

Spent Nuclear Fuels Project

FY 1995 Multi-Year Program
Plan WBS #1.4

J. L. Denning

Date Published
September 1994

Prepared for the U.S. Department of Energy
Office of Environmental Restoration and
Waste Management



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Hanford Company**

P.O. Box 1970
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Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

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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

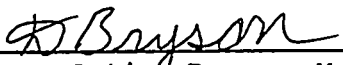
Exceptions: This FY95 MYPP has restricted interim approval. The Line Item Workscope (WBS 1.4.1.1.2) is not authorized at this time, pending Congressional reprogramming. Work scope will be reevaluated pending the RL FY95 budget reprioritization in October 1994.

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



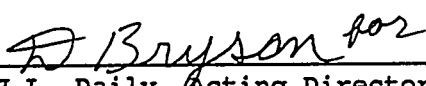
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9-22-94
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Auth 9-22-94
GT 9-22-94 

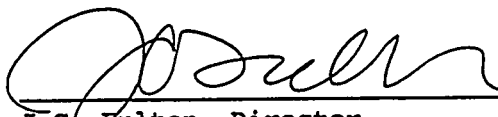
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RELEASE AUTHORIZATION

Document Number: WHC-SP-1104

Document Title: Spent Nuclear Fuels Project
FY 1995 Multi-Year Program Plan WBS #1.4

Release Date: September 27, 1994

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

APPROVED FOR PUBLIC RELEASE

* * * * *

WHC Information Release Administration Specialist:



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(Signature)

September 27, 1994

(Date)

Table of Contents

1.	PROGRAM OVERVIEW	1.A-1
1A.	Program Vision & Mission	1.A-1
1B.	Program Mission Strategy	1.B-1
1B1.	Technical Requirements	1.B.1-1
1B2.	Program Objectives	1.B.2-1
2.	PROGRAM BASELINE	2.A
2A1.	WBS Structure	2.A-1
2A2.	WBS Dictionary	2.A.2-1
2B.	Responsibility Assignment Matrix	2.B-1
2C.	Program Logic Diagrams	2.C
2D.	Program Master Baseline Schedule	2.D
2E.	Program Performance Baseline Schedule	2.E
2F.	Milestone List	2.F-1
2G.	Milestone Description Sheets	2.G
2H.	Cost Baseline Summary by Year	2.H-1
2I.	Basis of Estimate	2.I
2J.	Waste Type Data	2.J-1
2K.	Planned Staffing (FTE)	2.K-1
2L.	Building Blocks	2.L-1
3.	FISCAL YEAR WORK PLAN	3
3A.	Cost Estimate Baseline by Month	3.A
3B.	Program Funding Required	3.B

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SPENT NUCLEAR FUELS PROJECT

WBS Number 1.4

FY 1995 MYPP

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

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

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.

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

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.

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

1.B.2. Program Objectives

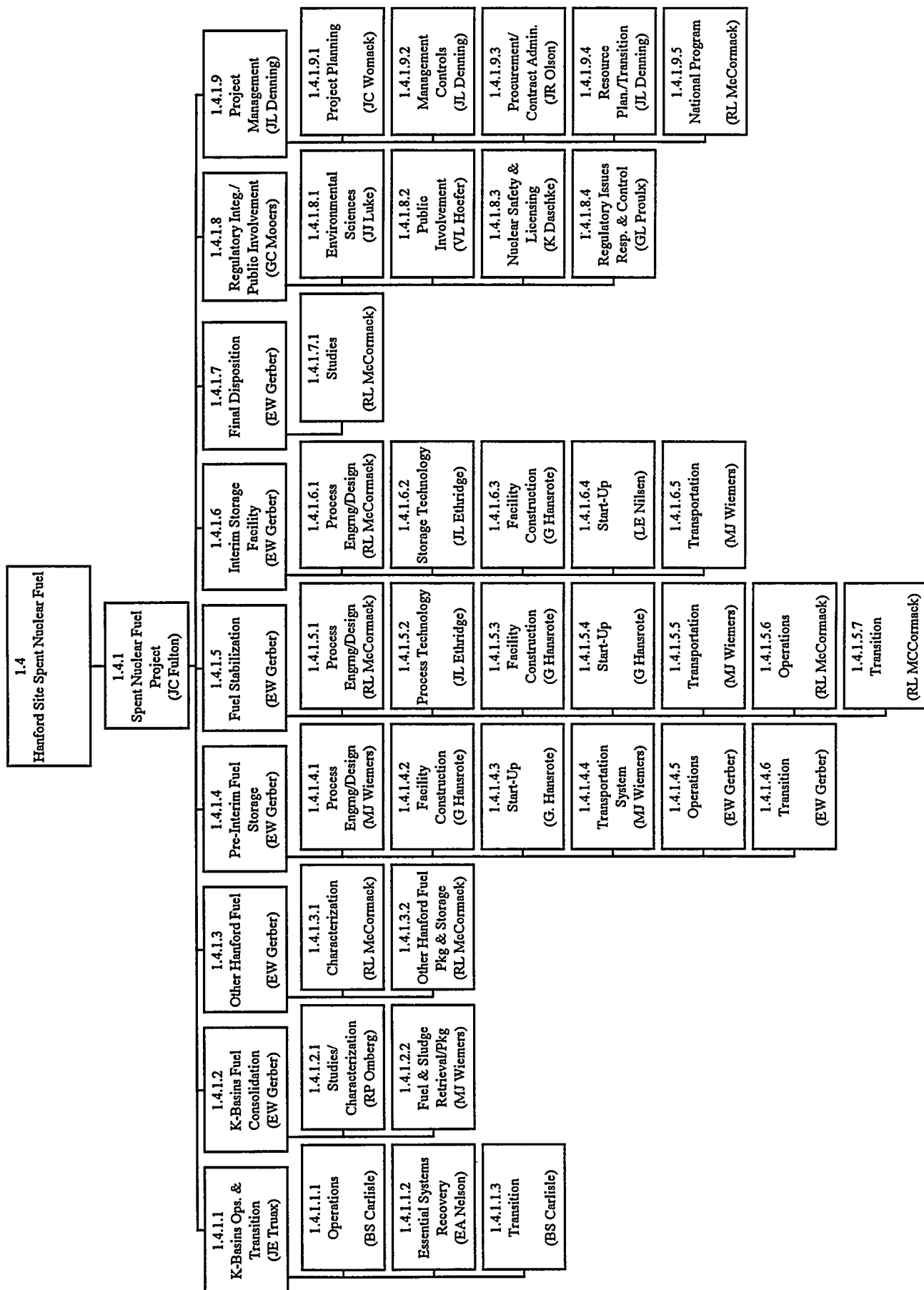
The major components of the Spent Nuclear Fuel (SNF) Project problem statement include:

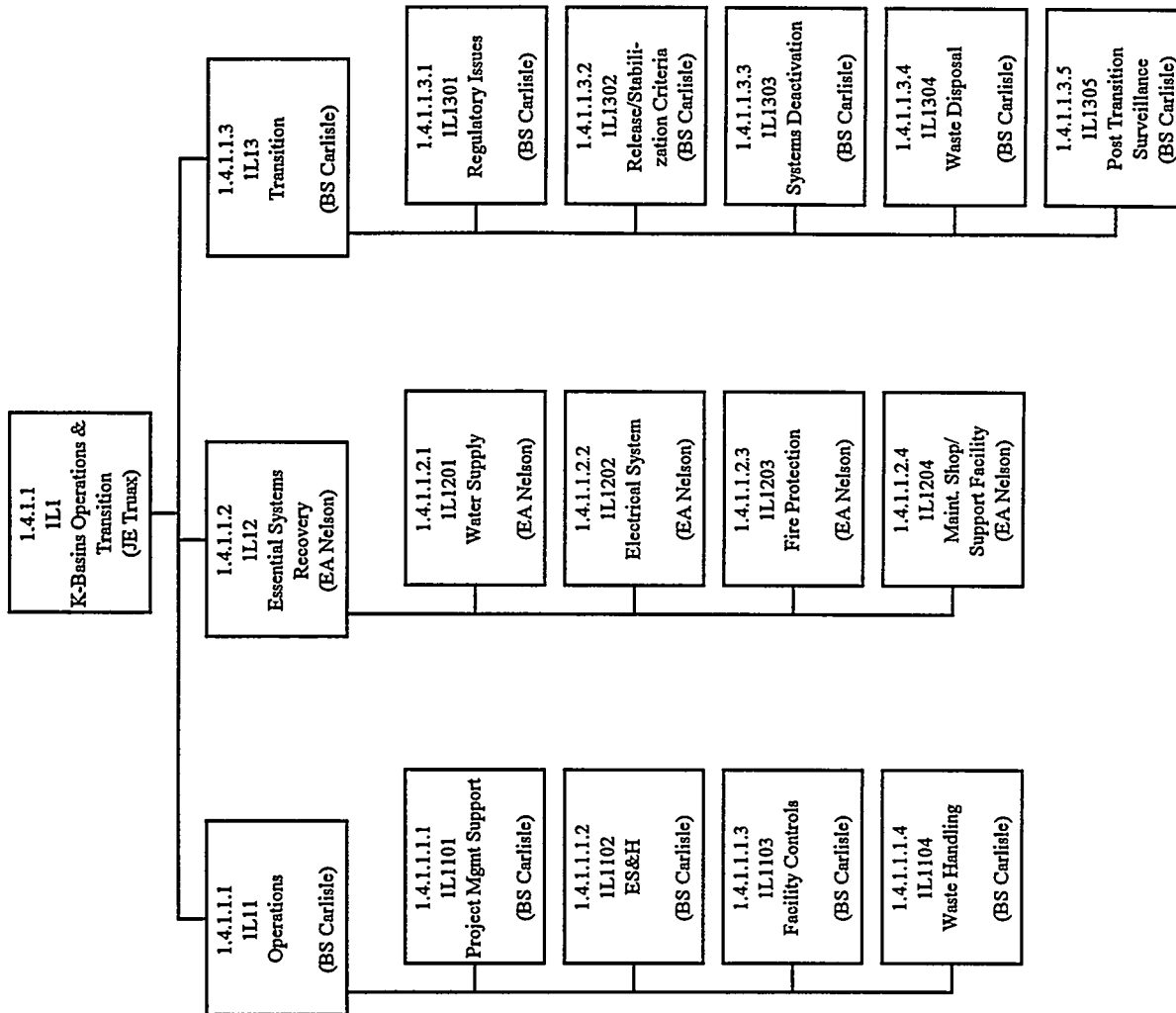
- The K-Basin facilities are not adequate for interim storage of the Hanford SNF. They do not meet DOE regulations and have significant safety, operation, compliance, and public concern issues.
- Not all SNF is known to be in a safe condition. The condition of the N-Reactor and single pass reactor SNF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

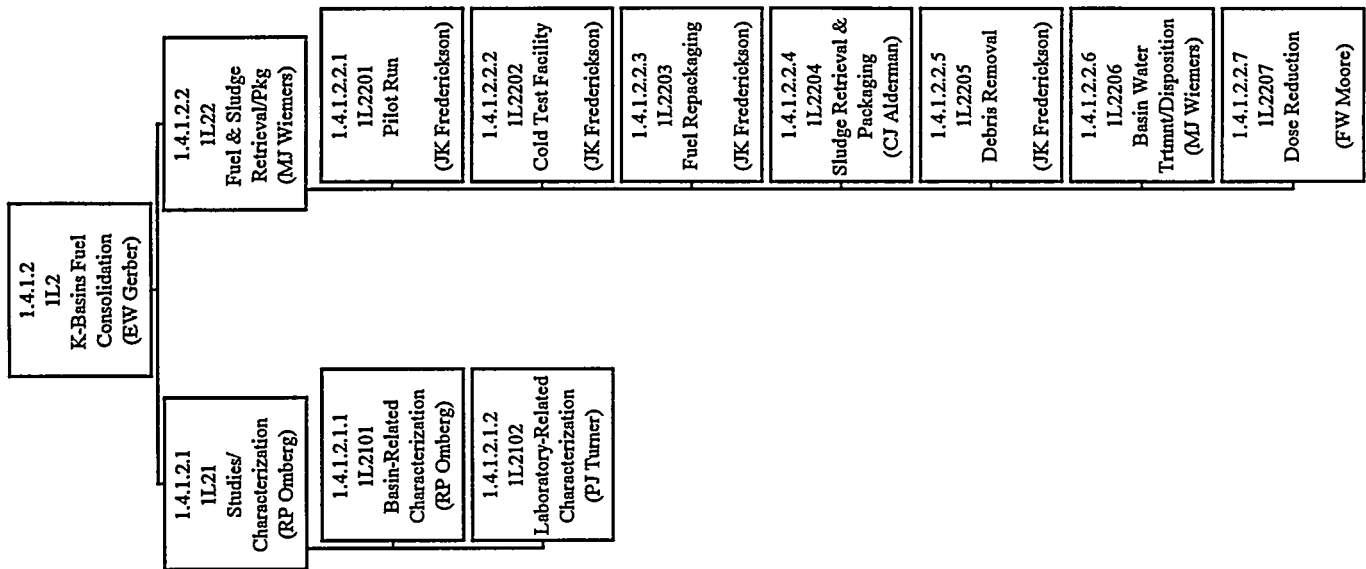
In response to these problems the four basic objectives of the SNF Project:

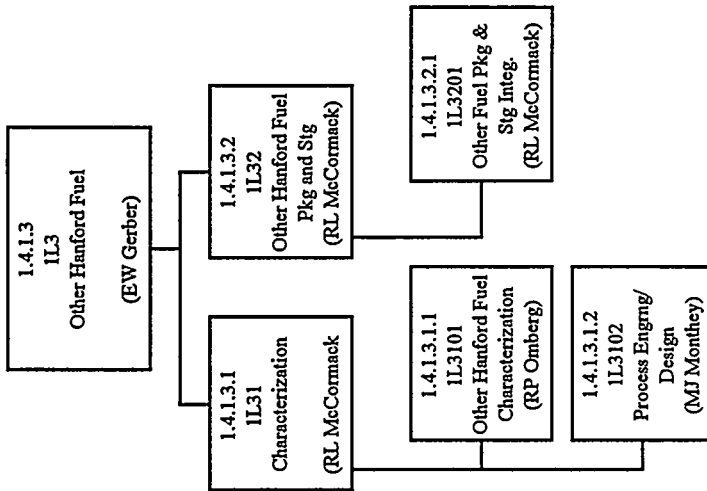
- Upgrade Conduct Of Operations to comply with DOE orders.
- Provide safe existing storage, identify and resolve vulnerabilities, and remedy unsafe conditions.
 - Organize and manage to ensure that safety and security envelopes are maintained at all times.
 - Stabilize and consolidate in new facilities 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.

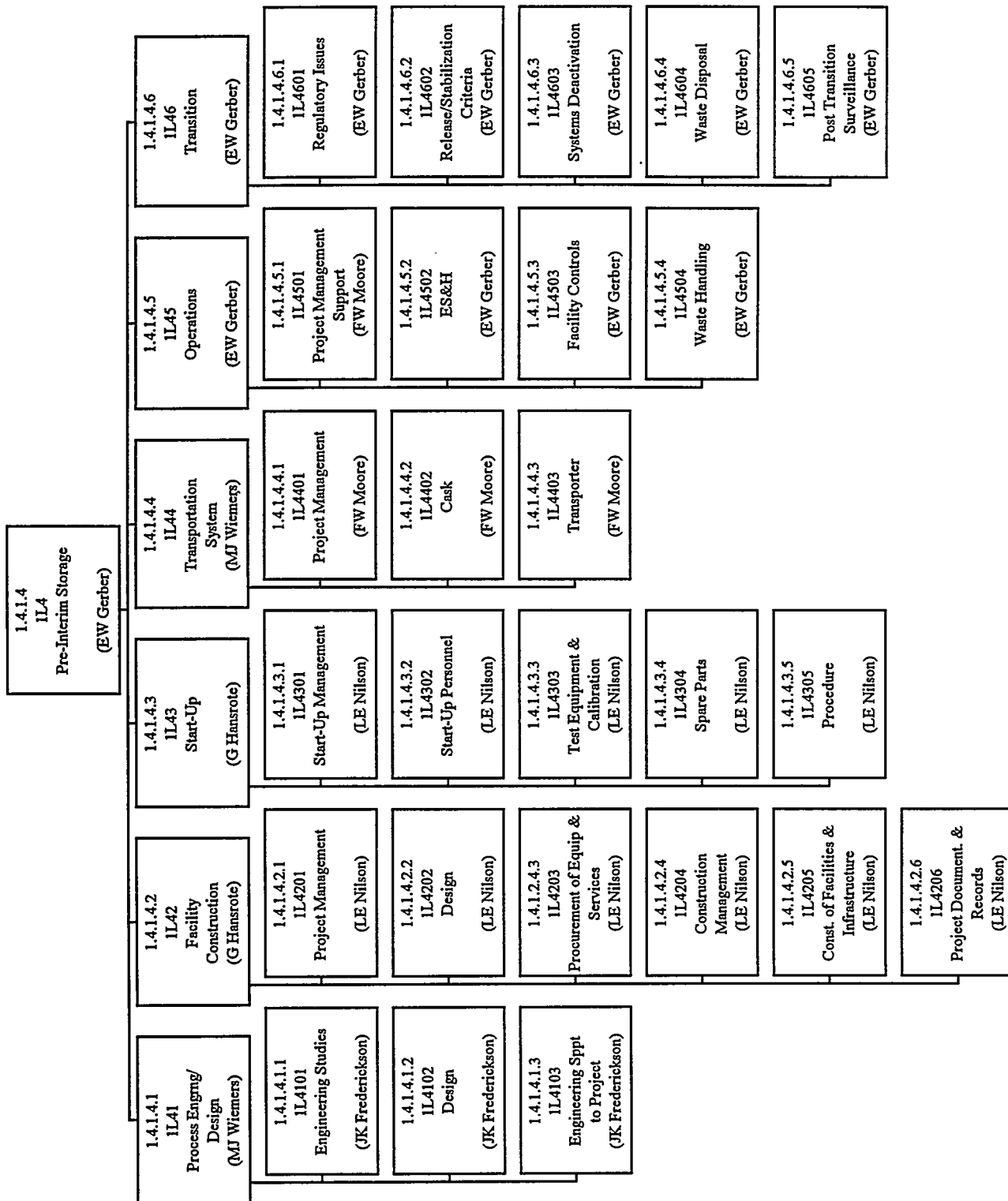
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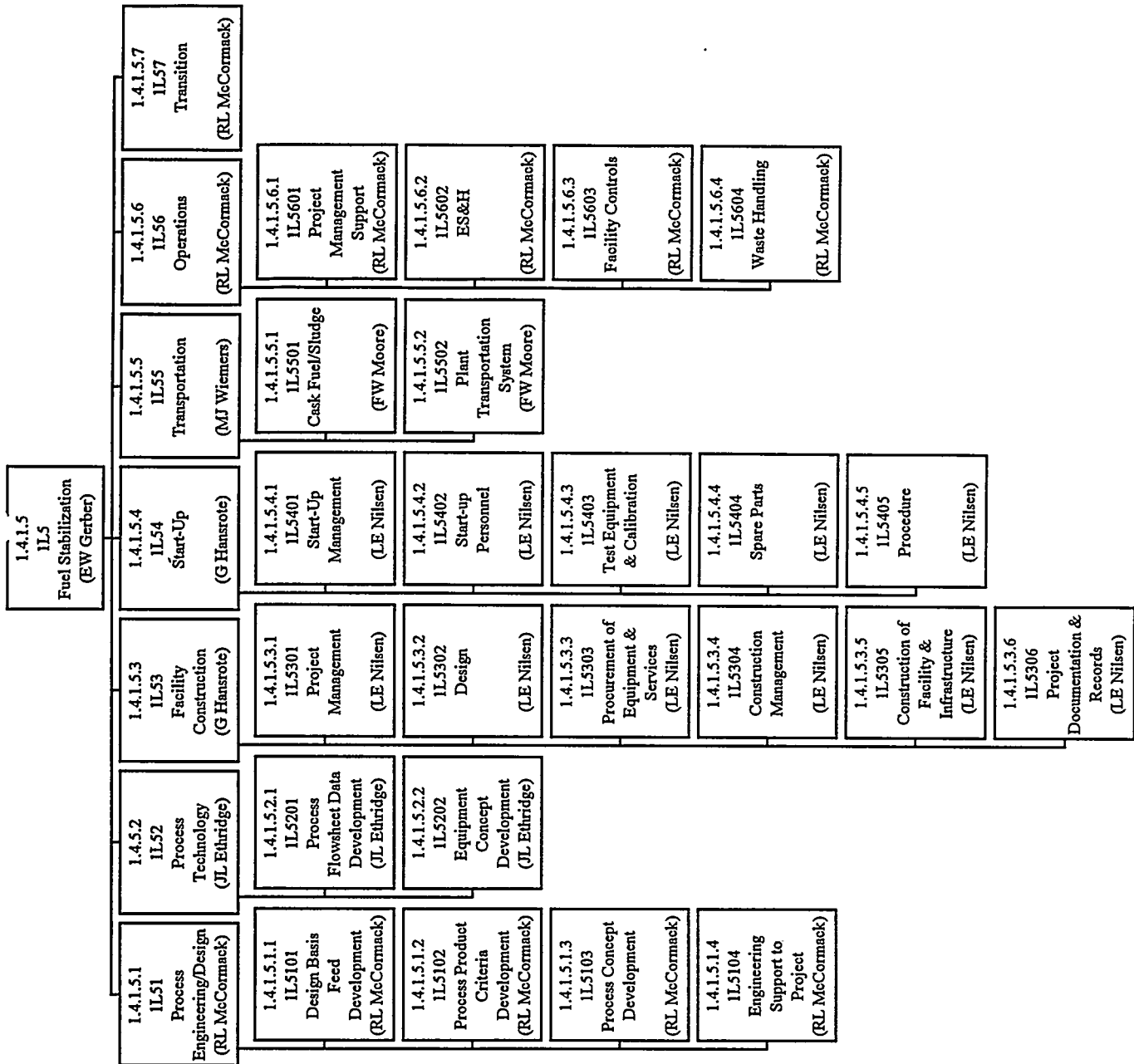


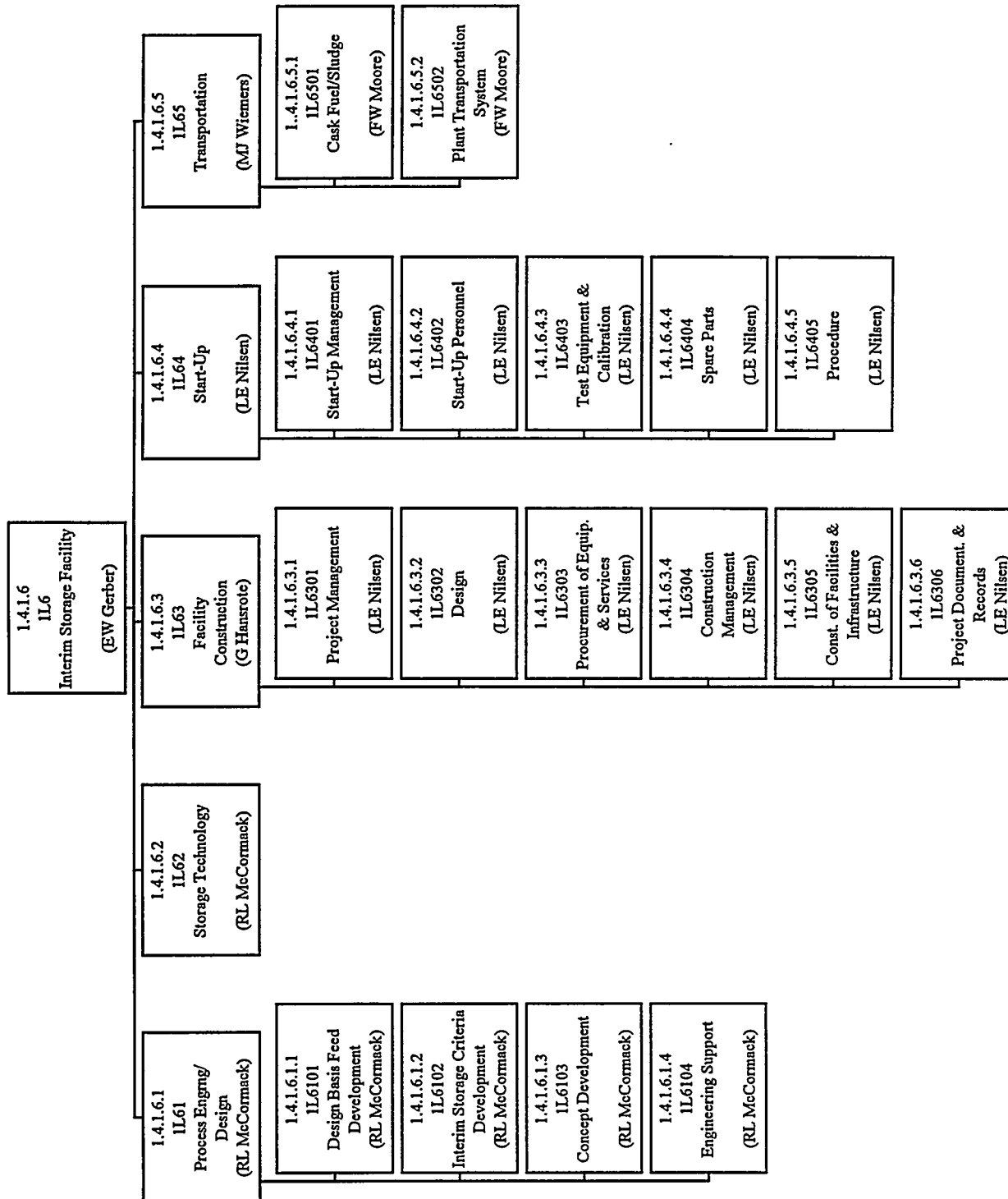


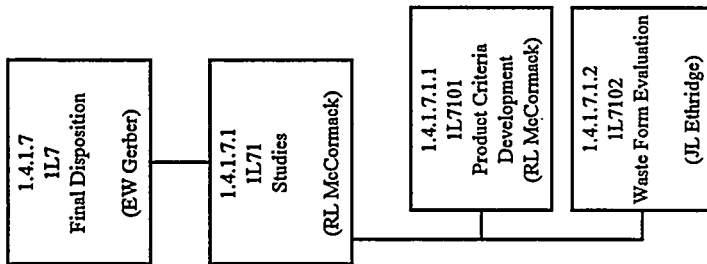


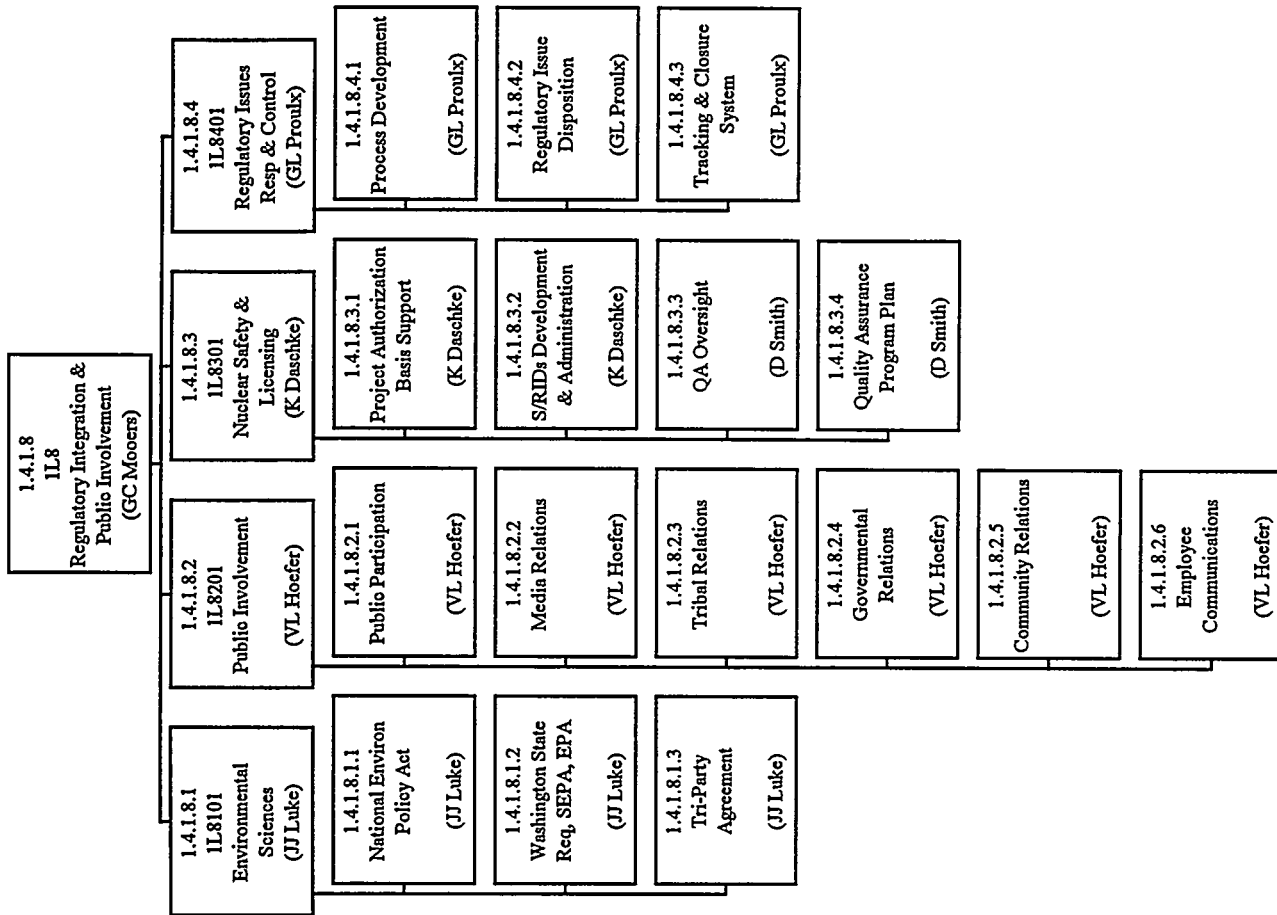


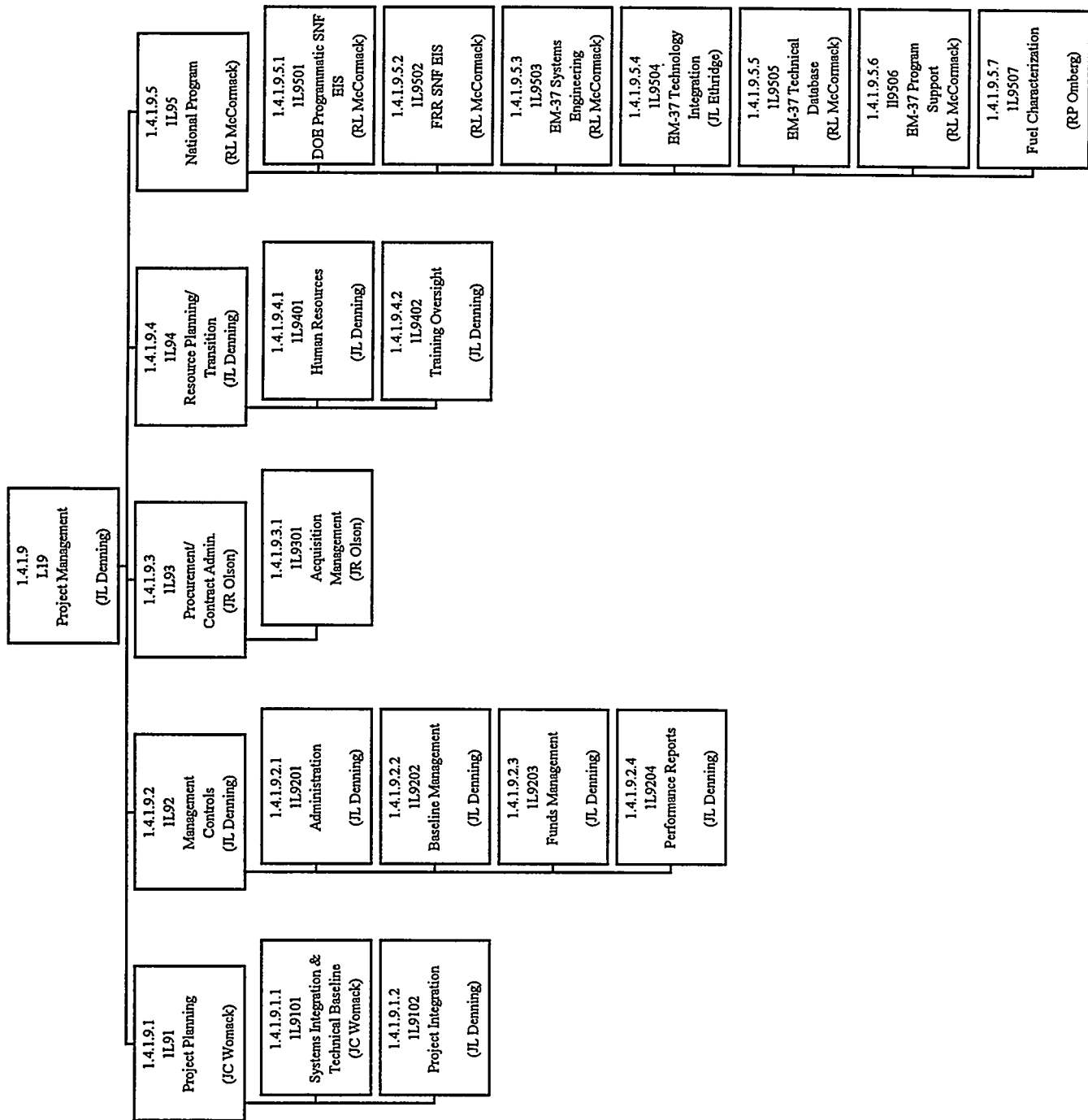












SPENT NUCLEAR FUEL PROJECT

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 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:		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

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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 1.4.1.1.1	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: • 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.		

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 08/25/94	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		

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 08/25/94	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		

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 08/25/94	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		

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 08/25/94	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		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

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 1.4.1.1.2	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 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. The tasks identified for this WBS element include: • Fire Protection Upgrade • Electrical Systems Upgrades • Heat Exchanger Removal • Ninety-Day RCRA Storage Pad		

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 08/12/94	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.		

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 08/12/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.1.2.2		5 WBS ELEMENT TITLE Electrical System	
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 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.			

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 08/12/94	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.		

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 08/11/94	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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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 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		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

2.A.2. WBS Dictionary

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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 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. 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. Cost accounts included in this activity are: • Basin-Related Characterization • Laboratory-Related Characterization 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.		

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 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 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. 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. Consistent with the division of responsibility as noted above, the Basin-Related characterization cost account includes the following Task Packages • Qualitative In-situ Data • Sample shipping to and from Hot Cells • Engineering Interpretation of Characterization Data • Data Quality Objectives		

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 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 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. 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. Consistent with the division of responsibility as delineated above, the Laboratory-Related Characterization cost account includes the following Task Packages • Hot Cell Operations • Hot Cell Examinations • Interim Storage Technology Support 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.		

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 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: 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		

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	
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 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
ELEMENT TASK DESCRIPTION (Cont) 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. Lower level elements of this scope or work are: 1.4.1.2.2.1.01 Project Management 1.4.1.2.2.1.02 Process Engineering 1.4.1.2.2.1.03 Characterization Support 1.4.1.2.2.1.04 Pre-Pilot Facility Engineering 1.4.1.2.2.1.05 Operations Support 1.4.1.2.2.1.06 Readiness Assessment 1.4.1.2.2.1.07 ES&H 1.4.1.2.2.1.08 QA 1.4.1.2.2.1.09 Pilot Run Clean-Up	

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 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 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. B. TECHNICAL CONTENT/WORK STATEMENT 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. Lower level elements of this scope of work are: 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:			
• 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
ELEMENT TASK DESCRIPTION (Cont) 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. Lower level elements of this scope of work are: 1.4.1.2.2.3.01 Project Management 1.4.1.2.2.3.02 Engineering Studies/Analyses 1.4.1.2.2.3.03 Design 1.4.1.2.2.3.04 Engineering Support 1.4.1.2.2.3.05 Procurement 1.4.1.2.2.3.06 Facility Modifications 1.4.1.2.2.3.07 Installation 1.4.1.2.2.3.08 Fuel Repackaging 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 1.4.1.2.2.4	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: • 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
ELEMENT TASK DESCRIPTION (Cont) 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. As no formal direction has been provided for the SNFP, this cost account is based upon the following assumptions: • 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.	

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 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: • Cutting/dislodging • Removal • Decontamination • Size reduction • Packaging • Packaging handling/storage • Controls and instrumentation Lower level elements of this scope of work are: 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		

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 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/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 B. TECHNICAL CONTENT/WORK STATEMENT 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. 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. Cost accounts included within this activity are: • Engineering studies • Characterization support • Project management • Design • Engineering support • Procurement • Facility modifications • Installation • 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 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: • Project Management • Engineering Studies/Analyses • Design • Procurement • Facility Modifications • Installation		

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 1.4.1.3	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		

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 1.4.1.3.1	5 WBS ELEMENT TITLE Characterization	
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 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. 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. Tasks included within this cost account are: • 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		

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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 1.4.1.3.1.2	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: • 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.		

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 1.4.1.3.2	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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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 1.4.1.4	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		

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 1.4.1.4.1	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 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: 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 This task includes the entire transportation system to make the fuel from the KE Basin to the temporary storage facility.		

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 1.4.1.4.1.1	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.		

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 1.4.1.4.1.2	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.		

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 1.4.1.4.1.3	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.		

WORK BREAKDOWN STRUCTURE DICTIONARY

2.A.2-39

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 1.4.1.4.2.1		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:					
- Project Management - Business Management - Quality Assurance					

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 1.4.1.4.2.2		5 WBS ELEMENT TITLE Design			
6 INDEX LINE NO.		7 REVISION NO AND AUTHORIZATION 0/LE Nilsen		8 DATE 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					

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 1.4.1.4.2.3		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: - 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 1.4.1.4.2.4	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: - Construction Management - Cost and Schedule Control - Material and Equipment Management - Site Infrastructure Management		

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 08/94	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: - 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 1.4.1.4.3	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 a Temporary Storage Facility, to receive spent nuclear fuel from 105 KE/KW basins. Start-up of the Temporary Fuel Storage Facility will verify that the systems, as constructed, will meet the functional design requirements. Tasks identified in this WBS element include: - Start-Up Management - Start-Up Personnel - Test Equipment and Calibration - Spare Parts - Procedure - Start-Up 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 08/94	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 A. COST CONTENT Labor, Material, Subcontracts 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: - Management - Business Management - Quality Assurance		

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 1.4.1.4.3.2	5 WBS ELEMENT TITLE Start-Up Personnel	
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 personnel and support services to perform start-up activities for a Near-Term Storage Facility. Tasks identified in this WBS element include: - Start-Up Personnel - Non Dedicated Support - Shape Support - Construction Force Support		

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:					
- Test and Calibration Equipment - Laboratory Support - Repair Facility Support					

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 1.4.1.4.3.4		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 Near-Term Storage Facility. Tasks identified in this WBS element include: - Spare Parts - Spare Equipment					

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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 1.4.1.4.4	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: 1.4.1.4.1.1 Project Management 1.4.1.4.1.2 Cask 1.4.1.4.1.3 Transporter		

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 1.4.1.4.4.1	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: • Project Management Plans • Work Plans and their development • Cost and schedule • Progress reports		

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 1.4.1.4.4.2	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: 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		

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 1.4.1.4.4.3	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: 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		

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 1.4.1.4.5	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		

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 1.4.1.4.6	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 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. The longer level elements of this task, leading to a transition of the facility from an operating to surveillance configuration, are: 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 1.4.1.5	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															
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. 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: <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														

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 1.4.1.5.1	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		

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 1.4.1.5.1.1	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		

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 1.4.1.5.1.2	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.		

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 1.4.1.5.1.3	5 WBS ELEMENT TITLE Process 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 B. TECHNICAL CONTENT/WORK STATEMENT 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. The elements of this activity, leading to completion of the documentation required to initiate the facility conceptual design, consist of: 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		

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 1.4.1.5.1.4	5 WBS ELEMENT TITLE Engineering Support to Project	
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 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. • Design Requirements Document • Functions and Requirements Document • Conceptual Design Plan • Short Form Data Sheets		

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 1.4.1.5.2	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		

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 1.4.1.5.2.1	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 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. 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. This element leads to validation of the enabling assumptions used to develop the fuel stabilization facility process flowsheet.		

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 1.4.1.5.2.2	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 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. 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. This element leads to validation of the enabling assumptions used to develop the fuel stabilization preliminary design concept.		

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	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 Spent Nuclear Fuel Stabilization 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		

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 1.4.1.5.3.1		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:			
■ 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: - Title I Preliminary Design - Title II Detailed Design - Title III Field Engineering Services - A/E Support - Special Studies		

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			
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 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 - 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 1.4.1.5.3.4	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: - Construction Management - Cost and Schedule Control - Material and Equipment Management - Site Infrastructure Management		

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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 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.4	5 WBS ELEMENT TITLE Start-Up	
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 start-up services to support a nuclear Fuel Stabilization Facility, to receive spent nuclear fuel from 105 KE/KW basins. Start-up of the Fuel Stabilization Facility will verify that the systems, as constructed, will meet the functional design requirements. Tasks identified in this WBS element include: - Start-Up Management - Start-Up Personnel - Test Equipment and Calibration - Spare Parts - Procedure - Start-Up 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 08/94	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: ■ Management ■ Business Management ■ Quality Assurance		

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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 1.4.1.5.4.3		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:					
- Test and Calibration Equipment - Laboratory Support - Repair Facility Support					

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 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.5.4.4	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 Spent Nuclear Fuel Stabilization Facility. Tasks identified in this WBS element include: - Spare Parts - Spare 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 1.4.1.5.4.5		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: - 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: • 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: • 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: 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		

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 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 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. The longer level elements of this task, leading to a transition of the facility from an operating to surveillance configuration, are: 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

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	5 WBS ELEMENT TITLE Process Engineering/Design	
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 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. 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: 1.4.1.6.1.1 - 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

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 1.4.1.6.1.1	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		

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 1.4.1.6.1.2	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 • 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 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. The elements of this activity, leading to completion of the documentation required to initiate the facility conceptual design, consist of: 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		

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 1.4.1.6.1.4	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.		

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 1.4.1.6.2	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: - Project Management - Architect-Engineering Services - Procurement of Equipment and Services - Construction Management - Construction of Facilities and Infrastructure - Project Documentation and 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 1.4.1.6.3.1	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 an Interim Storage Facility to store spent nuclear fuel prior to shipment to a Federal repository. Tasks identified in this WBS element include: - 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 1.4.1.6.3.2	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: - 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: - Capital Equipment - CENRTC Equipment - Spare Parts/Equipment		

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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 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.3.6	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 Interim Storage Facility. Tasks identified in this WBS element include: - Engineering Design Media - As-Built Records - P&ID's, Fluor Diagrams - Compliance and Inspection Records.		

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: - 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: - 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 1.4.1.6.4.2	5 WBS ELEMENT TITLE Start-Up Personnel	
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 personnel and support services to perform start-up activities for an Interim Storage Facility. Tasks identified in this WBS element include: - Start-Up Personnel - Non Dedicated Support - Shape Support - Construction Force Support		

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 08/94	3 IDENTIFICATION NO. 1.4.1
4 WBS ELEMENT CODE 1.4.1.6.4.3	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 Interim Storage Facility. Tasks identified in this WBS element include: ■ Test and Calibration Equipment ■ Laboratory Support ■ Repair Facility Support		

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:					
- Spare Parts - Spare 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 1.4.1.6.4.5	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 Interim 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: - 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 1.4.1.6.5	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: • 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 1.4.1.6.5.1	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.		

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 1.4.1.6.5.2	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: • 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 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 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. 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. The next lower level task under this element is: 1.4.7.1 Studies Additional lower level task elements will be added to the Final Disposition Activity Element as disposition plans mature.		

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 1.4.1.7.1	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.		

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 1.4.1.7.1.1	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.		

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 1.4.1.7.1.2	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.		

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 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: • Facilities • Transportation • Packaging • Environmental quality (air, soils, water) Regulating agencies and stakeholders include: • 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: • 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.		

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 1.4.1.8.2	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: • 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)		

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 1.4.1.8.3	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: • 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.		

WHC-SP-1104

2.A.2-117

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 1.4.1.8.4	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: • 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.		

SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4

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: • Scope Determination/Definition • Risk Assessment • Order of Magnitude Schedule Development • Order of Magnitude Estimate Development • National Program		

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 1.4.1.9.1	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
ELEMENT TASK DESCRIPTION (Cont) B. TECHNICAL CONTENT/WORK STATEMENT (Cont) 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: • Systems Engineering & Technical Baseline (WBS 1.4.1.9.1.01) • Project Integration (WBS 1.4.1.9.1.02)	

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 1.4.1.9.1.1	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: Systems Integration • Systems Engineering Management & Technical Baseline Development • Engineering Integration Integrated Options Evaluation/Selection • Life cycle evaluation of storage, transportation, and fuel disposition options to support development of overall project baseline.		

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 1.4.1.9.1.2	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 <u>Labor:</u> Exempt Non-Exempt <u>Contract Support</u> <u>Overhead:</u> Department Overhead G&A B. TECHNICAL CONTENT/WORK STATEMENT 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. Major end item deliverables: • 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		

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 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 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. The Management Controls WBS element will consist of four WBS sub-elements: • 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)			

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 1.4.1.9.2.1	5 WBS ELEMENT TITLE Administration	
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 Contract Consultants <u>Material and Supplies</u> <u>Overhead:</u> 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		

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 1.4.1.9.2.2	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 <u>Labor:</u> Exempt Non-Exempt <u>Material and Supplies</u> <u>Overhead:</u> B. TECHNICAL CONTENT/WORK STATEMENT 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.		

WBS ELEMENT CODE 1.4.1.9.2.2	WBS ELEMENT TITLE Baseline Management
ELEMENT TASK DESCRIPTION (Cont) 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). Major end item deliverables: • 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	

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 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: • Activity Data Sheet Coordination/Preparation • Spending forecasts and Estimate at Completion information • Financial Plans		

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 1.4.1.9.2.4	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 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). Major end item deliverables: • 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		

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 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 <u>Labor</u> Exempt Non-exempt <u>Overhead:</u> Departmental overhead G&A B. TECHNICAL CONTENT/WORK STATEMENT 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. There is one WBS sub-element in the Procurement/Contract Administration WBS element: • Acquisition Management (WBS 1.4.1.9.3.01) LEGAL DRIVERS AND ORDER REQUIREMENTS:		

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 1.4.1.9.3.1	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 <u>Labor</u> Exempt Non-exempt <u>Overhead:</u> Departmental overhead G&A 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.		

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 1.4.1.9.4	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
ELEMENT TASK DESCRIPTION (Cont) B. TECHNICAL CONTENT/WORK STATEMENT 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. The Resource Planning/Transition WBS element will consist of two WBS sub-elements: • Human Resources 1.4.1.9.4.01 • Training Oversight 1.4.1.9.4.02 LEGAL DRIVERS AND ORDER REQUIREMENTS:	

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 1.4.1.9.4.1	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.		

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 1.4.1.9.4.2	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:		

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 1.4.1.9.5	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. 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		

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 1.4.1.9.5.2	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.		

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 1.4.1.9.5.3	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.		

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 1.4.1.9.5.4	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.		

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 1.4.1.9.5.5	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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SPENT NUCLEAR FUEL PROJECT

FY 1995 MYPP WBS Number 1.4 (Rev. C)

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

SPENT NUCLEAR FUEL PROJECT**FY 1995 MYPP****WBS Number 1.4 (Rev. C)**

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

FY 1995 MYPP **SPENT NUCLEAR FUEL PROJECT**
WBS Number 1.4 (Rev. C)

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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
1.4.1.4	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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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
1.4.1.5	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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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
1.4.1.6	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

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FY 1995 MYPP SPENT NUCLEAT FUEL PROJECT WBS Number 1.4 (Rev. C)

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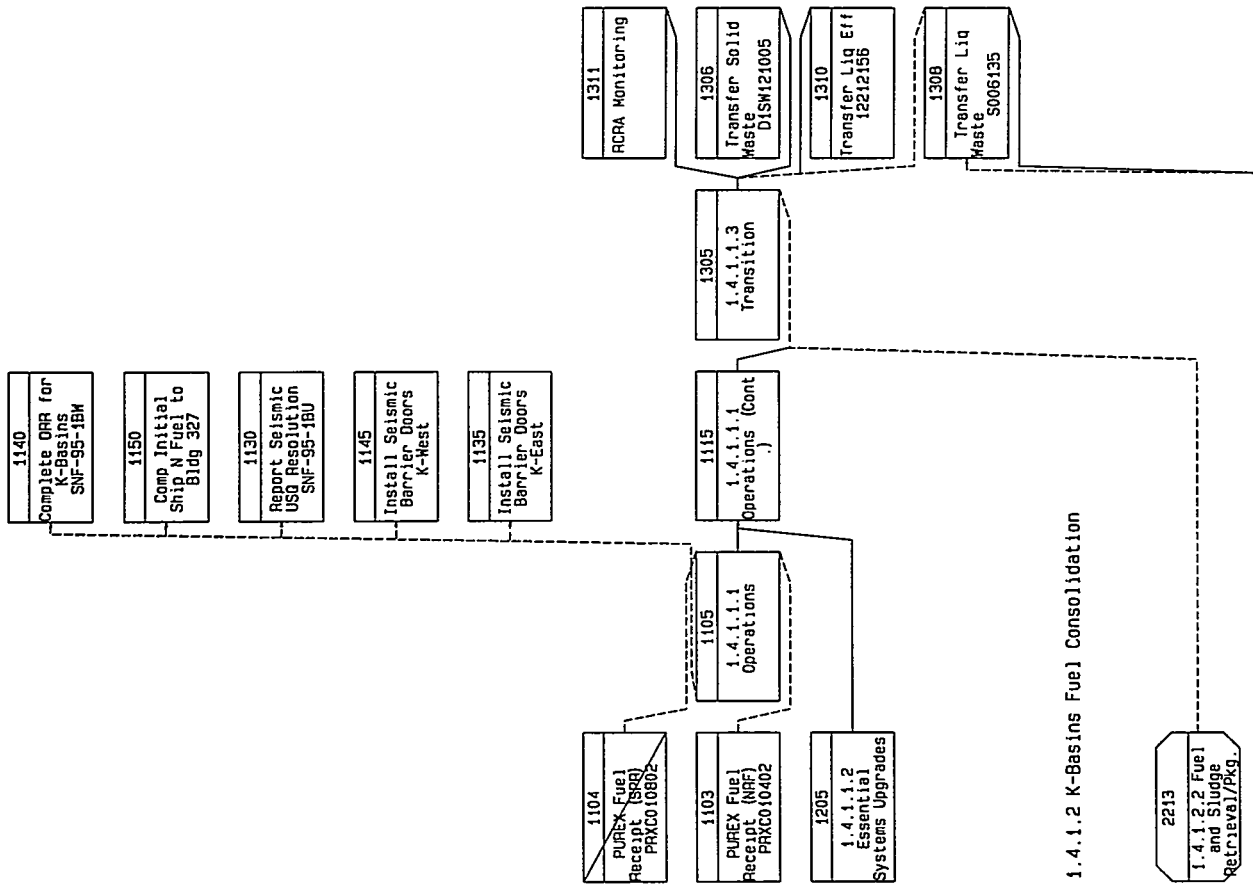
FY 1995 MYPP**WBS Number 1.4 (Rev. C)**[illegible]

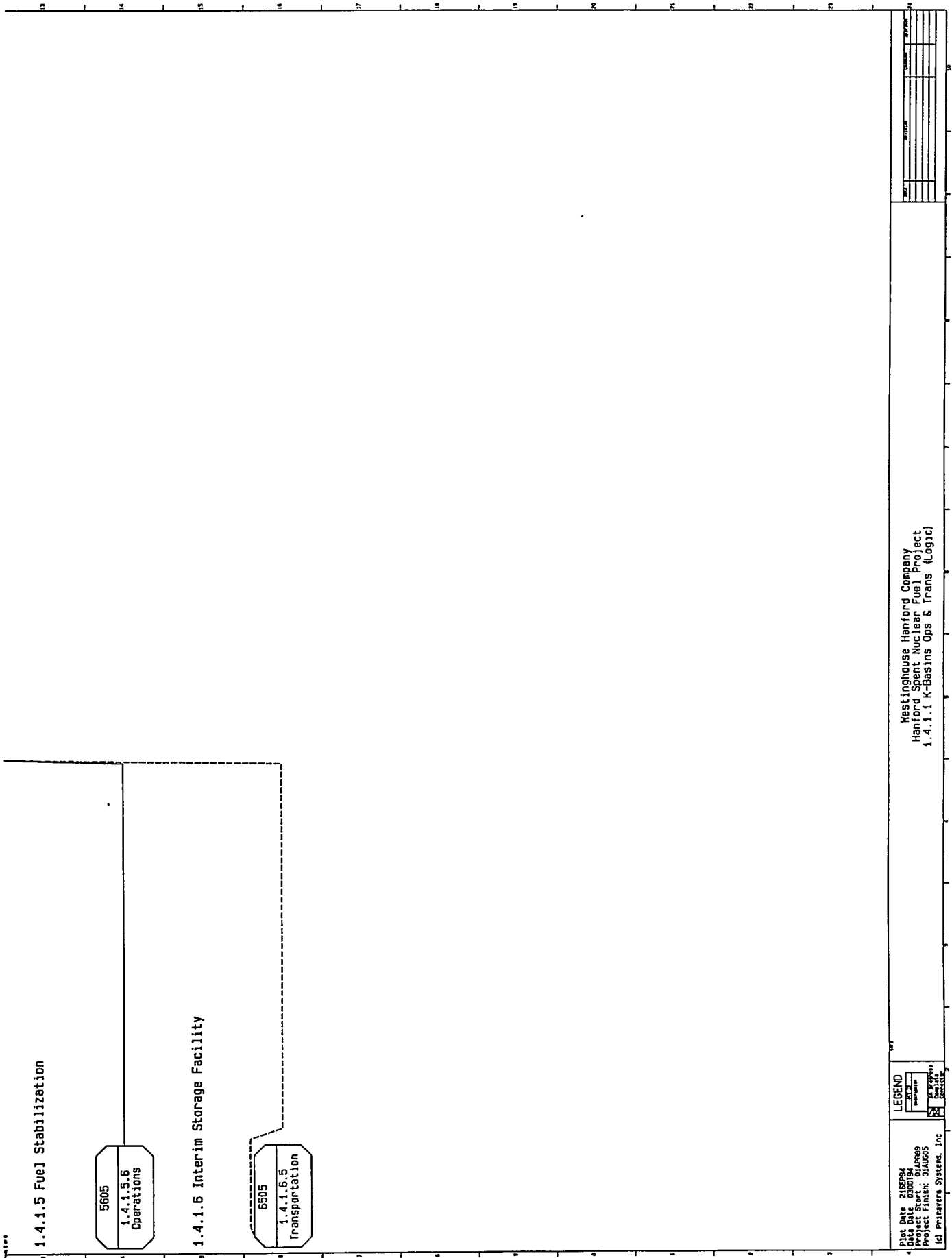
SPENT NUCLEAR FUEL PROJECT
WBS Number 1.4 (Rev. C)

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

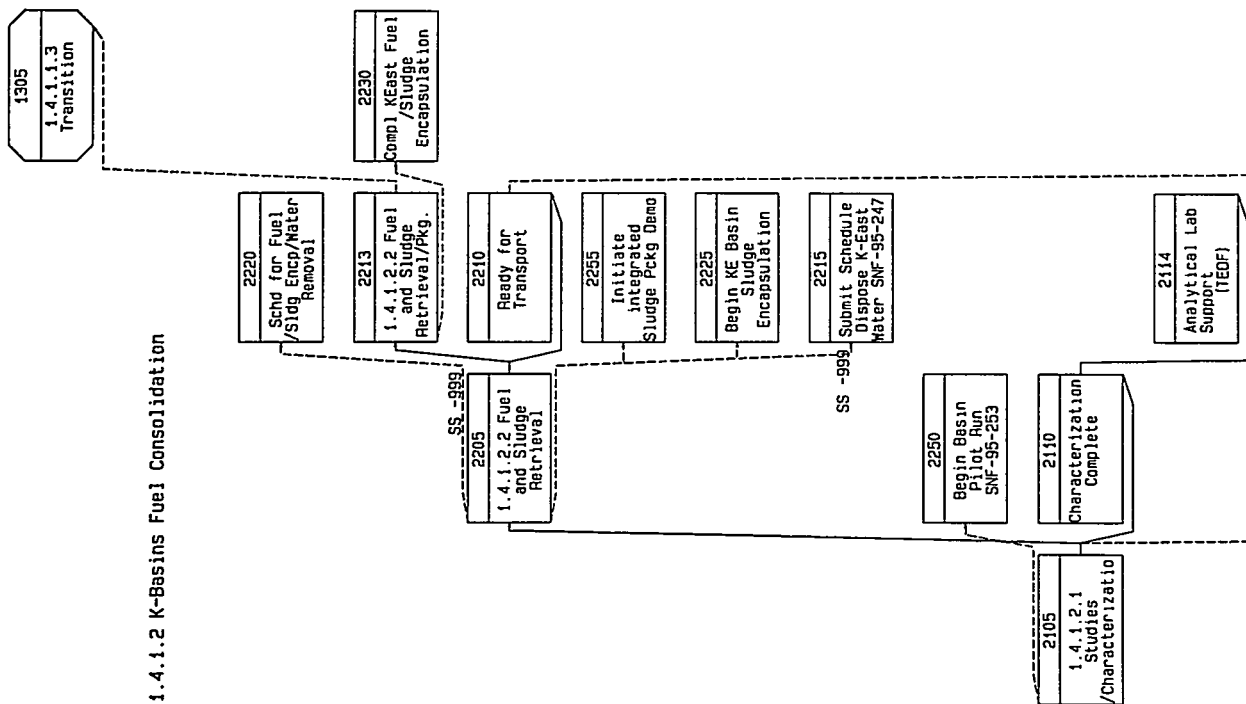
1.4.1.1 K-Basins Operations and Transition

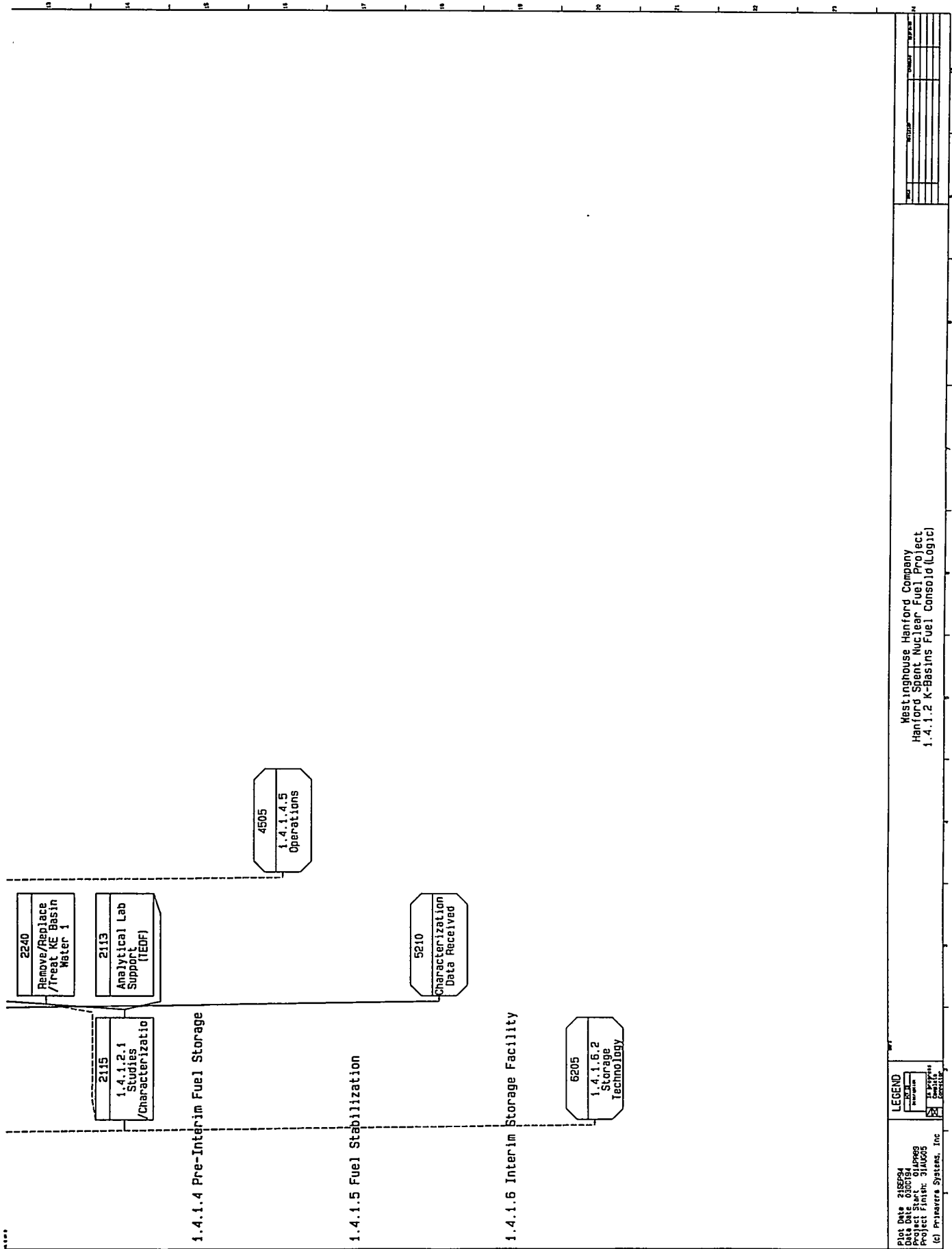




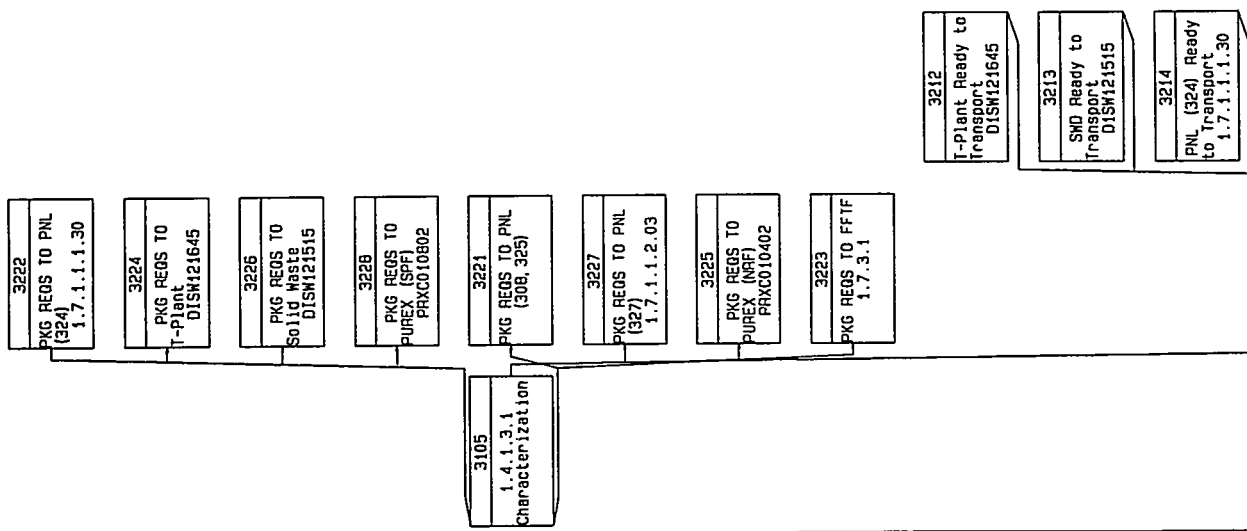
1.4.1.1 K-Basins Operations and Transition

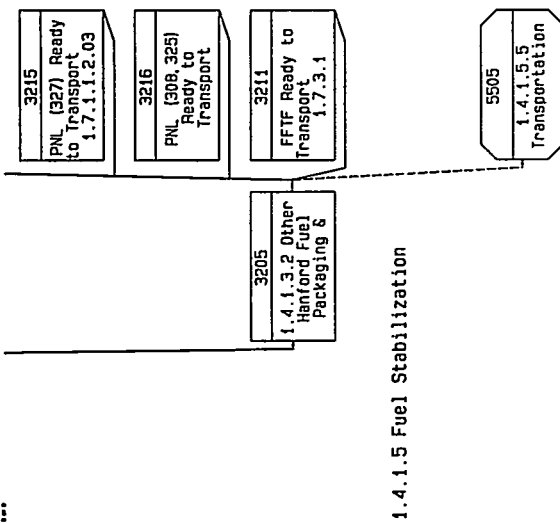
1.4.1.2 K-Basins Fuel Consolidation



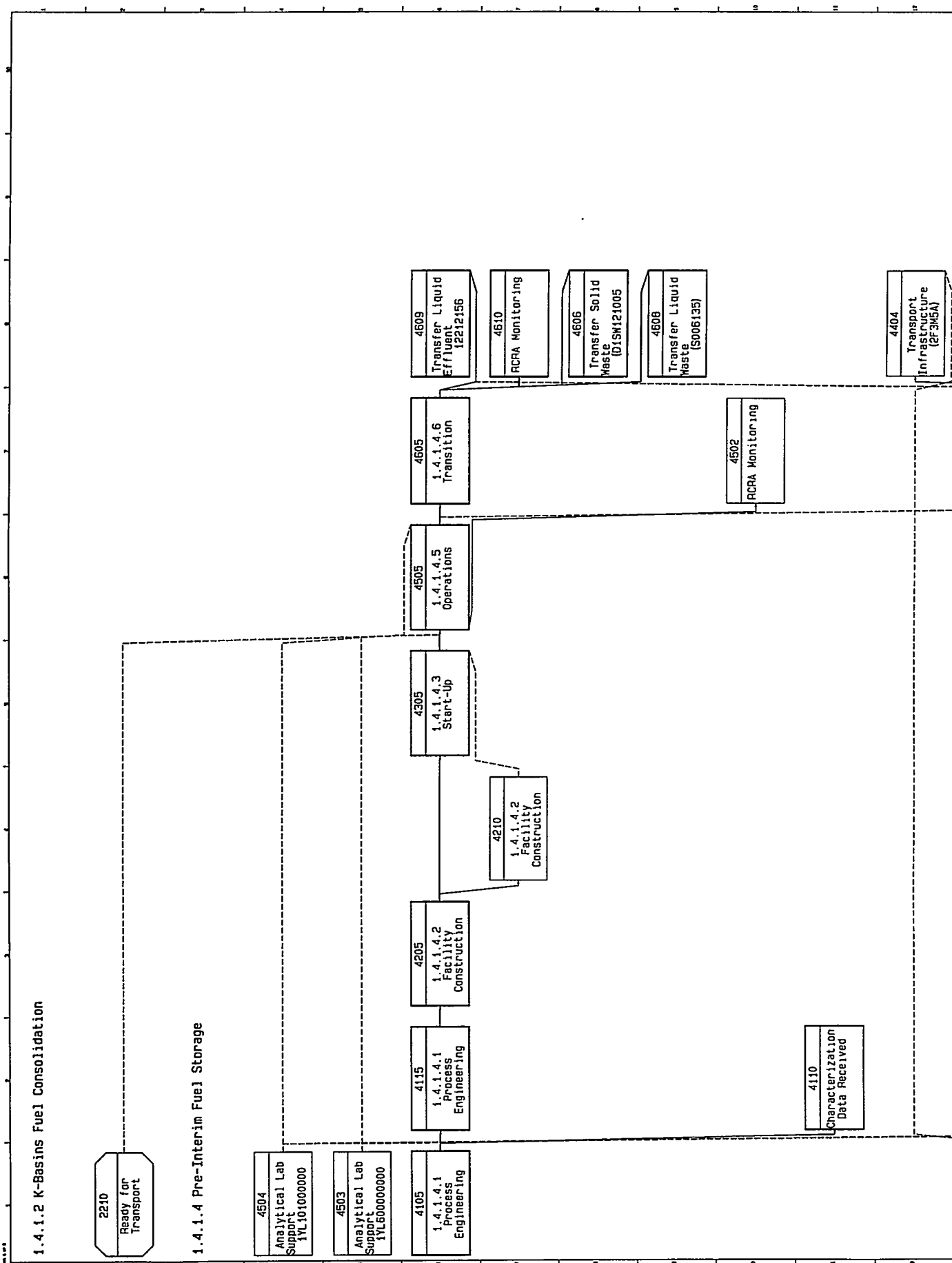


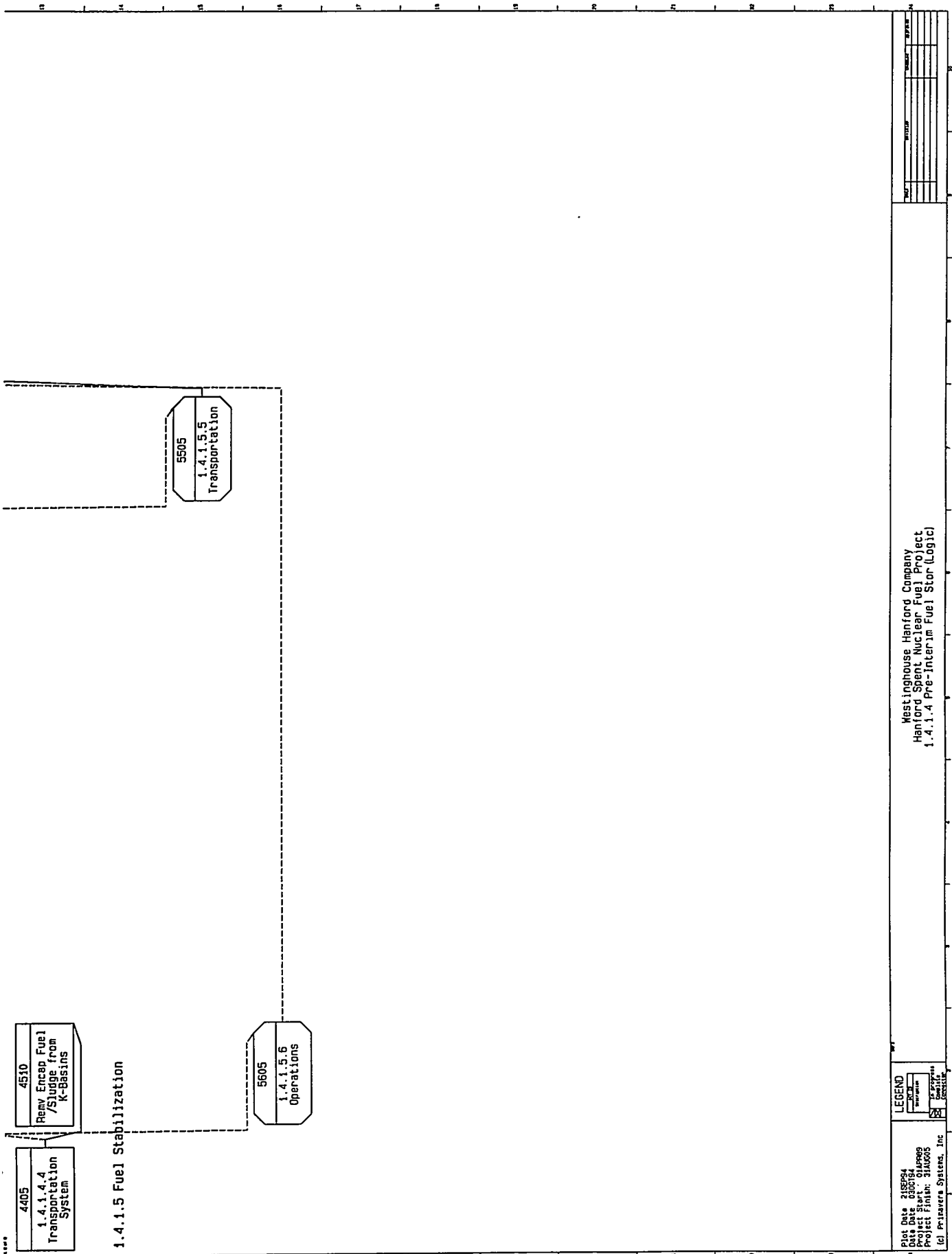
1.4.1.3 Other Hanford Fuel

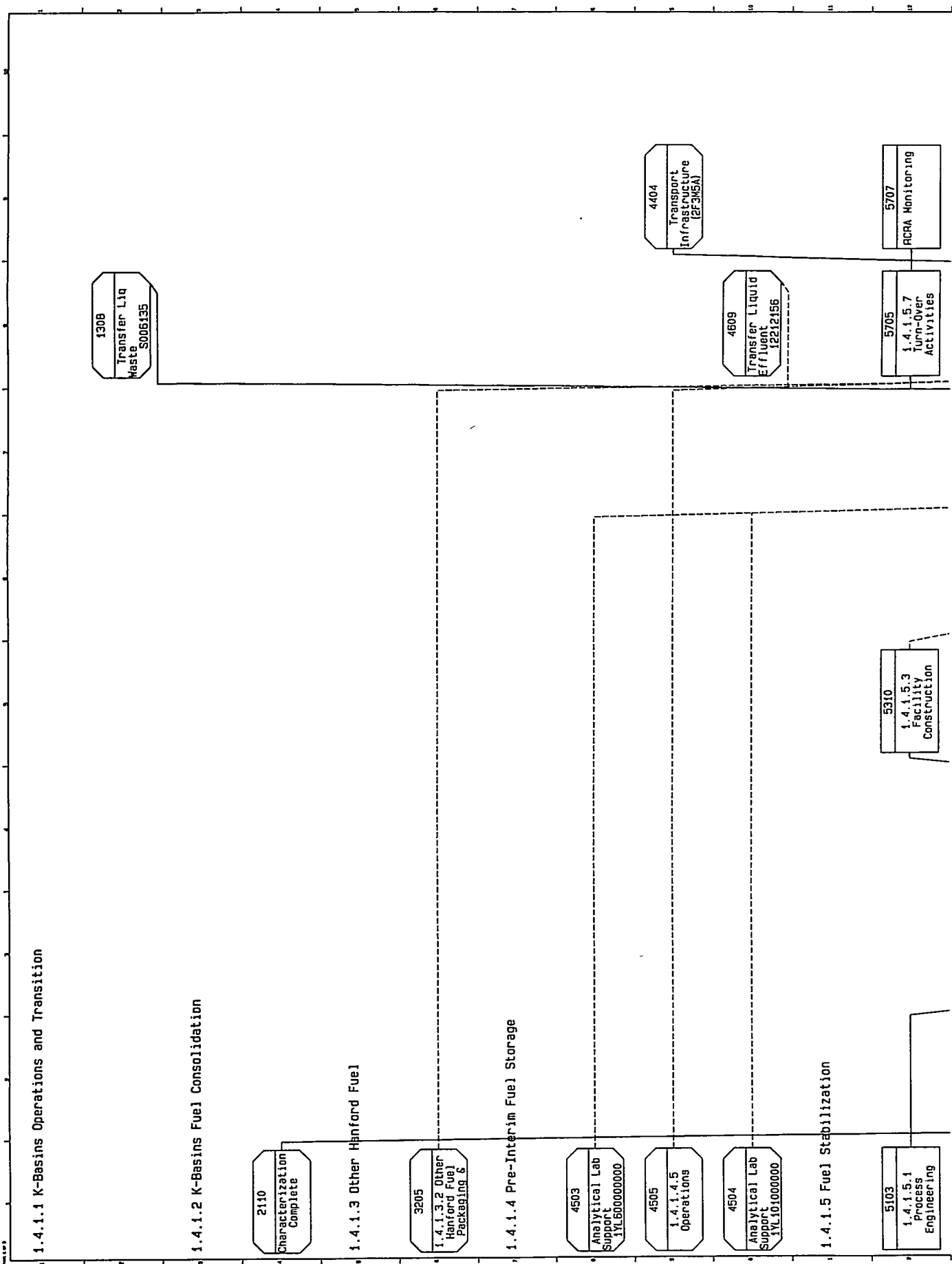


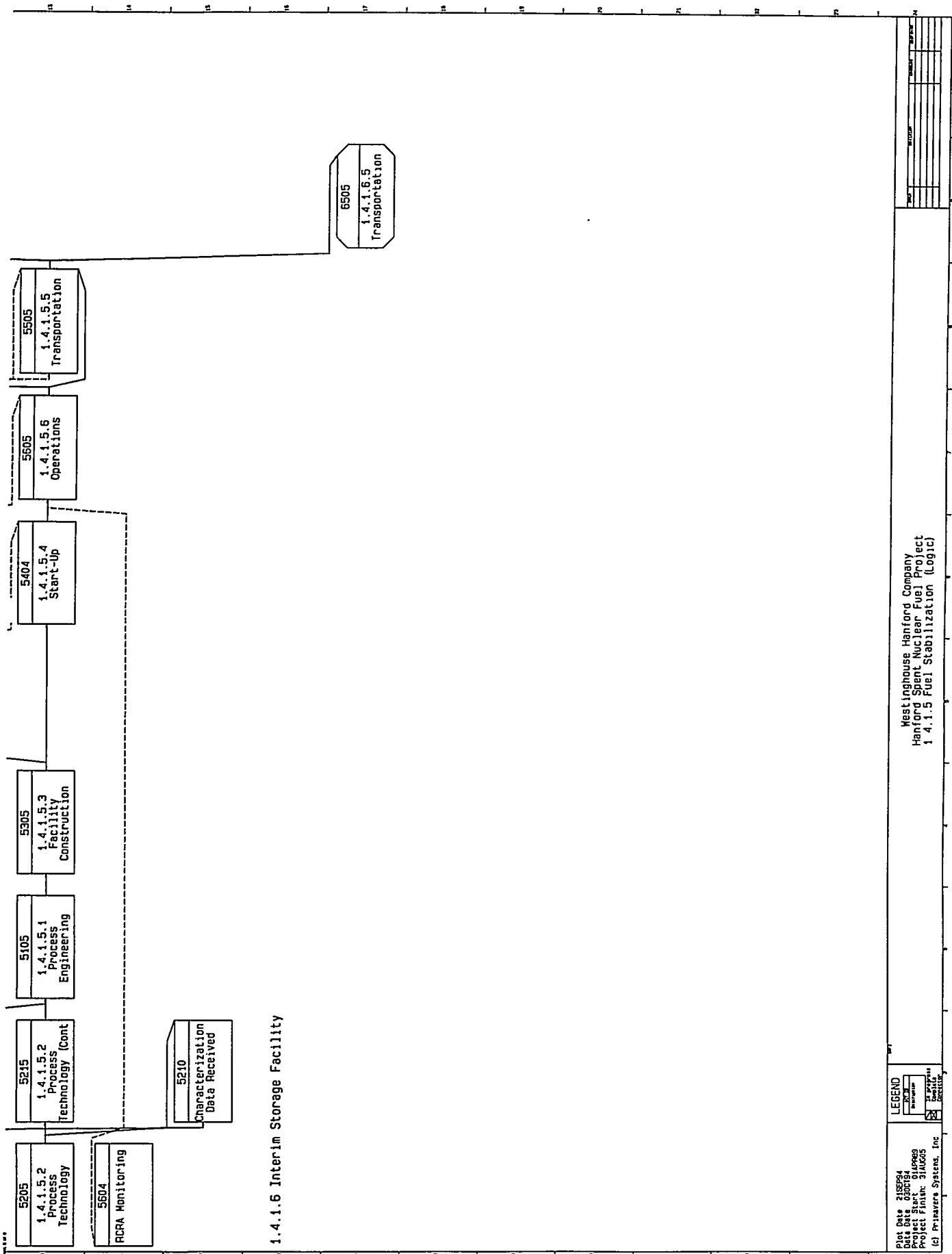


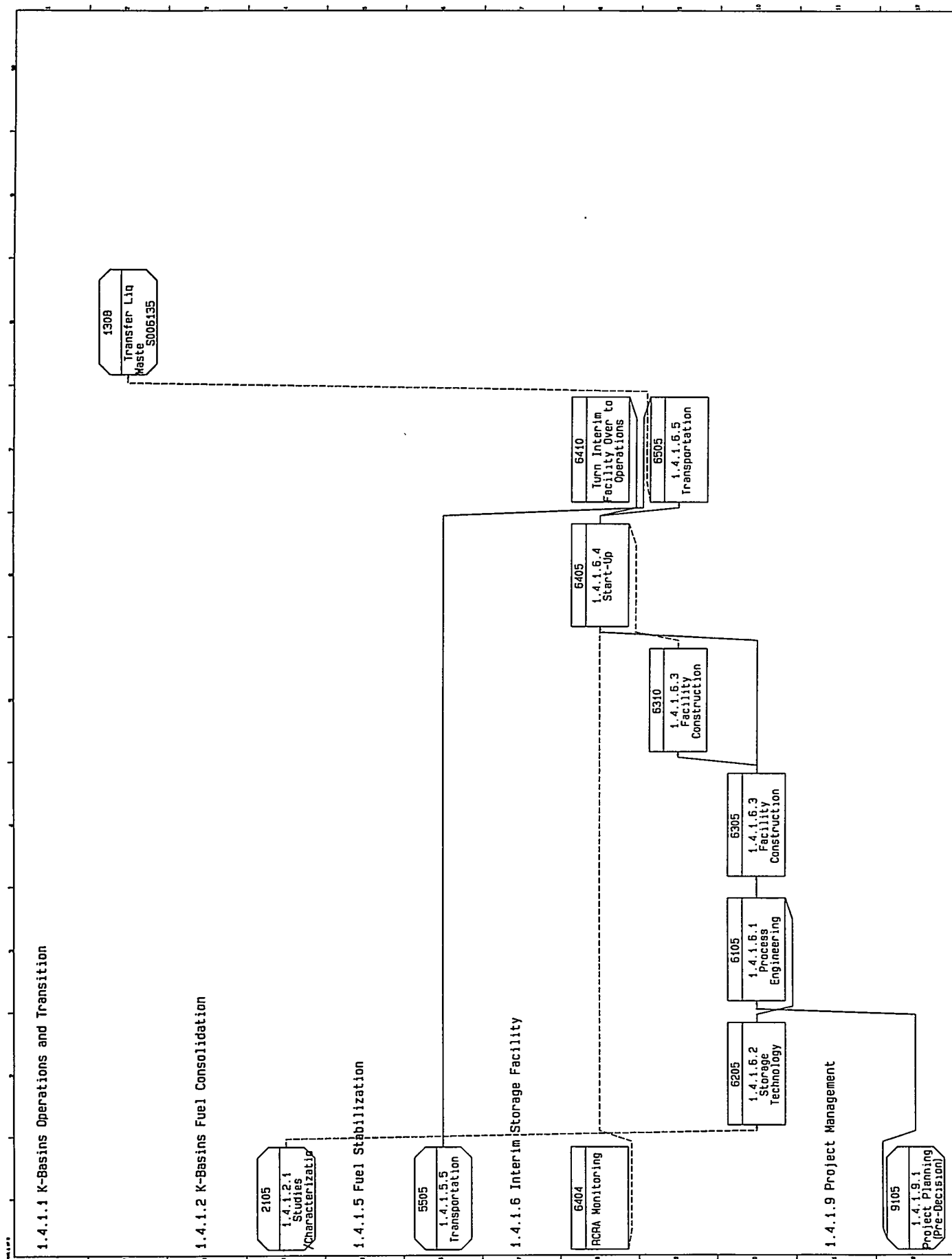
Plot Date: 21SEP94 Plot Start: 01/01/94 Project Start: 01/01/94 Project Finish: 31/03/95 (c) Primavera Systems, Inc.	LEGEND 3205: Other Hanford Fuel Packaging & Transportation 5505: Transportation	Westinghouse Hanford Company Hanford Spent Nuclear Fuel Project 1.4.1.3 Other Hanford Fuel (Logic)
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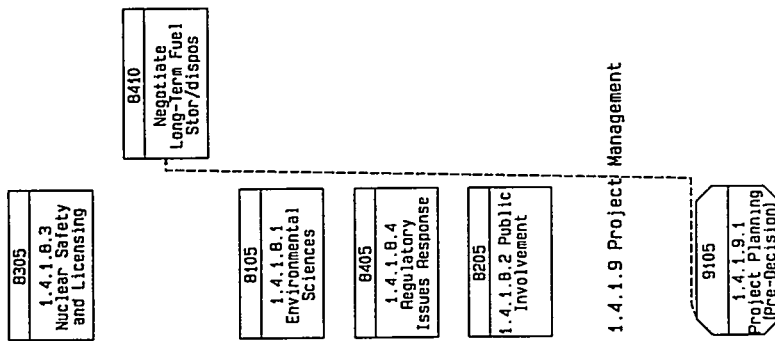


1.4.1.7 Final Disposition

7105	1.4.1.7.1 Studies
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Plot Date 21SEP94
 Date Date 030C194
 Project Start 01APR99
 Project Finish: 31AUG05
 (c) Primavera Systems, Inc

1.4.1.8 Regulatory Integration/Pub. Involvement



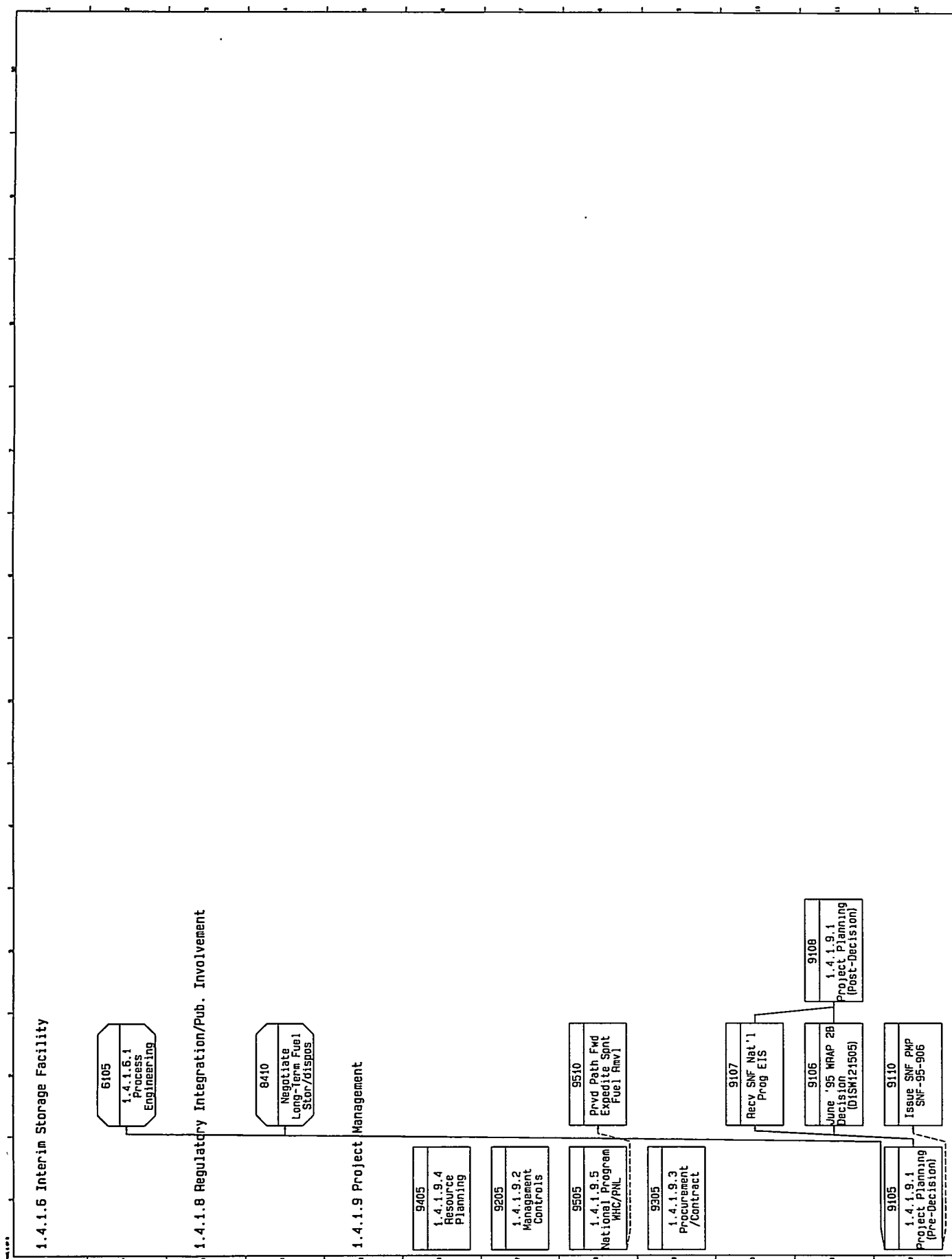
1.4.1.9 Project Management

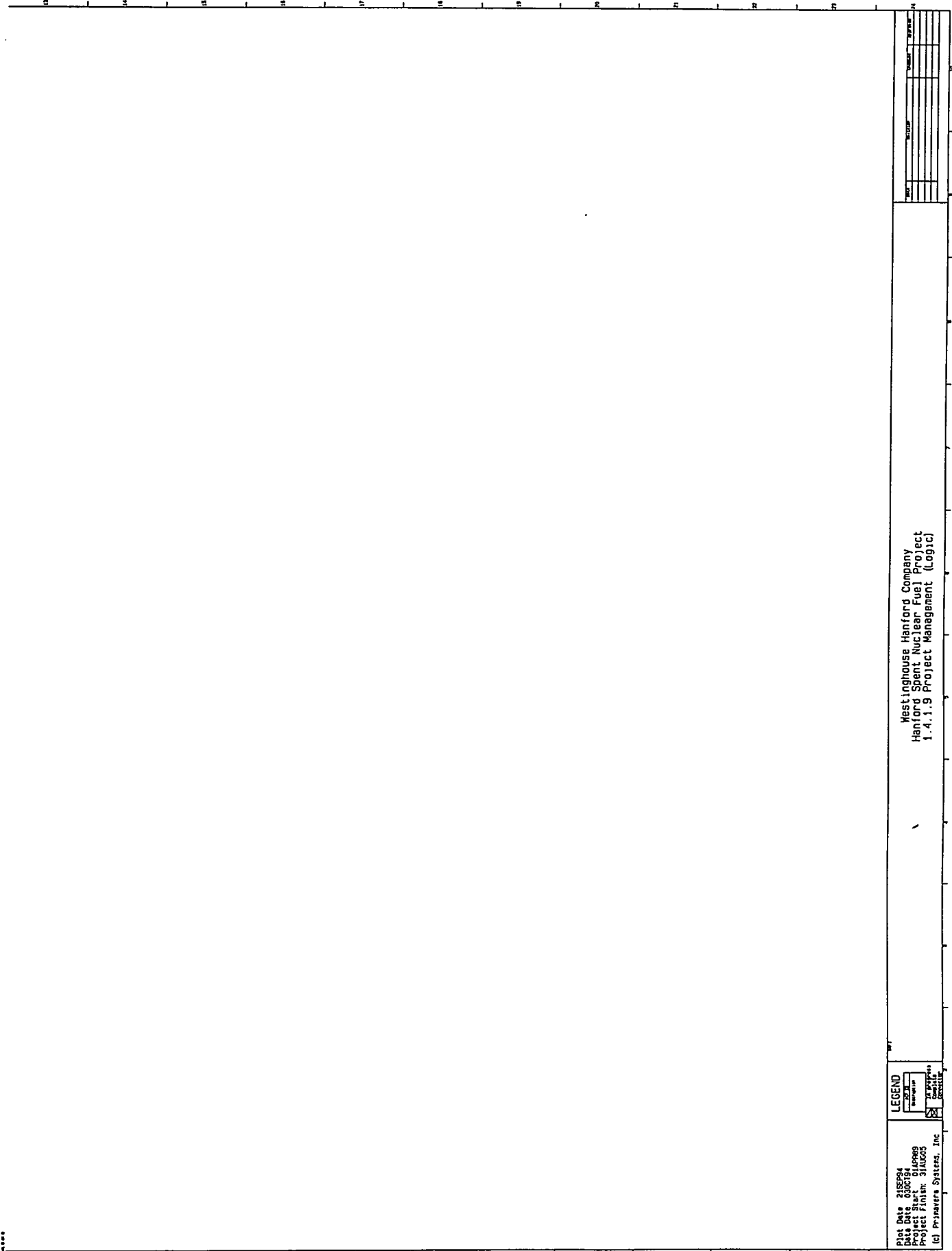
Plot Date: 21SEP94
 Data Date: 09DEC94
 Project Start: 31AUG95
 Project Finish: 31AUG95
 (c) Primavera Systems, Inc.

LEGEND

Activity	Activity
Activity	Activity
Activity	Activity
Activity	Activity

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

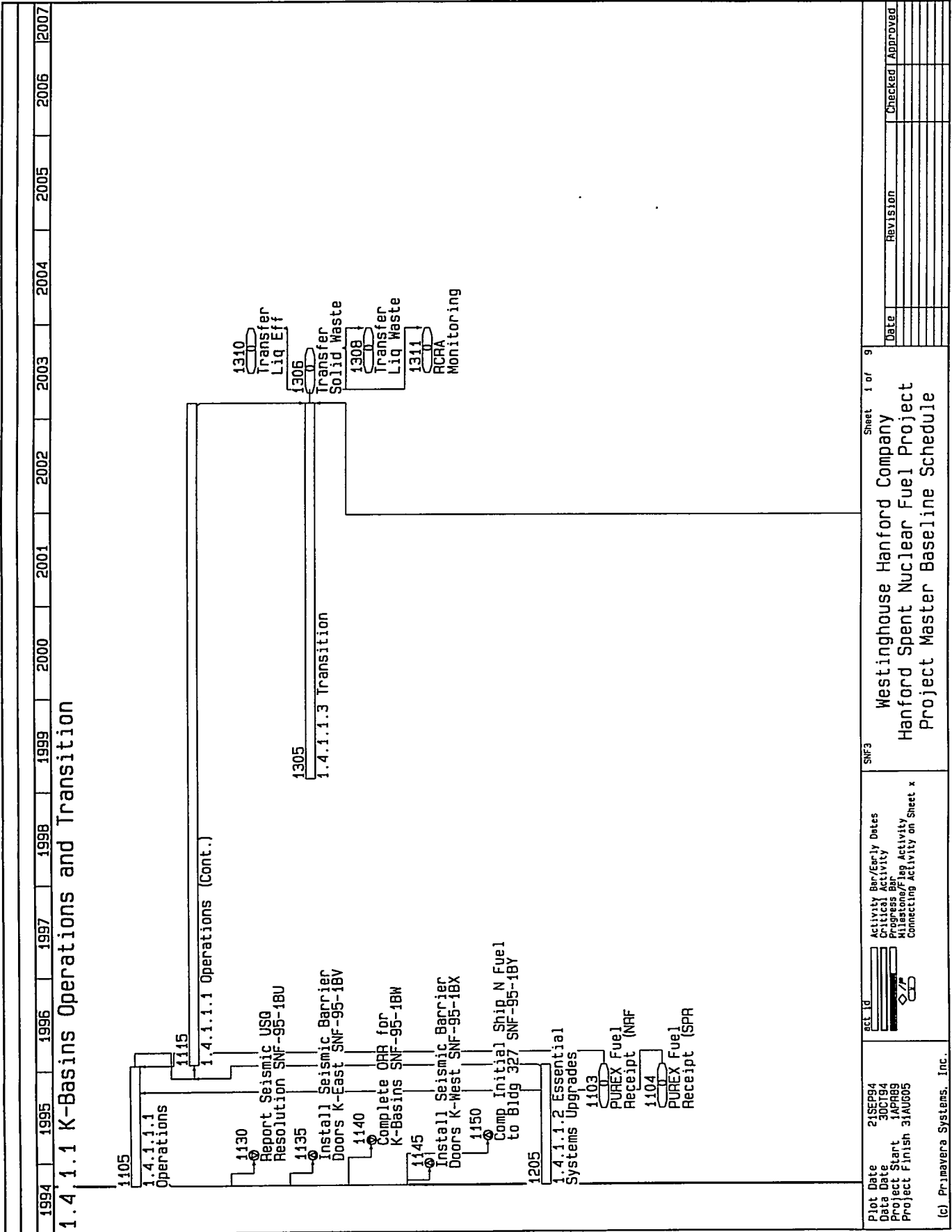


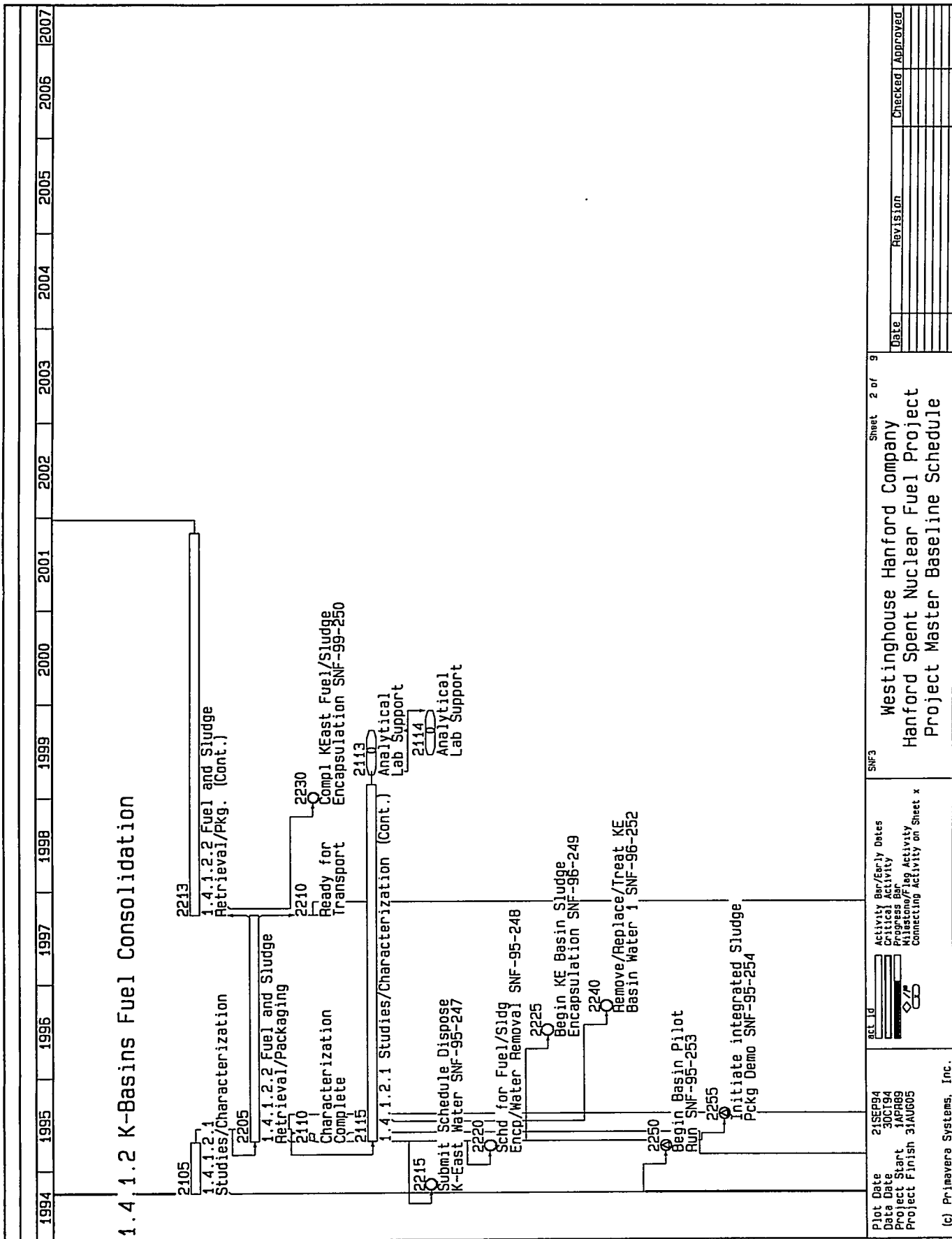


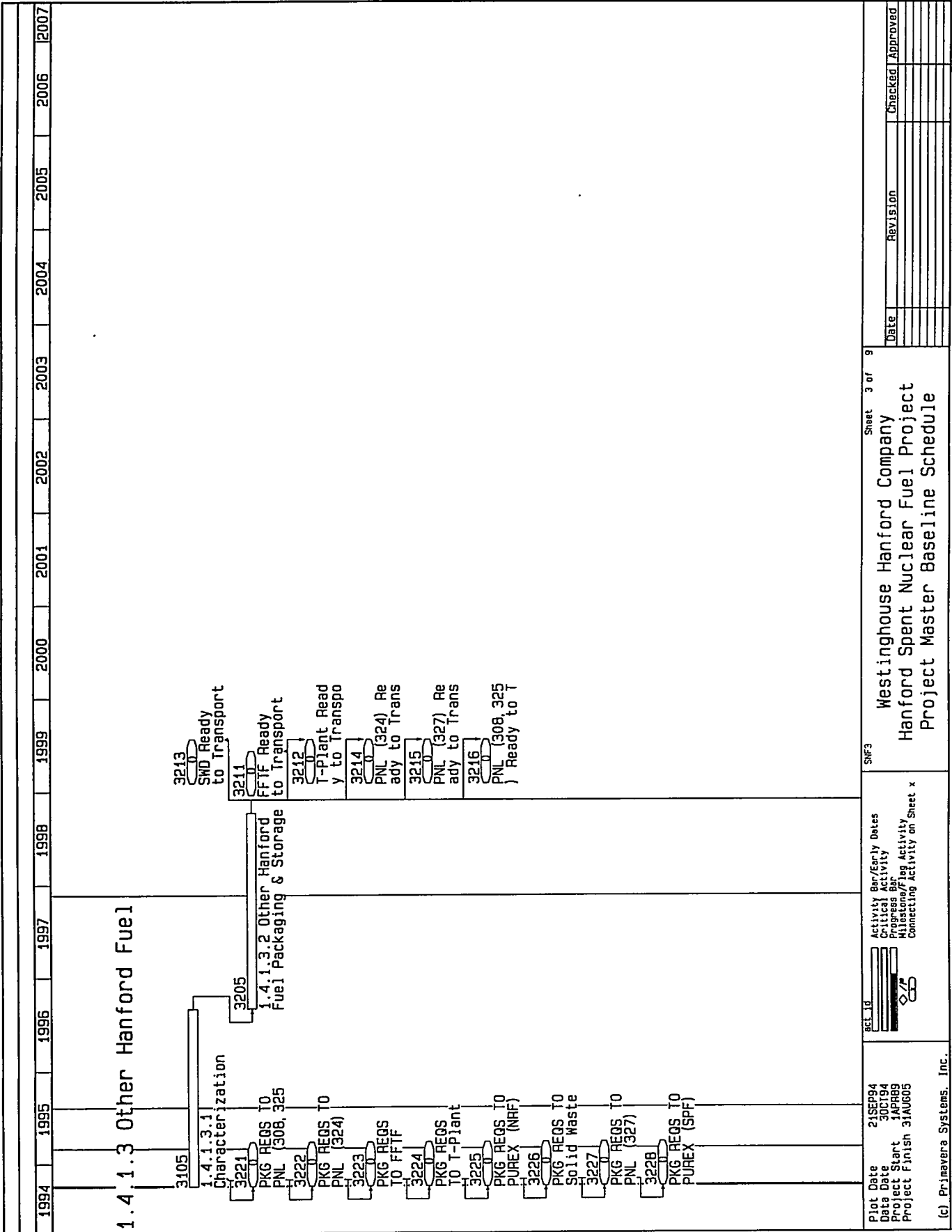
Westinghouse Hanford Company
Hanford Spent Nuclear Fuel Project
1.4.1.9 Project Management (Logic)

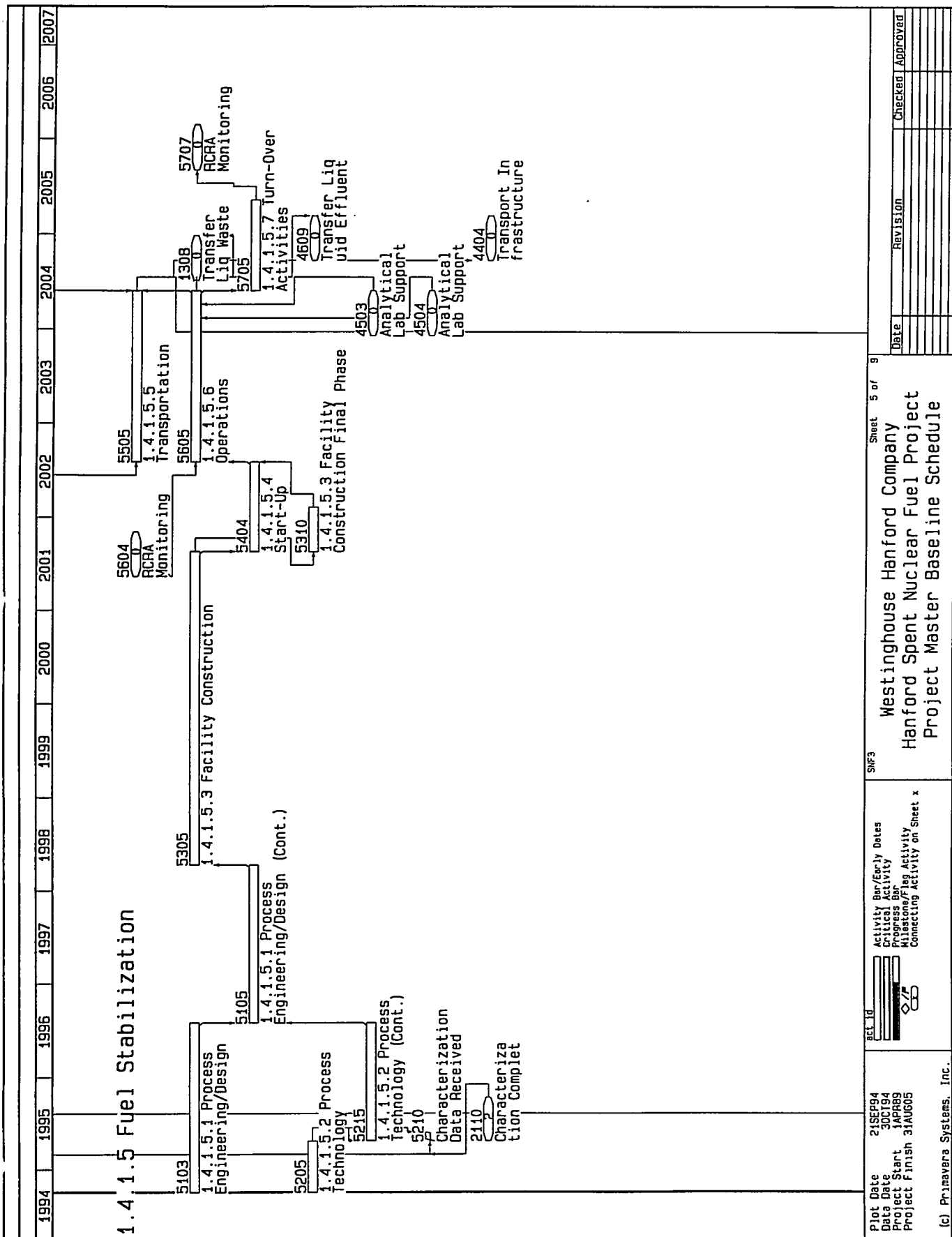
LEGEND
Symbol
Description

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









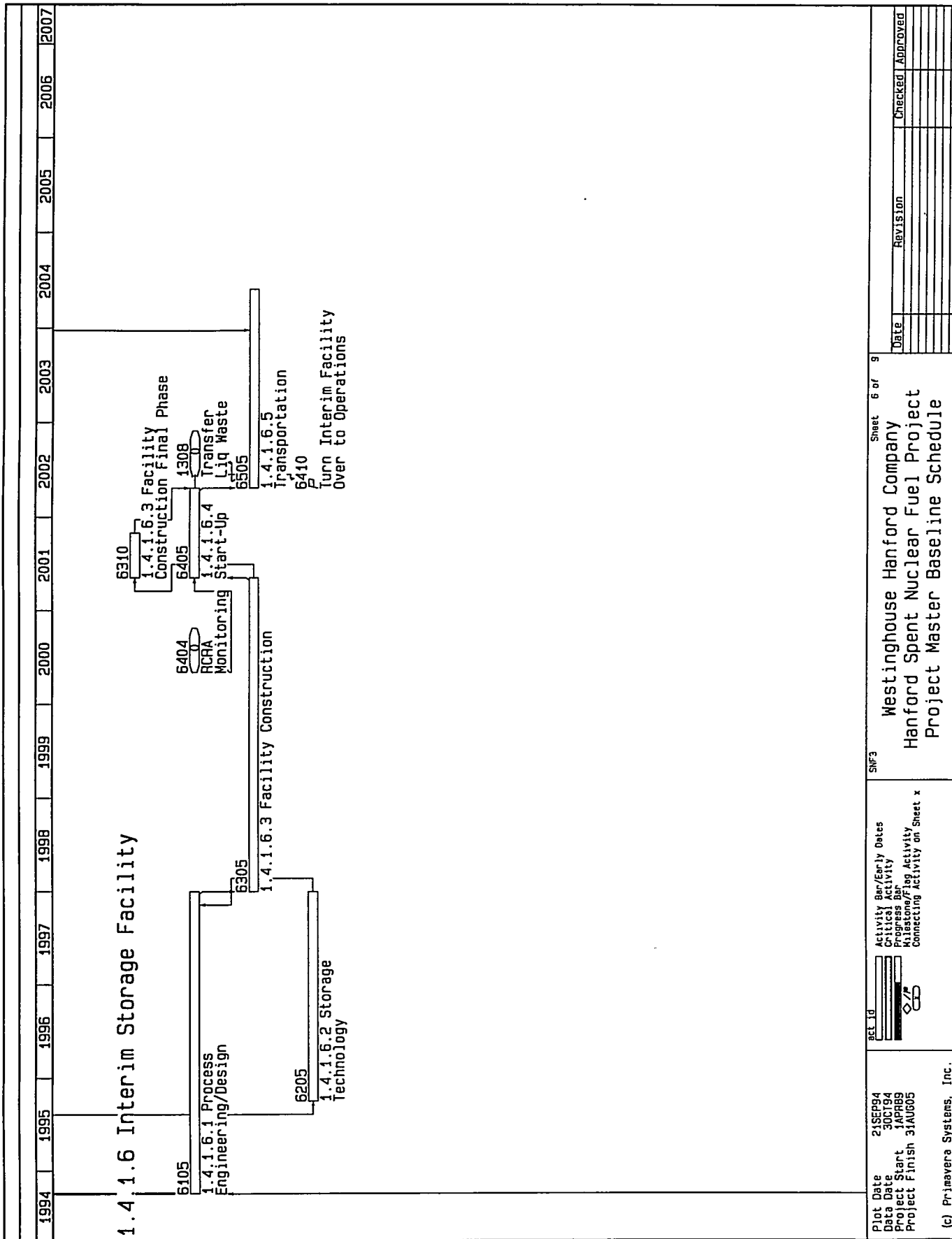
Plot Date 21SEP94
 Data Date 30CT94
 Project Start 1APR99
 Project Finish 31AUG05

Sheet 5 of 9

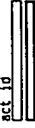
Westinghouse Hanford Company
 Hanford Spent Nuclear Fuel Project
 Project Master Baseline Schedule

Date	Revision	Checked	Approved

(c) Primavera Systems, Inc.

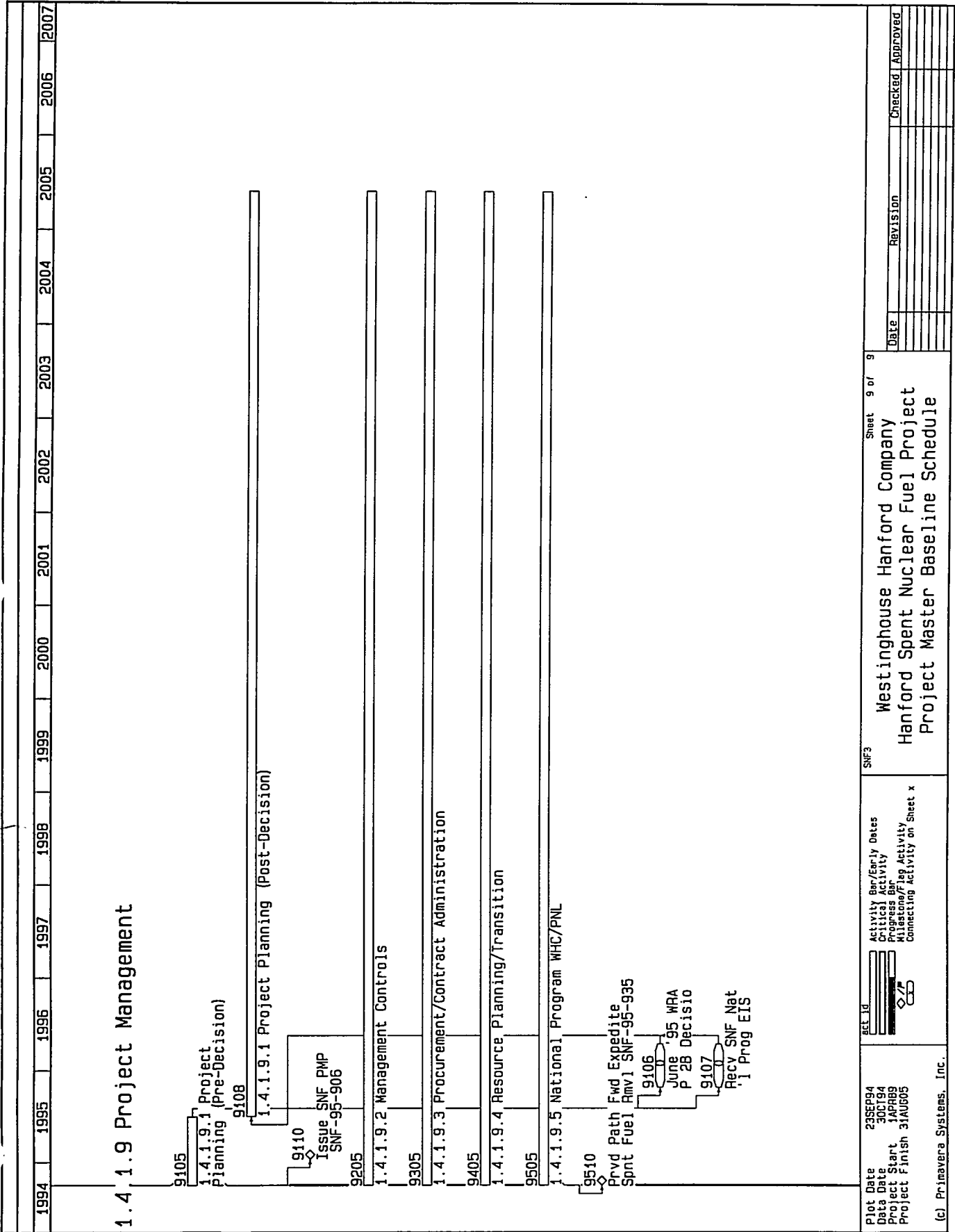


Plot Date 21SEP94	Activity Bar/Early Dates	Sheet 6 of 9
Data Date 30CT94	Critical Activity	
Project Start 31APR95	Milestone/Flag Activity	
Project Finish 31AUG05	Connecting Activity on Sheet x	
(c) Primavera Systems, Inc.		
Westinghouse Hanford Company Hanford Spent Nuclear Fuel Project Project Master Baseline Schedule		
Date	Revision	Checked
		Approved

1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1.4.1.7 Final Disposition 7105 1.4.1.7.1 Studies													
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 7 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 Storage/Disposal SNF-96-801													

Plot Date 21SEP94	Sheet 8 of 9	SNF3	Westinghouse Hanford Company Hanford Spent Nuclear Fuel Project Project Master Baseline Schedule
Data Date 30CT94	Activity Bar/Early Dates		
Project Start 1APR89	Critical Activity		
Project Finish 31AUG05	Progress Bar		
	Planning Activity		
	Connecting Activity on Sheet x		
(c) Primavera Systems, Inc.			



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		
AA105	Records Management	30CT94	90CT95	11105													
AAE	Records Management	30CT94	30SEP96														
AAE001	Records Management	30CT94	30SEP96														
AA106				11106													
AA106	SNF Inventory Controls	30CT94	90CT95														
AAF	SNF Inventory Controls	30CT94	29SEP95														
AAF001	Materials Accountability Database Info. Sys.	30CT94	29SEP95														
AAF002	K Basins Operations Campaign Letters	30CT94	29SEP95														
AAF003	Source Data Auditing & Field Files Maintenance	30CT94	29SEP95														
AAF004	SNF Inventory Controls Readiness Assessment Doc.	30CT94	29SEP95														
AAF005	Historical SNF Production Data	30CT94	29SEP95														
AAF005	Inventory Difference Documentation	30CT94	29SEP95														
AAF007	Annual Witnessed Inventory K Basins	30CT94	29SEP95														
AAF008	Custodian & Material Handler Verification	30CT94	29SEP95														
AA1	Project Management Support (Carlisle)	30CT94	90CT95	1111													
AB2	ES&H (Carlisle)	30CT94	90CT95	112													
AB201	Facility Compliance	30CT94	90CT95	11201													
ABA	Facility Compliance	30CT94	29SEP95														
ABA001	Implement DNFSB Recommendation 90-2	30CT94	29SEP95														
ABA002	Implement DNFSB	30CT94	29SEP95														
ABA003	Amendments related to CFR	30CT94	29SEP95														
AB202	Radiological Controls	30CT94	90CT95	11202													
AB21	Compliance assessment DOE n5480.6 & 5480.11	30CT94	29SEP95														
ABB	Radiological Controls	30CT94	29SEP95														
ABB001	Unconditional Radiological Release	30CT94	29SEP95														
ABB002	Required Radiological Surveillances	30CT94	29SEP95														
ABB003	Job Specific Radiation Safety Coverage	30CT94	29SEP95														
ABB004	Administering a Radiological Problem Reporting	30CT94	29SEP95														
ABB005	Preparing Radiation Work Permits	30CT94	29SEP95														
ABB006	Providing Emergency Response Capability for Rad	30CT94	29SEP95														
ABB007	Radiological Access Control	30CT94	29SEP95														
ABB008	Basic Certification & Qualification Training	30CT94	29SEP95														
ABB009	Basic certification & qualification --supervisor	30CT94	29SEP95														
ABB010	Supplement training staff	30CT94	29SEP95														

Activity Classification: SUMMARY LEVEL		PROGRAM		PROGRAM ELEMENT	
MISSION	SUBMISSION	COST	ACCOUNT	SNF2	2 of 7
Plot Date	21SEP94	Activity Bar/Early Dates	Activity Bar	Date	Revision
Data Date	10CT94	Progress Bar	Progress Bar	Checked	Approved
Project Start	10CT92	Milestone/Flag Activity	Milestone/Flag Activity		
Project Finish	22APR03				

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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	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ACD005	Measuring & Test Equipment	30CT94	30SEP95	11304																							
ACD007	Preventive Maintenance	30CT94	30SEP95																								
ACD008	Performance Indicators	30CT94	30SEP95																								
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	11307																							
ACG	Material & Equipment Controls	30CT94	30SEP96																								
ACG001	Property Control	30CT94	30SEP96																								
ACG002	Procurement Control	30CT94	30SEP96																								
ACG003	Rigging Certification Program	30CT94	30SEP96																								
ACG004	Lubrication Program	30CT94	30SEP96																								
ACG005	Spare Parts Program	30CT94	30SEP96																								
ACG006	Hazardous Waste Program	30CT94	30SEP96																								
AC308	Facilities Work Control	30CT94	90CT95																								
ACH	Facilities Work Control	30CT94	22APR03																								
ADA	Waste Handling (Carlisle)	30CT94	90CT95	114																							
ADA001	Hazardous Waste	30CT94	90CT95	11401																							
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 ACTIVITY

SUBMISSION COST ACCOUNT

SNF2

Activity Bar/Early Dates
Practices Activity
Practices Bar
Milestone/Flag Activity

Plot Date
Data Date
Project Start
Project Finish

Sheet 6 of 7

Spent Nuclear Fuels Project
Operations
1.4.1.1.1

Date Revision Checked Approved

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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	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
AE2105	1.4.1.1.2.1.06.01 PROCUREMENT	WT	13DEC94																								
AE2205	1.4.1.1.2.2.05.01 PROCUREMENT	ES	27JAN95																								
AE2305	1.4.1.1.2.3.05.01 CONSTRUCTION	FP	50EC94																								
AE2405	1.4.1.1.2.4.05.01 CONSTRUCTION	MS	27FEB95																								
AE2405	1.4.1.1.2.4.06.01 PROCUREMENT	MS	27FEB95																								
AEEL049	DOE DECISION POINT - FUNDS AVAILABLE		31AUG94																								
AEEL052	DESIGN REVIEW NO. 1 - COMPLETE		26OCT94																								
AEEL053	DESIGN REVIEW NO. 2 - COMPLETE		28DEC94																								
AEEL057	DESIGN		27OCT94																								
AEEL058	DESIGN REVIEW NO. 1		13OCT94																								
AEEL059	DESIGN REVIEW NO. 2		12DEC94																								
AEEL065	NORMAL BID - ASSEMBLE BID PACKAGE		28DEC94																								
AEEL070	NORMAL BID - REVIEW & APPROVE BID PACKAGE		5JAN95																								
AEEL075	NORMAL BID - BID SUBMITTALS		19JAN95																								
AEEL080	NORMAL BID - BID EVALUATIONS		16FEB95																								
AEEL085	NORMAL BID - AWARD		2MAR95																								
AEEL086	NORMAL BID - AWARD ELECTRICAL SYSTEM UPGRADE		9MAR95																								
AEEL090	NORMAL BID - CONSTRUCTION & TESTING-REDIS FDRS		9MAR95																								
AEEL091	NORMAL BID-ELECTRICAL SYSTEM UPGRADE COMPLETE		31MAY95																								
AEEL095	DISADV CONTR - ASSEMBLE PACKAGE		28DEC94																								
AEEL100	DISADV CONTR - AWARD		5JAN95																								
AEEL101	DISADV CONTR - AWARD ELECTRICAL SYSTEM UPGRADE		16FEB95																								
AEEL105	DISADV CONTR - CONSTRUCTION & TESTING-REDIS FDRS		16FEB95																								
AEEL106	DISADV CONTR-ELECTRICAL SYSTEM UPGRADE COMPLETE		10MAY95																								
AEEL110	DISADV CONTR - CONSTR SUBMITTAL RVN & AS-BLTS		9MAR95																								
AEEL115	NORMAL BID CONSTR SUBMITTAL REVIEW & AS-BUILTS		30MAR95																								
AEEL120	KAISER FAIR COST ESTIMATE		29AUG94																								

Activity Classification: SUMMARY LEVEL		MISSION		SUBMISSION		COST ACCOUNT		PROGRAM		PROGRAM ELEMENT	
Plat Date 22SEP94		Activity Bar/Early Dates		Activity Bar/Early Dates		Activity Bar/Early Dates		Activity Bar/Early Dates		Activity Bar/Early Dates	
Data Date 22AUG94		Critical Activity		Critical Activity		Critical Activity		Critical Activity		Critical Activity	
Project Start 10CT92		Progress Bar		Progress Bar		Progress Bar		Progress Bar		Progress Bar	
Project Finish 17JAN95		Milestone/Flag Activity		Milestone/Flag Activity		Milestone/Flag Activity		Milestone/Flag Activity		Milestone/Flag Activity	
(c) Primavera Systems, Inc.											

Spent Nuclear Fuels Project		Sheet 1 of 5	
Essential Systems Recovery		Date	
1.4.1.1.2		Revision	
		Checked	
		Approved	

Studies/Characterization

1.4.1.2.1

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
BA121	STUDIES/CHARACTERIZATION	30CT94	29SEP95	21																							
BA1	Basin-Related Characterization (Omberg)	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																								

Plot Date 2/SEP94
Data Date 10CT94
Project Start 1/SEP94
Project Finish 22JUN06

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Sheet 1 of 1

Spent Nuclear Fuels Project
Studies/Characterization
1.4.1.2.1

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

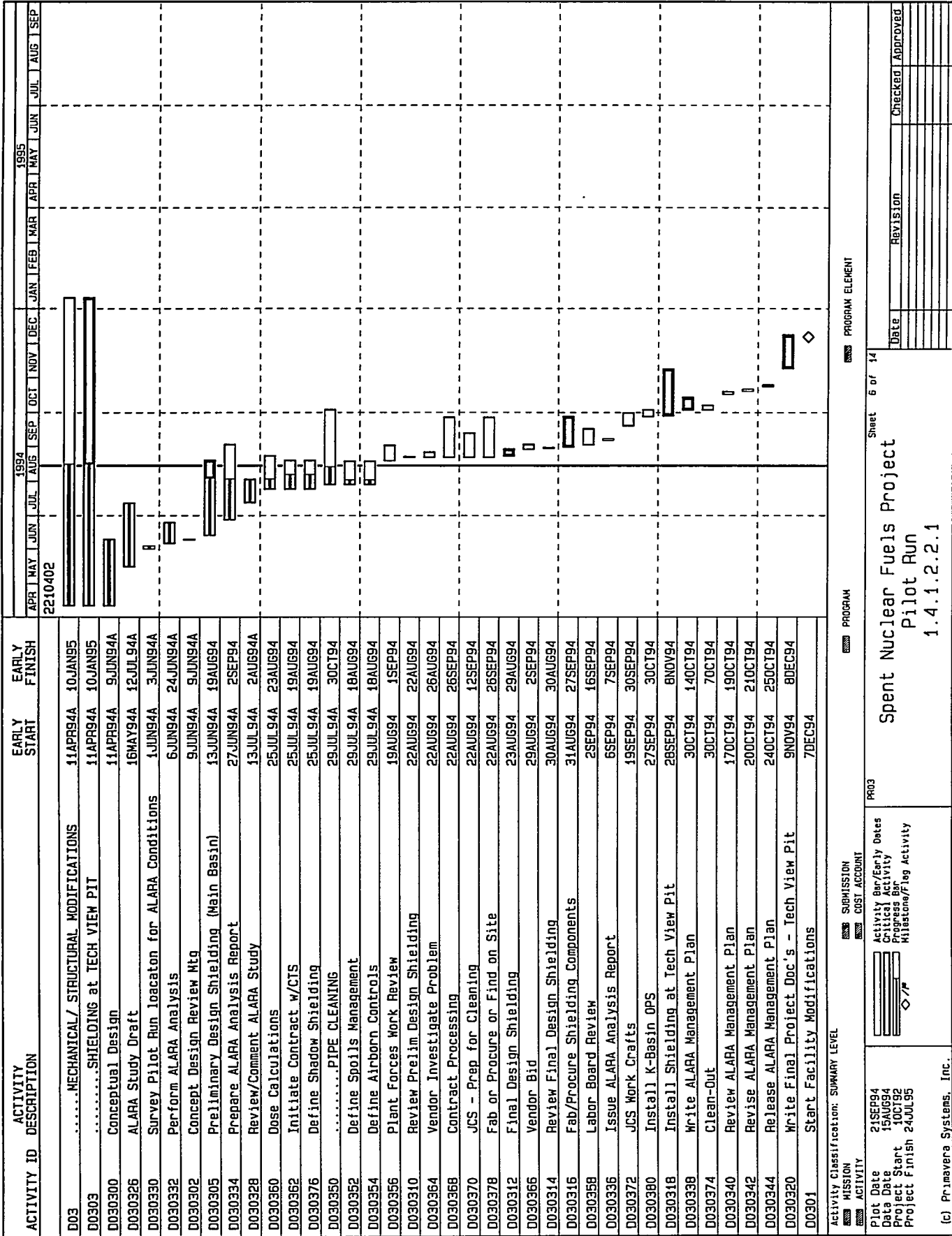
Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

Date _____
Revision _____
Checked _____
Approved _____

Pilot Run

1.4.1.2.2.1

[illegible]



ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994												1995				
				APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR		APR	MAY	JUN	JUL
G010122	Develop Below Water Activities	23MAY94A	2JUN94A																	
G010124	Develop Above Water Activities	23MAY94A	2JUN94A																	
G010126	Demonstration of Compliance	23MAY94A	2JUN94A																	
G010130	Review BARCT	23MAY94A	2JUN94A																	
G010140	MHC Air Permitting Review Meeting	3JUN94A	3JUN94A																	
G010142	MHC Upper Mgmt Review Mtg	8JUN94A	8JUN94A																	
G010145	Meet w / DOH (June B - Next Available in Aug)	8JUN94A	8JUN94A																	
G010160	DOH Approval Granted for Air Emission Standard	8JUN94A	8JUN94A																	
G010190	MHC Receive DOH Approval to Proceed	8JUN94A	8JUN94A																	
G010150	Incorp Comments and Additional Info Req'd	13JUN94A	24JUN94A																	
G010200	Notify WDOH That Conditions of Air Permit Met	30CT94	14OCT94																	
G03	NEPA DOCUMENTATION	23MAY94A	11NOV94																	
G030100	Complete Process and Eq Description	23MAY94A	10JUN94A																	
G030110	Submit to NEPA DOE-RL	14JUN94A	13JUL94A																	
G030105	Meet with DOE-RL Determine Requirements for NEPA	20JUN94A	20JUN94A																	
G030120	Develop Doc's Req'd per NEPA DOE-RL	30CT94	14OCT94																	
G030125	DOE-RL Review NEPA Documents	17OCT94	11NOV94																	
G030130	NEPA DOE-RL Approval to Proceed	17OCT94	11NOV94																	
G030140	NEPA Requirements Complete	11NOV94	11NOV94																	
G05	RADIOLOGICAL CONCERNS	30CT94	6DEC94																	
G0501	CRITICALITY/SAFETY DESCRIPTION PROCESS	30CT94	28NOV94																	
G050100	Review Existing CSER	30CT94	13OCT94																	
G050110	Revise & Issue CSER	14OCT94	16NOV94																	
G050120	Issue Approved CSER	17NOV94	28NOV94																	
G0503	SAFETY EVALUATION	30CT94	6DEC94																	
G050300	Identify Incremental Hazards	30CT94	14OCT94																	
G050310	Prepare Safety Evaluation	17OCT94	9NOV94																	
G050320	Review/Approve Safety Evaluation	10NOV94	23NOV94																	
G050330	Issue Safety Evaluation	28NOV94	2DEC94																	
G050340	Prepare Process Standard	5DEC94	6DEC94																	
G050350	Review Issue Process Standard	7DEC94	14DEC94																	
J	...QUALITY ASSURANCE	24MAY94A	19MAY95																	
J01	QUALITY ASSURANCE PLAN	24MAY94A	14OCT94																	

Activity Classification: SUMMARY LEVEL

MISSION ACTIVITY

SUBMISSION COST ACCOUNT

PROGRESS BAR

Milestone/Flag Activity

Pilot Date 21SEP94

Data Date 15AUG94

Project Start 10CT92

Project Finish 24JUL95

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Spent Nuclear Fuels Project

Pilot Run

1.4.1.2.2.1

Sheet 11 of 14

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	222																							
BC201	Administration	30CT94	29SEP95	22201																							
BC20101A	KBMU General Building Administration	30CT94	29SEP95	2220101																							
BC20101B	KBMU Safety/Environmental Doc/Liaison	30CT94	29SEP95																								
BC20101C	KBMU Equip/Material 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	Review Test	110CT94	130CT94																								
BC2020140	Modify Test Procedures	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 Procedures	7NOV94	18NOV94																								
BC2020440	Fab Shipping "Pig"	7NOV94	11NOV94																								
BC2020200	Review 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 Procedures	19NOV94	26NOV94																								
BC2020360	Write Training Procedures	21NOV94	29NOV94																								
BC2020240	Review Drawings, checker	23NOV94	23NOV94																								

Sheet 1 of 2
 Spent Nuclear Fuels Project
 Cold Test Facility
 1.4.1.2.2.2

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

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

Date Revision Checked Approved

(c) Primavera Systems, Inc.

Fuel Repackaging

1.4.1.2.2.3

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994				1995				Date	Revision	Checked	Approved	
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY					JUN
BD301	Protect Management	30CT94	29SEP95	22301												
				2230101												
BD302	Engineering Studies/Analyses	30CT94	29SEP95	22302												
				2230201												
BD303	Engineering Support	30CT94	29SEP95	22303												
				2230301												
BD304	ENGINEERING SUPPORT FY95	30CT94	29SEP95	22304												
				2230401												
BD305	DESIGN FY95	30CT94	29SEP95	22305												
				2230501												
BD306	ENGINEERING SUPPORT FY95	30CT94	29SEP95	22306												
				2230601												
BD307	Procurement	30CT94	29SEP95	22307												
				2230701												
BD308	Facility Modifications	30CT94	29SEP95	22308												
				2230801												
BD309	Installation	30CT94	29SEP95	22309												
				2230901												
BD310	Fuel Repackaging Operations	30CT94	29SEP95													
BD311	PNL to define work scope	30CT94	29SEP95													

Plot Date 21SEP94
Data Date 10CT94
Project Start 15SEP94
Project Finish 22JUN95

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Sludge Retrieval and Packaging

1.4.1.2.2.4

ACTIVITY ID DESCRIPTION		EARLY START	EARLY FINISH	1994											
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BEC	SLUDGE RETRIEVAL & PACKAGING (Alderman)	30CT94	30SEP02												
BEC-00	Provide Schedule-Fuel/Hnding & Wtr Rmv1 SNF-95-248		31MAR95												
BEC-05	Initiate Int. Sludge Pkg Demo SNF-95-254	31JUL95													
BEC1	...PROJECT MANAGEMENT	30CT94	30SEP02												
BEC11	PROJECT PLANS	30CT94	31OCT94												
BEC12	WORK PLANS	30CT94	29SEP95												
BEC13	COSTS/SCHEDULES	30CT94	30SEP02												
BEC14	PROGRESS REPORTS	30CT94	31AUG00												
BEC15	PERSONNEL MANAGEMENT	30CT94	30SEP02												
BEC2	...ENGINEERING STUDIES and ANALYSIS	30CT94	30SEP96												
BEC21	TECHNOLOGICAL SURVEY	30CT94	28FEB95												
BEC22	CANDIDATE ANALYSIS	1NOV94	30SEP96												
BEC23	EVALUATION	3JAN95	1MAR95												
BEC3	...DESIGN	30CT94	30SEP97												
BEC31	ENGINEERING DOCUMENTATION	30CT94	30SEP97												
BEC32	DEVELOPMENT TESTING	30CT94	31MAR97												
BEC4	...SUPPORT ENGINEERING	30CT94	30SEP98												
BEC41	SLUDGE CHARACTERIZATION	30CT94	29SEP95												
BEC42	SYSTEMS ENGINEERING	30CT94	31MAR95												
BEC43	ENVIRONMENTAL SAFETY and HEALTH	30CT94	30SEP98												
Activity Classification: SUMMARY LEVEL															
MISSION ACTIVITY															
SUBMISSION COST ACCOUNT															
Activity Bar/Early Dates															
Critical Activity															
Progress Bar															
Milestone/Flag Activity															
Plot Date 21SEP94															
Data Date BAUG94															
Project Start 10CT92															
Project Finish 30SEP02															
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SF1 SLOG				Sheet 1 of 2											
Spent Nuclear Fuels Project				Date											
Sludge Retrieval and Packaging				Revision											
1.4.1.2.2.4				Checked											
				Approved											

ACTIVITY ID DESCRIPTION		ACTIVITY	EARLY START	EARLY FINISH	1994												1995											
					OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP												
BEC45	QUALITY ASSURANCE		30CT94	30SEP98																								
Activity Classification SUMMARY LEVEL					PROGRAM ELEMENT																							
MISSION					PROGRAM																							
ACTIVITY					SUBMISSION																							
					COST ACCOUNT																							
Plot Date 21SEP94					SWFI SLOG																							
Data Date BAUG94					Sheet 2 of 2																							
Project Start 10CT92					Spent Nuclear Fuels Project																							
Project Finish 30SEP02					Sludge Retrieval and Packaging																							
					1.4.1.2.2.4																							
(c) Primavera Systems, Inc																												

Debris Removal

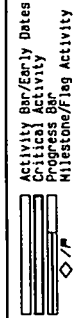
1.4.1.2.2.5

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUE	WBS6	WBS7	WBS8	1995											
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BF5	Debris Removal (Frederickson)	30CT94	29SEP95	255	5			12251											
BF501A	Scheduling & Cost Accounting	30CT94	10FEB95	90	5	01		122501											
BF501B	Detailed Baseline Scheduling	30CT94	10FEB95	90	5	01													
BF501C	Resource Loading of Schedule	30CT94	10FEB95	90	5	01													
BF501D	Write Project Mgmt Plan	30CT94	10FEB95	90	5	01													
BF501E	Review Project Mgmt Plan	30CT94	10FEB95	90	5	01													
BF501F	Approve Release Plan	30CT94	10FEB95	90	5	01													
BF501G	Write RA plan	30CT94	10FEB95	90	5	01													
BF501G2	Review RA Plan	30CT94	10FEB95	90	5	01													
BF501H	Revise RA Plan	30CT94	10FEB95	90	5	01													
BF501I	Engineering Support	30CT94	29SEP95	255	5	01		122502											
BF502	Support Engineering	30CT94	29SEP95	255	5	02													
BF502A	Administration support	30CT94	29SEP95	255	5	02													
BF502B	Write functions and requirements	30CT94	31OCT94	21	5	02													
BF502C	Review functions and requirements	1NOV94	1DEC94	21	5	02													
BF502D	Approve & release F&R's	2DEC94	15DEC94	10	5	02													
BF502E	Write work plans	16DEC94	16JAN95	21	5	02													
BF502F	Review work plans	19JAN95	16FEB95	21	5	02													
BF502G	Approve/release work plans	17FEB95	2MAR95	10	5	02													
BF502H	Write test procedures/plans	3MAR95	31MAR95	21	5	02													
BF502I	Review test procedures/plans	3APR95	1MAY95	21	5	02													
BF502J	Revise plans	2MAY95	15MAY95	10	5	02													
BF502K	Approve/release plans	16MAY95	29MAY95	10	5	02													
BF502L	Rvw all supporting project documents	30MAY95	12JUN95	10	5	02													
BF502M	Approve all project supporting document	13JUN95	26JUN95	10	5	02		122503											
BF503	Procurement	30CT94	29SEP95	255	5	03													
BF503A	Administrative support	30CT94	5APR95	128	5	03													
BF503G	Prepare bids for equipment acquisitions	30CT94	1DEC94	42	5	03													
BF503H	Basin decommissioning support	30CT94	10FEB95	90	5	03													
BF503B	Write statement of work	6APR95	4MAY95	21	5	03													
BF503C	Review SOW	5MAY95	2JUN95	21	5	03													
BF503D	Approve SOW	5JUN95	16JUN95	10	5	03													
BF503E	Prepare bids for outside support	19JUN95	15AUG95	42	5	03		122504											
BF 504	Debris Removal Operations	30CT94	29SEP95	255	5	04													
BF504	Debris Removal Operations	30CT94	29SEP95	255	5	04													
BF5040	Debris Removal Operations	30CT94	29SEP95	255	5	04													

Sheet 1 of 2

SPENT NUCLEAR FUELS PROJECT
DEBRIS REMOVAL
1.4.1.2.2.5

SNF1



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ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUE	WBS6	WBS7	WBS8	1995											
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BF504051	Debris Removal Technology	30CT94	140CT94	10 5	04														
BF504052	Technology management	30CT94	140CT94	10 5	04														
BF504A	Administration support	30CT94	29DEC94	60 5	04														
BF504B	Write job packages	30CT94	29DEC94	60 5	04														
BF504X	Package equipment for final disposal	30CT94	140CT94	10 5	04														
BF504Y	Remove cannister rack from basin floor	30CT94	140CT94	10 5	04														
BF504Z	Decon racks	30CT94	140CT94	10 5	04														
BF504ZA	Package for disposal	30CT94	140CT94	10 5	04														
BF504ZB	Materials for packaging	30CT94	140CT94	10 5	04														
BF504C	Review job packages	30DEC94	13JAN95	10 5	04														
BF504D	Approve job Packages	16JAN95	27JAN95	10 5	04														
BF504E	Remove debris from TVP's	30JAN95	10FEB95	10 5	04														
BF504F	Remove debris from Measel pit	13FEB95	24FEB95	10 5	04														
BF504G	Remove debris from discharge chute	27FEB95	10MAR95	10 5	04														
BF504H	Remove debris from load out pit	13MAR95	24MAR95	10 5	04														
BF504I	Remove debris from dummy elev pit	27MAR95	7APR95	10 5	04														
BF504J	Stage all debris for removal from basin	10APR95	21APR95	10 5	04														
BF504K	Package debris for final disposal	24APR95	5MAY95	10 5	04														
BF504L	Remove debris from basin	8MAY95	19MAY95	10 5	04														
BF504M	Move empty canstrs in basin to stg area	22MAY95	2JUN95	10 5	04														
BF504N	Clean cannisters	5JUN95	16JUN95	10 5	04														
BF504P	Assay cannisters	19JUN95	30JUN95	10 5	04														
BF504Q	Remove cannisters from basin	3JUL95	14JUL95	10 5	04														
BF504R	Package cannisters for disposal	17JUL95	28JUL95	10 5	04														
BF504S	Move large unusable equip to stng area	31JUL95	11AUG95	10 5	04														
BF504T	Remove equipment from basin	14AUG95	25AUG95	10 5	04														
BF504U	Decon equipment	28AUG95	8SEP95	10 5	04														
BF504V	Assay equipment	11SEP95	22SEP95	10 5	04														

Sheet 2 of 2

SPENT NUCLEAR FUELS PROJECT
DEBRIS REMOVAL
1.4.1.2.2.5

SWF1

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



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

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Date	Revision	Checked	Approved

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
B6601	Project Management	30CT94	29SEP95																								
B660101	W/S-T-SNF-95-247 SUBMT SCHD DISP CONTAM H2O K-E	31OCT94																									
B660201	Functions and Requirements Documentation	30CT94	3MAR95																								
B660202	Process Flow Diagrams	1NOV94	3MAR95																								
B660203	Engineering Design/Analysis	30CT94	16MAY95																								
B660204	Final Report	1MAR95	25JUL95																								
B6603	Water Characterization	30CT94	29SEP95																								
B660301	Review existing data for adequacy	30CT94	29SEP95																								
B660303	Gather and examine data samples	30CT94	29SEP95																								
B660304	Engineering Data Interpretation	30CT94	29SEP95																								
B6604	Design	30CT94	5JAN95																								
B66041	PNL Technology Development	30CT94	29SEP95																								
B6609	Basin Water Treatment Operations	30CT94	30JUN95																								

Sheet 1 of 1

Spent Nuclear Fuels Project
Basin Water Treatment/Disposal
1.4.1.2.2.6

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

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

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Date Revision Checked Approved

Dose Reduction

1.4.1.2.2.7

ACTIVITY ID DESCRIPTION		EARLY START	EARLY FINISH	1994 1995											
				DEC	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BH7	DOSE REDUCTION (FW Moore)	11APR94A	30SEP96												
BH71	...PROJECT MANAGEMENT	11APR94A	30SEP96												
BH72	...ENGINEERING STUDIES/ANALYSIS	11APR94A	30SEP96												
BH73	...DESIGN	18JUL94A	30SEP96												
BH74	...PROCUREMENT	21NOV94	30SEP96												
BH75	...FACILITY MODIFICATIONS	10EC94	30SEP96												
BH76	...INSTALLATION	1MAR95	30SEP96												
BH77	...TECHNOLOGY INTEGRATION	30CT94	30SEP96												

Activity Classification SUMMARY LEVEL		SUBMISSION COST ACCOUNT		PROGRAM ELEMENT	
MISSION ACTIVITY	ACTIVITY	Activity Bar/Early Dates	Critical Activity	Progress Bar	Milestone/Flag Activity
Pilot Date Data Date Project Start Project Finish	21SEP94 1AUG94 10CT92 31DEC02	Spent Nuclear Fuels Project Sheet 1 of 1 Dose Reduction 1.4.1.2.2.7			
(c) Primavera Systems, Inc					

Other Hanford Fuel

1.4.1.3

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	1994			1995			1996			
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
311													
CA1	Other Hanford Fuel Characterization (Omberg)	30CT94	29SEP95										
CA1011	ACQUIRE & ARCHIVE EXISTING SNF DATA	30CT94	29SEP95										
CA1021	DEFINE A PATH FORWARD FOR ACQUISITION OF SNF	30CT94	29SEP95										
CA1031	ESTABLISH READINESS FOR LICENSE APPLICATION	30CT94	29SEP95										
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	Amend Char Plan to Char Hanfd fuels	30CT94	29SEP95										
CA110D	Amend current EA to allow transp of Hfuels	30CT94	29SEP95										
CA1311	Other Hanford Fuel Characterization (Omberg)	30CT94	29SEP95										
CA2	Process Engineering/Design (Monthey)	30CT94	29SEP95										
CA2011	DEVELOP PROCESS FLOW DIAGRAMS FOR EACH SNF TYPE	30CT94	29SEP95										
CA2021	DEVELOP SNF MANAGEMENT TRADE OFF STUDIES	30CT94	29SEP95										
CA3011	DEVELOP PACKAGING SELECTION PROCESS	30CT94	29SEP95										
CB1321	Other Fuel Packaging and Storage Integration (McC)	30CT94	29SEP95										
CA3	Other Fuel Packaging Technology Development (Eth)	30CT94	29SEP95										

Plot Date 21SEP94

Data Date 10CT94

Project Start 1SEP94

Project Finish 22JUN96

Activity Bar/Early Dates

Progress Bar

Milestone/Flag Activity

○ / ■

SNF1

Spent Nuclear Fuels Project

Other Hanford Fuel

1.4.1.3

Sheet 1 of 1

Date

Revision

Checked

Approved

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Pre-Interim Fuel Storage

1.4.1.4

[illegible]

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
D0C50201	Publishing	30CT94	29SEP95	143502																							
D0C50202	Configuration Management	30CT94	29SEP95																								
D0D1	Project Management (Moore)	30CT94	29SEP95	1441																							
D0D2	Cask (Moore)	30CT94	29SEP95	1442																							
D0D144201	Engineering Studies	30CT94	5APR95	144201																							
D0D201	Engineering Studies	30CT94	28APR95																								
D0D201W	Complete Evaluation of Alt Transport Equip		28APR95	144204																							
D0D204	Operations Interface	30CT94	29SEP95	1443																							
D0D3	Transporter (Moore)	30CT94	29SEP95	144301																							
D0D144301	Engineering Studies	30CT94	5APR95																								
D0D301	Engineering Studies	30CT94	28APR95	144302																							
D0D302	Design	30CT94	29SEP95																								
D0D302W	Comp) Transporter Syst Func Reqs Dsn/Dev/Rvw		29SEP95	145																							
D0F145	Operations	30CT94	29SEP95	1451																							
D0F1	Project Management Support (Gerber)	30CT94	29SEP95	145101																							
D0F101	Project Management Support	30CT94	29SEP95	145102																							
D0F102	Plant Tracking & Scheduling	30CT94	29SEP95	145103																							
D0F103	Training	30CT94	29SEP95	145104																							
D0F104	QA Support	30CT94	29SEP95	145105																							
D0F105	Records Management	30CT94	29SEP95	145106																							
D0F106	SNF Inventory Controls	30CT94	29SEP95	1452																							
D0F2	ES&H (Gerber)	30CT94	29SEP95	145201																							
D0F201	Facility Compliance	30CT94	29SEP95																								

Sheet 2 of 4

Spent Nuclear Fuels Project
Pre-Interim Storage
1.4.1.4

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

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

SNF1

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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			
DDF202	Radiochemical Controls	30CT94	29SEP95	145202														
DDF203	OSR Compliance/Implementation	30CT94	29SEP95	145203														
DDF204	Integrity Assessment & Surveillance	30CT94	29SEP95	145204														
DDF205	Industrial Hygiene	30CT94	29SEP95	145205														
DDF206	Security	30CT94	29SEP95	145206														
DDF207	Environmental Monitoring & Compliance	30CT94	29SEP95	145207														
DDF3	Facility Controls (Gerber)	30CT94	29SEP95	1453														
DDF301	Facility Compliance	30CT94	29SEP95	145301														
DDF302	Surveillance	30CT94	29SEP95	145302														
DDF303	Plant Engineering	30CT94	29SEP95	145303														
DDF304	Preventative Maintenance	30CT94	29SEP95	145304														
DDF305	Facility Assessment	30CT94	29SEP95	145305														
DDF306	Conduct of Operations	30CT94	29SEP95	145306														
DDF307	Material & Equipment Controls	30CT94	29SEP95	145307														
DDF308	Facilities Work Control	30CT94	29SEP95	145308														
DDF4	Waste Handling (Gerber)	30CT94	29SEP95	1454														
DDF401	Hazardous Waste	30CT94	29SEP95	145401														
DDF402	Low & Intermediate Level Solid Waste	30CT94	29SEP95	145402														
DDF403	Radioactive Mixed Waste	30CT94	29SEP95	145403														
DDF404	Landfill	30CT94	29SEP95	145404														

Plot Date 22SEP94
Data Date 10CT94
Project Start 15SEP94
Project Finish 22JUN06

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

Sheet 3 of 4

Spent Nuclear Fuels Project
Pre-Interim Storage
1.4.1.4

Date	Revision	Checked	Approved

Fuel Stabilization

1.4.1.5

Interim Storage Facility

1.4.1.6

ACTIVITY ID 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	OCT			
FA	Process Engineering/Design (McCormack)	30CT94	20CT95	[Hatched Bar]																											
FA1	Design Basis Feed Development (McCormack)	30CT94	20CT95	[Hatched Bar]																											
FA101	Nominal Design Basis Feed Descriptions	30CT94	29SEP95																												
FA101M	M/S-R CMPLT INITIAL DESIGN BASIS FEED DESC DOC		31JAN95	[Diamond]																											
FA102	Bounding Design Basis Feed Descriptions	30CT94	29SEP95																												
FA103	Operational Variability Basis Descriptions	30CT94	29SEP95																												
FA103M	M/S-R DRAFT OPERATIONAL VARIATION BASIS DESC		30SEP95	[Diamond]																											
FA2	Interim Storage Criteria Development (McCormack)	30CT94	29SEP95	[Hatched Bar]																											
FA2M	M/S-R COMPLETE INTERM FUEL STORAGE CRITERIA DOC		31AUG95	[Diamond]																											
FA3	Concept Development (McCormack)	30CT94	29SEP95	[Hatched Bar]																											
FA301	Project Baseline Flowsheet Development	30CT94	29SEP95																												
FA302	Facility Concept Development	30CT94	29SEP95																												
FA303	Prepane Design Definition Documentation	30CT94	29SEP95																												
FA303M	M/S-R COMPLETE INITIAL DRAFT FUNCTIONS & REQS		30SEP95	[Diamond]																											
FA4	Engineering Support (McCormack)	3JAN95	29SEP95	[Hatched Bar]																											
FA401	Product Criteria Development	3JAN95	29SEP95																												

Activity Classification: SUMMARY LEVEL		SUBMISSION COST ACCOUNT		PROGRAM		PROGRAM ELEMENT	
MISSION ACTIVITY	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates
Plot Date 22SEP94	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates	Activity Bar/Early Dates
Data Date 10CT94	Critical Activity	Critical Activity	Critical Activity	Critical Activity	Critical Activity	Critical Activity	Critical Activity
Project Start 10CT94	Progress Bar	Progress Bar	Progress Bar	Progress Bar	Progress Bar	Progress Bar	Progress Bar
Project Finish 23DEC02	Milestone/Flag Activity	Milestone/Flag Activity	Milestone/Flag Activity	Milestone/Flag Activity	Milestone/Flag Activity	Milestone/Flag Activity	Milestone/Flag Activity
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Spent Nuclear Fuels Project		Sheet 1 of 1	
Interim Storage Facility		Date	
1.4.1.6		Revision	
		Checked	
		Approved	

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	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
H	Compliance/Public Involvement	30CT94	29SEP95	8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

ACTIVITY ID DESCRIPTION		EARLY START	EARLY FINISH	1994												1995											
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP												
HD	Regulatory Issues Responses and Control (Proulx)	30CT94	29SEP95																								
HD1	Process Development (Proulx)	30CT94	29SEP95																								
HD2	Regulatory Issue Disposition (Proulx)	30CT94	29SEP95																								
HD3	Tracking and Closure System (Proulx)	30CT94	29SEP95																								

Activity Classification: SUMMARY LEVEL		SUBMISSION		PROGRAM		PROGRAM ELEMENT	
MISSION	ACTIVITY	MISSION	ACTIVITY	PROGRAM	ACTIVITY	PROGRAM ELEMENT	ACTIVITY
Plot Date 22SEP94 Data Date 10CT94 Project Start 10CT92 Project Finish 23DEC02		Activity Bar/Early Dates Critical Activity Progress Bar Milestone/Flag Activity		Sheet 2 of 2 Spent Nuclear Fuels Project Compliance/Public Involvement 1.4.1.8		Date Revision Checked Approved	
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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	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
91																											
I1A	Project Planning (Monack)	30CT94	23DEC02																								
I1A001	Project Planning (FY-95)	30CT94	29SEP95																								
I1A1	Systems Integration & Technical Baseline (Monack)	30CT94	29SEP95																								
I1A101	Systems Integration	30CT94	29SEP95																								
I1A10101	Systems Engineering	30CT94	29SEP95																								
I1A10102	Engineering Integration	30CT94	29SEP95																								
I1A102	Integrated Options Evaluations/Selection	30CT94	29SEP95																								
I1A2A	Project Integration (FY-95)	30CT94	29SEP95																								
I1A201	Revise Project Plan	1NOV94	1DEC94																								
I1A20101	M/S-O: Revise Project Plan		1DEC94																								
I1A202	Establish Schedule Hierarchy	30CT94	16JAN95																								
I1A20201	M/S-O: Establish Schedule Hierarchy		16JAN95																								
I1A202001	Train Essential Personnel	17JAN95	28APR95																								
I1A20202	M/S-O: Train Essential Personnel		28APR95																								
I1A203	Project Logic Development	30CT94	16JAN95																								
I1A20301	M/S-O: Dev Initial Logic consistent with F & R		16JAN95																								
I1A203001	Confirm WBS	17JAN95	28APR95																								
I1A20302	M/S-O: Confirm WBS is consistent with Logic		28APR95																								
I1A204	Develop SNF Site Integrated Schedule	30CT94	20JAN95																								
I1A20401	M/S-O: SNF Integrated Level 1 Schedule		20JAN95																								
I1A204001	Maintain SNF Site Integrated Schedule	23JAN95	29SEP95																								
I1B	Management Controls (Denning)	30CT94	23DEC02																								
I1B001	Management Controls (FY95)	30CT94	29SEP95																								
I1B001A	M/S-R-SNF-95-934 COMPL LVL 1 M/S ON OR AHEAD SCH		29SEP95																								
I1B1A	Administration (FY-95)	30CT94	29SEP95																								

Activity Classification: SUMMARY LEVEL

MISSION ACTIVITY

SUBMISSION

PROGRAM

PROGRAM ELEMENT

Plot Date
Data Date
Project Start
Project Finish

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

SNF 1101

Spent Nuclear Fuels Project
Project Management
1.4.1.9

Sheet 1 of 3

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		
IID1	Human Resources	30CT94	29SEP95	941													
IID2	Training Oversight	30CT94	29SEP95														
IIE	National Program (McCormack)	30CT94	20CT95														
IIE1	DOE Programmatic SNF EIS	30CT94	20CT95														
IIE2	FRR SNF EIS	30CT94	20CT95														
IIE3	EM-37 Systems Engineering	30CT94	20CT95														
IIE301	M/S-K-SNF-95-935 PRVD RECND TO DOE EXPED FL REM		20CT94	◇													
IIE4	EM-37 Technology Integration	30CT94	20CT95														
IIE5	EM-37 Technical Database	30CT94	20CT95														
IIE6	EM-37 Program Support	30CT94	20CT95														
IIE7	Fuel Characterization	30CT94	20CT95														

Activity Classification: SUMMARY LEVEL		SUBMISSION		PROGRAM		PROGRAM ELEMENT	
MISSION	ACTIVITY	Activity Bar/Early Dates	Activity Critical Activity	Activity Progress Activity	Activity Milestone/Flag Activity	Sheet 3 of 3	
Plot Date	22SEP94						
Data Date	10CT94						
Project Start	18CP94						
Project Finish	20MAY05						
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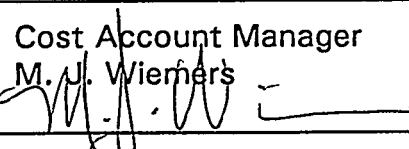
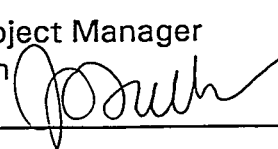
SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

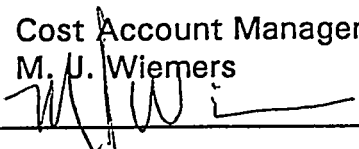
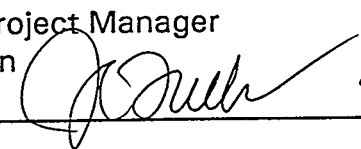
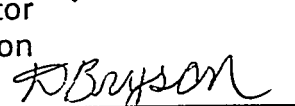
FY 1995 MYPP

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 H-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

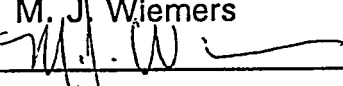
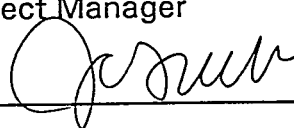
Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

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: 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. "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."			
Description of what constitutes completion of this milestone: 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. 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 	

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 	
Program Element Manager E. W. Gerber 		DOE Monitor D. C. Bryson GT 	

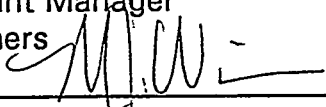
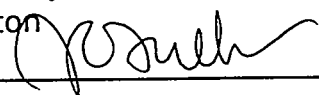
Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

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 		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

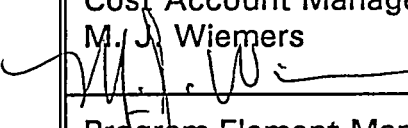
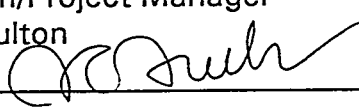
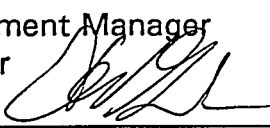
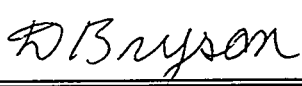
Westinghouse Hanford Company MILESTONE DESCRIPTION SHEET

Title: 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)
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.			
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.			
Cost Account Manager J. J. Luke <i>[Signature]</i>		Program/Project Manager J. C. Fulton <i>[Signature]</i>	
Date 9/21/94		Date 9/21/94	
Program Element Manager G. C. Mooers <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 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)
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.			
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.			
Cost Account Manager M. J. Wiemers 		Program/Project Manager J. C. Fulton 	
Program Element Manager E. W. Gerber 		DOE Monitor D. C. Bryson 	
Date 9/20/94		Date 9/21/94	
Date 9/20/94		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)
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.			
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.			
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: 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

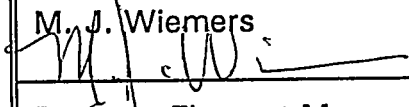
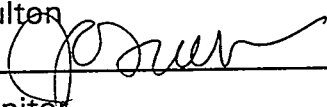
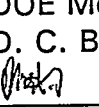
Milestone Description:

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
Description of what constitutes completion of this milestone: 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.	
Cost Account Manager M. J. Wiemers 	Date 9/20/94
Program/Project Manager J. C. Fulton 	Date 9/24/94
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: 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)
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.			
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.			
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 <i>B. S. Carlisle</i>		Program/Project Manager J. C. Fulton <i>J. C. Fulton</i>	
Date 9-21-94		Date 9/21/94	
Program Element Manager J. E. Truax <i>J. E. Truax</i>		DOE Monitor D. C. Bryson <i>D. C. Bryson</i>	
Date 9-21-94		Date 9/22/94	

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 		Program/Project Manager J. C. Fulton 	
Program Element Manager E. W. Gerber 		DOE Monitor D. C. Bryson 	

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>9/22/94</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: 08/24/95 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

Date

B. S. Carlisle

B. S. Carlisle 9-21-94

Program/Project Manager

Date

J. C. Fulton

J. C. Fulton 9/21/94

Program Element Manager

Date

J. E. Truax

J. E. Truax 9-21-94

DOE Monitor

Date

D. C. Bryson

D. C. Bryson 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>	
Date 9/20/94		Date 9/14/94	
Program Element Manager E. W. Gerber <i>[Signature]</i>		DOE Monitor D. C. Bryson GT <i>[Signature]</i>	
Date 9/20/94		Date 9/22/94	

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 ⁶ 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. Edridge <i>for</i>		Date 9/21/94	Program/Project Manager J. C. Fulton	Date 9/21/94	
Program Element Manager J. L. Denning		Date 9/21/94	DOE Monitor D. C. Bryson		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 9/21/94	
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 20,154	51,593 500 1,960 6,994	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			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	17,000 0	75,000 2,048	23,000 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		14,000 361	42,000 371	152,000 382	116,000 394	11,000 406	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	

SPENT NUCLEAR FUEL PROJECT
WBS Number 1.4

FY 1995 MYPP

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.

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)				

SPENT NUCLEAR FUEL PROJECT

WBS NUMBER 1.4

FY 1995 MYPP

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.

WHC-SP-1104

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 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)				

SPENT NUCLEAR FUEL PROJECT

WBS NUMBER 1.4

FY 1995 MYPP

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.

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)				

WHC-SP-1104

SPENT NUCLEAR FUEL PROJECT

WBS NUMBER 1.4

FY 1995 MYPP

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.

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 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)				

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

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

WHC-SP-1104

2.I. 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.

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

WHC-SP-1104

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.

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

WHC-SP-1104

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			

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

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				

SPENT NUCLEAR FUEL PROJECT

WBS Number 1.4

FY 1995 MYPP

WHC-SP-1104

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			

SPENT NUCLEAR FUEL PROJECT **WBS Number 1.4**

FY 1995 MYPP

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
Total Capital
Grand Total
Productivity Commitment
Total Funding

84,830
13,620
98,450
(9,845)
88,605

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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

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	94	93	93	93	93	93	93	93	93	72	60	62	1,032
1.4.1.9.5	National Program	4110-0	Spent Nuclear Fuel	668	873	727	712	672	674	674	671	671	650	638	640	8,270
SUBTOTAL				1,236	1,748	1,427	1,423	1,262	1,269	1,269	1,241	1,241	1,032	928	940	14,539
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

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

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.

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
1.4.1.1	K-Basin Operations & Transitions															
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

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
				U	12,003	0	12,003	0	12,003	12,003	0
					98,450	9,845	88,605	0	88,605	107,150	18,545