety Analyses												30CT94		29SEP95	
BA10204		105-K OSR and SAR Reviews												30CT94		29SEP95	
BA103		Engineering Data Interpretation												30CT94		29SEP95	
BA103A		Sealed Canister Sampling												30CT94		30JUN95	
BA103B		Underwater Sludge Sampling												30CT94		30JUN95	
BA103C		Systematic Review of Existing Data												30CT94		29SEP95	
BA10301		Acquisition of foreign data & experience												30CT94		29SEP95	
BA10302		Engineering Interpretation of Foreign Data												30CT94		29SEP95	
BA10303		Engineering Support												30CT94		29SEP95	
BA104		Data Quality Objectives												30CT94		29SEP95	
BA10401		Data Quality Objectives (Qualitative)												30CT94		29SEP95	
BA10402		Data Quality Objectives (Quantitative)												30CT94		29SEP95	
BA106		Debris Removal												30CT94		29SEP95	
BA2		Laboratory-Related Characterization (Turner)												30CT94		29SEP95	
BA201		Hot Cell Operations												30CT94		29SEP95	
BA202		Hot Cell Exams												30CT94		29SEP95	
21														OCT		1994	
														NOV			
														DEC			
														JAN			
														FEB			
														MAR			
														APR			
														MAY			
														JUN			
														JUL			
														AUG			
														SEP			

1994
 1995

Sheet 1 of 1

Spent Nuclear Fuels Project
 Studies/Characterization
 1.4.1.2.1

Date
 Revision
 Checked
 Approved

Plot Date
 Date Date
 Project Start
 Project Finish

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 21SEP94
 10CT94
 1SEP94
 22JUN06

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

Pilot Run

1.4.1.2.2.1

ACTIVITY		EARLY START	EARLY FINISH	1994												1995							
ACTIVITY ID	DESCRIPTION			APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
				2210407																			
D070115	Plan Work Pkg for Compressed Air Supply	6SEP94	19SEP94						■														
D070120	Procure Mat Work Pkg for Compressed Air Supply	20SEP94	26SEP94						■														
D070130	Install Work Pkg for Compressed Air Supply	27SEP94	30SEP94						■														
D070132	Install Pipe Supports Compressed Air Supply	27SEP94	30SEP94						■														
D070134	Run Pipe, Compressed Air Supply	30CT94	7OCT94						■														
D070136	Test Pipe, Compressed Air Supply	10OCT94	10OCT94						■														
				2210408																			
D0702	HYDRAULIC LINE REROUTING	20JUN94A	20DEC94																				
D070200	Evaluate for Re-Design Requirements	20JUN94A	24JUN94A	■																			
D070205	Hydraulic Lines Requirements from Interface Dwg	11JUL94A	12JUL94A				■																
D070210	ECN/Work Package Hydraulic Line Components	30CT94	9NOV94							■													
D070215	Plan Work Package Hydraulic Lines	10NOV94	23NOV94							■													
D070220	Procure Materials Hydraulic Lines Work Package	28NOV94	1DEC94								■												
D070230	Install Hydraulic Lines Work Package	7DEC94	20DEC94								■												
D070232	Pipe Supprot Hydraulic Lines Work Package	7DEC94	8DEC94								■												
D070234	Run Pipe, Hydraulic Lines Work Package	9DEC94	12DEC94								■												
D070236	Run Conduit, Hydraulic Lines Work Package	13DEC94	16DEC94								■												
D070238	Pull Cable, Hydraulic Lines Work Package	19DEC94	20DEC94								■												
D070240	Test Piping, Hydraulic Lines Work Package	21DEC94	21DEC94								■												
				2210409																			
D0703	RELOCATE HIGH PRESSURE PIPING	20JUN94A	27DEC94																				
D070300	Evaluate for Re-Design Requirements	20JUN94A	24JUN94A	■																			
D070305	Reqmts from Interface Dwg High Press Air Piping	27JUN94A	12JUL94A				■																
D070310	ECN/Work Pkg High Pressure Piping Components	30CT94	9NOV94							■													
D070315	Plan Work Package High Pressure Piping	10NOV94	23NOV94								■												
D070320	Procure Material High Pressure Piping Wrk Pkg	28NOV94	1DEC94								■												
D070330	Install Work Pkg High Pressure Piping	7DEC94	13DEC94								■												
D070332	Install Pipe Support, Pressure Piping	7DEC94	8DEC94								■												
D070334	Run Pipe, Pressure Piping	9DEC94	14DEC94								■												
D070336	Run Conduit, Pressure Piping	15DEC94	20DEC94								■												
D070338	Pull Cable, Pressure Piping	21DEC94	22DEC94								■												
D070340	Test Piping, Pressure Piping	27DEC94	27DEC94								■												
D99	PILOT RUN READINESS ASSESSMENT	4JAN95	30MAR95																				
				2210410																			
D990010	Prepare Plant Readiness Doc's	4JAN95	17JAN95											■									
D990020	Review Plant Readiness Doc's	18JAN95	7FEB95											■									
D990030	Conduct Plant Walk-Down	8FEB95	14FEB95												■								
D990040	Revise Systems as Needed	15FEB95	8MAR95													■							

Activity Classification: SUMMARY LEVEL		SUBMISSION		PROGRAM		PROGRAM ELEMENT	
MISSION							
ACTIVITY							

Plot Date 21SEP94	<div><div></div><div></div><div></div><div></div></div> <div>Activity Bar/Early Dates Critical Activity Progress Bar Milestone/Flag Activity</div>	PRO3	Spent Nuclear Fuels Project Pilot Run 1.4.1.2.2.1	Sheet 9 of 14
Data Date 15AUG94				
Project Start 10CT92				
Project Finish 24JUL95				

(c) Primavera Systems, Inc.	Date	Revision	Checked	Approved

Cold Test Facility

1.4.1.2.2.2

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994												1995											
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BC2	Cold Test Facility (Frederickson)	30CT94	29SEP95																								
BC201	Administration	30CT94	29SEP95																								
BC20101A	KBMU General Building Adminsitration	30CT94	29SEP95																								
BC20101B	KBMU Safety/Environmental Doc/Liaison	30CT94	29SEP95																								
BC20101C	KBMU Equip/Materail Accounting	30CT94	29SEP95																								
BC202	Engineering Support	30CT94	29SEP95																								
BC2020100	Test Table Top model	30CT94	70CT94																								
BC2020290	Review Test Plan	30CT94	60CT94																								
BC2020110	Modifications Design	50CT94	110CT94																								
BC2020300	Release Test Plan	70CT94	70CT94																								
BC2020310	Release Work Plan	100CT94	120CT94																								
BC2020340	Review Test Package	100CT94	140CT94																								
BC2020450	Procure Vacutubes for Sampling	100CT94	280CT94																								
BC2020120	Rerun Test	110CT94	130CT94																								
BC2020140	Modify Test Procedues	110CT94	140CT94																								
BC2020150	Incorporate Design Changes in Drawings	120CT94	140CT94																								
BC2020160	Procure Additional Materials for full size	140CT94	210CT94																								
BC2020130	Design Review for Table Top Model	170CT94	170CT94																								
BC2020410	Receive Drawing of Shipping "Pig" from Tank Farm	170CT94	180CT94																								
BC2020320	Review Function Design Criteria	180CT94	200CT94																								
BC2020420	Modify Shipping "Pig" to Hold Tubes	180CT94	190CT94																								
BC2020430	Procure Parts for Shipping "Pig"	180CT94	280CT94																								
BC2020330	Release FDC	210CT94	210CT94																								
BC2020170	Fab Full Size for Cold test	240CT94	1NOV94																								
BC2020180	Test Full Size in Cold Test Basin	2NOV94	4NOV94																								
BC2020190	Modifications to Design	7NOV94	10NOV94																								
BC2020260	Write Operating Proceures	7NOV94	18NOV94																								
BC2020440	Fab Shipping "Pig"	7NOV94	11NOV94																								
BC2020200	Rerun Test	11NOV94	14NOV94																								
BC2020220	Modify Test Procedures	14NOV94	16NOV94																								
BC2020345	Review Test Package	14NOV94	15NOV94																								
BC2020210	Design Review for Full Size	16NOV94	16NOV94																								
BC2020350	Release Test Package	16NOV94	17NOV94																								
BC2020230	Incorporate Design Changes in Drawings	17NOV94	22NOV94																								
BC2020270	Review Operating Proceures	19NOV94	26NOV94																								
BC2020360	Write Training Procedures	21NOV94	29NOV94																								
BC2020240	Review Drawings, checker	23NOV94	23NOV94																								

Plot Date 21SEP94
Data Date 10CT94
Project Start 1SEP94
Project Finish 22JUN06

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

SNF1

Sheet 1 of 2

Spent Nuclear Fuels Project Cold Test Facility 1.4.1.2.2.2

Date	Revision	Checked	Approved

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994													
				DEC	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
BC2020250	Release Drawings	23NOV94	28NOV94														
BC2020280	Release Operating Procedures	28NOV94	29NOV94														
BC2020370	Review Training Procedures	30NOV94	20DEC94														
BC2020380	Release Training Procedures	5DEC94	5DEC94														
BC2020390	Train Operators On Sampling Equipment	7DEC94	14DEC94														
BC2020400	Transport Sampling Equipment to KW Basin	15DEC94	16DEC94														
BC20201A	KBMU General Facility Engineering Activities	30CT94	29SEP95														
BC20201B	KBMU Safety/Environ Documentation/Liaison Supt	30CT94	29SEP95														
BC20201C	KBMU Hazardous Waste Dispositon	30CT94	29SEP95														
BC20201D	KBMU Equipment Material Accounting	30CT94	29SEP95														
BC20201E	KBMU Pool Equipment Maint & Oper Engring Suppt	30CT94	29SEP95														
BC203	Craft Support	30CT94	29SEP95														
BC20301A	KBMU General Facility Craft Support	30CT94	29SEP95														
BC20301B	KBMU Pool Equipment Maint & Oper Craft Support	30CT94	29SEP95														
BC204	Utilities	30CT94	29SEP95														
BC20401A	KBMU Overall Building Utility Costs	30CT94	29SEP95														
BC20401B	KBMU Equipment Utility Costs	30CT94	29SEP95														
BC20401C	KBMU Pool Water Deionization Service	30CT94	29SEP95														

Plot Date 21SEP94
 Data Date 10CT94
 Project Start 1SEP94
 Project Finish 22JUN06

SNF 1
Spent Nuclear Fuels Project
Cold Test Facility
 1.4.1.2.2.2

Sheet 2 of 2

Date	Revision	Checked	Approved

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WHC-SP-1104

Fuel Repackaging

1.4.1.2.2.3

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994			1995									
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
BD301	Project Management	30CT94	29SEP95	22301												
BDB010100	PROJECT MANAGEMENT FY95	30CT94	29SEP95	2230101												
BD302	Engineering Studies/Analyses	30CT94	29SEP95	22302												
BDA010100	STUDIES/REPORTS FY95	30CT94	29SEP95	2230201												
BDC010100	DESIGN FY95	30CT94	29SEP95	2230301												
BD304	Engineering Support	30CT94	29SEP95	22304												
BDD010100	ENGINEERING SUPPORT FY95	30CT94	29SEP95	2230401												
BD305	Procurement	30CT94	29SEP95	22305												
BD306	Facility Modifications	30CT94	29SEP95	22306												
BD307	Installation	30CT94	29SEP95	22307												
BD308	Fuel Repackaging Operations	30CT94	29SEP95	22308												
BD309	PNL to define work scope	30CT94	29SEP95	22309												

Plot Date 21SEP94
Data Date 10CT94
Project Start 1SEP94
Project Finish 22JUN06

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

SNF1

Spent Nuclear Fuels Project
Fuel Repackaging
1.4.1.2.2.3

Sheet 1 of 1

Date	Revision	Checked	Approved

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Sludge Retrieval and Packaging

1.4.1.2.2.4

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994			1995								
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BEC	SLUDGE RETRIEVAL & PACKAGING (Alderman)	30CT94	30SEP02	224											
BEC-00	Provide Schedule-Fuel/Hnding & Wtr Rmvl SNF-95-248		31MAR95												
BEC-05	Initiate Int. Sludge Pkg Demo SNF-95-254	31JUL95													
BEC1	...PROJECT MANAGEMENT	30CT94	30SEP02	22401											
BEC11	PROJECT PLANS	30CT94	31OCT94	2240101											
BEC12	WORK PLANS	30CT94	29SEP95	2240102											
BEC13	COSTS/SCHEDULES	30CT94	30SEP02	2240103											
BEC14	PROGRESS REPORTS	30CT94	31AUG00	2240104											
BEC15	PERSONNEL MANAGEMENT	30CT94	30SEP02	2240105											
BEC2	...ENGINEERING STUDIES and ANALYSIS	30CT94	30SEP96	22402											
BEC21	TECHNOLOGICAL SURVEY	30CT94	28FEB95	2240201											
BEC22	CANDIDATE ANALYSIS	1NOV94	30SEP96	2240202											
BEC23	EVALUATION	3JAN95	1MAR95	2240203											
BEC3	...DESIGN	30CT94	30SEP97	22403											
BEC31	ENGINEERING DOCUMENTAION	30CT94	30SEP97	2240301											
BEC32	DEVELOPMENT TESTING	30CT94	31MAR97	2240302											
BEC4	...SUPPORT ENGINEERING	30CT94	30SEP98	22404											
BEC41	SLUDGE CHARACTERIZATION	30CT94	29SEP95	2240401											
BEC42	SYSTEMS ENGINEERING	30CT94	31MAR95	2240402											
BEC43	ENVIRONMENTAL SAFETY and HEALTH	30CT94	30SEP98	2240403											

Activity Classification: SUMMARY LEVEL

MISSION SUBMISSION

ACTIVITY COST ACCOUNT

PROGRAM

PROGRAM ELEMENT

Plot Date 21SEP94

Data Date 8AUG94

Project Start 10CT92

Project Finish 30SEP02

Activity Bar/Early Dates

Critical Activity

Progress Bar

Milestone/Flag Activity

SNF1 SLDG

Sheet 1 of 2

Date

Revision

Checked

Approved

Spent Nuclear Fuels Project

Sludge Retrieval and Packaging

1.4.1.2.2.4

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ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994			1995											
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
BEC45	QUALITY ASSURANCE	30CT94	30SEP98	2240405														

Activity Classification SUMMARY LEVEL		☐ MISSION ☐ ACTIVITY		☐ SUBMISSION ☐ COST ACCOUNT		☐ PROGRAM		☐ PROGRAM ELEMENT																									
Plot Date 21SEP94 Data Date 8AUG94 Project Start 10CT92 Project Finish 30SEP02		 		Activity Bar/Early Dates Critical Activity Progress Bar Milestone/Flag Activity		SNF1 SLOG <div style="text-align: center;"> Spent Nuclear Fuels Project Sludge Retrieval and Packaging 1.4.1.2.2.4 </div>		<div style="text-align: right;">Sheet 2 of 2</div> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		Date	Revision	Checked	Approved																				
Date	Revision	Checked	Approved																														
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WHC-SP-1104

Debris Removal

1.4.1.2.2.5

Basin Water Treatment/Disposal

1.4.1.2.2.6

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994												1995											
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BG601	Project Management	30CT94	29SEP95																								
BG60101	M/S-T-SNF-95-247 SUBMT SCHD DISP CONTAM H2O K-E		31OCT94																								
BG60201	Functions and Requirements Documentation	30CT94	3MAR95																								
BG60202	Process Flow Diagrams	1NOV94	3MAR95																								
BG60203	Engineering Design/Analysis	30CT94	16MAY95																								
BG60204	Final Report	1MAR95	25JUL95																								
BG603	Water Characterization	30CT94	29SEP95																								
BG60301	Review existing data for adequacy	30CT94	29SEP95																								
BG60303	Gather and examine data samples	30CT94	29SEP95																								
BG60304	Engineering Data Interpretation	30CT94	29SEP95																								
BG604	Design	30CT94	5JAN95																								
BG6041	PNL Technology Development	30CT94	29SEP95																								
BG609	Basin Water Treatment Operations	30CT94	30JUN95																								

Plot Date 21SEP94
Data Date 10CT94
Project Start 1SEP94
Project Finish 22JUN06

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

SNF1

Spent Nuclear Fuels Project
Basin Water Treatment/Disposal
1.4.1.2.2.6

Sheet 1 of 1

Date	Revision	Checked	Approved

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Dose Reduction

1.4.1.2.2.7

Other Hanford Fuel

1.4.1.3

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994				1995									
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
				311													
CA1	Other Hanford Fuel Characterization (Omberg)	30CT94	29SEP95														
				31101													
CA1011	ACQUIRE & ARCHIVE EXISTING SNF DATA	30CT94	29SEP95														
				31102													
CA1021	DEFINE A PATH FORWARD FOR ACUISTION OF SNF	30CT94	29SEP95														
				31103													
CA1031	ESTABLISH READINESS FOR LICENSE APPLICATION	30CT94	29SEP95														
				31104													
CA1041	DEVELOP SCHEDULE & ORDER FOR DISPOSITION	30CT94	29SEP95														
CA11	Define a Path Forward for SNF Acquisition	30CT94	29SEP95														
CA110	...Develop Sched & Order for Disposition	30CT94	29SEP95														
CA110A	...Acquire/Archive Exist'g SNF Data	30CT94	29SEP95														
CA110B	Assess dry store conditions for Hanfd fuels	30CT94	29SEP95														
CA110C	Ammend Char Plan to Char Hanfd fuels	30CT94	29SEP95														
CA110D	Ammend current EA to allow transp of Hfuels	30CT94	29SEP95														
				312													
CA1311	Other Hanford Fuel Characterization (Omberg)	30CT94	29SEP95														
CA2	Process Engineering/Design (Monthey)	30CT94	29SEP95														
				31201													
CA2011	DEVELOP PROCESS FLOW DIAGRAMS FOR EACH SNF TYPE	30CT94	29SEP95														
				31202													
CA2021	DEVELOP SNF MANAGEMENT TRADE OFF STUDIES	30CT94	29SEP95														
				31301													
CA3011	DEVELOP PACKAGING SELECTION PROCESS	30CT94	29SEP95														
				31305													
CB1321	Other Fuel Packaging and Storage Integration (McC	30CT94	29SEP95														
				321													
CA3	Other Fuel Packaging Technology Development (Eth	30CT94	29SEP95														
									</								

Pre-Interim Fuel Storage

1.4.1.4

ACTIVITY ID DESCRIPTION											
EARLY START											
EARLY FINISH											
1994											
OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP											
143502											
DDC50201 Publishing											
DDC50202 Configuration Management											
DD01 Project Management (Moore)											
DD02 Cask (Moore)											
DDD144201 Engineering Studies											
DDD144201 Engineering Studies											
DDD201 Engineering Studies											
DDD201H Complete Evaluation of Alt Transport Equip											
DDD204 Operations Interface											
DD03 Transporter (Moore)											
DDD144301 Engineering Studies											
DDD301 Engineering Studies											
DDD302 Design											
DD0302M Comp] Transporter Syst Func Regs Dsn/Dev/Rvw											
DDF145 Operations											
DDF1 Project Management Support (Gerber)											
DDF101 Project Management Support											
DDF102 Plant Tracking & Scheduling											
DDF103 Training											
DDF104 QA Support											
DDF105 Records Management											
DDF106 SNF Inventory Controls											
DDF2 ES&H (Gerber)											
DDF201 Facility Compliance											
SNF1											
Spent Nuclear Fuels Project											
Pre-Interim Storage											
1.4.1.4											
Date											
Revision											
Checked											
Approved											
Sheet 2 of 4											

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

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Plot Date 22SEP94
Data Date 10CT94
Project Start 1SEP94
Project Finish 22JUN06

ACTIVITY ID DESCRIPTION		EARLY START	FINISH	1994	1995	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
DDF202	Radio logical Controls	30CT194	29SEP95	145202													
DDF203	OSR Compliance/Implementation	30CT194	29SEP95	145203													
DDF204	Integrity Assessment & Surveillance	30CT194	29SEP95	145204													
DDF205	Industrial Hygiene	30CT194	29SEP95	145205													
DDF206	Security	30CT194	29SEP95	145206													
DDF207	Environmental Monitoring & Compliance	30CT194	29SEP95	145207													
DDF3	Facility Controls (Gerber)	30CT194	29SEP95	145301													
DDF301	Facility Compliance	30CT194	29SEP95	145302													
DDF302	Surveillance	30CT194	29SEP95	145303													
DDF303	Plant Engineering	30CT194	29SEP95	145304													
DDF304	Preventative Maintenance	30CT194	29SEP95	145305													
DDF305	Facility Assessment	30CT194	29SEP95	145306													
DDF306	Conduct of Operations	30CT194	29SEP95	145307													
DDF307	Material & Equipment Controls	30CT194	29SEP95	145308													
DDF308	Facilities Work Control	30CT194	29SEP95	1454													
DDF4	Waste Handling (Gerber)	30CT194	29SEP95	145401													
DDF401	Hazardous Waste	30CT194	29SEP95	145402													
DDF402	Low & Intermediate Level Solid Waste	30CT194	29SEP95	145403													
DDF403	Radioactive Mixed Waste	30CT194	29SEP95	145404													
DDF404	Landfill	30CT194	29SEP95														

1.4.1.4
Spent Nuclear Fuels Project
Pre-Interim Storage

Revision _____
Checked _____
Approved _____

Plot Date 22SEP94
Data Date 10CT94
Project Start 1SEP94
Project Finish 22JUN06

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Sheet 3 of 4

Fuel Stabilization

1.4.1.5

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	WBS6	WBS7	WBS8	1994				1995						
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
EA151500	Document flowsheet concept selection	17APR95	28APR95	10	1													
EA151450	Transmit for EM/RW review	1MAY95	25OCT95	128	1													
EA151510	Develop process flow diagram	1MAY95	9JUN95	30	1													
EA151520	Develop mass balances	1MAY95	9JUN95	30	1													
EA151530	Develop process chemistry/technology descrip	1MAY95	23JUN95	40	1													
EA151540	Prep enabling assumption list	1MAY95	12MAY95	10	1													
EA151560	Prep process technology study needs	15MAY95	19MAY95	5	1													
EA151550	Prep draft flowsheet document	26JUN95	18AUG95	40	1													
EA151670	Identify process trade studies to be evaluated	26JUN95	30JUN95	5	1													
EA151570	Distribute draft flowsheet doc for review	21AUG95	15SEP95	20	1													
EA151580	Incorporate review comments	18SEP95	6OCT95	15	1													
EA101	Nominal Design Basis Feed Descriptions	30CT94	31JAN95	82	1	01												
EA101M	M/S-R CMPLT INITIAL DESIGN BASIS FEED DESC DOC		31JAN95	0	1	01												
EA102	Bounding Design Basis Feed Descriptions	30CT94	24FEB95	100	1	02												
EA103	Operational Variability Basis Descriptions	30CT94	24FEB95	100	1	03												
EA2	Process Product Criteria Development (McCormack)	30CT94	20CT95	256	2													
EA201	Expedited Temporary Storage Criteria Definition	30CT94	28FEB95	102	2	01												
EA201M	M/S-R CMPLT TEMP FUEL STORAGE PREFORM. CRIT. DOC		28FEB95	0	2	01												
EA202	Interim Storage Criteria Definition	30CT94	20CT95	256	2	02												
EA203	Disposal Form Criteria Definition	30CT94	2FEB95	345	2	03												
EA3	Process Concept Development (McCormack)	30CT94	20CT95	256	3													
EA301	Project Baseline Flowsheet Development	30CT94	17NOV95	290	3	01												
EA302	Facility Concept Development	30CT94	12JAN96	330	3	02												
EA303	Prepare Design Definition Documentation	30CT94	20CT95	256	3	03												
EB1	Process Flowsheet Data Development (Ethridge)	30CT94	20CT95	256	1													
EB152A	Collect Baseline Process Data	30CT94	30CT94	1	1													

Activity Classification: SUMMARY LEVEL		SUBMISSION		PROGRAM		PROGRAM ELEMENT	
MISSION		COST ACCOUNT					
ACTIVITY							
Plot Date	22SEP94	Activity Bar/Early Dates	SNF1	Spent Nuclear Fuels Project		Sheet 2 of 3	
Data Date	10CT94	Critical Activity		Fuel Stabilization			
Project Start	1SEP94	Progress Bar		1.4.1.5			
Project Finish	20MAY05	Milestone/Flag Activity					
				Date	Revision	Checked	Approved

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ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	WBS6	WBS7	WBS8	1994			1995							
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
EB152B	Process collection equipment development data	30CT94	140CT94	10	1													
EB152C	Collect Baseline Equipment Design Data	30CT94	30CT94	1	1													
EB152D	Collect facility trade study data	30CT94	30CT94	1	1													
EB120101	Sludge package/product interaction test	30CT94	2FEB95	84	1	1												
EB120102	Sludge prcs prod behavior/propert test	30CT94	5APR95	128	1	1												
EB120103	Fuel alternative tech selection	30CT94	4JAN95	63	1	1												
EB120104	Concept design of selected alternatives	30CT94	30JUN95	190	1	1												
EB120105	Fuel/sludge program management	30CT94	20CT95	256	1	1												
EB120106	Fuel/sludge program support	30CT94	20CT95	256	1	1												
EB120201	Sludge systems assessment	30CT94	2FEB95	84	1	2												
EB120202	Fuel systems assessment	30CT94	5APR95	128	1	2												
EB120203	Fuel stabilization test equip procurement	30CT94	30JUN95	190	1	2												
EB120204	Fuel/sludge program management	30CT94	20CT95	256	1	2												
EB120205	Fuel/sludge program support	30CT94	20CT95	256	1	2												
EB2	Equipment Concept Development (Ethrledge)	30CT94	20CT95	256	2													

Activity Classification: SUMMARY LEVEL

MISSION

ACTIVITY

SUBMISSION

COST ACCOUNT

PROGRAM

PROGRAM ELEMENT

Plot Date 22SEP94

Data Date 10CT94

Project Start 1SEP94

Project Finish 20MAY05

Activity Bar/Early Dates

Critical Activity

Progress Bar

Milestone/Flag Activity

SNF1

Sheet 3 of 3

Date

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Spent Nuclear Fuels Project

Fuel Stabilization

1.4.1.5

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Interim Storage Facility

1.4.1.6

Final Disposition

1.4.1.7

FINAL DISPOSITION

1.4.1.7

NO SCHEDULE ACTIVITY FOR FY 1995

Regulatory Integration/ Public Involvement

1.4.1.8

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994			1995								
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
H	Compliance/Public Involvement	30CT94	29SEP95	8											
HA	Environmental Sciences (Hoefer)	30CT94	29SEP95	81											
HA1	National Environmental Policy Act (Hoefer)	30CT94	29SEP95	811											
HA101	M/S-R-SNF-95-835 DEVELOP SNFP NEPA STRATEGY		31DEC94	812											
HA2	Washington State Requirements, SEPA, EPA (Hoefer)	30CT94	29SEP95	813											
HA3	Tri-Party Agreement (Hoefer)	30CT94	29SEP95	82											
HB	Public Involvement (Luke)	30CT94	29SEP95	821											
HB1	Public Participation (Luke)	30CT94	29SEP95	822											
HB101	M/S-R-SNF-95-804 PRODUCE VIDEO TOUR OF KE BASINS		31MAR95	823											
HB2	Media Relations (Luke)	30CT94	90CT95	824											
HB3	Tribal Relations (Luke)	30CT94	90CT95	825											
HB301	M/S-R-SNF-95-810 1Q QUARTER TRIBAL GOV BRIEFING		31DEC94	826											
HB302	M/S-R-SNF-95-810 2Q QUARTER TRIBAL GOV BRIEFING		31MAR95	83											
HB303	M/S-R-SNF-95-810 3Q QUARTER TRIBAL GOV BRIEFING		30JUN95	831											
HB304	M/S-R-SNF-95-810 4Q QUARTER TRIBAL GOV BRIEFING		30SEP95	832											
HB4	Governmental Relations (Luke)	30CT94	29SEP95	833											
HB5	Community Relations (Luke)	30CT94	29SEP95												
HB6	Employee Communications (Luke)	30CT94	29SEP95												
HC	Nuclear Safety & Licensing (Moore)	30CT94	29SEP95												
HC1	Project Authorization Basis Support	30CT94	29SEP95												
HC2	S/RIDs Development & Administrative Assessment	30CT94	29SEP95												
HC3	QA Oversight	30CT94	29SEP95												
HC4	Quality Assurance Program Plan	30CT94	29SEP95												

Activity Classification: SUMMARY LEVEL			
☐ MISSION	☐ SUBMISSION	☐ PROGRAM	☐ PROGRAM ELEMENT
☐ ACTIVITY	☐ COST ACCOUNT		

Plot Date 22SEP94	Activity Bar/Early Dates Critical Activity Progress Bar Milestone/Flag Activity	SNF2	Sheet 1 of 2	Spent Nuclear Fuels Project Compliance/Public Involvement 1.4.1.8			
Date Date 10CT94				Date	Revision	Checked	Approved
Project Start 10CT92							
Project Finish 23DEC02							

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Project Management

1.4.1.9

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994				1995								
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
IIB2A	Baseline Management (FY-95)	30CT94	20CT95	922												
IIB201	Prepare Program Management Plan	1NOV94	31JAN95	92201												
IIB201A	M/S-K-SNF-95-906 Issue SNF PROG MANAGEMENT PLAN		31JAN95	92202												
IIB202	Prepare 1996 MYPP/PMP	2MAY95	16AUG95	92203												
IIB202A	M/S-K-SNF-95-907 Issue 1996 PMP/MYPP		16AUG95	92204												
IIB202001	Submit 1996 MYPP/PMP	17AUG95	25SEP95	923												
IIB202B	M/S-O: Obtain PMP/MYPP Work Authorization		25SEP95	92301												
IIB203	Develop ADS Guidance	1FEB95	27FEB95	92302												
IIB204	Change Control Administration	30CT94	22SEP95	92303												
IIB3A	Funds Management (FY-95)	30CT94	20CT95	924												
IIB301	Prepare Spending Forecasts/EAC	30CT94	22SEP95	92401												
IIB302	Prepare/Coordinate ADS Input	28FEB95	1MAY95	92402												
IIB302A	M/S-O: Issue ADS		1MAY95	92403												
IIB303	FDS Baseline Management	30CT94	22SEP95	92404												
IIB4A	Performance Reports (FY-95)	30CT94	20CT95	931												
IIB401	Site Management System Reports	30CT94	22SEP95	94												
IIB402	Progress Tracking System Reports	30CT94	22SEP95													
IIB403	Senior Management Project Reviews	30CT94	22SEP95													
IIB404	Award Fee/Significant Events/Non-Financial	30CT94	22SEP95													
IIC	Procurement/Contract Administration (Olson)	30CT94	30SEP97													
IIC1A	Acquisition Management (FY-95)	30CT94	22SEP95													
IIC1B	Acquisition Management (FY96-97)	25SEP95	30SEP97													
IID	Resource Planning/Transition (Denning)	30CT94	23DEC02													

Activity Classification: SUMMARY LEVEL

☐ MISSION

☐ ACTIVITY

Plot Date 21SEP94

Data Date 10CT94

Project Start 10CT92

Project Finish 23DEC02

☐ SUBMISSION

☐ PROGRAM

☐ PROGRAM ELEMENT

SNF1 1101

Sheet 2 of 3

Activity Bar/Early Dates

Critical Activity

Progress Bar

Milestone/Flag Activity

Spent Nuclear Fuels Project

Project Management

1.4.1.9

Date	Revision	Checked	Approved

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ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994			1995									
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
				941												
IID1	Human Resources	30CT94	29SEP95													
				942												
IID2	Training Oversight	30CT94	29SEP95													
				95												
IIE	National Program (McCormack)	30CT94	20CT95													
				951												
IIE1	DOE Programmatic SNF EIS	30CT94	20CT95													
				952												
IIE2	FRR SNF EIS	30CT94	20CT95													
				953												
IIE3	EM-37 Systems Engineering	30CT94	20CT95													
IIE301	M/S-K-SNF-95-935 PRVD RECMND TO DOE EXPED FL REM		200CT94	◇												
				954												
IIE4	EM-37 Technology Integration	30CT94	20CT95													
				955												
IIE5	EM-37 Technical Database	30CT94	20CT95													
				956												
IIE6	EM-37 Program Support	30CT94	20CT95													
				957												
IIE7	Fuel Characterization	30CT94	20CT95													
														</		

FY 1995 MYPP

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

2.F. Milestone List					
Milestone Type*	Control Number	RL WBS	ADS NUMBER	Milestone Description	Milestone Completion Date
HQ-TPA	SNF-95-247	1.4.1.2.2.6 M-34-00-T04	4110-0	Submit schedule for disposing of contaminated K-East Basin water	10/31/94
HQ-TPA	SNF-95-248	1.4.1.2.2 M-34-00-T05	4110-0	Provide a schedule for fuel / sludge handling and contaminated water removal / replacement to regulators	03/31/95
HQ-TPA	SNF-96-249	1.4.1.2.2 M-34-00-T06	4110-0	Begin K-East Basin sludge encapsulation	06/28/96
HQ-TPA	SNF-96-801	1.4.1.8.1 M-34-02	4110-0	Negotiate long-term fuel storage and disposition with regulators	06/28/96
HQ-TPA	SNF-99-250	1.4.1.2.2.3 M-34-00-T07	4110-0	Complete K-East fuel and sludge encapsulation	12/30/98
HQ-TPA	SNF-03-251	1.4.1.4.5 M-34-00-T08	4110-0	Remove encapsulated fuel and sludge from K-Basins	12/30/02
HQ-TPA	SNF-96-252	1.4.1.2.2.6 M-34-01	4110-0	Remove/replace/treat contaminated K-East Basin water	09/30/96
HQ	SNF-95-1BU	1.4.1.1.1	4110-0	Report Seismic USQ completion of corrective actions.	01/30/95
RL	SNF-95-1BV	1.4.1.1.1	4110-0	Complete installation of seismic barrier doors in KE Basin.	01/30/95
RL	SNF-95-253	1.4.1.2.2.1	4110-0	Begin Basin Pilot Run	03/31/95
HQ	SNF-95-1BW	1.4.1.1.1	4110-0	Complete Operational Readiness Review for K-Basins Operations.	03/31/95
RL	SNF-95-1BX	1.4.1.1.1	4110-0	Complete installation of seismic barrier doors in KW Basin.	12/30/94
RL	SNF-95-1BY	1.4.1.1.1	4110-0	Complete shipment of the initial three N-Reactor fuel elements to 327 Bldg. Hot Cells for characterization.	04/15/95
RL	SNF-95-254	1.4.1.2.2	4110-0	Initiate the integrated sludge packaging demonstration.	07/31/95
RL	SNF-95-935	1.4.1.9	4110-0	Provide a formal project recommendation to DOE on the path forward to expedite removal of spent fuel from the K-Basins	10/20/94
RL	SNF-95-906	1.4.1.9.2.2	4110-0	Issue the SNF Project Management Plan	01/31/95

2.F-1

WHC-SP-1104

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Submit Schedule for Disposing of Contaminated K-East Basin Water		Date: 8/26/94 (See note below.)	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.2.2.6		Due Date: 10/31/94	
Control Number: SNF-95-247		Rev: 0	
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☒ TPA Number <u>M-34-00-T04</u>	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☒ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: <p>Note: This milestone was defined in September of 1993 and approved in January of 1994, as part of the fourth amendment to the <i>Hanford Federal Facility Agreement and Consent Order</i> (89-10 Rev. 3). The following milestone description is taken verbatim from that document.</p> <p>"Submit a schedule describing activities for the final disposition of contaminated K-East Basin water for planning purposes to support the 100-KR-4 record of decision."</p>			
Description of what constitutes completion of this milestone: <p>This milestone will be considered complete upon submittal of the K-East Basin water disposition schedule to DOE-EPA. The schedule shall include descriptions of each major activity required for treatment and/or transfer of contaminated water, and schedules for completion of those activities.</p> <p>WHC recognizes the need to complete the TPA milestones one month prior to due date in order to allow RL sufficient time to provide completion data to the regulator.</p>			
Cost Account Manager M. J. Wiemers		Program/Project Manager J. C. Fulton
Date 9/20/94		Date 9/21/94	
Program Element Manager E.W. Gerber		DOE Monitor D. C. Bryson
Date 9/20/94		Date 9/22/94	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Provide a schedule for fuel / sludge handling and contaminated water removal / replacement to regulators			Date: 08/24/94
Assigned To: Spent Nuclear Fuel Project			CIN: N/A
Program WBS Designator: 1.4.1.2.2			Due Date: 03/31/95
Control Number: SNF-95-248			Rev: 0
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA TPA Number <u>M-34-00-T05</u>	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☒ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: Provide a schedule for fuel and sludge handling and contaminated water removal or replacement to Ecology and EPA that supports the TPA milestone.			
Description of what constitutes completion of this milestone: Submittal of a schedule for disposition of contaminated K-East Basin water.			
WHC recognizes the need to complete the TPA milestones one month prior to due date in order to allow RL sufficient time to provide completion data to the regulator.			
Cost Account Manager M. J. Wiemers		Program/Project Manager J. C. Fulton
Date 9/20/94		Date 9/21/94	
Program Element Manager E. W. Gerber		DOE Monitor D. C. Bryson GT
Date 9/20/94		Date 9/21/94	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Begin K-East Basin sludge encapsulation		Date: 08/29/94	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.2.2		Due Date: 06/28/96	
Control Number: SNF-96-249		Rev: 0	
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☒ TPA Number <u>M-34-00-T06</u>	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: Initiate K-East Basin Sludge Encapsulation.			
Description of what constitutes completion of this milestone: Initiation of work to containerize the K-East Basin sludge. WHC recognizes the need to complete the TPA milestones one month prior to due date in order to allow RL sufficient time to provide completion data to the regulator.			
Cost Account Manager M. J. Wiemers		Program/Project Manager J. C. Fulton
Program Element Manager E. W. Gerber		DOE Monitor D. C. Bryson GT

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Negotiate long-term fuel storage and disposition with regulators			Date: 08/24/94
Assigned To: Spent Nuclear Fuel Project			CIN: N/A
Program WBS Designator: 1.4.1.8.1			Due Date: 06/28/96
Control Number: SNF-96-801			Rev: 0
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☒ TPA Number <u>M-34-02</u>	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
<p>Milestone Description: Negotiations with Ecology and EPA on incorporation of transition activities including stabilization of the basins, consistent with section 3.1 of the agreement (as amended) and the record of decision regarding long-term storage and ultimate disposition of the irradiated fuel. DOE will submit a signed Tri-Party agreement change request proposing milestones for (1) the completion of removal of fuel and sludges from the K-Basins and (2) the completion of stabilization of the basins.</p>			
<p>Description of what constitutes completion of this milestone: DOE will submit a signed Tri-Party agreement change request proposing milestones for (1) the completion of removal of fuel and sludges from the K-Basins and (2) the completion of stabilization of the basins. WHC recognizes the need to complete the TPA milestones one month prior to due date in order to allow RL sufficient time to provide completion data to the regulator.</p>			
Cost Account Manager J. J. Luke <i>[Signature]</i>		Program/Project Manager J. C. Fulton <i>[Signature]</i>	
Program Element Manager G. C. Mooers <i>[Signature]</i>		DOE Monitor D. C. Bryson <i>[Signature]</i>	
Date: 9/21/94		Date: 9/22/94	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Complete K-East fuel and Sludge Encapsulation			Date: 08/24/94
Assigned To: Spent Nuclear Fuel Project			CIN: N/A
Program WBS Designator: 1.4.1.2.2.3			Due Date: 12/30/98
Control Number: SNF-99-250			Rev: 0
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☒ TPA Number <u>M-34-00-T07</u>	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
<p>Milestone Description: This milestone includes the encapsulation of the fuel and sludge within K-East Basins. The scope of this includes but is not limited to work plans, equipment design, fuel retrieval, and packaging of the sludge and fuel.</p>			
<p>Description of what constitutes completion of this milestone: Complete encapsulation of the fuel and sludge within K-East Basins. WHC recognizes the need to complete the TPA milestones one month prior to due date in order to allow RL sufficient time to provide completion data to the regulator.</p>			
Cost Account Manager M. J. Wiemers		Date 9/20/94	
Program/Project Manager J. C. Fulton		Date 9/21/94	
Program Element Manager E. W. Gerber		Date 9/20/94	
DOE Monitor D. C. Bryson		Date 9/22/94	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Remove encapsulated fuel and sludge from K-Basins			Date: 08/24/94		
Assigned To: Spent Nuclear Fuel Project			CIN: N/A		
Program WBS Designator: 1.4.1.4.5			Due Date: 12/30/02		
Control Number: SNF-03-251			Rev: 0		
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☒ TPA Number <u>M-34-00-T08</u>	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)		
<p>Milestone Description: Remove all the fuel and sludge from both K-East and K-West basins in an encapsulated form. The scope of this milestone includes but is not limited to encapsulation, removal, transportation of encapsulated fuel and sludge, and encapsulated materials placed in interim storage.</p>					
<p>Description of what constitutes completion of this milestone: All fuel and sludge removed from K-East and K-West Basins. WHC recognizes the need to complete the TPA milestones one month prior to due date in order to allow RL sufficient time to provide completion data to the regulator.</p>					
Cost Account Manager M. J. Wiemers		Date 9/20/94	Program/Project Manager J. C. Fulton	Date 9/21/94	
Program Element Manager E. W. Gerber		Date 9/20/94	DOE Monitor D. C. Bryson GT		Date 9/22/94

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Remove/Replace/Treat Contaminated K-East Basin Water		Date: 8/26/94 (See note below.)	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.2.2.6		Due Date: 09/30/96 Assume Option #1 below	
Control Number: SNF-96-252		Rev: 0	
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☒ TPA Number <u>M-34-01</u>	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☒ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Remove/Replace/Treat Contaminated K-East Basin Water	Date: 8/26/94 (See note below.)
Assigned To: Spent Nuclear Fuel Project	CIN: N/A
Program WBS Designator: 1.4.1.2.2.6	Due Date: 09/30/96 Assume Option #1 below
Control Number: SNF-96-252	Rev: 0

Milestone Description:

Note: This milestone was defined in September of 1993 and approved in January of 1994, as part of the fourth amendment to the Hanford Federal Facility Agreement and Consent Order (89-10 Rev. 3). The following milestone description is taken verbatim from that document.

Contaminated K-East Basin water will be removed, replaced, or treated. The timing of this action must be coordinated with encapsulation and the cleaning of the residual contamination in the basin and (as noted below) the alternative selection is dependant on the feasibility of moving encapsulated K-East basin fuel and sludge to the K-West Basin. The contaminated water will be dispositioned in accordance with reasonable available hanford site treatment and/or disposal processes and methods, available at the time of this action. Unless a better option becomes available, the water will be trucked to C-018 for disposal.

If the K-East fuel and sludge, once encapsulated, can be moved to the K-West Basin (determined through a september 1994 engineering study target date) the removal and disposal of the contaminated water shall be completed by September 2000. This date is an eighteen month action, starting in March 1999, three months after fuel and sludge encapsulation is completed. If the transfer of encapsulated K-East Basin fuel and sludge to K-West Basin is infeasible, contaminated K-East Basin water will be replaced by fresh water, starting in September, 1996 at a rate of two million gallons/year and will continue until such time that the tritium concentration in the basin is decreased and is maintained at or below 300,000 pCi/L (the goal is to reduce the tritium concentration in the basin such that resulting groundwater tritium concentration meet drinking water concentration standards, recognizing a lag between basin and groundwater concentrations).

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Remove/Replace/Treat Contaminated K-East Basin Water	Date: 8/26/94 (See note below.)																								
Assigned To: Spent Nuclear Fuel Project	CIN: N/A																								
Program WBS Designator: 1.4.1.2.2.6	Due Date: 09/30/96 Assume Option #1 below																								
Control Number: SNF-96-252	Rev: 0																								
<p>Description of what constitutes completion of this milestone:</p> <p>This milestone will have been satisfied on schedule if <u>either</u> of the following criteria are satisfied: (1) equipment and operations are provided by September of 1996 to begin feeding fresh water to the K-East Basin and transferring contaminated water to C-108 or other appropriate facility at a minimum rate of two million gallons per year (The milestone allows this rate to be reduced to a maintenance level once the basin's tritium concentration has been reduced to "at or below" 300,000 pCi/L); or (2) all water is removed from the K-East Basin and trucked to C-108 (or some other disposal facility) by September 2000. WHC recognizes the need to complete the TPA milestones one month prior to due date in order to allow RL sufficient time to provide completion data to the regulator.</p>																									
<table style="width: 100%; border: none;"> <tr> <td style="width: 40%;">Cost Account Manager</td> <td style="width: 10%; text-align: right;">Date</td> <td style="width: 40%;">Program/Project Manager</td> <td style="width: 10%; text-align: right;">Date</td> </tr> <tr> <td>M. J. Wiemers</td> <td></td> <td>J. C. Fulton</td> <td></td> </tr> <tr> <td> </td> <td>9/20/94</td> <td> </td> <td>9/21/94</td> </tr> </table>	Cost Account Manager	Date	Program/Project Manager	Date	M. J. Wiemers		J. C. Fulton			9/20/94		9/21/94	<table style="width: 100%; border: none;"> <tr> <td style="width: 40%;">Program Element Manager</td> <td style="width: 10%; text-align: right;">Date</td> <td style="width: 40%;">DOE Monitor</td> <td style="width: 10%; text-align: right;">Date</td> </tr> <tr> <td>E.W. Gerber</td> <td></td> <td>D. C. Bryson</td> <td></td> </tr> <tr> <td> </td> <td>9/20/94</td> <td> D. C. Bryson</td> <td>9/22/94</td> </tr> </table>	Program Element Manager	Date	DOE Monitor	Date	E.W. Gerber		D. C. Bryson			9/20/94	D. C. Bryson	9/22/94
Cost Account Manager	Date	Program/Project Manager	Date																						
M. J. Wiemers		J. C. Fulton
9/20/94		9/21/94																						
Program Element Manager	Date	DOE Monitor	Date																						
E.W. Gerber		D. C. Bryson
9/20/94	D. C. Bryson	9/22/94																						

Westinghouse Hanford Company

MILESTONE DESCRIPTION SHEET

Title: Report seismic USQ completion of corrective actions.		Date: 08/24/94	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.1.1		Due Date: 01/30/95	
Control Number: SNF-95-1BU		Rev: 0	
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
<p>Milestone Description: Resolve issues associated with potential seismically induced leakage of the K Basins and make hardware modifications to limit leakage. Update the safety basis to reflect upgraded analyses and modified hardware configurations.</p>			
<p>Description of what constitutes completion of this milestone: Submit for RL approval a USQ resolution package which includes: 1) a description of hardware modifications installed to correct deficiencies, 2) an updated interim safety basis.</p>			
Cost Account Manager B. S. Carlisle		Program/Project Manager J. C. Fulton	
Date <i>9-21-94</i>		Date <i>9/21/94</i>	
Program Element Manager J. E. Tryax		DOE Monitor D. C. Bryson	
Date <i>9-21-94</i>		Date <i>9/22/94</i>	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Complete installation of seismic barrier doors in KE Basin			Date: 08/24/94
Assigned To: Spent Nuclear Fuel Project			CIN: N/A
Program WBS Designator: 1.4.1.1.1			Due Date: 01/30/95
Control Number: SNF-95-1BV			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: Install seismic barrier doors in KE Basin.			
Description of what constitutes completion of this milestone: Installation means that the doors are properly qualified and put in place, that all appropriate pre-installation reviews are complete with discrepancies resolved and that the doors are functioning as intended. Readiness assessments will be performed and approved by WHC per the requirements of DOE Order 5480.31; RL will perform normal management and operations oversight. A day-for-day slip in the above dates will be allowed, provided a circumstance totally beyond WHC's control caused delay.			
Cost Account Manager B. S. Carlisle		Program/Project Manager J. C. Fulton
Program Element Manager J. E. Truax		DOE Monitor D. C. Bryson GT

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Begin Basin Pilot Run		Date: 08/24/94	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.2.2.1		Due Date: 03/31/95	
Control Number: SNF-95-253		Rev: 0	
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: The scope of this milestone is to start the Pilot Run for the removal of debris and sludge from the K-Basins.			
Description of what constitutes completion of this milestone: Start the Pilot Run In K-Basins.			
Cost Account Manager J. R. Frederickson <i>[Signature]</i>		Program/Project Manager J. C. Fulton <i>[Signature]</i>	
Date 9/20/94		Date 9/21/94	
Program Element Manager E. W. Gerber <i>[Signature]</i>		DOE Monitor D. C. Bryson <i>[Signature]</i>	
Date 9/20/94		Date 9/22/94	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Complete Operational Readiness Review for K-Basins Operations		Date: 08/24/94 <i>9/22/94</i>	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.1.1		Due Date: 03/31/95	
Control Number: SNF-95-1BW		Rev: 0	
MILESTONE TYPE: ☒ DOE-HQ ☐ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: The K-Basins Operations will need to have a Operational Readiness Review (ORR) completed. This milestone supports that the completion of that ORR.			
Description of what constitutes completion of this milestone: Complete the ORR for the K-Basins Operations.			
Cost Account Manager B. S. Carlisle <i>[Signature]</i>		Program/Project Manager J. C. Fulton <i>[Signature]</i>	
Date <i>9-21-94</i>		Date <i>9/21/94</i>	
Program Element Manager J. E. Truax <i>[Signature]</i>		DOE Monitor D. C. Bryson <i>[Signature]</i>	
Date <i>9-21-94</i>		Date <i>9/22/94</i>	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Complete installation of seismic barrier doors in KW Basin			Date: 08/24/94
Assigned To: Spent Nuclear Fuel Project			CIN: N/A
Program WBS Designator: 1.4.1.1.1			Due Date: 12/30/94
Control Number: SNF-95-1BX			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: Install seismic barrier doors in KW Basin.			
Description of what constitutes completion of this milestone: Installation means that the doors are properly qualified and put in place, that all appropriate pre-installation reviews are complete with discrepancies resolved and that the doors are functioning as intended. Readiness assessments will be performed and approved by WHC per the requirements of DOE Order 5480.31; RL will perform normal management and operations oversight. A day-for-day slip in the above dates will be allowed, provided a circumstance totally beyond WHC's control caused delay.			
Cost Account Manager B. S. Carlisle 		Program/Project Manager J. C. Fulton 	
Date 9-21-94		Date 9/21/94	
Program Element Manager J. E. Truax 		DOE Monitor D. C. Bryson GT 	
Date 9-21-94		Date 9/22/94	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Complete shipment of the initial three N-Reactor fuel elements to 327 Bldg. Hot Cells for characterization.		Date: 08/24/94 9/22/94	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.1.1		Due Date: 04/15/95	
Control Number: SNF-95-1BY		Rev: 0	
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: Complete shipment of initial three N-Reactor fuel elements to the 327 Bldg. hot cell.			
Description of what constitutes completion of this milestone: Complete shipment of three N-Reactor fuel elements to the 327 Bldg. hot cells. Delays due to the inability of the 327 Bldg. hot cell to receive this fuel will not count against this milestone.			
Cost Account Manager B. S. Carlisle		Program/Project Manager J. C. Fulton
Date 9-21-94		Date 9/21/94	
Program Element Manager J. E. Truax		DOE Monitor D. C. Bryson
Date 9-21-94		Date 9/22/94	

Westinghouse Hanford Company

MILESTONE DESCRIPTION SHEET

Title: Initiate the integrated sludge packaging demonstration		Date: 08/24/94	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.2.2		Due Date: 07/31/95	
Control Number: SNF-95-254		Rev: 0	
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: Demonstrate integrated sludge packaging concept.			
Description of what constitutes completion of this milestone: Complete the integrated sludge packaging demonstration of the leading packaging concepts and issue performance analysis report.			
Cost Account Manager C. J. Alderman <i>[Signature]</i>		Program/Project Manager J. C. Fulton <i>[Signature]</i>	
Program Element Manager E. W. Gerber <i>[Signature]</i>		DOE Monitor D. C. Bryson GT <i>[Signature]</i>	

Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: Provide a formal project recommendation to DOE on the path forward to expedite removal of spent fuel from the K-Basins		Date: 08/24/94	
Assigned To: Spent Nuclear Fuel Project		CIN: N/A	
Program WBS Designator: 1.4.1.9		Due Date: 11/30/94 ⁹⁻²²⁻⁹⁴ 10/20/94	
Control Number: SNF-95-935		Rev: 0	
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☐ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☐ Other (specify)
Milestone Description: Provide a recommendation to DOE on the path forward to expedite removal of the spent fuel from the K-Basins.			
Description of what constitutes completion of this milestone: Formal transmittal of a recommendation to DOE providing a path forward to expedite removal of the spent fuel from the K-Basins.			
Cost Account Manager J. L. Ethridge for		Program/Project Manager J. C. Fulton
Program Element Manager J. L. Denning		DOE Monitor D. C. Bryson
Date 9/21/94	Date 9/21/94	Date 9/21/94	Date 9/22/94

Westinghouse Hanford Company

MILESTONE DESCRIPTION SHEET

Title: Issue The SNF Project Management Plan			Date: 8/31/94
Assigned To: Spent Nuclear Fuel Project			CIN: N/A
Program WBS Designator: 1.4.1.9.2.2 Baseline Management			Due Date: 01/31/95
Control Number: SNF-95-906			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☒ Other (specify) Document - SNF Project Management Plan	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Issue the Spent Nuclear Fuel Project Management Plan (PMP).			
Description of what constitutes completion of this milestone: The PMP needs to meet the criteria for multi-year activity base cost estimates generated from an integrated resource loaded schedule. Included will be data for the project duration and include multi-year program plan deliverables. The PMP will include project management implementing procedures for SNF. Data is to be consistent with systems engineering analysis, schedule hierarchy, and option paths for disposition of SNF.			
Cost Account Manager J. L. Denning Date 9-16-94		Program/Project Manager J. C. Fulton Date 9/22/94	
Program Element Manager J. L. Denning Date 9-16-94		DOE Monitor D. C. Bryson GT Date 9/22/94	

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

2.H.1. Cost Baseline Summary (\$ In Thousands)								
Program Element/ADS	Fund Type (OP,LI,CE, GPP,ADS)	FY 1995 SMS Guidance	FY 1996 Plan	FY 1997 Plan	FY 1998 Plan	FY 1999 Plan	FY 2000 Plan	FY 2001 Plan
1.4.1.1/ 4110-0	OP CE GPP LI	44,126 1,617 12,003	51,593 500 1,960	49,014 500 	47,304 500 	65,212 500 	57,222 500 	58,712 500
1.4.1.2/ 4110-0	OP CE GPP LI	20,154	6,994	7,204	7,420	2,983	0	0
1.4.1.3/ 4110-0	OP CE GPP LI	1,444	8,230	9,166	10,086	9,038	0	0
1.4.1.4/ 4110-0	OP CE GPP LI	1,797	6,180	2,122	2,185	0	0	0
1.4.1.5/ 4110-0	OP CE GPP LI	4,123	0	2,048	3,519	7,563	19,951	6,746
1.4.1.6/ 4110-0	OP CE GPP LI	917	0	4,244	8,742	6,753	6,956	3,582
1.4.1.7/ 4110-0	OP CE GPP LI		361	371	382	394	406	418
1.4.1.8/ 4110-0	OP CE GPP LI	3,999	11,402	5,527	3,879	3,996	4,115	4,215
1.4.1.9/ 4110-0	OP CE GPP LI	8,270	6,788	6,991	7,201	7,417	7,640	7,869
Total Program Cost Summary	OP CE GPP LI	84,830 1,617 0 12,003	91,546 500 0 32,960	86,686 500 0 117,000	90,718 500 0 175,000	103,355 500 0 116,000	96,289 500 0 11,000	81,542 500 0 0
	Subtotal	98,450	125,006	204,186	266,218	219,855	107,789	82,042
	Productivity Commitment	(9,845)						
	Total	88,605	125,006	204,186	266,218	219,855	107,789	82,042

2.H.1-1

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FY 1995 MYPP

SPENT NUCLEAR FUEL PROJECT
WBS Number 1.4

2.I-1

**The Basis of Estimate is an optional
document for inclusion in the MYPP.
The data for the basis is stored in
office A148, MO-285.**

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SPENT NUCLEAR FUEL PROJECT

WBS NUMBER 1.4

FY 1995 MYPP

Program: Spent Nuclear Fuel Project

Quantify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1995 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

2.J. Waste Type Projections - FY 1995				
Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW				
LLW (SOLID)	9,546 ft ³		9,546 ft ³ ship for disposal	
LLW (LIQUID)				
LLMW (SOLID)	50 ft ³		50 ft ³ ship for disposal	
LLMW (LIQUID)				
LLW (GTC3)				
TRU	2,390 ft ³		2,390 ft ³ ship for disposal	
TRUM				
HAZARDOUS	100 ft ³		100 ft ³ ship for disposal	
SANITARY (LANDFILL)	13,100 ft ³		13,100 ft ³ ship for disposal	
SANITARY (LANDFILL-ASBESTOS)				

2.J-1

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SPENT NUCLEAR FUEL PROJECT WBS NUMBER 1.4

FOR THE EXECUTION YEAR - FY 1995 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

No long term storage of waste will be undertaken. Interim storage will be provided at the facility and all regulated wastes generated will be shipped within ninety days after designation.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

All waste will be shipped to the Central Waste Complex for burial or storage pending onsite/offsite disposal.

SUMMARY WASTE TYPE ISSUES:

Most of the low level, low level mixed, and hazardous waste will be generated by routine basin maintenance and housekeeping activities. Two other activities that will generate significant quantities of waste are the pilot encapsulation project (to include basin clean-out and material movement) and the removal of basin cooling heat exchangers from 105KW and 105KE. The transuranic waste present has resulted from concentrations of radionuclides in filtering devices used to maintain the basins' water quality. All of this waste is expected to be shipped in the FY-95 time frame and the devices are now controlled so as to not allow them to reach transuranic levels prior to change-out.

2.5-2

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FY 1995 MYPP

SPENT NUCLEAR FUEL PROJECT

WBS NUMBER 1.4

Program: Spent Nuclear Fuel Project

Quantify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for FY 1996 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

2.J. Waste Type Projections - FY 1996				
Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW				
LLW (SOLID)	9,281 ft ³		9,281 ft ³ ship for disposal	
LLW (LIQUID)				
LLMW (SOLID)	50 ft ³		50 ft ³ ship for disposal	
LLMW (LIQUID)				
LLW (GTC3)				
TRU				
TRUM				
HAZARDOUS	100 ft ³		100 ft ³ ship for disposal	
SANITARY (LANDFILL)	13,100 ft ³		13,100 ft ³ ship for disposal	
SANITARY (LANDFILL-ASBESTOS)				

2.2-3

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FY 1995 MYPP

SPENT NUCLEAR FUEL PROJECT WBS NUMBER 1.4

FOR THE YEAR FY 1996, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

No long term storage of waste will be undertaken. Interim storage will be provided at the facility and all regulated wastes generated will be shipped within ninety days after designation.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

All waste will be shipped to the Central Waste Complex for burial or storage pending onsite/offsite disposal.

SUMMARY WASTE TYPE ISSUES:

Since the methodology to be used for enhanced interim storage of the fuel located in the K-Basins has not yet been determined, it is not possible to be precise concerning long term waste production at K-basins. However, routine waste generation should be fairly constant as long as the fuel is still physically stored in the basins. It is also assumed that there will be some additional waste generation associated with ongoing characterization and facility modification activities.

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SPENT NUCLEAR FUEL PROJECT

WBS NUMBER 1.4

FY 1995 MYPP

Program: Spent Nuclear Fuel Project

Quantify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for FY 1997 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

2.J. Waste Type Projections - FY 1997				
Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW				
LLW (SOLID)	4,918 ft ³		4,918 ft ³ ship for disposal	
LLW (LIQUID)				
LLMW (SOLID)	50 ft ³		50 ft ³ ship for disposal	
LLMW (LIQUID)				
LLW GTC3				
TRU				
TRUM				
HAZARDOUS	75 ft ³		75 ft ³ ship for disposal	
SANITARY (LANDFILL)	13,000 ft ³		13,000 ft ³ ship for disposal	
SANITARY (LANDFILL-ASBESTOS)				

2.J-5

WEC-SP-1104

FY 1995 MYPP

SPENT NUCLEAR FUEL PROJECT WBS NUMBER 1.4

FOR THE YEAR FY 1997, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

No long term storage of waste will be undertaken. Interim storage will be provided at the facility and all regulated wastes generated will be shipped within ninety days after designation.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

All waste will be shipped to the Central Waste Complex for burial or storage pending onsite/offsite disposal.

SUMMARY WASTE TYPE ISSUES:

Since the methodology to be used for enhanced interim storage of the fuel located in the K-Basins has not yet been determined, it is not possible to be precise concerning long term waste production at K-basins. However, routine waste generation should be fairly constant as long as the fuel is still physically stored in the basins. It is also assumed that there will be some additional waste generation associated with ongoing characterization and facility modification activities.

FY 1995 MYPP

SPENT NUCLEAR FUEL PROJECT

WBS NUMBER 1.4

Program: Spent Nuclear Fuel Project

Quantify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the years FY 1998 - 2025 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

2.J. Waste Type Projections - FY 1998 - 2025				
Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW				
LLW (SOLID)	4,918 ft ³		4,918 ft ³ ship for disposal	
LLW (LIQUID)				
LLMW (SOLID)	50 ft ³		50 ft ³ ship for disposal	
LLMW (LIQUID)				
LLW GTC3				
TRU				
TRUM				
HAZARDOUS	75 ft ³ (1998) 50 ft ³ (1999 - 2025)		75 ft ³ (1998) 50 ft ³ (1999 - 2025) ship for disposal	
SANITARY (LANDFILL)	10,000 ft ³		10,000 ft ³ ship for disposal	
SANITARY (LANDFILL-ASBESTOS)				

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SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

2.K Planned Staffing Full Time Equivalents (FTEs)								
Program Element/ADS	FULL TIME EQUIVALENTS (FTEs)	FY 1995 Plan	FY 1996 Plan	FY 1997 Plan	FY 1998 Plan	FY 1999 Plan	FY 2000 Plan	FY 2001 Plan
1.4.1.1/ 4110-0	NONEXEMPT	52.6	59.0	54.0	51.0	68.0	58.0	58.0
	EXEMPT	190.7	216.0	199.0	186.0	249.0	212.0	212.0
	BARGAINING	123.4	140.0	129.0	120.0	161.0	137.0	137.0
	TOTAL	366.7	415.0	382.0	357.0	478.0	407.0	407.0
1.4.1.2/ 4110-0	NONEXEMPT	31.5	10.0	10.0	10.0	4.0		
	EXEMPT	86.7	29.0	29.0	29.0	11.0		
	BARGAINING	11.7	4.0	4.0	3.0	1.0		
	TOTAL	129.9	43.0	43.0	42.0	16.0	0.0	0.0
1.4.1.3/ 4110-0	NONEXEMPT	0.3	1.0	5.0	6.0	5.0		
	EXEMPT	11.8	65.0	70.0	75.0	65.0		
	BARGAINING							
	TOTAL	12.1	66.0	75.0	81.0	70.0	0.0	0.0
1.4.1.4/ 4110-0	NONEXEMPT	2.2	7.0	2.0	2.0			
	EXEMPT	17.2	57.0	19.0	19.0			
	BARGAINING							
	TOTAL	19.4	64.0	21.0	21.0	0.0	0.0	0.0
1.4.1.5/ 4110-0	NONEXEMPT	0.9		1.0	1.0	1.0	1.0	1.0
	EXEMPT	9.2		4.0	7.0	15.0	16.0	16.0
	BARGAINING							
	TOTAL	10.1	0.0	5.0	8.0	16.0	17.0	17.0
1.4.1.6/ 4110-0	NONEXEMPT	0.7		4.0	6.0	5.0	5.0	2.0
	EXEMPT	8.3		36.0	72.0	54.0	61.0	32.0
	BARGAINING							
	TOTAL	9.0	0.0	40.0	78.0	59.0	66.0	34.0
1.4.1.7/ 4110-0	NONEXEMPT		1.0	1.0	1.0	1.0	1.0	1.0
	EXEMPT		3.0	3.0	3.0	3.0	3.0	3.0
	BARGAINING							
	TOTAL	0.0	4.0	4.0	4.0	4.0	4.0	4.0
1.4.1.8/ 4110-0	NONEXEMPT	0.4	1.0	1.0	1.0			
	EXEMPT	14.7	20.0	19.0	14.0			
	BARGAINING							
	TOTAL	15.1	21.0	20.0	15.0	0.0	0.0	0.0
1.4.1.9/ 4110-0	NONEXEMPT	6.7	6.0	6.0	6.0	6.0	6.0	6.0
	EXEMPT	28.4	24.0	24.0	24.0	24.0	24.0	24.0
	BARGAINING							
	TOTAL	35.1	30.0	30.0	30.0	30.0	30.0	30.0
Total Program Cost Summary	NONEXEMPT	95.3	85.0	84.0	84.0	90.0	71.0	68.0
	EXEMPT	367.0	414.0	403.0	429.0	421.0	316.0	287.0
	BARGAINING	135.1	144.0	133.0	123.0	162.0	137.0	137.0
	TOTAL	597.4	643.0	620.0	636.0	673.0	524.0	492.0

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SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

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2.L. Building Blocks							
FY 1995 Building Blocks (\$000)							
ADS	RL WBS	Description	RL Pri	Fund Type	FY 1995	CUM FY 1995	Justification of Scope/Impact if not funded
4110-0	1.4.1.1	K-Basins Operations & Transitions		Exp			
4110-0	1.4.1.1.1	Operations	B1	Exp			
4110-0	1.4.1.1.1.1	Project Management Support	D1	Exp	6,297	6,297	Management of the K-Basins Operation will not be possible. Training, inventory control, Quality Assurance support, records management and plant tracking and scheduling will be forfeit.
4110-0	1.4.1.1.1.2	ES&H	B1	Exp	12,529	18,826	Facility Compliance, Radiological Controls, OSR Compliance/Implementation, Integrity Assessment and Surveillance , Industrial Hygiene , and Security will be impacted leaving the plant in an unsafe position.
4110-0	1.4.1.1.1.3	Facility Controls	A1	Exp Cap	21,822 1,617	40,648 1,617	Maintenance and Operations of K- Basins will be halted without this funding. Conduct of Operations and work control will not be accomplished. This will leave the plant to deteriorate and fall into disrepair.
4110-0	1.4.1.1.1.4	Waste Handling	B1	Exp Cap	2,652	43,300 1,617	Waste Disposal, Waste Handling and Operations Analysis will not be accomplished. This will result in accumulation of waste material of all types within the Plant.
4110-0	1.4.1.1.2	Essential Systems Recovery	A2	Exp Cap	826 12,003	44,126 13,620	K-Basin operations will provide minimum systems restoration to support SNFP; reduce the risk of personnel injury or death; implement Life Safety Code compliance; minimize risk of regulatory intervention and reduce base K-Basins operation costs.

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4110-0	1.4.1.1.3	Transition	B1	Exp Cap			
4110-0	1.4.1.2	K-Basins Fuel Consolidation		Exp			
4110-0	1.4.1.2.1	Studies/Characterization	A1	Exp Cap	7,954	52,080 13,620	Number of shipments to hot cell would be severely reduced. Due to high fixed costs in the PNL Hot Cells, number of Hot Cell examinations would be reduced to a single element. It is impossible for PNL to foresee the full impact of this cut without additional information on cuts in related program areas.
4110-0	1.4.1.2.2	Fuel & Sludge Retrieval /Packaging	B1	Exp			
4110-0	1.4.1.2.2.1	Pilot Run	B1	Exp Cap	2,180	54,260 13,620	The Pilot Run will be used to provide design bases for fuel removal processes and is critical for their success and related TPA Milestones.
4110-0	1.4.1.2.2.2	Cold Test Facility	B1	Exp Cap	537	54,797 13,620	The Cold Test Facility will support fuel and sludge handling and process system prototypes which will reduce cost and schedule for designs supporting those efforts.
4110-0	1.4.1.2.2.3	Fuel Repackaging	B1	Exp Cap	3,012	57,809 13,620	The fuel repackaging will package up the K-West and K-East Basin fuel and allow the fuel materials to be transferred out of the K-Basins. If not funded, the Milestones #M-34-00-T07 and T08 will not be met.
4110-0	1.4.1.2.2.4	Sludge Retrieval and Packaging	B1	Exp Cap	2,339	60,148 13,620	TPA Milestone #M-34-00-T08 and award fee goal milestone associated with sludge packaging demonstration will not be met. Goals discussed and agreed to with DNFSB will not be achieved.
4110-0	1.4.1.2.2.5	Debris Removal	B1	Exp Cap	1,279	61,427 13,620	If not completed, completion of Milestone #M-34-00-T07 and T08 may not be possible.
4110-0	1.4.1.2.2.6	Basin Water Treatment/Disposition	B1	Exp Cap	988	62,415 13,620	If not completed Milestone #M34-01 and M34-00-T04 cannot be met.

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4110-0	1.4.1.2.2.7	Dose Reduction	B1	Exp Cap	1,866	64,281 13,620	Without dose reduction, the worker dose in the K-East Basin will be extremely high. With current maintenance and security of the Basin requiring roughly 23 person-Rem per year, and many projects slated for the immediate future, the number of trained operators will be very significant. Projects such as fuel encapsulation will require 102 person-Rem above and beyond the day-to-day operations amount. At current administrative levels, this will require 204 more trained operators at a cost of approximately \$60K per operator year.
4110-0	1.4.1.3	Other Hanford Fuel		Exp			
4110-0	1.4.1.3.1	Characterization	A1	Exp Cap	920	65,201 13,620	FFTF fuel records will not be maintained, archived or evaluated. Assessment of "other fuels" ability to satisfy licensability required will not be completed.
4110-0	1.4.1.3.2	Other Hanford Fuel Packaging & Storage	D1	Exp Cap	524	65,725 13,620	Development of an integrated path forward for "other fuel" management will not occur. Hanford SNF management EIS will not be supported.
4110-0	1.4.1.4	Pre-Interim Fuel Storage		Exp			
4110-0	1.4.1.4.1	Process Engineering/Design	B1	Exp Cap	749	66,474 13,620	The process engineering and design begin the design process for the Pre-Interim Fuel Storage Facility. This facility is planned to receive the K-Basins fuel. If not funded, fuel will not be shipped from the K-Basins (Milestone #M-34-00-T08)
4110-0	1.4.1.4.2	Facility Construction	A1	Exp			
4110-0	1.4.1.4.3	Start-Up	A1	Exp			
4110-0	1.4.1.4.4	Transportation System	B1	Exp Cap	1,048	67,522 13,620	The transportation system will be used to haul the K-Basins fuel to the Pre-Interim Storage Facility. If not funded the Milestone #M-34-00-T08 will not be met.
4110-0	1.4.1.4.5	Operations	B1	Exp			
4110-0	1.4.1.4.6	Transition	B1	Exp			

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WBS Number 1.4

4110-0	1.4.1.5	Fuel Stabilization		Exp			
4110-0	1.4.1.5.1	Process Engineering/Design	B1	Exp Cap	1,823	69,345 13,620	Definition of stabilization requirements and development of a preferred alternative will not occur, resulting in an inability to move forward with process of project development for pre-interim and/or interim storage of N Reactor fuel. Hanford SNF management EIS will not be supported.
4110-0	1.4.1.5.2	Process Technology	B1	Exp Cap	2,300	71,645 13,620	Technology will not be developed to support the path forward from the K-Basins. TPA milestone #M34-00-T08 will not be met.
4110-0	1.4.1.5.3	Facility Construction	B1	Exp			
4110-0	1.4.1.5.4	Start-Up	B1	Exp			
4110-0	1.4.1.5.5	Transportation	B2	Exp			
4110-0	1.4.1.5.6	Operations	B1	Exp			
4110-0	1.4.1.5.7	Turn Over Activities	B1	Exp			
4110-0	1.4.1.6	Interim Storage Facility		Exp			
4110-0	1.4.1.6.1	Process Engineering/Design	B1	Exp Cap	917	72,562 13,620	Definition of interim storage facility requirements and evaluation of alternatives will not occur, which will prevent establishing a basis for interim storage project development and providing input to the Hanford SNF EIS. Therefore, interim storage of Hanford SNF will not be implemented.
4110-0	1.4.1.6.2	Storage Technology	B1	Exp			
4110-0	1.4.1.6.3	Facility Construction	B1	Exp Cap			
4110-0	1.4.1.6.4	Start-Up	B1	Exp			
4110-0	1.4.1.6.5	Transportation	B1	Exp			
4110-0	1.4.1.7	Final Disposition		Exp			

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4110-0	1.4.1.7.1	Studies	B1	Exp			
4110-0	1.4.1.8	Compliance/Public Involvement		Exp			
4110-0	1.4.1.8.1	Environmental Sciences	B1	Exp Cap	530	73,092 13,620	Non-compliance with regulatory requirements. Washington State & Federal Regulations, and SNFP TPA Milestones.
4110-0	1.4.1.8.2	Public Involvement	F1	Exp Cap	585	73,677 13,620	Failure to obtain public and employee involvement on SNFP Business and activities, will jeopardize the overall success of the project.
4110-0	1.4.1.8.3	Nuclear Safety/Licensing	A2	Exp Cap	757	74,434 13,620	Result in the lack of a Nuclear Safety Regulatory Program and authorization basis and impact the implementation of 10 CFR 830.
4110-0	1.4.1.8.4	Regulatory Issues Responses and Control	A1	Exp Cap	2,127	76,561 13,620	Result in issues not being captured or properly evaluated, exposing SNFP to unknown high risks and potential failure.
4110-0	1.4.1.9	Project Management		Exp			
4110-0	1.4.1.9.1	Project Planning	B1	Exp Cap	4,700	81,261 13,620	Technical baseline will not be established and maintained for SNF project systems engineering. Associated integration activities will not be performed, resulting in high risk of later project inefficiencies and redirection from lack of defined systems requirements and analysis. The Hanford SNF management EIS will not be supported.
4110-0	1.4.1.9.2	Management Control	F1	Exp Cap	2,538	83,799 13,620	Impacts ability to establish and maintain credible budget baseline and project control/reporting requirements. Also impacts out year forecasting.
4110-0	1.4.1.9.3	Procurement/Contract Administration	F1	Exp			
4110-0	1.4.1.9.4	Resource Planning/Transition	F1	Exp			

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4110-0	1.4.1.9.5	National Program	B1	Exp Cap	1,031	84,830 13,620	Integration of Hanford SNFP activities with the DOE integrated SNF program will not occur, resulting in program strategies inconsistent with national policy direction. FRR and INEL EIS activities will not be supported, compromising the ability to satisfy the INEL court order and inter-governmental agreements. Technology and intersite fuel management integration will not occur, resulting in non-completion and inefficient program directions.
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Total Operating	84,830
Total Capital	13,620
Grand Total	98,450
Productivity Commitment	(9,845)
Total Funding	88,605

2.L-6

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SPENT NUCLEAR FUEL PROJECT

1.4

FY 1995 MYPP

3.A.1 COST BASELINE SUMMARY/PROGRAM ELEMENT – OPERATING EXPENSE

(\$ in 000's)

RL WBS	WBS TITLE	ADS NUMBER	ADS TITLE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
1.4.1.1 K–Basin Operations & Transitions																
1.4.1.1.1	Operations	4110–0	Spent Nuclear Fuel	3,852	3,587	3,533	3,689	3,307	3,965	3,536	3,794	3,787	3,237	3,732	3,281	43,300
1.4.1.1.2	Essential Systems Recovery	4110–0	Spent Nuclear Fuel	69	68	68	71	69	70	75	69	69	70	69	59	826
1.4.1.1.3	Transition	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
			SUBTOTAL	3,921	3,655	3,601	3,760	3,376	4,035	3,611	3,863	3,856	3,307	3,801	3,340	44,126
1.4.1.2 K–Basin Fuel Consolidation																
1.4.1.2.1	Studies/Characterization	4110–0	Spent Nuclear Fuel	1,078	601	614	612	611	952	586	586	586	576	576	576	7,954
1.4.1.2.2	Fuel & Sludge Retrieval/Packaging	4110–0	Spent Nuclear Fuel	1,705	1,432	1,100	1,187	973	918	865	869	814	782	780	775	12,200
			SUBTOTAL	2,783	2,033	1,714	1,799	1,584	1,870	1,451	1,455	1,400	1,358	1,356	1,351	20,154
1.4.1.3 Other Hanford Fuel																
1.4.1.3.1	Characterization	4110–0	Spent Nuclear Fuel	80	80	80	80	80	80	80	80	78	68	67	67	920
1.4.1.3.2	Other Hanford Fuel Package/Storage	4110–0	Spent Nuclear Fuel	44	44	44	44	44	43	44	43	44	43	44	43	524
			SUBTOTAL	124	124	124	124	124	123	124	123	122	111	111	110	1,444
1.4.1.4 Pre–Interim Fuel Storage																
1.4.1.4.1	Process Engineering/Design	4110–0	Spent Nuclear Fuel	84	84	84	84	84	84	84	85	19	19	19	19	749
1.4.1.4.2	Facility Construction	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.4.3	Start–Up	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.4.4	Transportation System	4110–0	Spent Nuclear Fuel	136	144	145	145	143	143	143	10	10	10	10	9	1,048
1.4.1.4.5	Operations	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.4.6	Transition	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
			SUBTOTAL	220	228	229	229	227	227	227	95	29	29	29	28	1,797
1.4.1.5 Fuel Stabilization																
1.4.1.5.1	Process Engineering/Design	4110–0	Spent Nuclear Fuel	71	71	171	165	165	171	165	165	187	164	164	164	1,823
1.4.1.5.2	Process Technology	4110–0	Spent Nuclear Fuel	190	190	190	190	190	190	190	190	190	190	200	200	2,300
1.4.1.5.3	Facility Construction	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.5.4	Start–Up	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.5.5	Transportation	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.5.6	Operations	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.5.7	Turn Over Activities	4110–0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
			SUBTOTAL	261	261	361	355	355	361	355	355	377	354	364	364	4,123

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SPENT NUCLEAR FUEL PROJECT

1.4

FY 1995 MYPP

3.A.1 COST BASELINE SUMMARY/PROGRAM ELEMENT – OPERATING EXPENSE

(\$ in 000's)

RL WBS	WBS TITLE	ADS NUMBER	ADS TITLE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
1.4.1.6 Interim Storage Facility																
1.4.1.6.1	Process Engineering/Design	4110-0	Spent Nuclear Fuel	38	38	46	89	91	89	93	89	92	86	84	82	917
1.4.1.6.2	Storage Technology	4110-0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.6.3	Facility Construction	4110-0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.6.4	Start-Up	4110-0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.6.5	Transportation	4110-0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
			SUBTOTAL	38	38	46	89	91	89	93	89	92	86	84	82	917
1.4.1.7 Final Disposition																
1.4.1.7.1	Studies	4110-0	Spent Nuclear Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0
			SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.1.8 Compliance/Public Involvement																
1.4.1.8.1	Environmental Sciences	4110-0	Spent Nuclear Fuel	41	49	40	54	42	46	43	42	42	44	42	45	530
1.4.1.8.2	Public Involvement	4110-0	Spent Nuclear Fuel	51	51	51	51	51	51	46	47	46	47	46	47	585
1.4.1.8.3	Nuclear Safety & Licensing	4110-0	Spent Nuclear Fuel	63	63	63	63	63	63	63	63	63	63	63	64	757
1.4.1.8.4	Reg. Issues Response & Control	4110-0	Spent Nuclear Fuel	282	323	294	174	176	159	159	112	112	112	112	112	2,127
			SUBTOTAL	437	486	448	342	332	319	311	264	263	266	263	268	3,999
1.4.1.9 Project Management																
1.4.1.9.1	Project Planning	4110-0	Spent Nuclear Fuel	386	532	386	386	385	385	385	371	371	371	371	371	4,700
1.4.1.9.2	Management Controls	4110-0	Spent Nuclear Fuel	188	248	248	233	194	196	196	207	207	207	207	207	2,538
1.4.1.9.3	Procurement/Contract Administration	4110-0	Spent Nuclear Fuel													0
1.4.1.9.4	Resource Planning/Transition	4110-0	Spent Nuclear Fuel													0
1.4.1.9.5	National Program	4110-0	Spent Nuclear Fuel	94	93	93	93	93	93	93	93	93	72	60	62	1,032
			SUBTOTAL	668	873	727	712	672	674	674	671	671	650	638	640	8,270
TOTAL EXPENSE SUMMARY				8,452	7,698	7,250	7,410	6,761	7,698	6,846	6,915	6,810	6,161	6,646	6,183	84,830
PRODUCTIVITY COMMITMENT				0	0	0	0	0	0	0	0	0	0	0	(9,845)	(9,845)
TOTAL FUNDING				8,452	7,698	7,250	7,410	6,761	7,698	6,846	6,915	6,810	6,161	6,646	(3,662)	74,985

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SPENT NUCLEAR FUEL PROJECT

1.4

FY 1995 MYPP

3.A.2 PROGRAM SUMMARY/COST ELEMENT – OPERATING EXPENSE

(\$ in 000's)

COST ELEMENT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
0 – LABOR	3,230	3,071	3,072	3,183	2,920	3,216	2,986	3,040	2,951	2,568	2,877	2,632	35,746
1 – MATERIALS	805	656	401	434	373	434	385	417	417	374	385	360	5,441
2 – PURCHASED SERVICES	963	1,158	1,052	965	896	1,222	883	860	871	837	868	808	11,383
3 – OTHER CONTRACTORS	1,091	611	620	656	620	620	620	620	633	608	598	598	7,895
4 – SITE SERVICES	164	142	138	130	120	137	122	127	125	117	130	111	1,563
5 – INTERNAL CHARGES	87	87	87	87	87	87	87	87	86	87	87	85	1,041
6 – IRM	38	39	40	45	40	37	45	37	39	42	37	36	475
7 – DEPARTMENTAL OVERHEAD	632	603	304	328	587	637	45	37	39	42	37	36	3,327
8 – G&A/CSP	1,442	1,331	1,536	1,582	1,118	1,308	1,673	1,690	1,649	1,486	1,627	1,517	17,959
TOTAL EXPENSE SUMMARY	8,452	7,698	7,250	7,410	6,761	7,698	6,846	6,915	6,810	6,161	6,646	6,183	84,830
PRODUCTIVITY COMMITMENT	0	0	0	0	0	0	0	0	0	0	0	(9,845)	(9,845)
TOTAL EXPENSE FUNDING	8,452	7,698	7,250	7,410	6,761	7,698	6,846	6,915	6,810	6,161	6,646	(3,662)	74,985

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WHC-SP-1104

SPENT NUCLEAR FUEL PROJECT

1.4

FY 1995 MYPP

3.A.3 COST BASELINE SUMMARY - CENRTC

(\$ in 000's)

RL WBS	WBS TITLE	ADS NUMBER	ADS TITLE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
1.4.1.1 K	Basin Operations & Transitions															
1.4.1.1.1	Operations	4110-0	Spent Nuclear Fuel	0	0	0	55	50	216	216	216	216	216	216	216	1,617
TOTAL CENRTC SUMMARY				0	0	0	55	50	216	216	216	216	216	216	216	1,617

SPENT NUCLEAR FUEL PROJECT

1.4

FY1995 MYPP

3.A.4 COST BASELINE SUMMARY – GPP

(\$ in 000's)

RL WBS	WBS TITLE	ADS NUMBER	ADS TITLE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
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NO GPP ASSOCIATED WITH THIS PROGRAM.

3.A-5

WHC-SP-1104

SPENT NUCLEAR FUEL PROJECT

1.4

FY 1995 MYPP

3.A.5 COST BASELINE SUMMARY – LINE ITEM

(\$ in 000's)

RL WBS	WBS TITLE	ADS NUMBER	ADS TITLE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>1.4.1.1 K-Basin Operations & Transitions</u>																
1.4.1.1.2	Essential Systems Recovery	4110-0	Spent Nuclear Fuel	440	440	928	930	930	1,425	1,257	1,258	1,258	1,257	1,108	772	12,003
TOTAL LINE ITEM SUMMARY				440	440	928	930	930	1,425	1,257	1,258	1,258	1,257	1,108	772	12,003

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SPENT NUCLEAR FUEL PROJECT

1.4

FY 1995 MYPP

3.B PROGRAM FUNDING

(\$ in 000's)

RL WBS	WBS TITLE	ADS NUMBER	ADS TITLE	FUND TYPE	FY 1995 WORKSCOPE	FY 1995 PRODUCTIVITY COMMITMENT	FY 1995 FUNDING	PRIOR YEAR UNCOSTED	TOTAL OBLIGATION	FY 1995 REQUIREMENT	UNFUNDED
APPROVED FUNDING											
1.4.1	Spent Nuclear Fuel Project	4110-0	Spent Nuclear Fuel	OE	84,830	9,845	74,985	0	74,985	93,530	18,545
				CE	1,617	0	1,617	0	1,617	1,617	0
				GPP	0	0	0	0	0	0	0
				LI	12,003	0	12,003	0	12,003	12,003	0
					98,450	9,845	88,605	0	88,605	107,150	18,545