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Fiscal Year 1998 Multi-Year Work Plan

Advanced Reactors Transition Program

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Advanced Reactors Transition Program

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FISCAL YEAR 1998 MULTI-YEAR WORK PLAN
ADVANCED REACTORS TRANSITION

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FISCAL YEAR 1998 MULTI-YEAR WORK PLAN
ADVANCED REACTORS TRANSITION

1.0 ADVANCED REACTORS TRANSITION - WBS 1.12.1.1

1.1. TECHNICAL BASELINE

1.1.1 Mission

The mission of the Advanced Reactors Transition program is two fold. First, the program is responsible to maintain the Fast Flux Test Facility (FFTF) and the Fuels and Materials Examination Facility (FMEF) in Standby to support a possible future role in the tritium production strategy. Secondly, the program is responsible to continue deactivation activities which do not conflict with the Standby directive. On going deactivation activities include the processing of non-usable, irradiated, FFTF components for storage or disposal; deactivation of Nuclear Energy legacy test facilities; and deactivation of the Plutonium Recycle Test Reactor (PRTR) facility, 309 Building.

1.1.2 Scope

1.1.2.1 Fast Flux Test Facility. The FFTF is a 400 mega-watt thermal (MWt), sodium cooled, fast reactor located in the 400 Area. The reactor has been defueled in preparation for transition to shutdown. Based on the Secretary of Energy's directive, the FFTF will be maintained in Standby to support a possible future role in the tritium production strategy. Meanwhile, deactivation related activities, which do not adversely impact the potential to restart the reactor, will continue. These will include the processing and packaging of irradiated core components which have no useful purpose in a restart, maintaining and enhancing the reliability of the specialized fuel handling equipment required to remotely transfer and process irradiated and non-irradiated components for removal from the facility, and inspection and maintenance of systems such as sodium drain lines and their piping supports. Plant modifications needed for shutdown, but not impacting potential operation, such as cross-connecting the FFTF and the Fuel Storage Facility (FSF) argon gas systems, will also be continued.

1.1.2.2 Fuels and Materials Examination Facility. The FMEF is a fully qualified structure in the 400 Area, which was constructed to support the operation of the FFTF. Within the facility are an unused fuel production line, fuel assembly area, and hot cells. This facility has never been operated as a nuclear facility. The FMEF will be maintained in a Standby mode, pending a decision by the DOE to utilize it for an appropriate mission. During this Standby period, operating expenses will be offset, in part, by the utilization of office and maintenance space by other Hanford Site activities.

1.1.2.3 Nuclear Energy Legacies. The Nuclear Energy (NE) Legacies are small, non-nuclear facilities which were used in the development of the liquid metal

technologies and equipment for the FFTF. These included sodium filled test loops, sodium fire experiments, and sodium treatment, storage, and disposal facilities. Two sodium testing areas remain to be deactivated in the NE Legacies, the test loops in the 337B Highbay, containing an estimated 2,800 gallons of frozen sodium and 110 gallons of liquid sodium-potassium alloy (NaK), and the Containment System Test Facility (CSTF) located in the 221-T Building, containing an estimated 215 gallons of frozen sodium. Deactivation will drain the sodium and NaK inventories, disposition piping, and clean the tanks. Additionally, NE Legacies activities include surveillance and maintenance of the 337B Highbay and closure of the 3718-F Resource Conservation and Recovery Act (RCRA) site.

1.1.2.4 Plutonium Recycle Test Reactor. The PRTR in the 309 Building was a heavy-water moderated and cooled test reactor, used in the early 1960's to test reactor fuels. It was initially laid up in 1969. Subsequently it was used in support of the FFTF, provided shop space for various activities, and was identified as a ground test site for a space reactor development program known as SP-100. Currently vacated, except for the FFTF Interim Examination and Maintenance Cell mock-up and training facility, cleanout and stabilization of radiological and hazardous materials is required before the facility can be turned over for deactivation and decommissioning (D&D). In the interim, Surveillance and Maintenance continues to ensure safe and compliant status of the facility.

1.1.2.5 Work For Others. In addition to work related to the Advanced Reactors Transition Program, Advanced Reactors personnel are involved in performing studies for Japan Atomic Power Company (JAPC). JAPC and DOE Headquarters have entered into a contract for this work with JAPC providing required funding.

1.1.2.6 Environmental, Safety and Health Commitments. The ART program is committed to worker safety, health, and environmentally responsible operations. Program activities will comply with applicable DOE Orders and federal/state regulations. Wherever appropriate, activities will be performed using approved procedures and workers have the authority to stop work if safety is in question.

The ART Program will implement applicable portions of the Integrated Safety Management System (ISMS), including appropriate aspects of the Radiological Controls Improvement Program (RCIP), Chemical Management System (CMS), and Emergency Planning and PreparednessImprovements (EPPI).

1.1.3 Interfaces and Constraints

1.1.3.1 Funding. Advanced Reactors Transition funding comes from three sources in the U.S. Department of Energy: the Office of Environmental Management (EM-60), the Office of Nuclear Energy, Science, and Technology (NE-40), and through International Programs. Expenditure of these funds is limited to discrete activities. Further, the new FY 1998 EM-60 funding is directed to be divided as follows:

FFTF/FMEF Standby -- $31,181K
FFTF Deactivation Activities -- $5,700K
non-FFTF activities (NE Legacy and PRTR) -- $3,700K

Carryover from FY 1997 funds will remain in Standby activities or in FFTF deactivation and non-FFTF activities, depending upon the area of underrun. Current projections place this carryover in the Standby area.

1.1.3.2 Facility Turnover. Advanced Reactors Transition is responsible for deactivation of NE Legacy facilities and the PRTR/309 Building. At the conclusion of this work, the assigned facilities will pass to other organizations for future use or for final decommissioning. These turnovers are as follows:

Facility	Operations & Maintenance	Close Out	
		Post Operations	D&D
NE Legacy:			
335 Bldg	RL-TP11	RL-TP11	RL-TP14
337B Highbay	RL-TP11	RL-TP11	RL-TP14
Containment Systems Test Facility (CSTF) in 221-T	RL-TP11	RL-TP11	RL-WM04
PRTR/309 Building		RL-TP11	RL-ER05 / RL-ER06

Project Identifiers:
RL-ER05 Surveillance and Maintenance (Environmental Restoration Contractor -ERC)
RL-ER06 Decontamination & Decommissioning (ERC)
RL-TP11 Advanced Reactors Transition
RL-TP14 Hanford Surplus Facility Program 300 Area Revitalization
RL-WM04 Solid Waste Management

1.1.3.3 Major Interfaces with Other Projects. Aside from the facility turnover interfaces listed above, Advanced Reactors has several significant interfaces with other Hanford Site and non-Hanford projects.

In the disposition of spent nuclear fuels from the FFTF and the former NE Legacy TRIGA[1] reactor, Advanced Reactors will interface with Spent Nuclear Fuels Project (RL-WM01). At a future time, tentatively scheduled to begin in FY 2000, Advanced Reactors Transition will transfer spent nuclear fuel, in dry storage casks, from the FFTF and its 400 Area Interim Storage Area (ISA), to the 200 Area ISA, which will be operated by the Spent Nuclear Fuels Project.

Interface will continue with Tank Waste Remediation Systems (TWRS) Retrieval Project (RL-TW04) on the potential beneficial use of the FFTF radioactive sodium in the tank waste treatment process. Dependent upon future decisions regarding FFTF operation, any potential use may not occur due to incompatible schedules. Periodically, low level liquid radioactive waste resulting from the washing of sodium wetted components will be transferred to the TWRS evaporators for disposition.

1.1.4 Planning Assumptions and Issues

1.1.4.1 Assumptions. The following assumptions are reflected in the development of this MYWP:

a. The FFTF in conjunction with the FMEF will be directed, in December 1998, to pursue a path toward restart for tritium and medical isotope production. Further, the NEPA decision process will result in the conclusion that start up and operation are the appropriate final decision.

b. The Tri-Party Agreement Milestones related to FFTF will be placed on hold or deleted by modification to the agreement. This change is currently under development and review.

c. In FY 1998, FFTF/FMEF will receive funding from EM, NE, and work for others (JAPC). In FY 1999 and beyond, FFTF/FMEF will no longer receive any funding from either EM or JAPC.

d. In FY 1998, expenditure of EM appropriated FY 1998 funds for FFTF/FMEF Standby related activities shall be limited to $31,181K. Additional EM funds, up to $5,700K may be spent on deactivation related activities in the FFTF.

e. The underrun of FY 1997 funding will be retained within the project for FY 1998 costs.

[1]TRIGA is a trademark of Gulf General Atomics Company, Incorporated

1.1.4.2 Issues

a. The proposed FY 1999 funding levels for EM funded deactivation, and the established Hanford priorities, jeopardize the completion of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), target milestone MX-92-11T, "Complete disposition options for all Hanford Site non-radioactive sodium," by its due date of March 2002.

1.1.5 References

1.1.5.1 Fast Flux Test Facility Standby Plan, HNF-SD-FF-SSP-056, Revision 0, March 6, 1997.

1.1.5.2 Advanced Reactors Transition Program Resource Loaded Schedule, HNF-SD-FF-SSP-050, Revision 4, June 27, 1997.

1.1.5.3 Environmental Assessment, Disposition of Alkali Metal Test Loops, Hanford Site, Richland, Washington, DOE/EA-0987, May 1995.

1.1.5.4 Hanford Site Sodium Management Plan, WHC-SD-FF-MP-001, Revision 1, September 26, 1995.

1.1.5.5 309 Building Transition Plan, WHC-SD-SP-SSP-001, Revision 1, May 8, 1995.

1.1.5.6 Project Baseline Summary, "Advanced Reactors Transition," RL-TP11.

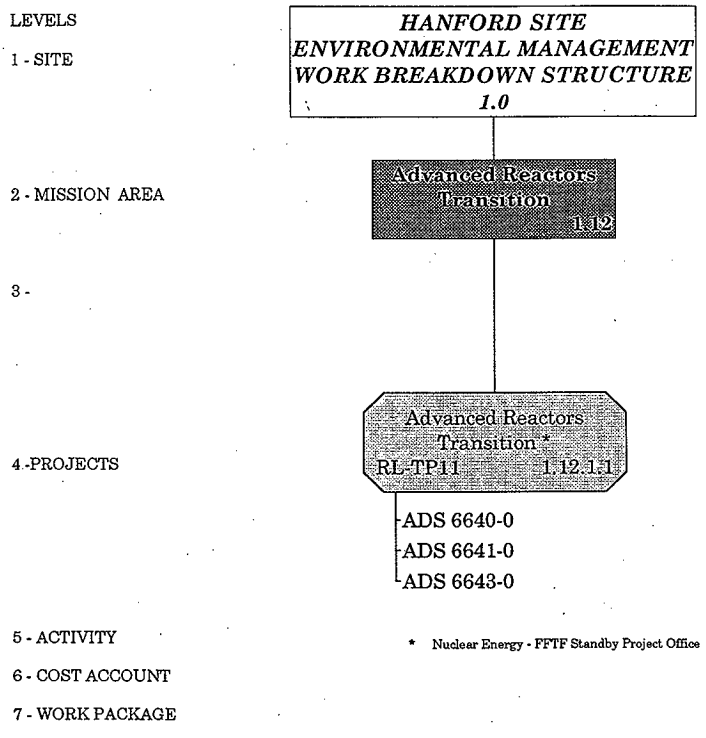
1.1.5.7 Field Work Proposal "FFTF Complex," NEW9905.

1.1.5.8 Final Programmatic Environmental Impact Statement (PEIS) for Tritium Supply and Recycle, DOE/EIS-0161, July 1995.

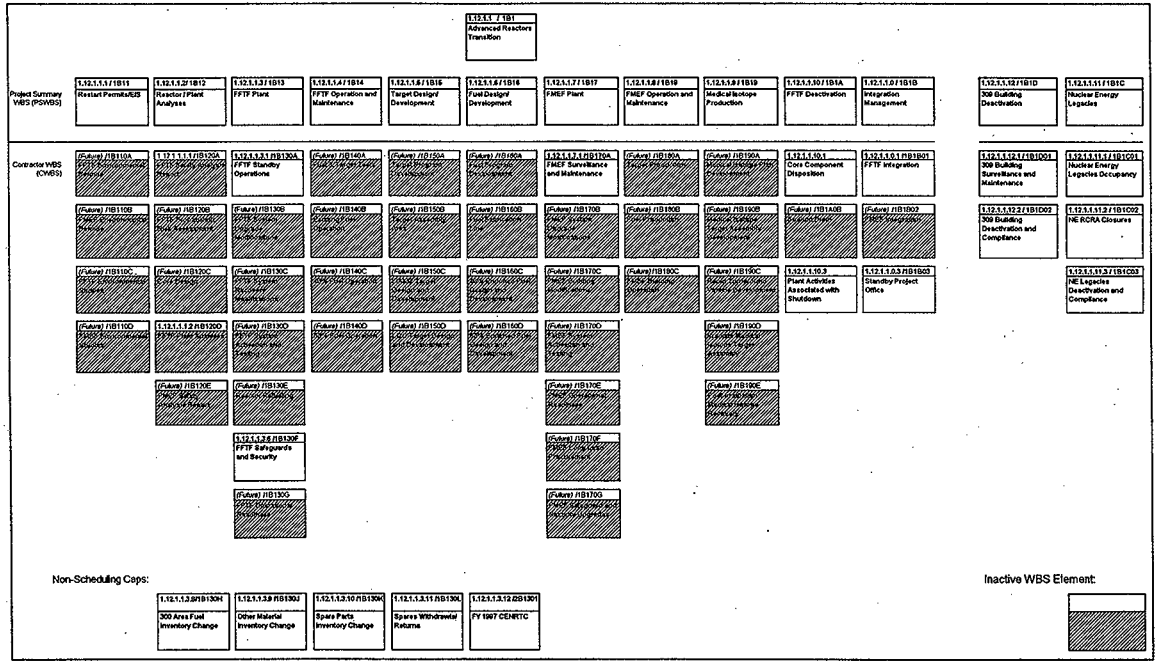
1.2 WORK BREAKDOWN STRUCTURE

The Advanced Reactors Transition (ART) Work Breakdown Structure (WBS) derives from the Hanford Site Environmental Breakdown structure, as shown below. The ART WBS, shown on the following page, further develops the WBS on a product oriented basis. Although the ART WBS has been developed for a full restart effort, many of the activities (shaded in the figure) are not currently active and are neither funded nor further defined. Each of the activities at the project summary WBS level is defined in section 1.2.3, but those which are inactive have a Budget and Reporting Number of "Future" in block 11 of the WBS dictionary sheet.

1.2.1 Work Breakdown Structure Hierarchy



1.2.1 Work Breakdown Structure Hierarchy



ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1	Advanced Reactors Transition

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70 & AF-95

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads and Enterprise Company Services.

B. TECHNICAL CONTENT/WORK STATEMENT

Advanced Reactors Transition maintains the Fast Flux Test Facility (FFTF) and the Fuels and Materials Examination Facility (FMEF) in Standby to support a possible future role in the tritium production strategy.

The project continues deactivation activities which do not conflict with the Standby directive. On going deactivation activities include the processing of non-usable, irradiated, FFTF components for storage or disposal; deactivation of the Plutonium Recycle Test Reactor (PRTR) facility, 309 Building; and deactivation of Nuclear Energy legacy test facilities.

The project also directs, manages, and performs studies and analyses required by the DOE to evaluate the potential role of the FFTF in the tritium production strategy and analyses contracted by the Japan Atomic Power Company (JAPC) through the DOE.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.0	Integration Management

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70 & AF-95

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads and Enterprise Company Services.

B. TECHNICAL CONTENT/WORK STATEMENT

Provide planning and administration of Advanced Reactors Transition (ART) Project activities; communication with the DOE; and other special activities, as needed. Manage reserved funds required to pay for accomplishment of performance related fees.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.1	Restart Permits / EIS

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	Future

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

This element is a future function. There is no cost content budgeted during FY 1998.

B. TECHNICAL CONTENT/WORK STATEMENT

FUTURE:
This WBS will develop the detailed environmental analyses and obtain the statutorily required permits for operation of the FFTF and FMEF. The most obvious of these statutory requirements is the National Environmental Policy Act of 1969, which is anticipated to result in a formal Environmental Impact Statement. Other regulations to be addresses include the Clean Air Act and Amendments of 1990, the Washington State Environmental Policy Act, the Resource Conservation and Recovery Act of 1976, the National Historical Preservation Act of 1996, and the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement.)

Although the WBS is developed to the first level of restart activities, the WBS products are not within the current work scope and will not be further defined in the MYWP.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.2	Reactor/Plant Analyses

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	Future

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

This element is a future function. There is no cost content during FY 1998.

B. TECHNICAL CONTENT/WORK STATEMENT

FUTURE:
This WBS will develop reports which are required to support a final decision on future operation of the FFTF and FMEF. This will include new safety analyses, reactor core designs, and applicable Final Safety Analysis Reports.

Although the WBS is developed to the first level of restart activities, the WBS products are not within the current work scope and will not be further defined in the MYWP.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP WBS 1.12.1.1

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3	FFTF Plant

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS will maintain the FFTF in a safe and compliant, standby condition. The condition of the plant hardware, software and personnel will be preserved in a manner not to preclude plant restart within three and one half years of a decision to do so. This WBS will focus on the following objectives:

1. Carry out plant preservation and maintenance required to sustain standby status.
2. Preserve and maintain required design and engineering documentation and data.
3. Maintain technical capability and expertise.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.4	FFTF Operations and Maintenance

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	Future

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

This element is a future function. There is no cost content budgeted during FY 1998.

B. TECHNICAL CONTENT/WORK STATEMENT

FUTURE:
This WBS will provide the operation of the FFTF in a production mode at some future date, if the DOE decision process, including the National Environmental Policy Act (NEPA) reviews, determines that the FFTF should resume operation.

Although the WBS is developed to the first level of restart activities, the WBS products are not within the current work scope and will not be further defined in the MYWP.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.5	Target Design/Development

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	Future

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

This element is a future function. There is no cost content budgeted during FY 1998.

B. TECHNICAL CONTENT/WORK STATEMENT

FUTURE:
This WBS will provide for the design, prototype development, and evaluation of tritium production targets for use in the FFTF at some future date, if the DOE decision process, including the National Environmental Policy Act (NEPA) reviews, determines that the FFTF should resume operation. It will also provide the design and installation of a target assembly facility.

Although the WBS is developed to the first level of restart activities, the WBS products are not within the current work scope and will not be further defined in the MYWP.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.6	Fuel Design/Development

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	Future

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

This element is a future function. There is no cost content budgeted during FY 1998.

B. TECHNICAL CONTENT/WORK STATEMENT

FUTURE:
This WBS will provide for the design, prototype development, and evaluation of reactor fuel assemblies and the fuel fabrication facilities necessary to provide fuel for use in the FFTF at some future date, if the DOE decision process, including the National Environmental Policy Act (NEPA) reviews, determines that the FFTF should resume operation.

Although the WBS is developed to the first level of restart activities, the WBS products are not within the current work scope and will not be further defined in the MYWP.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.7	FMEF Plant

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

Provide management, engineering, maintenance, and utilities in accordance with applicable DOE Orders, federal and state environmental requirements, and approved procedures. The Fuels and Materials Examination Facility (FMEF) work scope is limited to surveillance and maintenance of the facility. The FMEF is a seismically qualified, non-contaminated facility that is being held in standby for a possible mission. At some future date, if the DOE determines that FMEF and FFTF are to operate to support the tritium production strategy, this WBS will also provide facility upgrades, modifications, and startup to perform its new role.

Revenue to partially offset the standby expenses is generated by leasing office and floor space to other Hanford Site organizations.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.8	FMEF Operations and Maintenance

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	Future

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

This element is a future function. There is no cost content budgeted during FY 1998.

B. TECHNICAL CONTENT/WORK STATEMENT

FUTURE:
This WBS will provide production mode operation of the FMEF building, fuel production, and target production at some future date, if the DOE decision process, including the National Environmental Policy Act (NEPA) reviews, determines that the FFTF should resume operation.

Although the WBS is developed to the first level of restart activities, the WBS products are not within the current work scope and will not be further defined in the MYWP.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.9	Medical Isotope Production

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	Future

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

This element is a future function. There is no cost content budgeted during FY 1998.

B. TECHNICAL CONTENT/WORK STATEMENT

FUTURE:
This WBS will provide both development and production mode operation of medical isotope production activities, including design, fabrication, evaluation, irradiation, and recovery of medical isotope targets for processing and distribution. These activities will begin at some future date, if the DOE decision process, including the National Environmental Policy Act (NEPA) reviews, determines that the FFTF should resume operation.

Although the WBS is developed to the first level of activities, the WBS products are not within the current work scope and will not be further defined in the MYWP.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.10	FFTF Deactivation

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS will accomplish those activities which move the FFTF toward an industrially and radiologically safe shutdown condition, without adversely impacting the capability to restart the reactor, if DOE determines that reactor restart for tritium production is an appropriate action.

Activities will include removing unusable spent nuclear fuel components from the FFTF to dry cask storage. Irradiated, non-fueled components will also be removed from the FFTF and dispositioned for proper disposal. The fuel handling equipment will be maintained and upgraded, where appropriate, to enhance reliability for either a resumption of transition to shutdown or a future operational mission.

Sodium drain equipment, procedures, and analyses will be preserved for future use.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.11	Nuclear Energy Legacies

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS provides the clean up of NE Legacy facilities. These are divided into two main groupings, NE Resource Conservation and Recovery Act (RCRA) Closures and NE Legacies.

NE RCRA Closures provides for the environmental management of NE hazardous waste facilities. This sub-activity addresses the base program responsibilities associated with NE facilities that currently manage, or have managed, hazardous materials. The facility remaining under a RCRA closure plan is the 3718-F Alkali Metal Treatment and Storage Facility.

NE Legacies involves the strategy development and implementation program for ultimate disposition of DOE NE non-reactor facilities and associated materials/equipment. Specific tasks include, provide coordination/oversight for program implementation, evaluate disposition of miscellaneous facility-specific items, prioritize and perform facility disposition engineering studies and the NEPA documentation, and conduct disposition of facilities in accordance with CRADA, including the sodium inventory, where applicable. This activity also provides operation and maintenance of the Building 337 Highbay and buildings 335 and 3718M.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

1.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.12	PRTR/309 Building

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, and Overheads.

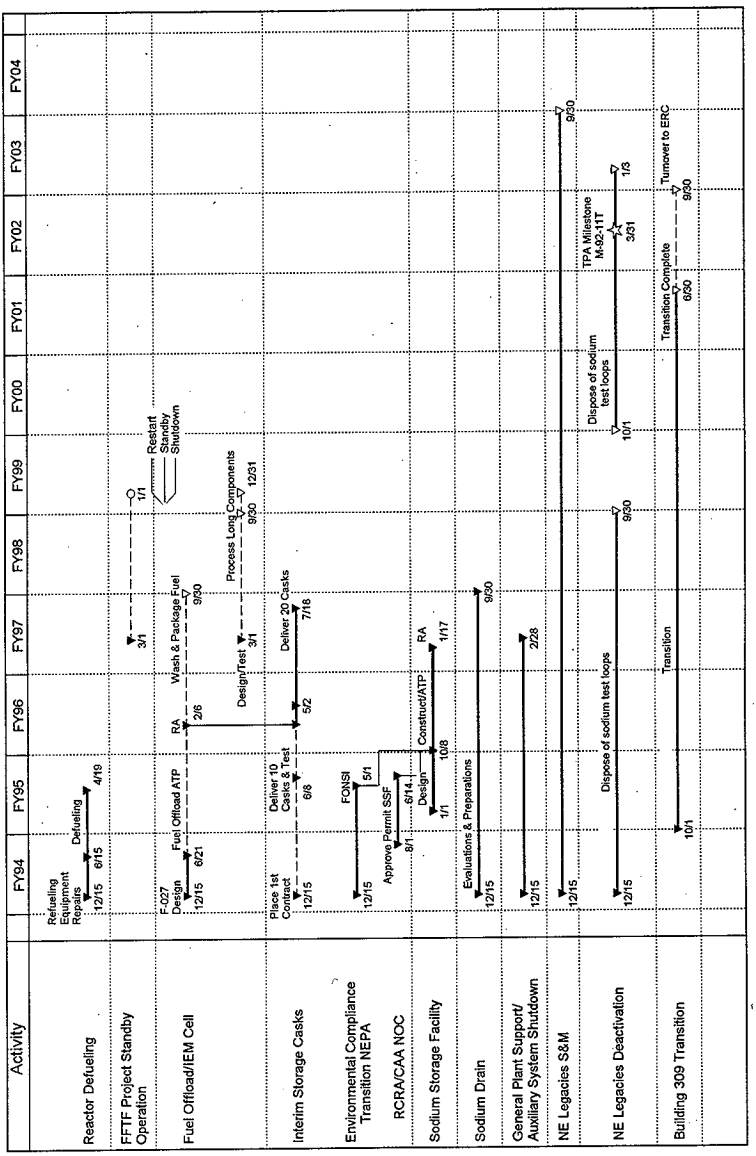
B. TECHNICAL CONTENT/WORK STATEMENT

This WBS describes the major elements and project baseline to characterize and stabilize the PRTR/309 Building for long-term layup while awaiting the D&D phase.

The PRTR/309 Building work scope includes the surveillance and operation of the facility subject to DOE Orders and federal codes for radiological facilities. The deactivation and compliance activities prepare the building for acceptance by EM-40 for long-term surveillance and maintenance pending decontamination and decommissioning. Activities will dispose of equipment, components, and waste products associated with the PRTR reactor systems, including all nonessential systems (e.g., heating ventilating and air conditioning (HVAC), electrical distribution, monitoring, and fluid), which will be shutdown and drained or de-energized. The process, laboratory, and office areas of the facility will be secured to convert the facility to a minimum safe S&M condition for turnover to an ERC for long-term interim surveillance preparatory to a final D&D phase.

1.3 SCHEDULE

1.3.1 Program Master Schedule



1.3.2 Milestones List

MILESTONE CONTROL #	TPA-MS NUMBER	TPA TYPE	MS LEVEL	MS TITLE	TYPE	PLANNED BASELINE	APPROVED BASELINE	REVISED BASELINE	PBS#	MISSION AREA
B17-98-104			O	Update the Advanced Reactors Resource Loaded Schedule	OTH	10/31/97			RL-TP11	STBY
B17-98-106			O	Update the FFTF Standby Plan	OTH	11/26/97			RL-TP11	STBY
B00-98-304			RL	Issue Rev. 0 of the Technical Information Document	**	12/26/97			NE	STBY
B13-98-103			RL	Complete the FFTF Standby Work Phase 97-4	PBCI	12/31/97			RL-TP11	STBY
B69-98-304			RL	Clean the Prototype Applications Loop Sodium Tank	PBCI	12/31/97			RL-TP11	EM
B13-98-104			RL	Implement a Pilot Program for Work Process Improvements	**	1/9/98			RL-TP11	STBY
B13-98-101			RL	Complete Reactor Control Rod Timing Checks	PBCI	1/30/98			RL-TP11	STBY
B00-98-303			RL	Submit final summary report on GEMs safety studies	OTH	3/31/98			WFO	WFO
B13-98-102			RL	Issue Head Mounted Equipment Testing Report	PBCI	3/31/98			RL-TP11	STBY
B13-98-105			RL	Complete the FFTF Standby Work Phase 98-1	PBCI	3/31/98			RL-TP11	STBY
B13-98-106			RL	Complete FFTF Standby Annual System Assessment Reports	**	3/31/98			RL-TP11	STBY
B17-98-103			O	Prepare the Advanced Reactors Transition FY 2000 Budget Request Documents, Final Draft	OTH	4/15/98			RL-TP11	STBY
B19-98-401	M-81-04-T01	T	FO	Complete Reactor and Heat Transport System Sodium Drain	OTH	4/30/98		NOTE 1	RL-TP11	
B79-98-901			RL	Characterize the PRTR Fuel Transfer Pit	**	5/1/98			RL-TP11	EM
B10-98-101			RL	Complete RRB for OTA Shearing ATP	PBCI	6/30/98			RL-TP11	EM
B10-98-301			RL	Replace Refrigerant in ICCW/ECCW Chillers with R134a	OTH	6/30/98			RL-TP11	EM
B13-98-107			RL	Complete the FFTF Standby Work Phase 98-2	PBCI	6/30/98			RL-TP11	STBY
B17-98-107	M81-02-T01	T	FO	Submit Sodium disposition Evaluation Report/Decision Point	OTH	6/30/98		NOTE 1	RL-TP11	EM
B19-98-402	M-81-02	I	FO	Complete Sodium Storage Facility Startup -- COMPLETE	EA	7/31/98			RL-TP11	EM
B69-98-303			RL	Remove the Building 337 NaK	PBCI	8/3/98			RL-TP11	EM
B17-98-105			O	Prepare the Advanced Reactors Transition FY 1999 Multi-Year Work Plan Final Draft	OTH	8/28/98			RL-TP11	STBY
B10-98-102			RL	Complete ATP for OTA Shear	PBCI	8/31/98			RL-TP11	EM
B69-98-306			RL	Remove 221-T Sodium Piping and Tanks	PBCI	9/1/98			RL-TP11	EM
B79-98-905			RL	Stabilize the PRTR Fuel Storage Basin	OTH	9/1/98			RL-TP11	EM
B13-98-108			RL	Complete the FFTF Standby Work Phase 98-3	PBCI	9/30/98			RL-TP11	STBY
B69-98-305			RL	Revise the Hanford Site Sodium Management Plan	OTH	9/30/98			RL-TP11	EM
B69-98-307			RL	Clean Residuals from 1720-DR Sodium Tank	PBCI	9/30/98			RL-TP11	EM
B10-98-103			RL	Obtain RRB Release for OTA Shear Operation	PBCI	10/9/98			RL-TP11	EM
B69-99-302	M-92-10	I	FO	Submit Hanford Site Sodium Management Plan to Ecology	EA	10/31/98			RL-TP11	EM
B19-99-301	M-81-00-T02	T	FO	Complete transfer of irradiated fuel to dry cask storage	OTH	10/31/98		NOTE 1	RL-TP11	EM
B19-99-302	M-81-00-T03	T	FO	Complete transfer of unirradiated fuel to the Plutonium Finishing Plant	OTH	10/31/98		NOTE 1	RL-TP11	EM
B19-99-303	M-81-00-T04	T	FO	Complete transfer of special fuel to the Idaho National Engineering Laboratory for consolidated fuel	OTH	10/31/98		NOTE 1	RL-TP11	EM
B17-99-102	M-81-03	I	FO	Submit FFTF End Point Criteria Document	EA	12/31/98		NOTE 1	RL-TP11	EM
B19-99-401	M-81-04-T02	T	FO	Complete Interim Decay Storage and Fuel Storage Facility sodium drain	OTH	12/31/98		NOTE 1	RL-TP11	EM

1.3.2 Milestones List

MILESTONE CONTROL #	TPA-MS NUMBER	TPA TYPE	MS LEVEL	MS TITLE	TYPE	PLANNED BASELINE	APPROVED BASELINE	REVISED BASELINE	PBS#	MISSION AREA
B17-00-101	M-20-29A	I	FO	Submit Sodium Storage Facility and Sodium Reaction Facility Closure Plan or request for procedural closure	EA	12/31/99			RL-TP11	EM
B19-00-401	M-81-04	I	FO	Complete FFTF sodium drain	EA	3/31/00		NOTE 1	RL-TP11	EM
B19-01-501	M-81-00-T05	T	FO	Complete auxiliary system deactivation	OTH	3/31/01		NOTE 1	RL-TP11	EM
B79-01-901			FO	Transition Building 309 to shutdown status	OTH	6/30/01			RL-TP11	EM
B17-01-101	M-81-05	I	FO	Submit FFTF Surveillance and Maintenance Plan	EA	6/30/01		NOTE 1	RL-TP11	EM
B19-01-502	M-81-06	I	FO	Complete PCB Transformer Disposal	EA	9/30/01		NOTE 1	RL-TP11	EM
B17-02-101	M-81-00	M	FO	Complete FFTF Transition and inintiate the Surveillance and Maintenenace Phase	EA	12/31/01		NOTE 1	RL-TP11	EM
B69-02-301	MX-92-11T	T	FO	Complete disposition options for all Hanford Site nonradioactive sodium	OTH	3/31/02			RL-TP11	EM
B19-99-402	M-92-09	I	FO	Complete aquisition of new facilities, modification of existing facilities, and/or modifications of planned facilitites necessary for storage, treatment, and disposal of Hanford Site sodium.	EA	TBE 10/31/98			RL-TP11	EM
NOTES:										
1: These Milestones are the subject of a draft change proposal, which will delete them due to the FFTF entry into Standby.										
2: This list includes serveral Level "O" milestones. These have been added at RL request, for consistency with past MYWP activities. Their inclusion does NOT indicate RL approval or a requirement for RL approval of changes related to these Level "O" milestones										
3: TYPE designators are as follows: EA - enforceable agreement; OTH - other; PBCI - Performance Based Contract Incentive; "**" - "double asterik" milestone										

1.4 COSTS AND FUNDS

1.4.1 Bases of Estimate

The Advanced Reactors Transition cost estimate has been developed using Activity Based Cost (ABC) estimating techniques. Planning rates and escalation applied to these estimates are consistent with those developed by the Fluor Daniel Hanford Company (FDH) Chief Financial Officer and approved by RL. The supporting information is maintained by the FFTF Transition Project Office in the 400 Area 4710 Building.

Workscope defined in this MYWP includes anticipated carryover of FY 1997 underrun and deferred workscope. It also includes $6 million in workscope related to FFTF Standby expected to be funded from the Office of Nuclear Energy, Science, and Technology (NE) and $309K of work scope to be funded through "work for others" under a DOE contract with Japan Atomic Power Company (JAPC).

Standby related activities are estimated to require 50% of the FFTF Project Integration effort and all of the Standby Project Office costs. The other 50% of the FFTF Project Integration effort will support deactivation activities at FFTF and project planning and integration for NE Legacies and 309 Building/PRTR.

1.4.2 NEW BUDGET AUTHORITY (B/A) BY YEAR -- TOTAL PROGRAM

	WBS #s	FUND SOURCE	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
INVENTORY TRANSFER													
Spare Parts Inventory	1.12.1.1	RL-TP11	9,804										9,804
ENVIRONMENTAL MANAGEMENT													
FFTF Deactivation (includes FFTF Integration share)	1.12.1.1.10	RL-TP11	11,277	5,700									16,977
NE Legacies	1.12.1.1.11	RL-TP11	2,000	1,850	530	2,271	2,467	2,220	770	0	0	0	12,108
309 Building/PRTR	1.12.1.1.12	RL-TP11	2,000	1,850	1,377	2,070	1,700	620	0	0	0	0	9,617
Sub Total			15,277	9,400	1,907	4,341	4,167	2,840	770	0	0	0	38,702
FFTF & FMEF STANDBY													
FFTF & FMEF Standby (includes FFTF Integration share)	1.12.1.1.3 & 1.12.1.1.7	RL-TP11	31,100	31,181									62,281
FFTF SPO & Studies	1.12.1.1.0.3	NE	1,000	6,000									7,000
Sub Total			32,100	37,181									69,281
CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION (CENRTC)													
CENRTC	1.12.1.1.3.12	RL-TP11	224	0									224
FFTF & FMEF STANDBY / RESTART													
FFTF & FMEF	1.12.1.1.0 Thru 1.12.1.1.9	NEW9905			61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	907,726
		NE	1,000	6,000	61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	914,726
		JAPC	441	309									750
TOTAL:			57,846	46,890	63,851	107,302	109,908	156,974	129,466	115,830	118,960	119,460	1,026,487

1.4.3 TOTAL BUDGET AUTHORITY (B/A) BY YEAR -- TOTAL PROGRAM

	WBS #s	FUND SOURCE	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
INVENTORY TRANSFER													
Spare Parts Inventory	1.12.1.1	RL-TP11	9,804										9,804
ENVIRONMENTAL MANAGEMENT													
FFTF Deactivation (includes FFTF Integration share)	1.12.1.1.10	RL-TP11	11,277	5,700									16,977
FY 1997 Deactivation Carryover		RL-TP11		800									
NE Legacies	1.12.1.1.11	RL-TP11	2,000	1,850	530	2,271	2,467	2,220	770	0	0	0	12,108
309 Building/PRTR	1.12.1.1.12	RL-TP11	2,000	1,850	1,377	2,070	1,700	620	0	0	0	0	9,617
FY 1997 Standby Carryover		RL-TP11		880									
Sub Total			15,277	11,080	1,907	4,341	4,167	2,840	770	0	0	0	40,382
FFTF & FMEF STANDBY													
FFTF & FMEF Standby (includes FFTF Integration share)	1.12.1.1.3 & 1.12.1.1.7	RL-TP11	31,100	31,181									62,281
FY 1997 Carryover		RL-TP11		1,690									1,690
FFTF SPO & Studies	1.12.1.1.0.3	NE	1,000	6,000									7,000
FY 1997 Carryover		NE		100									100
Sub Total			32,100	38,971									69,281
CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION (CENRTC)													
CENRTC	1.12.1.1.3.12	RL-TP11	224	0									224
CENRTC Carryover	1.12.1.1.3.12	RL-TP11	0	224									224
FFTF & FMEF STANDBY / RESTART													
FFTF & FMEF	1.12.1.1.0 Thru 1.12.1.1.9	NEW9905			61,944	102,961	105,741	154,134	128,698	115,830	118,960	119,460	907,726
WORK FOR OTHERS													
GEMs Studies	2.1.1.2.2.1	JAPC	441	309									750
SUBTOTALS:													
	Inventory	RL-TP11	9804										
		RL-TP11	46,377	43,951	1,907	4,341	4,167	2,840	770				102,663
		NE	1,000	6,100	61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	914,726
		JAPC	441	309									750
TOTAL:													
EXPENSE:			57,622	50,360	63,851	107,302	109,908	156,974	129,466	115,830	118,960	119,460	1,027,943
GRAND TOTAL:			57,846	50,584	63,851	107,302	109,908	156,974	129,466	115,830	118,960	119,460	1,028,167

TOTALS in the right-hand column do not include carryover, in order to avoid double counting.

1.4.4 BUDGETED COST OF WORK SCHEDULED (BCWS) -- TOTAL PROGRAM

	WBS #s	FUND SOURCE	EAC FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
INVENTORY TRANSFER													
Spare Parts Inventory	1.12.1.1	RL-TP11	9,804										9,804
ENVIRONMENTAL MANAGEMENT													
Project Integration	1.12.1.1.0.1	RL-TP11	1,037	2,356									3,393
FFTF Deactivation	1.12.1.1.10	RL-TP11	8,849	5,255									14,104
NE Legacies	1.12.1.1.11	RL-TP11	2,616	1,669	573	2,271	2,467	2,220	770				12,586
309 Building/PRTR	1.12.1.1.12	RL-TP11	1,975	1,800	1,334	2,070	1,700	620	0				9,499
Sub Total			14,477	11,080	1,907	4,341	4,167	2,840	770				39,582
FFTF & FMEF STANDBY													
FFTF Project Integration	1.12.1.1.0.1	RL-TP11	1,195	2,356									3550.55
FFTF & FMEF Standby	1.12.1.1.3 & 1.12.1.1.7	RL-TP11	27,335	30,515									57850
FFTF SPO & Studies	1.12.1.1.0.3	NE	900	6,100									7000
Sub Total			29,430	38,971									68400.55
CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION (CENRTC)													
CENRTC	1.12.1.1.3.12	RL-TP11	0	224									224
FFTF & FMEF STANDBY / RESTART													
FFTF & FMEF	1.12.1.1.0 Thru 1.12.1.1.9	NE			61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	907,726
WORK FOR OTHERS													
GEMs Studies	2.1.1.2.2.1	JAPC	441	309									750
SUBTOTALS:													
	Inventory	RL-TP11	9,804										9,804
		RL-TP11	43,006	43,951	1,907	4,341	4,167	2,840	770				100,982
		NE	900	6,100	61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	914,726
		JAPC	441	309									750
TOTAL:													
	EXPENSE		54,151	50,360	63,851	107,302	109,908	156,974	129,466	115,830	118,960	119,460	1,026,262
	GRAND TOTAL:		54,151	50,584	63,851	107,302	109,908	156,974	129,466	115,830	118,960	119,460	1,026,486

1.4.5 Project Funding by Work Breakdown Structure

1998 SITE RL-WBS CODES 1998 PHMC-FDS CODES	LEVEL	TITLE	MANAGER	BUDGET VALUES ($000)				
				ACTIVITY	COST ACCOUNT			
					STANDBY	FFTF D/C	NON-FFTF	WORK FOR OTHERS
1.12.1.1 1B1	PROJECT	Advanced Reactors Transition	Loika					
1.12.1.1.0 1B1B	ACTIVITY	Integration Management	Loika	10,812				
1.12.1.1.0.1 1B1B01	CA	FFTF Integration	Hulvey		2,356	2,156	200	
1.12.1.1.0.3 1B1B03	CA	Standby Project Office	Hulvey		6,100			
1.12.1.1.3 1B13	ACTIVITY	FFTF Plant	Loika	29,376				
1.12.1.1.3.1 1B130A	CA	FFTF Standby Operations	Gantt		26,466			
1.12.1.1.3.6 1B130F	CA	FFTF Safeguards and Security	Gold		2,967			
1.12.1.1.3.8 1B130H	CA	300 Area Fuel Oil Inventory Change	Montano		1			
1.12.1.1.3.9 1B130J	CA	Other Materials Inventory Change	Montano		1			
1.12.1.1.3.10 1B130K	CA	Spares Parts Inventory Change	Montano		-466			
1.12.1.1.3.11 1B130L	CA	Spares Withdrawal/Returns	Montano		407			
1.12.1.1.3.12 2B1301		Capital Equipment Not Related To Construction (CENRTC)	Montano	224				
1.12.1.1.3.12 2B1301	CA	Capital Equipment Not Related To Construction (CENRTC)	Montano		224			

1998 SITE RL-WBS CODES 1998 PHMC-FDS CODES	LEVEL	TITLE	MANAGER	BUDGET VALUES ($000)				
				ACTIVITY	COST ACCOUNT			
					STANDBY	FFTF D/C	NON-FFTF	WORK FOR OTHERS
1.12.1.1.7 1B17	ACTIVITY	FMEF Plant	Bitten	1,139				
1.12.1.1.7.1 1B170A	CA	FMEF Surveillance and Maintenance	Bitten		1,139			
1.12.1.1.10 1B1A	ACTIVITY	FFTF Deactivation	Loika	5,255				
1.12.1.1.10.1 1B1A0A	CA	Core Component Disposition (except CCCs)	Witherspoon			4,846		
1.12.1.1.10.3 1B1A0C	CA	Plant Activities Associated with Shutdown	Burke			409		
1.12.1.1.11 1B1C	ACTIVITY	NE Legacies	Loika	1,669				
1.12.1.1.11.1 1B1C01	CA	Legacy Occupancy	Brehm				508	
1.12.1.1.11.2 1B1C02	CA	NE RCRA Closures	Dillhoff				25	
1.12.1.1.11.3 1B1C03	CA	NE Legacies Deactivation	Brehm				1,136	
1.12.1.1.12 1B1D	ACTIVITY	PRTR/309 Building (ADS 6643)	Bitten	1,800				
1.12.1.1.12.1 1B1D01	CA	309 Building S&M	Bitten				847	
1.12.1.1.12.2 1B1D02	CA	309 Building D/C	Bitten				953	

1998 SITE RL-WBS CODES 1998 PHMC-FDS CODES	LEVEL	TITLE	MANAGER	BUDGET VALUES ($000)				
				ACTIVITY	COST ACCOUNT			
					STANDBY	FFTF D/C	NON-FFTF	WORK FOR OTHERS
2.1.1.2.2 1W1	ACTIVITY	Non-DOE Work by BWHC	Loika	309				
2.1.1.2.2.1 1W1D01	CA	Gas Expansion Module Studies	Burke					309
			Expense Total	50,360	38,971	7,411	3,669	309
			GRAND TOTAL	50,584	39,195	7,411	3,669	309

1.5 STAFFING ESTIMATES

ADVANCED REACTORS TRANSITION PROJECT -- WBS 1.12.1.1
Revision 0
AVERAGE ANNUAL FULL TIME EQUIVALENTS
(includes Major Subcontractors but not Enterprise Companies)

PBS Number	PBS Title	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
RL-TP11	Advanced Reactors Transition	327	10.6	21.9	19.7	12.3	2.1				
NEW9905	FFTF Complex	6.5	440	490	560	600	600	600	600	600	600
WFO	GEMs Safety Studies (Work for Others Task)	0.5									
Total PBS FTEs		334	450.6	511.9	579.7	612.3	602.1	600	600	600	600

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2.0 ENVIRONMENTAL MANAGEMENT ACTIVITIES

2.1 TECHNICAL BASELINE

2.1.1 Mission

The environmental management activities under the direction of the Advanced Reactors Transition Program support the Hanford Site mission to provide minimum safe surveillance and maintenance of facilities, in compliance with State and federal statutes and DOE requirements, and to deactivate facilities. Deactivation of facilities will reduce risks to workers, the public, and the environment and reduce the costs of long-term surveillance and maintenance. This mission applies to the NE Legacy facilities, the PRTR/309 Building, and the FFTF. FFTF deactivation will consist of activities that do not preclude the option or increase the costs to restart the reactor, if determined necessary by DOE.

2.1.2 Scope

2.1.2.1 NE Legacies. A portion of the DOE's Nuclear Energy Programs at the Hanford Site were directly associated with research and development for the Liquid Metal Fast Breeder Reactor Program. As a result of these activities, alkali metals (predominantly sodium, but also including sodium-potassium eutectic alloy, commonly known as NaK) are stored in dormant test loops. Remaining test loops are the 221T Containment Systems Test Facility in the 200 West Area and the Composite Reactor Component Test Activity and High Temperature Sodium Facility, both in the 337B Highbay in the 300 Area.

The sodium and NaK will be removed from these facilities, packaged, and dispositioned. To the extent practical, the alkali metal will be drained to approved containers and sold to commercial users. The piping and controls will be reused by LM Technologies, in accordance with an approved Cooperative Research and Development Agreement, or packaged for appropriate disposal or excess, as appropriate. Ultimately, the alkali metal residuals will have been reacted and removed from any large components left in place for later decommissioning.

In addition, the 3718-F Alkali Metal Treatment and Storage Facility in the 300 Area is undergoing RCRA Closure. This facility has been cleaned, with the exception of low-level PCB contamination found during verification sampling. This issue must be resolved prior to final closure.

2.1.2.2 PRTR/309 Building. The Plutonium Recycle Test Reactor (PRTR)/309 Building, originally completed in 1960, provided an operating test reactor in the Hanford Works Plutonium Fuels Utilization Program to research and develop nuclear fuel technology. In 1962, the Plutonium Recycle Critical Facility (PRCF) was added to support the PRTR operation as a location where the reactivity values of fuel assemblies could be checked. Then in 1963, the Fuel Element Rupture Test Facility (FERTF) began operation in one fringe channel of the PRTR. The FERTF was used as a pilot irradiation facility to test new fuel element designs and new operating regimes. Reactor operations ceased in 1969. Several uses of the facility continued until August of 1993, when the PRTR/309

Building facility was declared excess by DOE-NE. The transition of the building to the Environmental Restoration Contractor (ERC) will involve placing the facility in a configuration which reduces surveillance and maintenance costs to a minimum and meets acceptance criteria for turnover to the ERC.

Preparation of the facility for turnover to long-term surveillance and maintenance requires that many closed areas of the facility be opened, characterized to identify radiological contaminants and hazardous materials, and, as necessary, cleaned out. The results of these efforts must be documented as a baseline for future decommissioning plans. Also, facility systems and structures must be in a safe, stable condition for turnover.

2.1.2.3 FFTF Deactivation. The FFTF is the largest, most modern, liquid metal-cooled test reactor in the world. Originally constructed in the late 1970s, it's purpose was to support the U.S. Liquid Metal Fast Breeder Reactor (LMFBR) Program. The FFTF began routine power operation in 1982 and demonstrated its ability to perform fuel and materials tests in support of both national and international fast breeder reactor programs, produce medical and industrial isotopes, perform materials tests for the fusion and space programs, perform passive safety tests, and provide customized neutron environments to meet customer needs. Detailed studies were also done to show the feasibility of producing significant quantities of Plutonium-238, as well as approximately 100 megawatts of electrical power with the addition of a steam powered turbine generator.

In January 1990, after a U. S. Department of Energy (DOE) evaluation of potential long term missions for the FFTF, DOE concluded that justification to support the expense of continued operation did not exist. This led to a series of new studies and marketing efforts by the Governor of the State of Washington, in cooperation with the Congressional Delegation of the State. Eventually the Secretary of Energy informed the Washington State Congressional Delegation that DOE planned to commence a phased shutdown process on December 15, 1993, to place the FFTF in a radiologically and industrially safe shutdown condition. Accordingly, removal of the fuel from the reactor vessel began in March 1994 and was completed in April 1995. Following this major accomplishment, the cleaning and packaging for interim storage of sodium wetted, fueled components was successfully demonstrated.

In order to remove the spent nuclear fuel from storage in the FFTF, procurement contracts were placed for the fabrication of Interim Storage Casks (ISC) and Core Component Containers (CCC) that will be used for the dry storage of washed, FFTF nuclear fueled components. The CCC, when filled with up to seven clean FFTF fueled components, is placed inside of an ISC and transported to the 400 Area Interim Storage Area (ISA), located in the northeast corner of the FFTF complex. The 400 Area ISA is large enough to also store spent nuclear fuel from other facilities in the Hanford 300 Area.

After preparations were made to support the early draining of the secondary loop sodium to in-plant storage tanks in November 1995, DOE ordered all drain activities delayed while an expedited review was conducted on the possible benefits of continued reactor operation for tritium production. Eventually, DOE suspended actions to drain the secondary loop sodium until

further notice and deferred all activities that would affect the potential to restart the reactor. Then in January 1997, the Secretary of Energy, by Memorandum of Decision (MOD), directed the FFTF be maintained in a standby condition while studies are conducted to determine if the FFTF can perform a role in augmenting the current, dual-track tritium production options. By December 1998 the DOE is to determine the primary, long-term source of tritium and any potential augmentation role for the FFTF. The MOD identifies two options for producing tritium - building an accelerator or converting a commercial reactor - with the FFTF considered as either a backup or a stopgap measure. Despite these delays to the shutdown plan, significant progress has been made in several key areas which include: packaging and storing highly-radioactive, spent, fueled components in ISCs; procedure preparation for draining plant sodium; completing the reactor vessel plenum drill development project; and completing the construction of the Sodium Storage Facility (SSF). The new SSF is located adjacent to the FFTF and has four tanks for storing radioactive sodium. The 292,000 gallon volume of these tanks will accommodate all drainable sodium from the FFTF.

Continuing deactivation related activities will focus on processing and packaging irradiated core components which would have no purpose in a reactor restart scenario. Spent nuclear fuel meeting these criteria will be stored in Interim Storage Casks; non-fueled components will be packaged for burial as radioactive waste. In addition, plant activities will include maintaining and enhancing the reliability of the specialized fuel handling equipment required to remotely transfer and process irradiated and non-irradiated fueled components for removal from the facility; inspection and maintenance of systems such as sodium drain lines and their piping supports as required for eventual sodium drain; and preparing key plant systems required for deactivation and post deactivation, such as the potable water system in buildings which are expected to remain open, and replacing ozone depleting freon refrigerant (R12) with environmentally safe replacement freon (R134a) in the plant chillers. The freon replacement ensures that the R12 refrigerant is removed at a time when it can be sold for reuse, whereas later removal could require expenditure of disposal funds for disposal.

At the end of FY 1998, full responsibility for future operation and/or deactivation of the FFTF will transfer to the DOE Office of Nuclear Energy, Science and Technology (NE).

2.1.3 Endpoints

These activities support the following Hanford Site Mission Description Document end point:

- Complete deactivation of NE Legacy Facilities by 9/2001.
  [REMARKS: The proposed FY 1999 funding levels for EM funded deactivation, and the established Hanford priorities, jeopardize the completion of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), target milestone MX-92-11T, "Complete disposition options for all Hanford Site non-radioactive sodium," by its due date of March 2002.]

2.1.4 Interfaces

The major interfaces related to these facilities are defined in Part I of this MYWP. Forecast interactions between projects, including nuclear material transfers and infrastructure needs are contained in the Site Systems Engineering database.

2.1.5 Drivers

The Advanced Reactors Transition program will comply with applicable Federal, State, and local statutes and DOE Orders in operating assigned facilities. The requirement to transition the assigned facilities is established through the Hanford Site Strategic Plan objective to "transition high-cost surplus facilities to a low-cost, stable deactivated condition."

The NE Legacies deactivation activities are intended to support TPA target milestone MX-92-11T, "Complete disposition options for all Hanford Site non-radioactive sodium," due March 2002.

2.1.6 Risk Management

2.1.6.1 NE Legacies. The NE Legacies facilities present a risk to the public, the worker, and the environment by virtue of the large quantities of non-radioactive alkali metals, specifically sodium and sodium-potassium eutectic alloy (NaK). These metals can react with the atmosphere to produce sodium aerosols, which when combined with moisture, form a caustic inhalation risk. Under normal conditions, these metals are contained in systems or containers and protected from reaction by an inert cover gas.

At the beginning of FY 1997, the NE Legacies site inventory of non-radioactive alkali metals was about 50,500 gallons of sodium and 112 gallons of NaK. At the end of FY 1997, the inventory has been reduced to about 3,000 gallons of sodium and 110 gallons of NaK. During FY 1998 it is planned to remove the remaining NaK and about 200 gallons of the sodium, at which point the remaining inventory will be in a single system located in the 337B Highbay and residuals in the 3718-M storage tank, which was drained in FY 1997.

Removal of the alkali metals from the Hanford Site will eliminate the risk previously associated with this material.

2.1.6.2 PRTR/309 Building. The PRTR experienced a fuel failure during its 1960's operation, which released plutonium into various systems. In addition, other contamination and hazardous materials, such as asbestos and lead, remained in the facility when it was declared excess. To the extent practical, these materials will be removed from the facility for appropriate treatment and disposal. Remaining materials will be stabilized and documented as a basis for planning final decontamination and decommissioning.

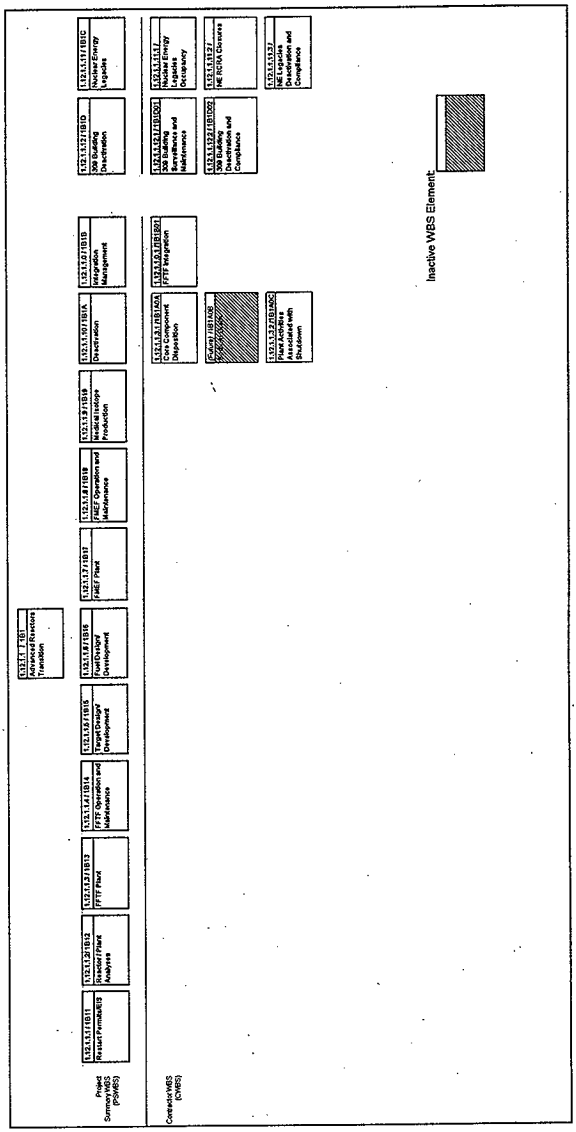
A major issue to be resolved during FY 1998 will be the removal of the insulation from the exterior of the reactor building. This insulation contains asbestos and is cracking with age. The intended scope is to remove this insulation and apply a fixative coating to ensure that any residual asbestos fibers are securely adhered to the surface. This action will avoid a future, fugitive asbestos release hazard for workers in the 300 Area.

2.1.6.3 FFTF Deactivation. The deactivation activities at FFTF during FY 1998 will focus primarily on the removal of irradiated core components for interim storage or disposal. This will reduce the potential radiological source term from within the FFTF.

FFTF related risks will be mitigated primarily through the continued performance of surveillance and maintenance activities associated with standby.

2.2 WORKBREAKDOWN STRUCTURE

2.2.1 Work Breakdown Structure Hierarchy



ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.2.2 WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.0	Integration Management

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70 & AF-95

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads and Enterprise Company Services.

B. TECHNICAL CONTENT/WORK STATEMENT

Provide planning and administration of Advanced Reactors Transition (ART) Project activities; communication with the DOE; and other special activities, as needed. Manage reserved funds required to pay for accomplishment of performance related fees.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.10	FFTF Deactivation

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS will accomplish those activities which move the FFTF toward an industrially and radiologically safe shutdown condition, without adversely impacting the capability to restart the reactor, if DOE determines that reactor restart for tritium production is an appropriate action.

Activities will include removing unusable spent nuclear fuel components from the FFTF to dry cask storage. Irradiated, non-fueled components will also be removed from the FFTF and dispositioned for proper disposal. The fuel handling equipment will be maintained and upgraded, where appropriate, to enhance reliability for either a resumption of transition to shutdown or a future operational mission.

Sodium drain equipment, procedures, and analyses will be preserved for future use.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP WBS 1.12.1.1

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.11	Nuclear Energy Legacies

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS provides the clean up of NE Legacy facilities. These are divided into two main groupings, NE Resource Conservation and Recovery Act (RCRA) Closures and NE Legacies.

NE RCRA Closures provides for the environmental management of NE hazardous waste facilities. This sub-activity addresses the base program responsibilities associated with NE facilities that currently manage, or have managed, hazardous materials. The facility remaining under a RCRA closure plan is the 3718-F Alkali Metal Treatment and Storage Facility.

NE Legacies involves the strategy development and implementation program for ultimate disposition of DOE NE non-reactor facilities and associated materials/equipment. Specific tasks include, provide coordination/oversight for program implementation, evaluate disposition of miscellaneous facility-specific items, prioritize and perform facility disposition engineering studies and the NEPA documentation, and conduct disposition of facilities in accordance with CRADA, including the sodium inventory, where applicable. This activity also provides operation and maintenance of the Building 337 Highbay and buildings 335 and 3718M.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.12	PRTR/309 Building

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS describes the major elements and project baseline to characterize and stabilize the PRTR/309 Building for long-term layup while awaiting the D&D phase.

The PRTR/309 Building work scope includes the surveillance and operation of the facility subject to DOE Orders and federal codes for radiological facilities. The deactivation and compliance activities prepare the building for acceptance by EM-40 for long-term surveillance and maintenance pending decontamination and decommissioning. Activities will dispose of equipment, components, and waste products associated with the PRTR reactor systems, including all nonessential systems (e.g., heating ventilating and air conditioning (HVAC), electrical distribution, monitoring, and fluid), which will be shutdown and drained or de-energized. The process, laboratory, and office areas of the facility will be secured to convert the facility to a minimum safe S&M condition for turnover to an ERC for long-term interim surveillance preparatory to a final D&D phase.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP WBS 1.12.1.1

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.0.1	FFTF Integration

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70 & AF-95

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

Plan, direct, and monitor FFTF standby and other ART facility transition to shutdown and turnover to ERC. Perform program integration, including development and maintenance of the work breakdown structure, logic diagrams, and upper tier schedules to establish baselines for the preparation of resource loaded schedules and cost estimates. Make assignments to performing organizations. Maintain Transition Project files. Administer FSAR documentation and coordinate resolution of related issues. Administer the FFTF End Point Program. Provide business accounting and performance measurement functions for the execution year. Provide business and financial support and out-year program planning including, coordination of responses to review bodies appraising the safety of facility operations, review of safety related rule making actions for applicability to FFTF and their implementation, coordination and preparation of budget documents (Project Baseline Summary - Ten Year Plan, and Field Work Proposal) and the MYWP, preparation of required Hanford Site Management System documents, and respond to numerous DOE requests (e.g., budget exercises, white papers, special schedules, etc.).

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.10.1	Core Component Disposition

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

Offload all unusable fueled components from within FFTF and place them in interim storage. Offload unusable nonfueled components from within FFTF and ship them for disposal. Activities in these areas include: Oversee the procurement and testing of ISCs and CCCs; prepare and approve detailed refueling plans and IEMC work plans; perform necessary criticality evaluations; conduct operational readiness assessments; operate and maintain the refueling equipment; provide engineering, maintenance, and operations support for component handling, washing, packaging, and shipping operations; assemble FFTF fuel assembly data packages; preserve FFTF nuclear equipment performance data and documentation.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.10.3	Plant Activities Associated with Shutdown

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS will perform plant system inspections and preparations which are consistent with the FFTF Transition Project Plan for transition to shutdown. These activities are limited to actions which do not impact the potential to restart the FFTF. For example, the trace heaters and pipe supports for the primary sodium drain lines will be inspected and repaired, as appropriate. Also, the argon gas systems will be cross-connected between the FSF and the FFTF, as required for minimum cost maintenance of an inert gas blanket on drained sodium systems after shutdown.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.11.1	Legacy Occupancy

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

Provide Landlord services for the Building 337 Highbay and buildings 335 and 3718M.

Provide building management and operation for the 335, 337 Highbay, and 3718-M buildings and the sodium systems located in Building 337 Highbay basement and Building 3718M. Provide electrical power and electrical maintenance for buildings 335, 3718M, and 337 Highbay. Provide steam for the 337 Highbay. Provide inert gas for sodium system protection. Provide building emergency support for buildings containing sodium.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.11.2	NE RCRA Closures

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

Three NE Legacy facilities were determined to require RCRA closure plans as appropriate remediation action. Only one of these facilities remains to be dispositioned, the 3718-F Alkali Metal Treatment and Storage Facility.

The 4843 facility has been accepted for clean closure and the RCRA permit closed. The 105-DR LSFF has been accepted for partial clean closure and the RCRA permit has been transferred to Bechtel Hanford. Soil sampling results at the 3718-F facility identified PCBs. This issue must still be resolved to complete closure of the 3718-F location.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Advanced Reactors Transition/BWHC	2 DATE 9/15/97	3 IDENTIFICATION NO. N/A
4 WBS ELEMENT CODE 1.12.1.1.11.3	5 WBS ELEMENT TITLE NE Legacies Deactivation	
6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION 0	8 DATE
9 APPROVED CHANGES		
10 SYSTEM DESIGN DESCRIPTION N/A	11 BUDGET AND REPORTING NUMBER EX-70	

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Overheads, and Enterprise Companies.

B. TECHNICAL CONTENT/WORK STATEMENT

Provide management, technical lead and coordination for the disposition of the non-reactor NE facilities.

The scope of this effort includes: development of the implementation plans to eliminate NE programs legacies; implementation of the Sodium Management Plan reflecting coordination with DOE and WA-Ecology and addressing potential RCRA issues and applicability; disposition of excess material associated with these facilities, as funds permit. This includes disposition of sodium test loops in accordance with CRADA.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.12.1	309 Building S&M

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management, and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

S&M activities include: building administration, building operations, maintenance, and safety analysis.

Building administration consists of work management using the JCS system, lock and tag administration, property protection, emergency planning, facility access control, facility orientation and maintenance of the shutdown log.

Building operations consists of paying utility bills, maintaining safe conduct of operations, and surveillance. Surveillance includes routine radiation protection surveys, operations checks, housekeeping and safety inspections and compliance assurance.

Maintenance includes preventive and corrective maintenance activities to ensure the building's safety envelope is adequate during the transition activities. It also includes input into the maintenance section of the building's D&D plan.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.12.2	309 Building D/C

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management, and Overheads.

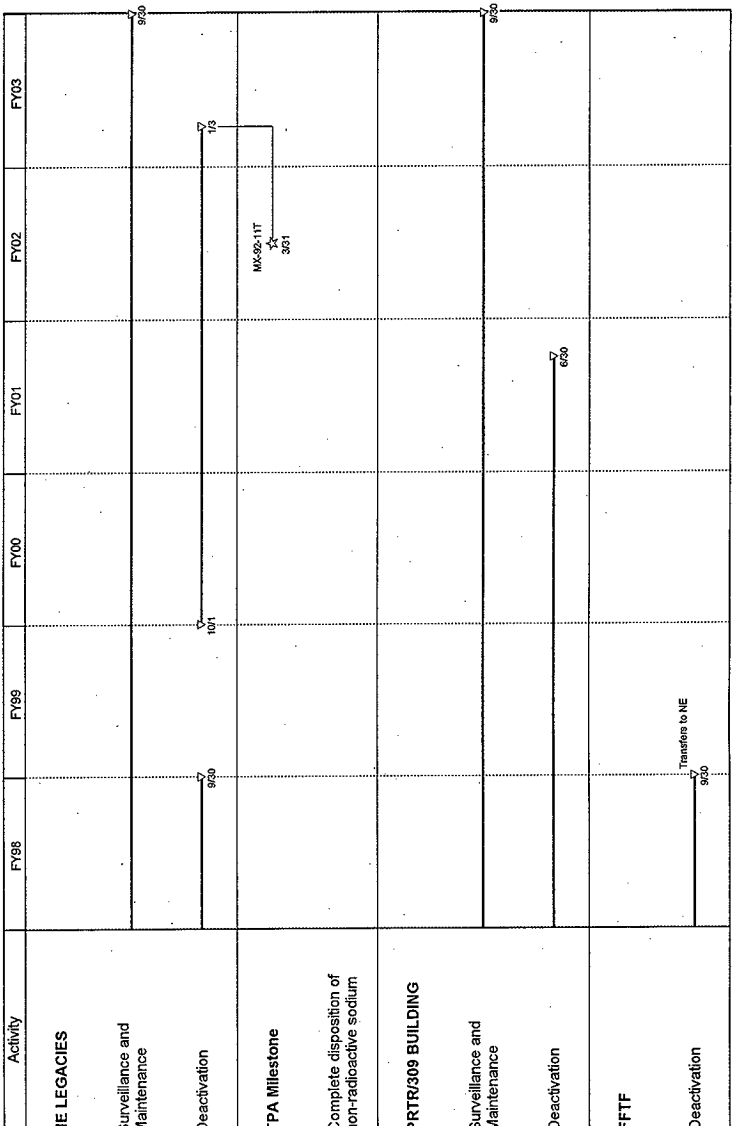
B. TECHNICAL CONTENT/WORK STATEMENT

D/C will move the facility towards turnover to the ERC for interim S&M and final D&D. Activities to be accomplished include disposition the underground emergency diesel fuel oil tank; characterize, cleanout, and stabilize the Transfer Waste Tank farm, the Rupture Loop Annex, the Fuel Storage Basin, the Fuel Examination Cell, the Fuel Transfer Basin, and the PRTR reactor cavity; replace the H&V system HEPA filters; disconnect and cap sanitary and process sewer lines. Completion reports will be prepared for key activities.

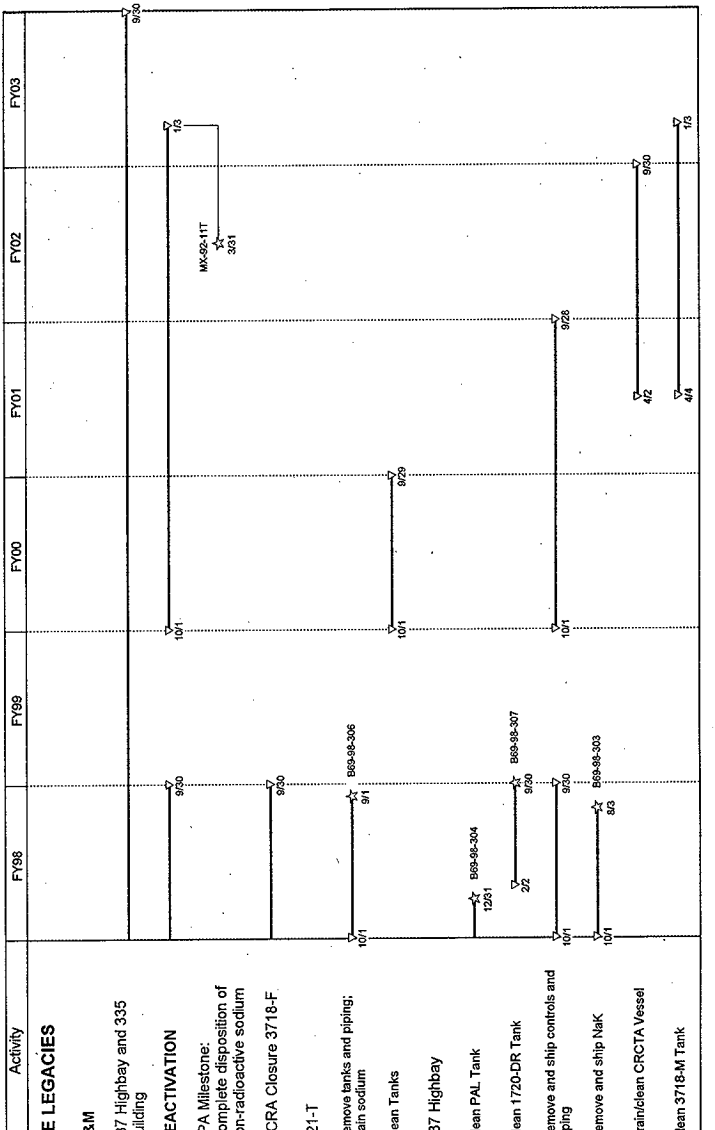
The facility Safety Basis document will be formatted in the Interim Safety Basis (ISB) style but of lesser scope to be consistent with the graded approach philosophy of a radiological facility rather than a nuclear facility.

2.3 SCHEDULE

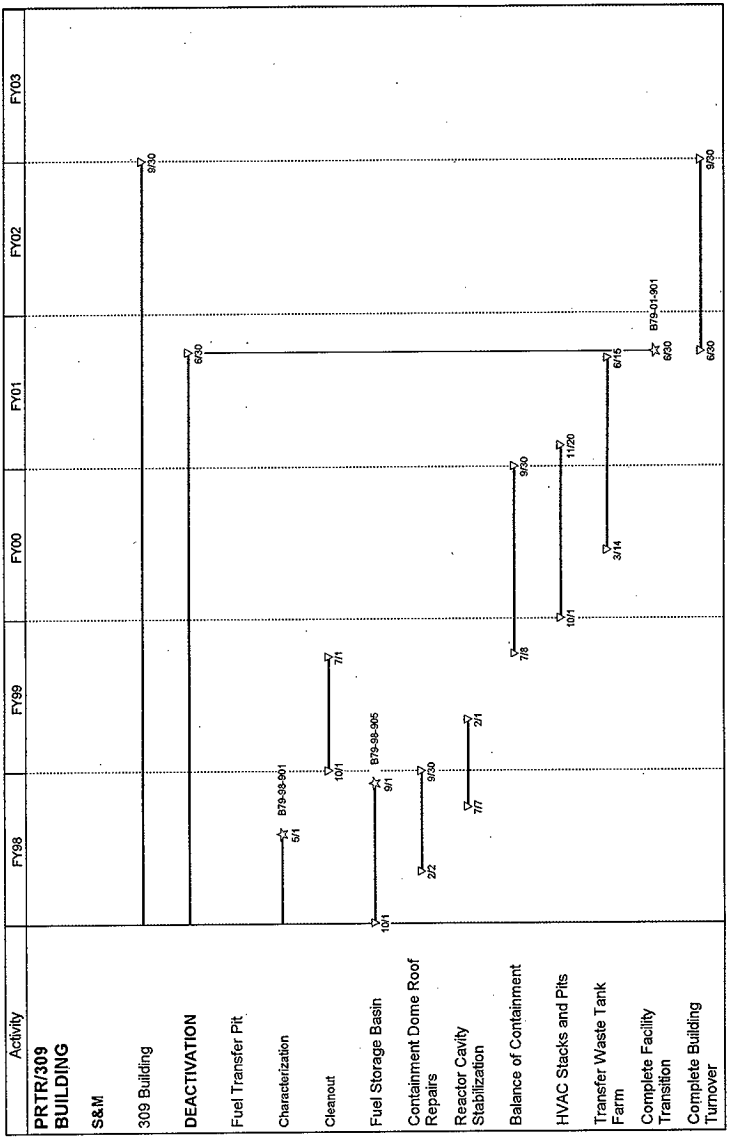
2.3.1 Environmental Management Master Schedule



2.3.1.1 Nuclear Energy Legacies Schedule



2.3.1.2 PRTR/309 Building Schedule



2.3.2 Milestones List

MILESTONE CONTROL #	TPA-MS NUMBER	TPA TYPE	MS LEVEL	MS TITLE	TYPE	DATES PLANNED BASELINE	DATES APPROVED BASELINE	DATES REVISED BASELINE	PBS#
B69-98-304			RL	Clean the Prototype Applications Loop Sodium Tank	PBCI	12/31/97			RL-TP11
B79-98-901			RL	Characterize the PRTR Fuel Transfer Pit	**	5/1/98			RL-TP11
B10-98-101			RL	Complete RRB for OTA Shearing ATP	PBCI	6/30/98			RL-TP11
B10-98-301			RL	Replace Refrigerant in ICCW/ECCW Chillers with R134a	OTH	6/30/98			RL-TP11
B69-98-303			RL	Remove the Building 337 NaK	PBCI	8/3/98			RL-TP11
B10-98-102			RL	Complete ATP for OTA Shear	PBCI	8/31/98			RL-TP11
B69-98-306			RL	Remove 221-T Sodium Piping and Tanks	PBCI	9/1/98			RL-TP11
B79-98-905			RL	Stabilize the PRTR Fuel Storage Basin	OTH	9/1/98			RL-TP11
B69-98-305			RL	Revise the Hanford Site Sodium Management Plan	OTH	9/30/98			RL-TP11
B69-98-307			RL	Clean Residuals from 1720-DR Sodium Tank	PBCI	9/30/98			RL-TP11
B10-98-103			RL	Obtain RRB Release for OTA Shear Operation	PBCI	10/9/98			RL-TP11
B19-98-402	M-81-02	I	FO	Complete Sodium Storage Facility Startup -- COMPLETE	EA	7/31/98			RL-TP11
B19-99-402	M-92-09	I	FO	Complete aquisition of new facilities, modification of existing facilities, and/or modifications of planned facilitites necessary for storage, treatment, and disposal of Hanford Site sodium.	EA	TBE 10/31/98			RL-TP11
B69-99-302	M-92-10	I	FO	Submit Hanford Site Sodium Management Plan to Ecology	EA	10/31/98			RL-TP11
B17-00-101	M-20-29A	I	FO	Submit Sodium Storage Facility and Sodium Reaction Facility Closure Plan or request for procedural closure	EA	12/31/99			RL-TP11
B79-01-901			FO	Transition Building 309 to shutdown status	OTH	6/30/01			RL-TP11
B69-02-301	MX-92-11T	T	FO	Complete disposition options for all Hanford Site nonradioactive sodium	OTH	3/31/02			RL-TP11
B19-98-401	M-81-04-T01	T	FO	Complete Reactor and Heat Transport System Sodium Drain	OTH	4/30/98		NOTE 1	RL-TP11
B17-98-107	M81-02-T01	T	FO	Submit Sodium disposition Evaluation Report/Decision Point	OTH	6/30/98		NOTE 1	RL-TP11
B19-99-301	M-81-00-T02	T	FO	Complete transfer of irradiated fuel to dry cask storage	OTH	10/31/98		NOTE 1	RL-TP11
B19-99-302	M-81-00-T03	T	FO	Complete transfer of unirradiated fuel to the Plutonium Finishing Plant	OTH	10/31/98		NOTE 1	RL-TP11
B19-99-303	M-81-00-T04	T	FO	Complete transfer of special fuel to the Idaho National Engineering Laboratory for consolidated fuel	OTH	10/31/98		NOTE 1	RL-TP11
B17-99-102	M-81-03	I	FO	Submit FFTF End Point Criteria Document	EA	12/31/98		NOTE 1	RL-TP11
B19-99-401	M-81-04-T02	T	FO	Complete Interim Decay Storage and Fuel Storage Facility sodium drain	OTH	12/31/98		NOTE 1	RL-TP11
B19-00-401	M-81-04	I	FO	Complete FFTF sodium drain	EA	3/31/00		NOTE 1	RL-TP11
B19-01-501	M-81-00-T05	T	FO	Complete auxiliary system deactivation	OTH	3/31/01		NOTE 1	RL-TP11
B17-01-101	M-81-05	I	FO	Submit FFTF Surveillance and Maintenance Plan	EA	6/30/01		NOTE 1	RL-TP11
B19-01-502	M-81-06	I	FO	Complete PCB Transformer Disposal	EA	9/30/01		NOTE 1	RL-TP11
B17-02-101	M-81-00	M	FO	Complete FFTF Transition and initiate the Surveillance and Maintenenace Phase	EA	12/31/01		NOTE 1	RL-TP11
NOTES:									
1: These Milestones are the subject of a draft change proposal, which will delete them due to the FFTF entry into Standby.									
2: TYPE designators are as follows: EA - enforceable agreement; OTH - other; PBCI - Performance Based Contract Incentive; "**" - "double asterik" milestone									

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

2.3.3 Milestone Description Sheet			
Title: Clean the Prototype Application Loop Sodium Tank			Date: 9/15/97
Assigned To: W. F. Brehm			CIN:
Program WBS Designator: 1.12.1.1.11.3			Due Date: 12/31/97
Control Number: B69-98-304			Rev: 1
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☒ Other (specify) Project Status Report	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Clean the Prototype Application Loop (PAL) sodium tank. Note: It may be necessary to remove tank internals and dispose of them as sodium-containing waste, if they cannot be cleaned effectively.			
Description of what constitutes completion of this milestone: All sodium and sodium compounds have been removed from the PAL tank, including all the tank internals. Cleanliness has been verified by visual inspection and/or analysis of rinse water. The tank is suitable for excess or recycle.			
Cost Account Manager D. L. Polzin		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.3.3 Milestone Description Sheet (continued)

Title: Characterize the PRTR Fuel Transfer Pit			Date: 9/15/97
Assigned To: E. J. Bitten			CIN:
Program WBS Designator: 1.12.1.1.12.2			Due Date: 5/01/98
Control Number: B79-98-901			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Conduct a detailed radiological and hazardous materials survey to characterize contamination found in the Plutonium Recycle Test Reactor (PRTR) Fuel Transfer Pit. Document results of the characterization surveys.			
Description of what constitutes completion of this milestone: FDH shall submit a letter to RL-SPO documenting completion of PRTR Fuel Transfer Pit Characterization activities and summarizing the results.			
Cost Account Manager E. J. Bitten		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP WBS 1.12.1.1

2.3.3 Milestone Description Sheet (continued)			
Title: Complete RRB for OTA Shearing ATP			Date: 9/15/97
Assigned To: S. W. Hiller			CIN:
Program WBS Designator: 1.12.1.1.10.1			Due Date: 6/30/98
Control Number: B10-98-101			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☐ Letter ☐ Drawings ☒ Other (specify) Approval signature on Readiness Assessment Release	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Completion of this milestone is approval by the FFTF approval authority for FFTF plant personnel to perform the Open Test Assembly Shear Acceptance Test Procedure (ATP).			
Description of what constitutes completion of this milestone: Signature of FFTF Approval Authority on the Readiness Assessment Release Sheet.			
Cost Account Manager W. V. Witherspoon		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.3.3 Milestone Description Sheet (continued)

Title: Replace Ozone Depleting CFC-12 Refrigerant in ICCW/ECCW Chillers	Date: 9/15/97
Assigned To: T. M. Burke	CIN:
Program WBS Designator: 1.12.1.1.10.3	Due Date: 6/30/98
Control Number: B10-98-301	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: The existing, ozone depleting CFC-12 refrigerant will be removed from all In-Containment and Ex-Containment Chillers and will be replaced with non-ozone depleting HFC-134a in all operable units.

Description of what constitutes completion of this milestone:
Complete work packages 4F-97-00214 through 4F-97-00221 to replace the existing CFC-12 refrigerant with HFC-134a.

Cost Account Manager T. M. Burke	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

2.3.3 Milestone Description Sheet (continued)

Title: Remove the Building 337 NaK	Date: 9/15/97
Assigned To: W. F. Brehm	CIN:
Program WBS Designator: 1.12.1.1.11.3	Due Date: 8/03/98
Control Number: B69-98-303	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☐ Report ☐ Letter ☐ Drawings ☒ Other (specify) Project Status Report	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Remove the sodium potassium alloy (NaK) from Building 337.

Description of what constitutes completion of this milestone: The bulk NaK is drained from the Building 337 cold trap cooling loop and cooling jacket into DOT approved receiving vessels and safely shipped offsite to a buyer. The cooling loop and jacket is back-filled with inert gas and established in a safe condition awaiting cleaning of residual NaK.

NOTE: The search for a buyer began in September 1997. If a buyer for the NaK cannot be found after a good faith search, the NaK will be safely stored until a treatment facility can be located. Location of a treatment facility and final disposal of the NaK will be pursued in FY 1999, if supported by the budget.

Cost Account Manager D. L. Polzin	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.3.3 Milestone Description Sheet (continued)

Title: Complete ATP for OTA Shear	Date: 9/15/97
Assigned To: S. W. Hiller	CIN:
Program WBS Designator: 1.12.1.1.10.1	Due Date: 8/31/98
Control Number: B10-98-102	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Complete the Acceptance Test Procedure (ATP) for operation of the open test assembly shear in the IEM Cell. Process two (2) forty-foot Material Open Test Assemblies (MOTA) for packaging in disposal containers.

A Test Results Review Team (TRRT) shall review the results of the ATP and issue its final report.

Description of what constitutes completion of this milestone: Provide a copy of the Test Results Review Team (TRRT) report stating that no further testing is required, based upon satisfactory completion of the ATP and review by the TRRT.

Cost Account Manager W. V. Witherspoon	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.3.3 Milestone Description Sheet (continued)

Title: Remove 221-T Sodium Piping and Tanks	Date: 9/15/97
Assigned To: W. F. Brehm	CIN:
Program WBS Designator: 1.12.1.1.11.3	Due Date: 9/01/98
Control Number: B69-98-306	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Subject to radiological free-release of the sodium, remove the sodium-wetted piping and tanks from the 221-T Head End Building.

Description of what constitutes completion of this milestone: Sodium wetted piping has been de-insulated, heaters and wiring removed, and cut up, placed into waste drums and is shipped offsite (or staged in a 90-day pad awaiting shipment.) The sodium in the two tanks has been drained into DOT approved shipping containers and is staged awaiting shipment. The tanks have been removed from 221-T. The portion of the sodium piping inside the Containment Systems Test Facility has been either cleaned of all residual sodium or removed and packaged with the other sodium wetted piping.

Cost Account Manager W. F. Brehm	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.3.3 Milestone Description Sheet (continued)

Title: Stabilize the PRTR Fuel Storage Basin	Date: 9/15/97
Assigned To: E. J. Bitten	CIN:
Program WBS Designator: 1.12.1.1.12.2	Due Date: 9/01/98
Control Number: B79-98-905	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Conduct a detailed radiological and hazardous materials survey to characterize contamination found in the Plutonium Recycle Test Reactor (PRTR) Fuel Storage Basin. Remove any portable contaminated equipment and prepare for shipment to the Solid Waste Burial Grounds. As necessary, remove smearable contamination from surfaces of the basin and stabilize residual surface contamination. Document results of the characterization surveys and stabilization.

Description of what constitutes completion of this milestone: FDH shall submit a letter to RL documenting completion of PRTR Fuel Examination Cell Stabilization activities.

Cost Account Manager E. J. Bitten	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.3.3 Milestone Description Sheet (continued)

Title: Obtain RRB Release for OTA Shear Operation	Date: 9/15/97
Assigned To: S. W. Hiller	CIN:
Program WBS Designator: 1.12.1.1.10.1	Due Date: 10/9/98*
Control Number: B10-98-103	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☐ Report ☐ Letter ☐ Drawings ☒ Other (specify) Approval signature on Readiness Assessment Release	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Completion of this milestone is approval by the FFTF approval authority to release unrestricted operation of the Open Test Assembly Shear by FFTF plant personnel. This would be authorized after satisfactory completion of the ATP and TRRT.

Description of what constitutes completion of this milestone: Signature of FFTF Approval Authority on the Readiness Assessment Release Sheet.

Cost Account Manager W. V. Witherspoon	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

* The proposed Performance Based Contract Incentive stretch date for this milestone is 9/30/98.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

2.3.3 Milestone Description Sheet (continued)

Title: Revise the Hanford Site Sodium Management Plan			Date: 9/15/97
Assigned To: D. L. Nielsen			CIN:
Program WBS Designator: 1.12.1.1.0.1			Due Date: 9/30/98
Control Number: B69-98-305			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☐ DOE-RL ☒ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Revise the Sodium Management Plan reflecting input from engineering studies, regulatory compliance, and the status of sodium and test loop disposition. The revision shall include all plan elements required by the TPA Action Plan, section 11.5.			
Description of what constitutes completion of this milestone: Provide a copy of the updated Hanford Site Sodium Management Plan to RL.			
Cost Account Manager R. K. Hulvey		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

** This milestone provides this report to RL in advance of TPA Milestone M-92-10, due 10/31/98. Due to the uncertainty about the FFTF future mission, the due date for M-92-10 is under discussion. If TPA Milestone M-92-10 is delayed, this milestone due date will be revised by appropriate change request.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

2.3.3 Milestone Description Sheet (continued)

Title: Clean Residuals from 1720-DR Sodium Tank	Date: 9/15/97
Assigned To: W. F. Brehm	CIN:
Program WBS Designator: 1.12.1.1.11.3	Due Date: 9/30/98
Control Number: B69-98-307	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Clean the sodium residuals from the 1720-DR storage tank.

Description of what constitutes completion of this milestone: Sodium and sodium compounds have been removed from the 1720-DR tank, including all the tank internals. Cleanliness has been verified by visual inspection and/or analysis of rinse water. The tank is suitable for excess or recycle.

Cost Account Manager W. F. Brehm	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

2.4 COSTS AND FUNDS

2.4.1 Budget Authority (B/A) by Year -- Environmental Management Activities

	WBS #s	FUND SOURCE	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
ENVIRONMENTAL MANAGEMENT													
FFTF Deactivation including a share of FFTF Project Integration	1.12.1.1.10	RL-TP11	11,277	5,700									16,977
FY 1997 Deactivation Carryover		RL-TP11		800									
NE Legacies	1.12.1.1.11	RL-TP11	2,000	1,850	530	2,271	2,467	2,220	770				12,108
309 Building/PRTR	1.12.1.1.12	RL-TP11	2,000	1,850	1,377	2,070	1,700	620					9,617
FY 1997 Standby Carryover		RL-TP11		880									
TOTAL:			15,277	11,080	1,907	4,341	4,167	2,840	770				40,382

2.4.2 Budgeted Cost of Work Scheduled (BCWS) by Year -- Environmental Management Activities

	WBS #s	FUND SOURCE	EAC FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
ENVIRONMENTAL MANAGEMENT													
Project Integration	1.12.1.1.0.1	RL-TP11	1,037	2,356									3,393
FFTF Deactivation	1.12.1.1.10	RL-TP11	8,849	5,255									14,104
NE Legacies S&M	1.12.1.1.11	RL-TP11	909	508	573	536	563	569	580				4,238
NE Legacies D/C	1.12.1.1.11	RL-TP11	1,707	1,161	0	1,735	1,904	1,651	190				8,348
309 Building/PRTR S&M	1.12.1.1.12	RL-TP11	750	847	734	739	616	620					4,306
309 Building/PRTR D/C	1.12.1.1.12	RL-TP11	1,225	953	600	1,331	1,084						5,193
TOTAL:			14,477	11,080	1,907	4,341	4,167	2,840	770				39,582

2.4.3 Environmental Management Funding by WBS

1998 SITE RL-WBS CODES 1998 PHMC-FDS CODES	LEVEL	TITLE	MANAGER	BUDGET VALUES ($000)		
				ACTIVITY	COST ACCOUNT	
					FFTF D/C	NON-FFTF
1.12.1.1 1B1	PROJECT	Advanced Reactors Transition	Loika			
1.12.1.1.0 1B1B	ACTIVITY	Integration Management	Loika	2,251		
1.12.1.1.0.1 1B1B01	CA	FFTF Integration	Hulvey		2,156	200
1.12.1.1.10 1B1A	ACTIVITY	FFTF Deactivation	Loika	5,255		
1.12.1.1.10.1 1B1A0A	CA	Core Component Disposition	Witherspoon		4,846	
1.12.1.1.10.3 1B1A0C	CA	Plant Activities Associated with Shutdown	Burke		409	
1.12.1.1.11 1B1C	ACTIVITY	NE Legacies	Loika	1,669		
1.12.1.1.11.1 1B1C01	CA	Legacy Occupancy	Brehm			508
1.12.1.1.11.2 1B1C02	CA	NE RCRA Closures	Dillhoff			25
1.12.1.1.11.3 1B1C03	CA	NE Legacies Deactivation	Brehm			1,136
1.12.1.1.12 1B1D	ACTIVITY	PRTR/309 Building	Bitten	1,800		
1.12.1.1.12.1 1B1D01	CA	309 Building S&M	Bitten			847
1.12.1.1.12.2 1B1D02	CA	309 Building D/C	Bitten			953
			GRAND TOTAL	11,080	7,411	3,669

3.0 FFTF STANDBY RELATED ACTIVITIES

3.1 TECHNICAL BASELINE

3.1.1 Mission

The Advanced Reactors Transition program will maintain the FFTF and the FMEF in a standby condition to perform a role in the Department's tritium production strategy, if required. The purpose is to maintain FFTF as near-term "insurance," given uncertainties associated with the current dual-track approach to tritium production and future stockpile requirements. Surveillance and maintenance will ensure compliance with federal and state safety requirements. Additionally, FFTF activities will ensure that there is: (a) no degradation of key plant systems; (b) retention of the authorization basis and configuration control; and (c) maintenance of key staffing, qualifications, and training.

3.1.2 Scope

3.1.2.1 Fast Flux Test Facility. The Fast Flux Test Facility (FFTF) is the largest, most modern, liquid metal-cooled test reactor in the world. Originally constructed in the late 1970s, it's purpose was to support the U.S. Liquid Metal Fast Breeder Reactor (LMFBR) Program. The FFTF began power operation in 1982 and demonstrated its ability to perform fuel and materials tests in support of both national and international fast breeder reactor programs, produce medical and industrial isotopes, perform materials tests for the fusion and space programs, perform passive safety tests, and provide customized neutron environments to meet customer needs. Detailed studies were also done to show the feasibility of producing significant quantities of Plutonium-238, as well as approximately 100 megawatts of electrical power with the addition of a steam powered turbine generator.

In January 1990, after a U. S. Department of Energy (DOE) evaluation of potential long term missions for the FFTF, DOE concluded that justification to support the expense of continued operation did not exist. This led to a series of new studies and marketing efforts by the Governor of the State of Washington, in cooperation with the Congressional Delegation of the State. Eventually the Secretary of Energy informed the Washington State Congressional Delegation that DOE planned to commence a phased shutdown process on December 15, 1993, to place the FFTF in a radiologically and industrially safe shutdown condition. Accordingly, removal of the fuel from the reactor vessel began in March 1994 and was completed in April 1995. Following this major accomplishment, the cleaning and packaging for interim storage of sodium wetted, fueled components was successfully demonstrated.

In order to remove the spent nuclear fuel from storage in the FFTF, procurement contracts were placed for the fabrication of Interim Storage Casks (ISC) and Core Component Containers (CCC) that will be used for the dry storage of washed, FFTF nuclear fueled components. The CCC, when filled with up to seven clean FFTF fueled components, is placed inside of an ISC and transported to the 400 Area Interim Storage Area (ISA), located in the

northeast corner of the FFTF complex. The 400 Area ISA is large enough to also store spent nuclear fuel from other facilities in the Hanford 300 Area.

After preparations were made to support the early draining of the secondary loop sodium to in-plant storage tanks in November 1995, DOE ordered all drain activities delayed while an expedited review was conducted on the possible benefits of continued reactor operation for tritium production. Eventually, DOE suspended actions to drain the secondary loop sodium until further notice and deferred all activities that would affect the potential to restart the reactor. Then in January 1997, the Secretary of Energy, by Memorandum of Decision (MOD), directed the FFTF be maintained in a standby condition while studies are conducted to determine if the FFTF can perform a role in augmenting the current, dual-track tritium production options. By December 1998 the DOE is to determine the primary, long-term source of tritium and any potential augmentation role for the FFTF. The MOD identifies two options for producing tritium - building an accelerator or converting a commercial reactor - with the FFTF considered as either a backup or a stopgap measure. Despite these delays to the shutdown plan, significant progress has been made in several key areas which include: packaging and storing highly-radioactive, spent, fueled components in ISCs; procedure preparation for draining plant sodium; completing the reactor vessel plenum drill development project; and completing the construction of the Sodium Storage Facility (SSF). The new SSF is located adjacent to the FFTF and has four tanks for storing radioactive sodium. The 292,000 gallon volume of these tanks will accommodate all drainable sodium from the FFTF.

Current planning assumes complete transfer of the FFTF and the Fuels and Materials Examination Facility (FMEF) to the DOE Office of Nuclear Energy, Science and Technology (DOE-NE) by FY 1999. A final decision is expected by December of 1998, that will result in an order to either (1) evaluate the FFTF for restart and to perform initial preparations for restart to produce tritium, (2) resume shutting down the complex, or (3) continue in the standby state.

3.1.2.2 Fuels and Materials Examination Facility. The FMEF was built during the late 1970s and early 1980s as a major addition to the breeder reactor technology development program. Its design was initiated in 1978 and underwent several major changes in scope as a result of changes in the direction of the DOE's breeder reactor development programs. The initial design concept was to provide a facility with capability to destructively and nondestructively inspect irradiated fuel materials from the DOE Research and Development Breeder Reactor projects being developed at that time (the FFTF and the Clinch River Breeder Reactor Plant [CRBRP]). The first facility scope revision occurred in April 1979, when a second breeder reactor development facility was incorporated within the FMEF design. This facility, the High Performance Fuels Laboratory (HPFL), was to produce breeder reactor fuel assemblies for the FFTF and the CRBRP. It included fabrication of high-exposure and spiked fuels for proliferation resistance. During 1979, the U.S. Government's proliferation policy was changed and the need for a HPFL type of fuel fabrication was eliminated. As a result, the HPFL process was replaced by the Secure Automated Fabrication (SAF) Line in October 1980. Further changes in the DOE Breeder Reactor Program direction resulted in a facility scope reduction in October 1983, removing the irradiated fuel

examination functions. During 1983, modifications to the shops and storage portion of the Entry Wing were incorporated for FFTF fuel assembly fabrication (pins to assemblies). The Fuel Assembly Area (FAA) was then established and configured to support fuel pin inspection, assembly, and storage. Low-exposure, SAF-fabricated driver fuel pins would be transferred to the FAA for final processing. With the demise of the DOE Breeder Reactor Program, the SAF Project was canceled. Several other projects have altered the original design of the facility, but none have ever come to fruition. Currently the facility is limited to providing office space and one of its hot cells serves as a test location for the Light Duty Utility Arm that is being built to inspect underground tanks that contain radioactive chemical waste.

If the FFTF is required to perform a role in the tritium production strategy, the FMEF is expected to be used to fabricate the fuel supply and possibly the targets. Alternatively, the FMEF may have an independent role in the Department's plans for disposition of surplus weapons grade plutonium.

3.1.2.3 Standby Project Office. The Standby Project Office (SPO) has been established to manage the overall Advanced Reactors Transition program with a special focus on Standby activities and special studies needed to support the DOE decision of a role for the FFTF in the tritium production strategy. The SPO is conducting the safety and environmental analyses that would be needed for required nuclear safety and National Environmental Policy Act (NEPA) documents prior to startup for tritium production. The SPO is also evaluating the use of FFTF for medical isotope production. A Standby Project Office Project Plan will be issued to further detail its operation, authority, and scope.

Studies and analyses, focused around five major sub-tasks, are underway:

1. Preparation of documentation that addresses FFTF environmental and safety issues developed in concert with external review groups, the Tribal Nations, regulators, and the public;

2. Development of a database for technical questions indicating current resolution of proposed approach (including validation of existing FFTF tritium production estimates);

3. Preparation and independent review of FFTF restart and life-cycle cost and schedule estimates;

4. Preparation of a Systems Engineering Management Plan (SEMP) that addresses fuel and target supply, long-lead time materials procurement, transportation, integration with Hanford Strategic Plan, tritium storage and processing sites, regulatory requirements, and staffing needs; and

5. Preparation of an FFTF medical isotopes production assessment report, including economic and technical feasibility.

If directed by HQ, the SPO would proceed with preparation of appropriate NEPA documentation that augments the existing *Final Programmatic Environmental Impact Statement (PEIS) for Tritium Supply and Recycle (DOE/EIS-0161).*

3.1.3 Drivers

The Advanced Reactors Transition program will comply with applicable Federal, State, and local statutes and DOE Orders in operating assigned facilities. The requirement to maintain the FFTF and FMEF in Standby has been established by RL letter of direction.

3.1.4 Assumptions

This section of the MYWP is based on the following assumptions:

1. Office of Nuclear Energy funds in the amount of $6.0M will be reprogrammed for purpose of funding the SPO activities.

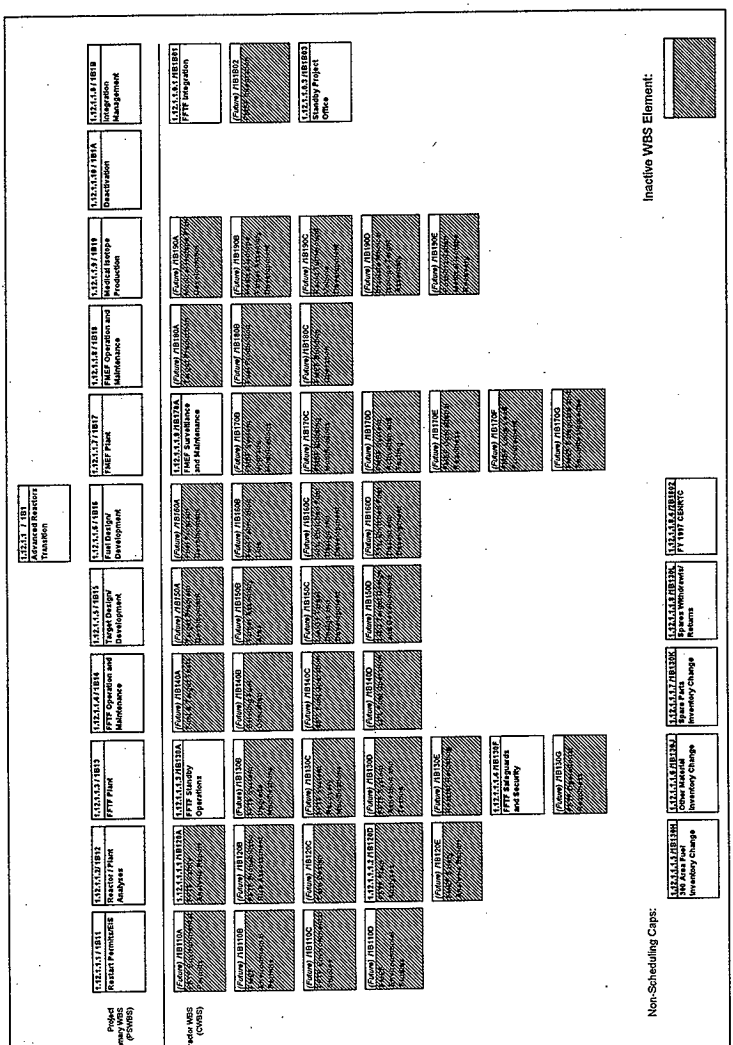
2. Standby activities will cost no more than $31,181K plus approved carryover, unless additional funding is provided from the Office of Nuclear Energy.

3. By December 1998, the SPO will be directed to initiate NEPA documentation for an FFTF and FMEF startup.

4. The NEPA documentation will be approved by December 1999 and the FFTF and FMEF directed to startup for a tritium and medical isotope production mission.

3.2 WORK BREAKDOWN STRUCTURE

3.2.1 Work Breakdown Structure Hierarchy



ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.0	Integration Management

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70 & AF-95

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads and Enterprise Company Services.

B. TECHNICAL CONTENT/WORK STATEMENT

Provide planning and administration of Advanced Reactors Transition (ART) Project activities; communication with the DOE; and other special activities, as needed. Manage reserved funds required to pay for accomplishment of performance related fees.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3	FFTF Plant

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS will maintain the FFTF in a safe and compliant, standby condition. The condition of the plant hardware, software and personnel will be preserved in a manner not to preclude plant restart within three and one half years of a decision to do so. This WBS will focus on the following objectives:

1. Carry out plant preservation and maintenance required to sustain standby status.
2. Preserve and maintain required design and engineering documentation and data.
3. Maintain technical capability and expertise.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.7	FMEF Plant

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

Provide management, engineering, maintenance, and utilities in accordance with applicable DOE Orders, federal and state environmental requirements, and approved procedures. The Fuels and Materials Examination Facility (FMEF) work scope is limited to surveillance and maintenance of the facility. The FMEF is a seismically qualified, non-contaminated facility that is being held in standby for a possible mission. At some future date, if the DOE determines that FMEF and FFTF are to operate to support the tritium production strategy, this WBS will also provide facility upgrades, modifications, and startup to perform its new role.

Revenue to partially offset the standby expenses is generated by leasing office and floor space to other Hanford Site organizations.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.0.1	FFTF Integration

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70 & AF-95

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

Plan, direct, and monitor the FFTF standby and movement of the other ART facilities through transition to shutdown and turnover to the ERC. Perform program integration, including development and maintenance of the work breakdown structure, logic diagrams, and upper tier schedules to establish baselines for the preparation of resource loaded schedules and cost estimates. Make assignments to performing organizations. Maintain Transition Project files. Administer FSAR documentation and coordinate resolution of related issues. Provide business accounting and performance measurement functions for the execution year. Provide business and financial support and out-year program planning including, coordination of responses to review bodies appraising the safety of facility operations, review of safety related rule making actions for applicability to FFTF and their implementation, coordination and preparation of budget documents (Project Baseline Summary - Ten Year Plan, and Field Work Proposal) and the MYWP, preparation of required Hanford Site Management System documents, and respond to numerous DOE requests (e.g., budget exercises, white papers, special schedules, etc.).

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.0.3	FFTF Standby Project Office

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	AF-95

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

A joint FFTF Standby Project Office (SPO) established by the Pacific Northwest National Laboratory (PNNL) and Fluor Daniel Hanford, Incorporated (FDH) will coordinate and direct activities to maintain the FFTF in a standby status, while continuing the FFTF deactivation work which doesn't impact a potential restart of the reactor, and will manage the performance of studies and analyses for potential FFTF missions. The SPO manages the supporting technical efforts of other participants, particularly with regard to nuclear fuel supply, core engineering, accident analyses, and other technical areas. They also provide a programmatic interface between the FFTF and DOE.

A project plan will be issued, more fully defining the operation, authority, and scope of the Standby Project Office. It will also detail the scope of studies and analyses to be performed.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3.1	FFTF Standby Operations

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company Services.

B. TECHNICAL CONTENT/WORK STATEMENT

This WBS defines the major elements and project baseline for maintaining the FFTF in "Standby". Standby activities will include surveillance and maintenance of the FFTF to maintaining the nuclear and environmental safety envelop. These activities will include, (1) monitoring and operation of plant equipment; (2) planning and performance of corrective and preventive maintenance; (3) safety, quality assurance, and health physics surveillances, assessments, and oversight; (4) training and qualification programs; (5) procurement and management of supplies and consumables; and (5) project planning and integration.

Funded from "standby" funding sources, this WBS also provides necessary services, such as project integration, electrical power, argon gas, and other consumables to FFTF deactivation activities (WBS 1.12.1.1.10)

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3.6	FFTF Safeguards and Security

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Internal Charges, Overheads, and Enterprise Company services.

B. TECHNICAL CONTENT/WORK STATEMENT

Safeguards and Security provides: an effective patrol force, physical security and associated equipment, safeguards oversight and services, and annual security assessments.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP WBS 1.12.1.1

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3.8	300 Area Fuel Oil Inventory Change

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Materials/Equipment and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

300 Area Fuel Oil Inventory Change provides funding for the net inventory change in the 1691 (Inventory) and 1711 (Reserve) General Ledger sub-accounts for bunker fuel oil for the 300 Area Power House.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3.9	Other Materials Inventory Change

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Materials/Equipment and Overheads

B. TECHNICAL CONTENT/WORK STATEMENT

Other Materials Inventory Change provides funding for the net inventory change in the 1681 (Inventory) General Ledger sub-accounts for other special materials, primarily gold, silver, and platinum used in the 300 Area laboratories. It also provides for the transfer of inventory from the former Maintenance and Operations (M&O) contractor to the present Management and Integration (M&I) contractor.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3.10	Spare Parts Inventory Change

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Materials/Equipment and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

Various Inventory Change -- provides funding for the net inventory change in the 1691 (Inventory) and 1711 (Reserve) General Ledger spare parts sub-accounts at MASF, FFTF, Security, Computers, and the 300 Area. It also provides for the transfer of inventory from the former Maintenance and Operations (M&O) contractor to the present Management and Integration (M&I) contractor.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3.11	Spares Withdrawals/Returns

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Materials/Equipment and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

Spares Withdrawals/Returns provides funding for the net inventory change due to spares withdrawals and returns in the 1691 (Inventory) and 1791 (Reserve) General Ledger spare parts sub-accounts at MASF, FFTF, Security, and Computers.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.3.12	CENRTC

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	35-EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Other Contractors, Internal Charges, and Overheads.

B. TECHNICAL CONTENT/WORK STATEMENT

Capital Equipment Not Related To Construction (CENRTC) activities maintain a safe and environmentally compliant reactor plant and support facilities, a modest budget of CENRTC funds that must be available to the project to cover equipment emergencies. Also, CENRTC funds are needed for the purchase of new equipment to assure compliance with new regulations and requirements.

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.2.2 WBS Dictionary (continued)

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT	2 DATE	3 IDENTIFICATION NO.
Advanced Reactors Transition/BWHC	9/15/97	N/A

4 WBS ELEMENT CODE	5 WBS ELEMENT TITLE
1.12.1.1.7.1	FMEF Surveillance and Maintenance

6 INDEX LINE NO.	7 REVISION NO AND AUTHORIZATION	8 DATE
	0	

9 APPROVED CHANGES

10 SYSTEM DESIGN DESCRIPTION	11 BUDGET AND REPORTING NUMBER
N/A	EX-70

12 ELEMENT TASK DESCRIPTION

A. COST CONTENT

Labor, Materials, Purchased Services, Site Services, Internal Charges, Information Resource Management Services, Overheads, and Enterprise Company services.

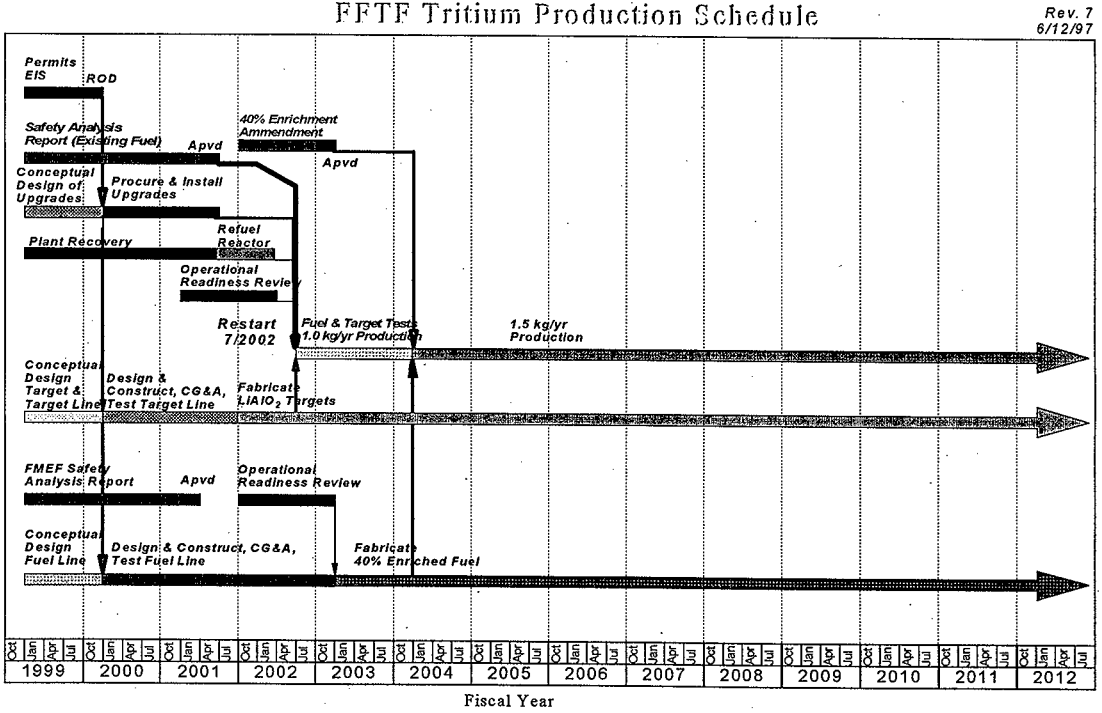
B. TECHNICAL CONTENT/WORK STATEMENT

Provide management, engineering, maintenance, and utilities in accordance with applicable DOE Orders, federal and state environmental requirements, and approved procedures. The Fuels and Materials Examination Facility (FMEF) work scope is limited to surveillance and maintenance of the facility.

The FMEF is a seismically qualified "clean" facility that is being held in standby, waiting a possible mission. Revenue to partially offset the standby expenses is generated by leasing office and floor space to other Hanford Site organizations.

3.3 SCHEDULE

3.3.1 FFTF Restart Master Schedule



3.3.2 Milestones List

MILESTONE CONTROL #	TPA-MS NUMBER	TPA TYPE	MS LEVEL	MS TITLE	TYPE	DATES PLANNED BASELINE	DATES APPROVED BASELINE	DATES REVISED BASELINE	PBS#
B17-98-104			O	Update the Advanced Reactors Resource Loaded Schedule	OTH	10/31/97			RL-TP11
B17-98-106			O	Update the FFTF Standby Plan	OTH	11/26/97			RL-TP11
B00-98-304			RL	Issue Rev. 0 of the Technical Information Document	**	12/26/97			NE
B13-98-103			RL	Complete the FFTF Standby Work Phase 97-4	PBCI	12/31/97			RL-TP11
B13-98-104			RL	Implement a Pilot Program for Work Process Improvements	**	1/9/98			RL-TP11
B13-98-101			RL	Complete Reactor Control Rod Timing Checks	PBCI	1/30/98			RL-TP11
B13-98-102			RL	Issue Head Mounted Equipment Testing Report	PBCI	3/31/98			RL-TP11
B13-98-105			RL	Complete the FFTF Standby Work Phase 98-1	PBCI	3/31/98			RL-TP11
B13-98-106			RL	Complete FFTF Standby Annual System Assessment Reports	**	3/31/98			RL-TP11
B17-98-103			O	Prepare the Advanced Reactors Transition FY 2000 Budget Request Documents, Final Draft	OTH	4/15/98			RL-TP11
B13-98-107			RL	Complete the FFTF Standby Work Phase 98-2	PBCI	6/30/98			RL-TP11
B17-98-105			O	Prepare the Advanced Reactors Transition FY 1999 Multi-Year Work Plan Final Draft	OTH	8/28/98			RL-TP11
B13-98-108			RL	Complete the FFTF Standby Work Phase 98-3	PBCI	9/30/98			RL-TP11
NOTES:									
1: TYPE designators are as follows: EA - enforceable agreement; OTH - other; PBCI - Performance Based Contract Incentive; "**" - "double asterik" milestone									

ADVANCED REACTORS TRANSITION

FY 1998 MYWP WBS 1.12.1.1

3.3.3 Milestone Description Sheet			
Title: Update the Advanced Reactors Resource Loaded Schedule			Date: 9/15/97
Assigned To: W. V. Witherspoon			CIN:
Program WBS Designator: 1.12.1.1.0.1			Due Date: 10/31/97
Control Number: B17-98-104			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☒ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☒ Other (specify) FDH Project Director
Milestone Description: Update the Resource Loaded Schedule (RLS) to reflect transitional progress and new guidance from FDH and DOE.			
Description of what constitutes completion of this milestone: Submit revised RLS to FDH Project Director with copy to RL-SPO.			
Cost Account Manager R. K. Hulvey		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

3.3.3 Milestone Description Sheet (continued)

Title: Update the FFTF Standby Plan			Date: 9/15/97
Assigned To: D. A. Gantt			CIN:
Program WBS Designator: 1.12.1.1.0.1			Due Date: 11/26/97
Control Number: B17-98-106			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☒ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☐ DOE-RL ☒ Other (specify) FDH Project Director
Milestone Description: Update the FFTF Project Plan to reflect the current scope, cost, and schedule baseline. This includes the resolution of institutional and technical issues, and Tri-Party Agreement milestones.			
Description of what constitutes completion of this milestone: Submit revised FFTF Transition Project Plan to FDH Project Director with a copy to RL-SPO.			
Cost Account Manager R. K. Hulvey		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Issue Rev. 0 of the Technical Information Document			Date: 9/15/97
Assigned To: D. L. Nielsen			CIN:
Program WBS Designator: 1.12.1.1.0.3			Due Date: 12/26/97
Control Number: B00-98-304			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Prepare and issue Revision 0 of the Technical Information Document (TID) to document the various environmental and safety studies in progress during FY 1997 and early FY 1998. These studies will provide the basis for a decision by the Secretary of Energy on the future FFTF mission direction.			
Description of what constitutes completion of this milestone: Provide a copy of the completed Technical Information Document to RL-SPO.			
Cost Account Manager R. K. Hulvey		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

3.3.3 Milestone Description Sheet (continued)

Title: Complete the FFTF Standby Work Phase 97-4	Date: 9/15/97
Assigned To: T. R. Gregory	CIN:
Program WBS Designator: 1.12.1.1.3.1	Due Date: 12/31/97
Control Number: B13-98-103	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Accomplishment of the Surveillance and Maintenance work scope will be measured by completing needed Surveillances, PM and ICRS packages, and designated work packages that are scheduled.

For the quarter 10/1/97 through 12/31/97, FFTF staff will: Complete the initial number of needed Surveillances and PM/ICRS work packages, and designated work packages (including an allowance for "projected" emergent work packages) identified at the start of the quarter. As the quarter progresses, emergent priority work beyond the initial projected number will count as completed work against the initial count.

At the start of the quarter, FFTF staff will formally transmit to FDH and RL the initial list of work packages for the quarter. This list will be the reference point for assessing of the quarter's performance at completion.

Description of what constitutes completion of this milestone: Completion of this milestone will be gauged by completion of the needed Surveillances and scheduled PM/ICRS work packages, and designated work packages for the quarter period that, in total number, are equal to or greater than the number of work packages identified at the beginning of the quarter by the FFTF Management Review Board.

Completion of this milestone will be documented by a letter to DOE-RL, after the completion of the quarter, documenting the total number of packages completed, as compared to the number originally designated. For purposes of reconciling actual work accomplished for the quarter, work packages that have been dispositioned as "field work complete" will count as completed work.

Cost Account Manager D. A. Gantt	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Implement a Pilot Program for Work Process Improvements			Date: 9/15/97
Assigned To: G. J. Boehnke			CIN:
Program WBS Designator: 1.12.1.1.3.1			Due Date: 1/9/98
Control Number: B13-98-104			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Implement a pilot program of Work Process Improvements at FFTF, including a standardized prioritization process (LIPS) and a minimum of five work process improvement recommendations from the FY 1997 FFTF work process task team.			
Description of what constitutes completion of this milestone: A letter from FDH to RL-SPO will describe the pilot program and its initial implementation.			
Cost Account Manager D. A. Gantt		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

3.3.3 Milestone Description Sheet (continued)

Title: Complete Reactor Control Rod Timing Checks	Date: 9/15/97
Assigned To: S. W. Hiller	CIN:
Program WBS Designator: 1.12.1.1.3.1	Due Date: 1/30/98
Control Number: B13-98-101	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Complete rod drop timing tests on all available control rod drive systems. A control rod drive system which has experienced a failure requiring major repair efforts, which are not justified during Standby testing, will not be considered to be available in terms of this milestone.

Description of what constitutes completion of this milestone:
FDH shall submit a letter to RL-SPO documenting that the field work is complete, initial data review is satisfactory for all available control rod drive systems, and the applicable work document shows complete in JCS.

Cost Account Manager D. A. Gantt	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Issue Head Mounted Equipment Testing Report			Date: 9/15/97
Assigned To: S. W. Hiller			CIN:
Program WBS Designator: 1.12.1.1.3.1			Due Date: 3/31/98
Control Number: B13-98-102			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Issue a report detailing the exercising and testing of the Head Mounted Components (IVHM, IT, and CRDM), results of data review and recommendations for equipment during long periods of storage (non-operation).

Description of what constitutes completion of this milestone:
A released report with distribution to include the FFTF Standby Project Office (DOE-RL).

Cost Account Manager D. A. Gantt	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Complete the FFTF Standby Work Phase 98-1	Date: 9/15/97
Assigned To: T. R. Gregory	CIN:
Program WBS Designator: 1.12.1.1.3.1	Due Date: 3/31/98
Control Number: B13-98-105	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Accomplishment of the Surveillance and Maintenance work scope will be measured by completing needed Surveillances, PM and ICRS packages, and designated work packages that are scheduled.

For the quarter 1/1/98 through 3/31/98, FFTF staff will: Complete the initial number of needed Surveillances and PM/ICRS work packages, and designated work packages (including an allowance for "projected" emergent work packages) identified at the start of the quarter. As the quarter progresses, emergent priority work beyond the initial projected number will count as completed work against the initial count.

At the start of the quarter, FFTF staff will formally transmit to FDH and RL the initial list of work packages for the quarter. This list will be the reference point for assessing of the quarter's performance at completion.

Description of what constitutes completion of this milestone: Completion of this milestone will be gauged by completion of the needed Surveillances and scheduled PM/ICRS work packages, and designated work packages for the quarter period that, in total number, are equal to or greater than the number of work packages identified at the beginning of the quarter by the FFTF Management Review Board.

Completion of this milestone will be documented by a letter to DOE-RL, after the completion of the quarter, documenting the total number of packages completed, as compared to the number originally designated. For purposes of reconciling actual work accomplished for the quarter, work packages that have been djspositioned as "field work complete" will count as completed work.

Cost Account Manager D. A. Gantt	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Complete FFTF Standby Annual System Assessment Reports			Date: 9/15/97
Assigned To: S. Guttenberg			CIN:
Program WBS Designator: 1.12.1.1.3.1			Due Date: 3/31/98
Control Number: B13-98-106			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ 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 standby Annual System Assessment Reports (ASARs) as required by FFTF-EI-083, "Plant Evaluation Program." All ASARs shall be compiled into a single document with an executive summary and released as an engineering supporting document.			
Description of what constitutes completion of this milestone: Provide a copy of the completed supporting document to RL-SPO.			
Cost Account Manager D. A. Gantt		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP

WBS 1.12.1.1

3.3.3 Milestone Description Sheet (continued)			
Title: Prepare the Advanced Reactors Transition FY 2000 Budget Request Documents, final drafts			Date: 9/15/97
Assigned To: D. A. Gantt			CIN:
Program WBS Designator: 1.12.1.1.0.1			Due Date: 4/15/98
Control Number: B17-98-103			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☒ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Prepare fiscal year (FY) 2000 final draft budget request documents for Advanced Reactors Transition.			
Description of what constitutes completion of this milestone: Submit final drafts of Advanced Reactors Transition FY 2000 budget request documents to DOE-RL.			
Cost Account Manager R. K. Hulvey		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Complete the FFTF Standby Work Phase 98-2			Date: 9/15/97
Assigned To: T. R. Gregory			CIN:
Program WBS Designator: 1.12.1.1.3.1			Due Date: 6/30/98
Control Number: B13-98-107			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Accomplishment of the Surveillance and Maintenance work scope will be measured by completing needed Surveillances, PM and ICRS packages, and designated work packages that are scheduled.

For the quarter 4/1/98 through 6/30/98, FFTF staff will: Complete the initial number of needed Surveillances and PM/ICRS work packages, and designated work packages (including an allowance for "projected" emergent work packages) identified at the start of the quarter. As the quarter progresses, emergent priority work beyond the initial projected number will count as completed work against the initial count.

At the start of the quarter, FFTF staff will formally transmit to FDH and RL the initial list of work packages for the quarter. This list will be the reference point for assessing of the quarter's performance at completion.

Description of what constitutes completion of this milestone: Completion of this milestone will be gauged by completion of the needed Surveillances and scheduled PM/ICRS work packages, and designated work packages for the quarter period that, in total number, are equal to or greater than the number of work packages identified at the beginning of the quarter by the FFTF Management Review Board.

Completion of this milestone will be documented by a letter to DOE-RL, after the completion of the quarter, documenting the total number of packages completed, as compared to the number originally designated. For purposes of reconciling actual work accomplished for the quarter, work packages that have been dispositioned as "field work complete" will count as completed work.

Cost Account Manager D. A. Gantt	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Prepare the Advanced Reactors Transition FY 1999 Multi-Year Work Plan final draft			Date: 9/15/97
Assigned To: D. A. Gantt			CIN:
Program WBS Designator: 1.12.1.1.0.1			Due Date: 8/28/98
Control Number: B17-98-105			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☒ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: Prepare fiscal year (FY) 1999 final draft Multi-Year Work Plan (MYWP) for Advanced Reactors Transition.			
Description of what constitutes completion of this milestone: Submit final draft of Advanced Reactors Transition FY 1999 MYWP to DOE-RL.			
Cost Account Manager R. K. Hulvey		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

3.3.3 Milestone Description Sheet (continued)

Title: Complete the FFTF Standby Work Phase 98-3	Date: 9/15/97
Assigned To: T. R. Gregory	CIN:
Program WBS Designator: 1.12.1.1.3.1	Due Date: 9/30/98
Control Number: B13-98-108	Rev: 0

MILESTONE TYPE:	DIVISION:	DELIVERABLE:	ADDRESS TO:
☐ DOE-HQ ☒ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	☐ Report ☒ Letter ☐ Drawings ☐ Other (specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)

Milestone Description: Accomplishment of the Surveillance and Maintenance work scope will be measured by completing needed Surveillances, PM and ICRS packages, and designated work packages that are scheduled.

For the quarter 7/1/98 through 9/30/98, FFTF staff will: Complete the initial number of needed Surveillances and PM/ICRS work packages, and designated work packages (including an allowance for "projected" emergent work packages) identified at the start of the quarter. As the quarter progresses, emergent priority work beyond the initial projected number will count as completed work against the initial count.

At the start of the quarter, FFTF staff will formally transmit to FDH and RL the initial list of work packages for the quarter. This list will be the reference point for assessing of the quarter's performance at completion.

Description of what constitutes completion of this milestone: Completion of this milestone will be gauged by completion of the needed Surveillances and scheduled PM/ICRS work packages, and designated work packages for the quarter period that, in total number, are equal to or greater than the number of work packages identified at the beginning of the quarter by the FFTF Management Review Board.

Completion of this milestone will be documented by a letter to DOE-RL, after the completion of the quarter, documenting the total number of packages completed, as compared to the number originally designated. For purposes of reconciling actual work accomplished for the quarter, work packages that have been dispositioned as "field work complete" will count as completed work.

Cost Account Manager D. A. Gantt	Program/Project Manager R. K. Hulvey
Program Element Manager E. F. Loika	

3.4 COSTS AND FUNDS

3.4.1 Budget Authority (B/A) by Year -- Standby Activities

	WBS #s	FUND SOURCE	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
FFTF & FMEF STANDBY													
FFTF & FMEF Standby (includes FFTF Integration share)	1.12.1.1.3 & 1.12.1.1.7	RL-TP11	31,100	31,181									62,281
FY 1997 Carryover		RL-TP11		2,570									2,570
Carryover to Deactivation		RL-TP11		-880									
FFTF SPO & Studies	1.12.1.1.0.3	NE	1,000	6,000									7,000
FY 1997 Carryover		NE		100									100
Sub Total			32,100	38,971									68,401
FFTF & FMEF STANDBY / RESTART													
FFTF & FMEF	1.12.1.1.0 Thru 1.12.1.1.9	NEW9905			61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	907,726
TOTAL:			32,100	38,971	61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	976,127

TOTALS in the right-hand column do not include carryover, inorder to avoid double counting.

3.4.2 Budgeted Cost of Work Scheduled (BCWS) by Year -- Standby Activities

	WBS #s	FUND SOURCE	EAC FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
FFTF & FMEF STANDBY													
FFTF Project Integration	1.12.1.1.0.1	RL-TP11	1,195	2,356									3,551
FFTF & FMEF Standby	1.12.1.1.3 & 1.12.1.1.7	RL-TP11	27,335	30,515									57,850
FFTF SPO & Studies	1.12.1.1.0.3	NE	900	6,100									7,000
Sub Total			29,430	38,971									68,401
CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION (CENRTC)													
CENRTC	1.12.1.1.3.12	RL-TP11	0	224									224
FFTF & FMEF STANDBY / RESTART													
FFTF & FMEF	1.12.1.1.0 Thru 1.12.1.1.9	NEW9905			61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	907,726
EXPENSE TOTAL:			29,430	38,971	61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	976,127
GRAND TOTAL:			29,430	39,195	61,944	102,961	105,741	154,134	128,696	115,830	118,960	119,460	976,351

3.4.3 Standby Related Funding by WBS

1998 SITE RL-WBS CODES 1998 PHMC-FDS CODES	LEVEL	TITLE	MANAGER	BUDGET VALUES ($000)	
				ACTIVITY	COST ACCOUNT STANDBY
1.12.1.1 1B1	PROJECT	Advanced Reactors Transition	Loika		
1.12.1.1.0 1B1B	ACTIVITY	Integration Management	Loika	8,456	
1.12.1.1.0.1 1B1B01	CA	FFTF Integration	Hulvey		2,356
1.12.1.1.0.3 1B1B03	CA	Standby Project Office	Hulvey		6,100
1.12.1.1.3 1B13	ACTIVITY	FFTF Plant	Loika	29,376	
1.12.1.1.3.1 1B130A	CA	FFTF Standby Operations	Gantt		26,466
1.12.1.1.3.6 1B130F	CA	FFTF Safeguards and Security	Gold		2,967
1.12.1.1.3.8 1B130H	CA	300 Area Fuel Oil Inventory Change	Montano		1
1.12.1.1.3.9 1B130J	CA	Other Materials Inventory Change	Montano		1
1.12.1.1.3.10 1B130K	CA	Spares Parts Inventory Change	Montano		-466
1.12.1.1.3.11 1B130L	CA	Spares Withdrawal/Returns	Montano		407
1.12.1.1.3.12 2B1301		Capital Equipment Not Related To Construction (CENRTC)	Montano	224	
1.12.1.1.3.12 2B1301	CA	Capital Equipment Not Related To Construction (CENRTC)	Montano		224
1.12.1.1.7 1B17	ACTIVITY	FMEF Plant	Bitten	1,139	
1.12.1.1.7.1 1B170A	CA	FMEF Surveillance and Maintenance	Bitten		1,139
			EXPENSE TOTAL	38,971	38,971
			GRAND TOTAL	39,195	39,195

4.0 WORK FOR OTHERS -- WBS 2.1.1.2.2.1

4.1 TECHNICAL BASELINE

4.1.1 Mission

The Advanced Reactors Transition Project will perform studies for the Japan Atomic Power Company (JAPC) as contracted through DOE. These studies will focus on the performance of the Gas Expansion Modules previously tested in the FFTF and application of that experimental data to JAPC computer codes and the design of the Demonstration Fast Breeder Reactor (DFBR). The studies will also provide response to follow-on questions generated from review of the original reports provided to JAPC.

4.1.2 Scope

The original GEM (Gas Expansion Module) contract between the Japan Atomic Power Company (JAPC) and the US Department of Energy (DOE) was signed in August of 1996 and specified that the following be performed by DOE to support an evaluation of potential application of GEMs to Japan's DFBR:

- Provide three reports related to the design and testing of GEMs at the Fast Flux Test Facility (FFTF). These were transmitted to JAPC shortly after contract signing.

- Hold a GEM Specialist Meeting in the United States. This meeting was held in December of 1996 and a meeting report was issued on December 31, 1996.

- Participate in a meeting with representatives of Japan's electric power companies to make a summary presentation on the results of the FFTF GEM development and testing program and the GEM Specialists Meeting. This meeting was held on February 3, 1997.

- Issue final and summary reports documenting the two meetings listed above. This documentation was completed in March of 1997.

In addition to the specific items listed above, during the performance of this contract, JAPC requested additional information to assist in their analysis of the FFTF GEM design and testing. This additional information was provided by DOE in several letters. Additional questions were provided by JAPC in February of 1997. Some of these were answered prior to the March 31, 1997 contract expiration date but others required additional time. In March of 1997 the original contract was modified (extended to March 31, 1998). Under this modification one additional report, dealing with pump start with GEMs tests performed at the FFTF, was provided to JAPC and DOE committed to providing a contract summary report in February of 1998. Also under this contract modification, answers to the remaining (and possibly additional) JAPC questions will be developed.

Specific activities related to the remaining JAPC/DOE GEM contract work are listed below.

1. Develop a conceptual core design which incorporates strong neutron absorbing assemblies, increased fuel enrichments and enriched B^{10} control rods. Determine the key neutronics characteristics of this core design and evaluate how it would behave in various accident scenarios. Interest in this possible design option results from the expectation that a core design incorporating these features would have many of the same passive safety characteristics as a core which incorporates GEMs. In addition, it may be of interest from the standpoint of other capabilities such as actinide burning.

2. Evaluate the possibility of relaxing the very tight tolerances previously used in the manufacture of mixed oxide fuel. Consider the potential cost savings as well as the fuel performance and safety impacts.

3. As required by the contract, a summary report for this contract will be prepared and DOE representatives will participate in a summary meeting. Finally, it is anticipated that additional questions will need to be answered as JAPC personnel review the most recent report provided to them.

4.2 WORK BREAKDOWN STRUCTURE / RESPONSIBILITY ASSIGNMENT

This work is reported under the SITE REQUEST FOR SERVICES function, WBS 2.0. WBS 2.1.1.2.2.1, Study on Gas Expansion Module, is assigned to T. M. Burke of FFTF Engineering.

4.3 SCHEDULE

Deliverables are planned as follows:

External report documenting the conceptual core design, key neutronics characteristics and expected performance under accident conditions. --- January 31, 1998

External report discussing previous FFTF manufacturing tolerances and their bases, the results of previous FFTF tests and analyses related to this subject, and a discussion of the potential impacts of relaxing the tolerances. --- January 31, 1998

As required by the contract, a summary report for this contract will be prepared and DOE representatives will participate in a summary meeting. --- March 31, 1998

ADVANCED REACTORS TRANSITION

FY 1998 MYWP **WBS 1.12.1.1**

4.3.1 Milestone Description Sheet			
Title: Final summary report on GEMs safety studies			Date: 9/15/97
Assigned To: T. M. Burke			CIN:
Program WBS Designator: 2.1.1.2.2.1			Due Date: 3/31/98
Control Number: B00-98-303			Rev: 0
MILESTONE TYPE: ☐ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☒ CONTRACTOR	DIVISION: ☐ State ☐ Federal ☒ DOE ☐ RCRA ☐ TPA Number _____	DELIVERABLE: ☒ Report ☐ Letter ☐ Drawings ☐ Other (specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (specify)
Milestone Description: At the conclusion of the GEMs safety studies for the Japan Atomic Power Company, a summary report for the contract will be prepared.			
Description of what constitutes completion of this milestone: A copy of the summary report will be provided to RL.			
Cost Account Manager T. M. Burke		Program/Project Manager R. K. Hulvey	
Program Element Manager E. F. Loika			

4.4 COSTS AND FUNDS

4.4.1 Budget Authority (B/A) by Year -- Work for Others

	WBS #s	FUND SOURCE	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
WORK FOR OTHERS													
GEMs Studies	2.1.1.2.2.1	JAPC	441	309									750
SUBTOTALS:													
		JAPC	441	309									750
TOTAL:													
			441	309									750

4.4.2 Budgeted Cost of Work Scheduled (BCWS) by Year -- Work for Others

	WBS #s	FUND SOURCE	EAC FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	TOTAL
WORK FOR OTHERS													
GEMs Studies	2.1.1.2.2.1	JAPC	441	309									750
SUBTOTALS:													
		JAPC	441	309									750
TOTAL:													
			441	309									750

4.4.3 Work for Others Funding

1998 SITE RL-WBS CODES 1998 PHMC-FDS CODES	LEVEL	TITLE	MANAGER	BUDGET VALUES ($000)	
				ACTIVITY	COST ACCOUNT WORK FOR OTHERS
1.12.1.1 1B1	PROJECT	Advanced Reactors Transition	Loika		
2.1.1.2.2 1W1	ACTIVITY	Non-DOE Work by BWHC	Loika	309	
2.1.1.2.2.1 1W1D01	CA	Gas Expansion Module Studies	Burke		309
			GRAND TOTAL	309	309

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