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INEL Integrated Spent Nuclear Fuel Consolidation Task Team Report

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ABSTRACT

This document describes a draft plan and schedule to consolidate spent nuclear fuel (SNF) and special nuclear material (SNM) from aging storage facilities throughout the Idaho National Engineering Laboratory (INEL) to the Idaho Chemical Processing Plant (ICPP) in a safe, cost-effective, and expedient manner. A fully integrated and resource-loaded schedule was developed to achieve consolidation as soon as possible. All of the INEL SNF and SNM management tasks, projects, and related activities from fiscal year 1994 to the end of the consolidation period are logic-tied and integrated with each other. The schedule and plan are presented to initiate discussion of their implementation, which is expected to generate alternate stakeholder concepts that can be evaluated using the methodology described in this report. Three perturbations to consolidating SNF as soon as possible are also explored. If the schedule is executed as proposed, the new and on-going consolidation activities will require about 6 years to complete and about $25.3M of additional funding. Reduced annual operating costs are expected to recover the additional investment in about 6.4 years. The total consolidation program as proposed will cost about $66.8M and require about 6 years to recover via reduced operating costs from retired SNF/SNM storage facilities. Detailed schedules and cost estimates for the Test Reactor Area Materials Test Reactor canal transfers are included as an example of the level of detail that is typical of the entire schedule (see Appendix D). The remaining work packages for each of the INEL SNF consolidation transfers are summarized in this document. Detailed cost and resource information is available upon request for any of the SNF consolidation transfers.

EXECUTIVE SUMMARY

Spent nuclear fuel (SNF) has been stored and processed at the Idaho National Engineering Laboratory (INEL) from onsite reactors, facilities across the country, and even foreign research reactors. Currently SNF is stored in various configurations at six different INEL facilities. Special Nuclear Material (SNM) has been used to support research and development of INEL missions and has also been received from offsite facilities for storage at the INEL. SNM is stored at four different INEL facility locations. Post cold war events, and related materials management decisions, have prompted the need to consolidate these storage activities to enhance safety and reduce operating costs. Thus, a multi-contractor INEL task team was formed to develop a pre-decisional draft INEL SNF/SNM consolidation plan. Knowledgeable and experienced INEL personnel provided the detail and insight necessary to scope and understand the issues, and develop the intricate planning strategy.

This report describes the development of the INEL SNF consolidation plan. It also presents a fully integrated and resource-loaded schedule to implement SNF/SNM consolidation as soon as possible at the Idaho Chemical Processing Plant (ICPP), in a safe and cost-effective manner. The plan integrates all SNF shipper and receiver management activities. Integration ensures the required resources have been identified, are available when needed, and dependent activities are linked together.

The scope of this plan includes: (a) SNF and/or SNM consolidation transfers from the Test Reactor Area, Test Area North, and Power Burst Facility; (b) SNF consolidation transfers within ICPP; (c) continued SNF receipts and shipments at ICPP, for example, Navy; and (d) related SNF activities, e.g., CPP-666 Fuel Storage Area reracking project. SNM consolidation transfers from Argonne National Laboratory-West and the Radioactive Waste Management Complex were not included in the scope of this study and are not scheduled in this plan.

Although the plan presents a potential integrated schedule, no SNF consolidation strategy has been finalized or adopted by the U.S. Department of Energy (DOE). Thus, the plan provides the basis to initiate discussion with concerned stakeholders. This involvement will help ensure that a complete scope of issues and strategic solutions are considered before selecting a particular SNF management action.

Assessing the advantages and disadvantages of alternate strategies requires accurate and detailed understanding of intricate and inter-related planning issues. This level of detailed planning required knowledgeable personnel and a significant amount of time, but ensured a comprehensive, systems analysis approach. The plan's modular organization allows assessment of the impacts of adding or deleting SNF transfers, new schedule deadlines, or evaluation trade-off issues related to cost and resource management.

Open Plan™ software was used to manage and integrate the extensive planning information. This tool supported the timely evaluation of a very complicated schedule. A printed copy of the complete schedule (about 2,000 pages) is

available and includes more than 6,000 tasks, 8,000 logic-ties, and 26,100 resource calls. This amount of information is necessary to assess the planning issues, but it is not "user friendly" until summarized. Thus, the schedule is supplemented by this report. This report (1) describes the assumptions and strategies that were used to develop the plan and schedule, (2) summarizes the costs, resources, and schedules, (3) identifies the key critical path issues for the as soon as possible base case, and (4) evaluates the impacts of some possible perturbations to the base case.

If the initial plan proves to address all concerns adequately, and it is implemented as presented, it will:

(1) Resolve the remaining INEL environmental, safety, and health (ES&H) vulnerability assessment issues identified in the Phase II, Plan of Action to Resolve Spent Nuclear Fuel Vulnerabilities by retiring six INEL SNF/SNM storage facilities,
(2) Reduce safety risks for SNF and SNM storage by relocating these inventories to newer and safer INEL facilities,
(3) Reduce long-term operational costs,
(4) Continue to demonstrate national leadership in SNF and SNM storage via continued rapid response to ES&H issues, timely implementation of new dry storage demonstration programs, and overall cost-effective operations, and
(5) Demonstrate the INEL's ability to work effectively as an integrated team, and provide technology transfer to the commercial SNF programs by means of dry storage data for new fuel types and SNF in degraded condition.

The key planning strategy for implementing INEL SNF consolidation is use of existing dry storage space at ICPP, and new construction for Three Mile Island SNF from Test Area North. Other initiating strategies include minimizing transfers to busy ICPP storage areas, developing standardized can sizes for repackaged SNF, using a common transfer cask for SNF transfer to the Irradiated Fuel Storage Facility (IFSF), and minimizing the total number of transfers by moving SNF directly to its preferred interim storage mode (dry storage).

INEL SNF/SNM consolidation costs are identified in Table EX-1. These costs do not include any contingency or management reserve and are in constant 1994 dollars. Activities that are not funded are highlighted by shadowed boxes in Table EX-1. About $25.3M of new funding is needed to fund the remaining SNF consolidation transfers. The total consolidation program will require about 6 years to implement. Total cost for the entire INEL SNF consolidation program is estimated at $66.8M. The cost recovery time for the consolidation program as a whole is estimated to be 6 years. Individual recovery times for each storage area are also indicated in Table EX-1.

Critical path items that must be funded in late fiscal year 1994, or very early fiscal year 1995, to support the as soon as possible base case include: (1) inspection and preparation of the Thermal Fuel Behavior Program #2 (TFBP-2) cask, (2) design and fabrication of an adapter plate for the IFSF

Table EX-1 INEL SNF Consolidation Costs Summary

Consolidation Transfers - To ICPP		FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	Total Consolidation Costs (a)	Total Consolidation Shipper & Receiver (a)	Annual Operating Savings (b)	Years To Recover Costs (c)
AO1 PBF	Shipper	$0	$2,145,033	$1,669,794	$1,090,240	$0	$0	$0	$4,905,067	$7,136,208	$2,178,000	3.3
40 Transfers												
TFBP-2 cask	Receiver	$0	$311,617	$1,104,096	$476,529	$74,224	$74,224	$74,512	$2,231,141			
AO2 ARMF / CFRMF	Shipper	$0	$883,190	$935,412	$746,572	$0	$0	$0	$2,565,174	$4,301,606	$275,000	15.6
17 Transfers												
TFBP-2 cask	Receiver	$0	$308,397	$759,861	$447,228	$74,224	$74,224	$72,498	$1,736,432			
AO3 MTR CANAL	Shipper	$0	$1,080,585	$597,762	$1,714,366	$661,175	$1,272,855	$165,481	$5,492,224	$8,202,603	$265,000	31.0
33 Transfers												
TFBP-2 cask	Receiver	$0	$134,160	$134,160	$291,787	$927,533	$739,225	$174,247	$2,710,379			
A04 TRA NMIS SNM	Shipper	$0	$0	$439,935	$0	$0	$0	$0	$439,935	$1,414,365	$769,000	1.8
24 Transfers												
Boxes	Receiver	$0	$365,140	$609,290	$0	$0	$0	$0	$974,430			
A05 TAN - TMI	Shipper	$0	$6,631,648	$1,473,526	$332,821	$374,863	$401,800	$43,572	$9,258,230	$22,762,167	$1,690,463	13.5
49 Transfers												
NuPac125-B Cask	Receiver	$564,069	$2,377,827	$5,096,761	$3,658,515	$664,699	$720,397	$262,001	$13,503,937			
A06 TAN - LOFT	Shipper	$0	$411,953	$517,497	$69,477	$18,275	$0	$0	$1,017,202	$2,678,989	$518,870	5.2
7 Transfers												
Peach Bottom Cask	Receiver	$0	$204,210	$639,326	$354,294	$120,167	$74,224	$74,512	$1,661,787			
A07 TAN - COMMERCIAL	Shipper	$0	$0	$19,500	$83,880	$293,160	$93,724	$141,844	$632,108	$3,450,522	$444,667	7.8
3 Transfers												
Loaded Storage Casks	Receiver	$0	$0	$0	$751,554	$606,107	$1,254,314	$206,439	$2,818,414			
Consolidation Transfers - Within ICPP												
BO1 CPP-603 SNF	S/R	$2,572,107	$3,495,785	$1,695,303	$1,504,223	$820,188	$33,542	$248,636	$10,490,280	$10,490,280	$1,200,000	8.7
1,200 Transfers												
STR Charger Cask												
BO2 Rover Bed	S/R	$0	$0	$202,872	$653,511	$0	$0	$0	$856,383	$856,383	$3,895,000	0.2
15 Transfers												
Peach Bottom (3) & Rover (12) Casks												
BO3 Fermi/Peach Bottom	S/R	$130,630	$1,278,420	$1,351,466	$718,585	$522,588	$529,694	$28,743	$4,560,126	$4,560,126	$0	0.0
59 Transfers												
Peach Bottom Cask												
BO4 Follow-on SNF Transfer	S/R	$0	$0	$0	$0	$77,820	$705,633	$53,582	$837,035	$837,035	$0	0.0
2 Transfers												
Peach Bottom Cask												
BO5 CPP-603 FECF SNF	S/R	$21,672	$36,503	$7,800	$0	$0	$0	$0	$65,975	$65,975	$0	0.0
2 Transfers												
Peach Bottom Cask												
									Total Costs =	$66,756,259	$11,236,000	5.94
									Total Unfunded Costs =	$25,342,339	$3,931,667	6.45
									Percent Unfunded =	38%		

-- Shadowed box indicates an unfunded INEL consolidation task

(a) Cost to transfer and store the SNF at ICPP and conduct dry demo programs (PBF, ARMF/CFRMF, MTR Canal, TAN Commercial and TAN TMI).

(b) Savings equal the difference in operating cost for SNF storage before and after consolidation.

(c) Recovery time equals the total dollars spent to relocate the SNF divided by the annual savings.

transfer cart, and (3) design, fabrication, and checkout of a prototype canister using the TFBP-2 cask as a top loader.

The impacts of delayed funding, safety drivers, and tighter schedule interfaces with the IFSF were also evaluated. Table EX-2 summarizes the cost and schedule impacts for those SNF transfers where there were changes. The cost for the remaining INEL SNF consolidation activities stay the same. A one year funding delay for the SNF transfers from Power Burst Facility, Materials Test Reactor canal, and ARMF/CFRMF (Case A) will increase the total cost of the INEL SNF consolidation program by about $3.5M. Conducting parallel transfers to IFSF from the CPP-603 south basin and the consolidation program (Case C) will increase the cost by about $5.0M.

Table EX-2. Cost and Schedule Impacts of (A) Funding Delays, (B) Safety Drivers, and (C) Tighter Schedule Interfaces

	CASE A	CASE B	CASE C
	Funding Delayed One Year (MTR Canal, ARMF/CFRMF, & PBF)	Safety Driver (MTR Canal Funded in FY-95; PBF & ARMF/CFRMF in FY-96)	Schedule Constraints, Closed Transfer Window (Parallel SNF Transfers to IFSF)
Increased Operational Costs	$2,830,583	$1,226,500	$2,844,417
Increased SNF Transfer Costs	$665,000	$0	$2,156,000
Total Cost	**$3,495,583**	**$1,226,500**	**$5,000,417**

FOREWORD

A task team, represented by principal INEL contractors, initiated work on the feasibility of SNF consolidation in the fall of 1992. This work began as an effort to resolve certain issues identified in the first draft of the Idaho National Engineering Laboratory (INEL) Spent Fuel Roadmap. As a result of this effort, WIN-367, Interim Report of the INEL Spent Nuclear Fuel Consolidation Task Team was issued. A principal conclusion from WIN-367 was that consolidation of INEL SNF was feasible and that preliminary actions could be initiated to reduce long-term operating costs and risks. However, further analyses were needed to confirm this conclusion, and to provide a methodology that could be used to determine the best transition strategy for the INEL.

A DOE report, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, independently verified INEL safety concerns. This report further added urgency for developing detailed plans that could be used to implement the proposed SNF consolidation strategy. Thus, a second task team was formed in January 1994 to develop: (1) an INEL SNF and SNM consolidation plan, (2) a detailed and fully integrated consolidation schedule, and (3) additional analyses including operational risks, resource requirements, funding profiles, and prioritized fuel transfers. This report documents the task team's efforts.

CONTENTS

FIGURES

FIGURES (Continued)

FIGURES (Continued)

TABLES

ACRONYMS

ALARA	as-low-as-reasonably achievable
ANL-W	Argonne National Laboratory-West
ARMF	Advanced Reactivity Measurement Facility
ATR	Advanced Test Reactor
CADMOST	Fuel Canning and Dry Modular Storage
CFA	Central Facility Area
CFRMF	Coupled Fast Reactivity Measurement Facility
CSE	Criticality Safety Evaluation
CX	categorical exclusion
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy-Idaho Operations Office
DOT	U.S. Department of Transportation
EA	environmental assessment
EG&G	EG&G Idaho, Inc.
EIS	environmental impact statement
EM	DOE Office of Environmental Management
ER&WM	Environmental Restoration and Waste Management
ES&H	environmental, safety, and health
ETR	Engineering Test Reactor
FECF	Fuel Element Cutting Facility
FONSI	Finding of No Significant Impact
FSAR	Final Safety Analysis Report
FSV	Fort St. Vrain
FHU	fuel handling unit
FY	fiscal year
GETR	General Electric Test Reactor
HP	health physicist
ICPP	Idaho Chemical Processing Plant
IFSF	Irradiated Fuel Storage Facility
INEL	Idaho National Engineering Laboratory
K	thousand
LICP	Line Item Construction Project
LOFT	Loss-of-Fluid Test
M	million
M&O	management and operations
MTHM	metric tons heavy metal
MTR	Materials Test Reactor
NA	not applicable
NE	DOE Office of Nuclear Energy
NEPA	National Environmental Policy Act
NMIS	Nuclear Material Inspection & Storage
NRC	Nuclear Regulatory Commission
NRF	Naval Reactor Facility
NuPac	Nuclear Packaging Cask

ACRONYMS (Continued)

ORR	Operational Readiness Review
PB-2	Peach Bottom-2
PBF	Power Burst Facility
PSAR	Preliminary Safety Analysis Report
RA	Readiness Assessment
ROD	Record of Decision
RW	DOE Office of Radioactive Waste
RWMC	Radioactive Waste Management Complex
SAR	Safety Analysis Report
SNF	spent nuclear fuel
SNM	special nuclear material
SO	system operations
TAN	Test Area North
TBD	to be determined
TFBP	Thermal Fuel Behavior Program
TMI	Three Mile Island
TRA	Test Reactor Area
TS/S	Technical Specifications and Standards
TSR	Technical Safety Requirements
TTR	Thermal Test Reactor
U-233	Uranium-233
WBS	work breakdown structure
WE-2	White Elephant #2
WINCO	Westinghouse Idaho Nuclear Company, Inc.

1.0 INTRODUCTION

The Idaho National Engineering Laboratory (INEL) is one of the U.S. Department of Energy's (DOE) largest national laboratories. Established in 1949 as the National Reactor Testing Station, it has been the site of the largest concentration of nuclear reactors (52) in the world. Most of the reactors were phased out after fulfilling their research mission, but several are still operating. This unique national role has allowed the INEL to develop core competencies in (1) nuclear reactor development, testing, and operation, (2) spent nuclear fuel (SNF) management (storage and processing), and (3) first of a kind waste processing development and related waste management activities. The INEL has developed the most diversified reactor operations, and the newest and most diversified SNF storage and processing center in the nation.

A task team, represented by principal INEL contractors, initiated work on the feasibility of SNF consolidation in the fall of 1992. This work began as an effort to resolve certain issues identified in the first draft of the INEL Spent Fuel Roadmap. As a result of this effort, Interim Report of the INEL Spent Nuclear Fuel Consolidation Task Team, WIN-367, was issued. A principal conclusion from WIN-367 was that consolidation of INEL SNF was feasible, and that preliminary actions could be initiated to reduce long-term operating costs and risks. However, the development of a detailed analytical model was necessary to confirm this conclusion and evaluate alternate SNF management strategies for the INEL.

The Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities independently verified INEL safety concerns. The report further added urgency for developing detailed plans that could be used to implement the proposed SNF consolidation strategy. Thus, a second task team was formed to: (1) develop a consolidation plan that included resource requirements, funding profiles, prioritized SNF transfers, and operational risk evaluation and, (2) develop a detailed and fully integrated INEL SNF consolidation schedule.

Because of the large number of reactors that have operated at the INEL, many different types of SNF have been stored and reprocessed. Reprocessing SNF recycled unused uranium and other wanted byproducts. It also helped prepare the separated waste materials for disposal. SNF inventory data is stored at INEL in a database system. The database includes detailed descriptions of the fissile material amounts and storage locations. This draft SNF consolidation plan addresses those fuels specifically proposed for transfer to the Idaho Chemical Processing Plant (ICPP) for consolidation of the INEL SNF inventory. The plan also includes the SNF transfers at the ICPP that interface and must be prioritized with the INEL transfers. A listing of the INEL SNF proposed for transfer is located in Appendix A.[a]

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[a]Generally speaking, SNF consists of unreacted source and fissile material, for example, Uranium-238 and Uranium-235; transuranic elements; fission products (high-level waste); fission product encapsulation (cladding); and structural components.

SNF is in various types of storage configurations at several different INEL facilities including: Power Burst Facility (PBF), Test Reactor Area (TRA), Test Area North (TAN), ICPP, Argonne National Laboratory-West (ANL-W), and Naval Reactor Facility (NRF). Figure 1.0-1 shows the location of these facilities. Because of the diverse nature of the storage configurations, the types of SNF, and the recent decision to terminate reprocessing at the ICPP, new SNF programmatic direction is being evaluated. The DOE Programmatic Spent Nuclear Fuel and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact Statement (Programmatic SNF and INEL ER&WM EIS) will be used to consider alternatives for managing the nation's SNF.

Obviously, the INEL SNF must continue to be managed safely during this National Environmental Policy Act (NEPA) process. The activities proposed in this plan are enveloped by each alternative under consideration in the Programmatic SNF and INEL ER&WM EIS. Although INEL SNF consolidation has not been adopted by DOE, this report presents the cost, resources, and potential schedule that would lead to timely completion of these objectives. When finalized, this proposed SNF consolidation plan will ensure near-term environmental, safety, and health (E&SH) issues are resolved in a timely and cost-effective manner, while decisions are made concerning the INEL's future SNF management role.

This potential SNF consolidation plan considers all of the INEL SNF and special nuclear material (SNM) management tasks and activities from fiscal year (FY)-94 to the end of the consolidation period. If the schedule is executed as proposed, consolidation will require about 6 years to complete. Consolidation is considered complete when all SNF and SNM has been transferred to the ICPP and placed in its designated location.

Should DOE choose to follow this plan, discussions with concerned stakeholders may be pursued. The feedback from this process would be used to formulate final action by DOE-Idaho Operations Office (DOE-ID) to implement the plan, or some new modified version of the plan.

1.1 TASK TEAM MISSION

The purpose of the INEL Integrated SNF Consolidation Task Team was to provide DOE-ID with a fully integrated and resource-loaded draft plan. The scope of the plan is to consolidate INEL SNF and SNM at the ICPP as soon as possible, in a safe and cost-effective manner. Developing the plan and detailed supporting schedule is a necessary first step towards analyzing new alternatives and identifying an optimum planning strategy for the future.

1.2 OBJECTIVES

An INEL SNF consolidation plan that addressed high-level feasibility issues was urgently needed. Development of such a plan required a detailed analysis and integration of all of the INEL SNF management activities. Dependent tasks

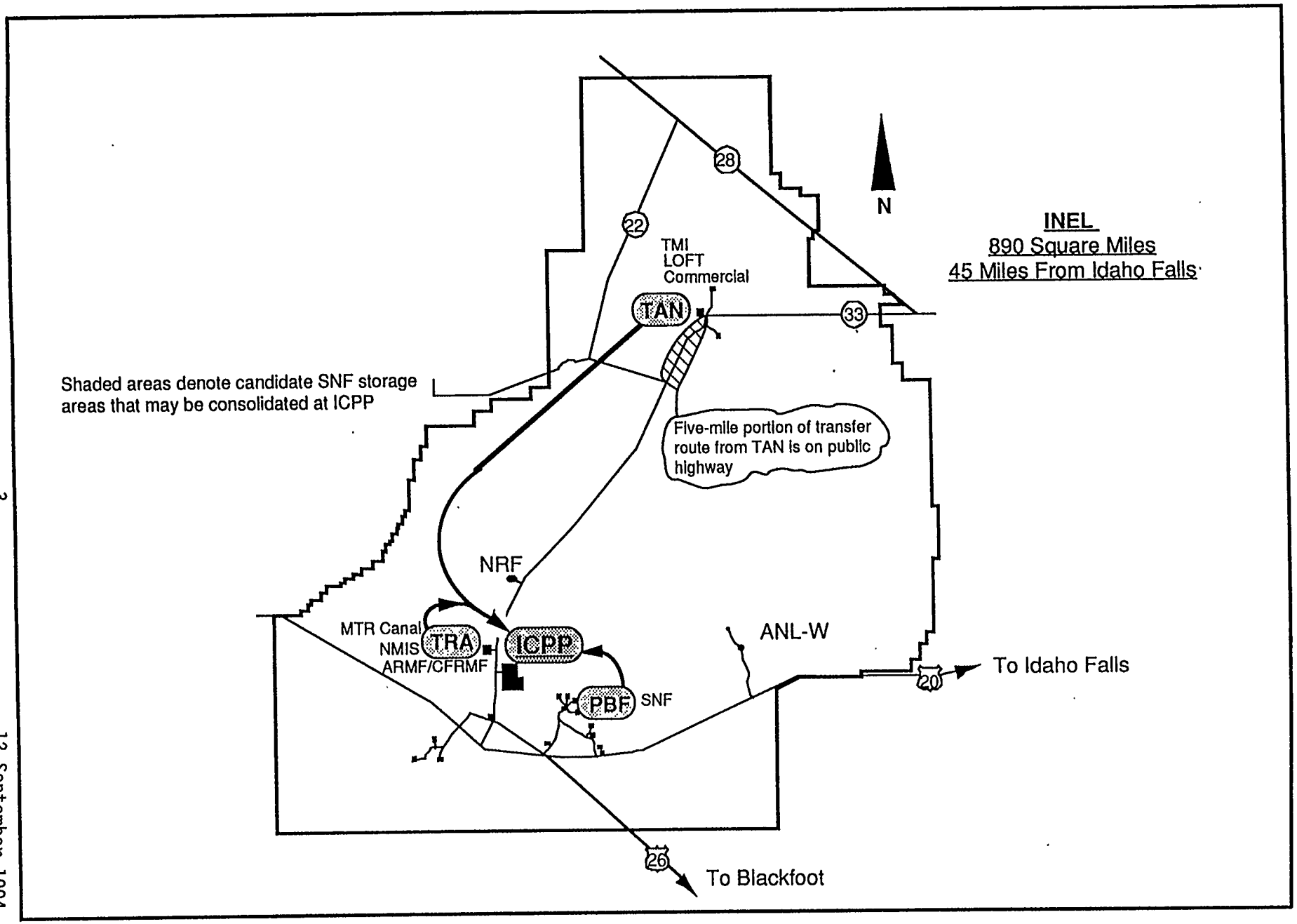


Figure 1.0 -1 INEL SNF/SNM Storage Locations And Consolidation Transfers

were identified and logic-tied to one another. With this in mind, the following objectives were identified and completed.

1. Form a multi-discipline INEL-wide task team to produce the plan (see Appendix B).

2. Develop a list of assumptions to bound the scope of the plan (see Appendix C).

3. Develop a "working" inventory of INEL SNF (see Appendix A). A working inventory includes all of the SNF and SNM that is scheduled to be shipped to the ICPP during this consolidation period.

4. Identify the anticipated lifetimes for INEL SNF and SNM storage facilities as related to the consolidation program lifetime (see WIN-367).

5. Identify all INEL key resource requirements including fuel handling and transportation resources and issues [i.e., equipment, casks, permits, safety documentation, NEPA documentation, personnel, fuel handling tools, training, procedures, Operational Readiness Reviews, canning stations, SNF characterization/inspection requirements, etc.] (see section 4.0).

6. Develop individual schedules and cost account plans for candidate fuel or material transfers to ICPP storage facilities (see Appendix D for the detailed MTR canal SNF transfer package).

7. Combine the individual schedules into an overall, integrated INEL SNF consolidation schedule. The schedule achieves consolidation as soon as possible based on the optimum selection of funding, timing, safety risks, environmental impacts, public acceptance, stakeholder input, etc. (see section 3).

8. Identify potential SNF consolidation issues and risks [i.e., classification of SNF forms, characterization requirements for storage, inventory and inspection requirements, advantages of different types of dry storage (e.g., individual vaults versus facility), storage of conditioned and unconditioned fuel, and fuel transportation time] and the actions needed for resolution of each issue (see section 5).

Completion of these objectives produced the information necessary for development of the INEL Integrated SNF Consolidation Task Team Report (base case) and evaluation of perturbations to the base case scenario.

1.3 SCOPE

The scope of the INEL Integrated SNF Consolidation Task Team Report included the identification of resource requirements, schedules, and related activities for INEL SNF management tasks. This included transferring inventories of SNF and SNM to ICPP from storage facilities at PBF, TRA, and TAN; transfers within

ICPP; normal SNF receipts from NRF and Advanced Test Reactor (ATR); and other related SNF tasks and projects, and on-going project activities.

A number of assumptions were developed to define the scope of the tasks. The assumptions are listed in Appendix C. The assumptions provided the baseline to develop schedules and cost estimates that would be realistic relative to the complexity and related uncertainties of the tasks.

It was not within the scope of this Task Team to schedule all of the future ICPP and INEL activities that did not directly relate to SNF management. For example, waste management, reactor operations, decontamination and decommissioning (D&D) of old SNF storage facilities, etc. This task would have required a larger task team and even more time, which is not necessary for examining the feasibility and advantages of different SNF consolidation options. Thus, the resources required for implementing SNF consolidation at the INEL are estimated. However, their availability from within the INEL can only be determined by knowing the entire INEL resource requirements for all activities and their availability during the next 10 years.

1.3.1 SNF Consolidation Complexities

INEL SNF consolidation is technically and administratively complex. A systems analysis approach was used to support completeness. Using this approach instills confidence that the proposed plan will work, and that required resources are adequately identified and understood. Factors that complicated this plan include:

a. The work involves material that is categorized as hazardous, radioactive, and safeguarded. The work must also be accomplished in compliance with (1) applicable federal, state, and tribal laws, rules, and regulations, and (2) applicable DOE Orders, Notices, and manuals. A summary of the pertinent documents is provided in WIN-367, Appendix A.

b. There are a number of continuing or new projects and tasks that may be schedule/funding driven by factors that are totally independent of those associated with SNF consolidation.

c. A management transition will occur when five of the INEL management and operations (M&O) contracts will be combined by award to a single contractor. The transition and any reduction of work force may reduce the experienced work force and their collective knowledge about existing INEL SNF and their storage facilities.

d. Past reprocessing activities did not include most fuel types for minimizing or eliminating deteriorated SNF. Thus, most of the non-Navy INEL SNF has been in prolonged wet storage, and subsequently, some of it has deteriorated.

e. Some of the facilities and equipment, needed for execution of this proposed consolidation, must be reconditioned for use after prolonged periods of inactivity and low-priority maintenance support. In some cases, the needed equipment does not exist. For example, new fuel handling equipment will be required at ICPP for some of the fuel types to be stored in the Irradiated Fuel Storage Facility (IFSF). In other cases, new personnel must be trained to provided the required SNF support work.

f. The SNF proposed for consolidation involves several DOE-HQ programs, such as the Office of Nuclear Energy (NE), the Office of Environmental Management (EM), and the Office of Civilian Radioactive Waste Management (RW). Priorities within these programs varies, making coordination and timely funding of SNF consolidation more challenging.

1.3.2 Work Breakdown Structure

The work breakdown structure (WBS) developed for INEL SNF consolidation is a hierarchial categorization of proposed, ongoing, and related activities. The SNF consolidation WBS closely correlates to the potential INEL SNF consolidation transfers. Arranging the WBS in this manner facilitates evaluating different alternatives if only part of the overall INEL SNF consolidation is implemented.

The INEL Integrated SNF Consolidation WBS shown in Figure 1.3-1 divides the Level 2 elements into four categories:

AO series - INEL SNF/SNM Consolidation Transfers To ICPP
BO series - SNF Consolidation Transfers Within ICPP
CO series - SNF/SNM Transfers To And From ICPP
DO series - Related SNF Activities At The INEL

A typical Level 3 WBS for one of the INEL SNF transfer tasks is shown in Figure 1.3-2. The Level 3 WBS is designed to separate the transfer task into: (1) preparation activities by the shipper and receiver, and (2) transfer operations by the shipper, carrier, and receiver to ensure the interacting transfer events are connected. The receiver and shipper preparation programs are subdivided and emphasize regulation compliance activities. Regulation compliance is extensive for handling hazardous and/or safeguarded nuclear material.

The AO and BO series WBS elements are described in 12 cost account planning package work statements in Appendix D. A typical set of documentation for 1 of the 12 WBS elements (TRA MTR Canal SNF Characterization, Repackaging, and Transfer to ICPP IFSF) is also included as an example of the level of detailed planning that was implemented for all of the WBS elements. The work documentation includes: a planning package work statement form, a schedule of all task events, and a Basis of Estimate form. The Basis of Estimate shows the estimates for the labor and non-labor resources for each event. Work package documentation sets for the remaining transfers are omitted to minimize the length of this report, but they are available upon request.

1.4 PRINCIPAL INEL CONSOLIDATION ACTIVITIES

This consolidation task is more easily understood by dividing it into three parts: (1) SNF/SNM consolidation transfers to and within ICPP (WBS elements AO and BO), (2) continued SNF/SNM receipts and transfers at ICPP (WBS element CO), and (3) related SNF activities that are independent of SNF consolidation (WBS element DO).

Part 1 consists of the actual INEL SNF or SNM consolidation transfers to inactivate or retire a SNF or SNM storage facility. They include INEL SNF/SNM consolidation transfers to ICPP (Table 1.4-1) and SNF consolidation transfers within ICPP (Table 1.4-2). Stabilization and future D&D of empty SNF storage facilities are not included in this plan.

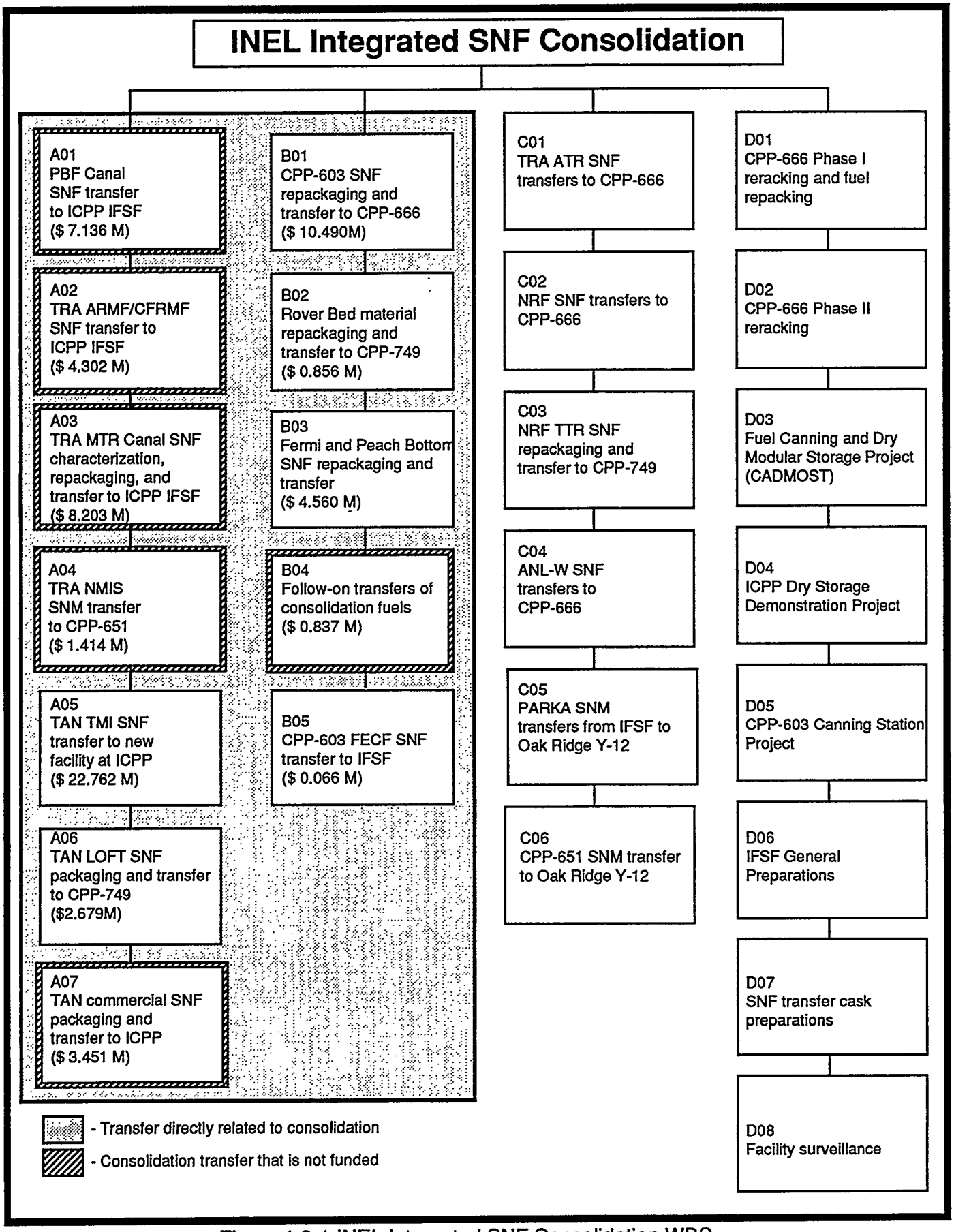


Figure 1.3-1 INEL Integrated SNF Consolidation WBS

MTR Canal

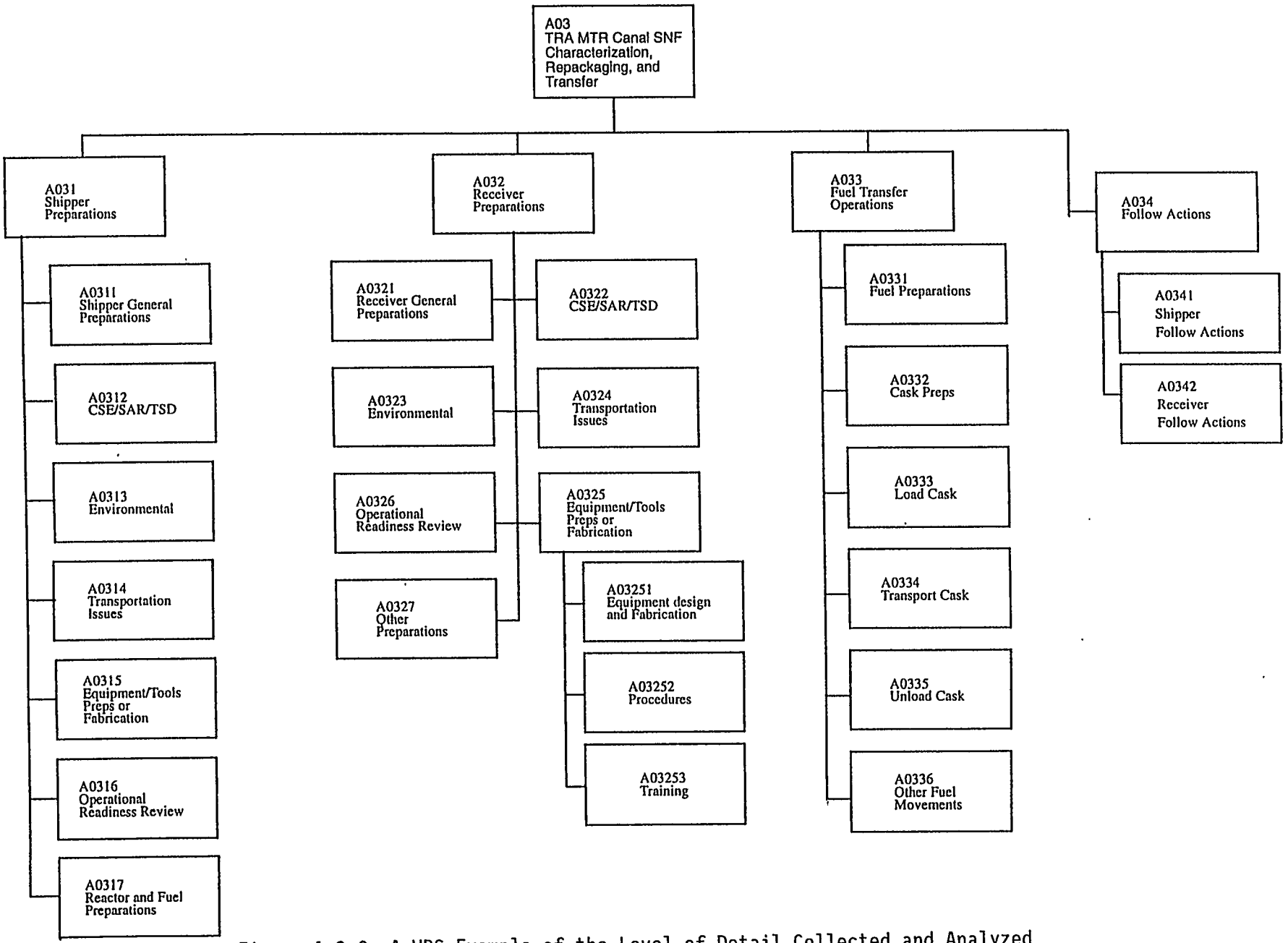


Figure 1.3-2 A WBS Example of the Level of Detail Collected and Analyzed

Table 1.4-1 INEL SNF/SNM Consolidation Transfers To ICPP

SNF Consolidation Activity	WBS Number	Sponsor
PBF Canal SNF Transfer to ICPP IFSF	A01	DOE-NE
TRA ARMF/CFRMF SNF Transfer to ICPP IFSF	A02	DOE-NE
TRA MTR Canal SNF Characterization, Repackaging, and Transfer to ICPP IFSF	A03	DOE-NE
TRA NMIS SNM Transfer to CPP-651	A04	DOE-NE
TAN TMI SNF Transfer to New Facility at ICPP	A05	DOE-EM
TAN LOFT SNF Packaging and Transfer to CPP-749	A06	DOE-EM
TAN Commercial SNF Packaging and Transfer to ICPP	A07	DOE-RW/EM

Table 1.4-2 SNF Consolidation Transfers Within ICPP

SNF Consolidation Activity	WBS Number	Sponsor
CPP-603 SNF Repackaging and Transfer to CPP-666	B01	DOE-EM
Rover Bed Material Repackaging and Transfer to CPP-749	B02	DOE-EM
Fermi and Peach Bottom SNF Repackaging and Transfer	B03	DOE-EM
Follow-on Transfers of Consolidation Fuels	B04	DOE-EM
CPP-603 Fuel Element Cutting Facility (FECF) SNF Transfer to IFSF	B05	DOE-EM

Part 2 consists of additional activities reviewed, scheduled, and integrated because of their interaction with the INEL SNF consolidation transfers and draw on common resources. They include continued SNF receipts and shipments at ICPP (Table 1.4-3) and related SNF management activities and projects at the INEL (Table 1.4-4).

Table 1.4-3 SNF/SNM Transfers To And From The ICPP

SNF Interactive Activity	WBS Number	Sponsor
TRA ATR SNF Transfers to CPP-666	C01	DOE-NE
NRF SNF Transfers to CPP-666	C02	DOE-EM
NRF TTR SNF Repackaging and Transfer to CPP-749	C03	DOE-EM
ANL-W SNF Transfers to CPP-666	C04	to be determined (TBD)
PARKA SNM Transfer from IFSF to Oak Ridge Y-12	C05	TBD
CPP-651 SNM Transfer to Oak Ridge Y-12	C06	TBD

Table 1.4-4 Related SNF Activities At INEL

SNF Interactive Activity	WBS Number	Sponsor
CPP-666 Phase I Reracking and Fuel Repackaging	D01	DOE-EM
CPP-666 Phase II Reracking	D02	DOE-EM
Fuel Canning and Dry Modular Storage Project (CADMOST)	D03	DOE-EM
ICPP Dry Storage Demonstration Project	D04	DOE-EM
CPP-603 Canning Station Project	D05	DOE-EM
IFSF General Preparations	D06	DOE-EM
SNF Transfer Cask Preparations	D07	TBD
Facility Surveillance	D08	TBD

The third part of the consolidation task consists of additional activities that were reviewed to assess their impact on the INEL Integrated SNF Consolidation Plan. Most of these items were not scheduled or integrated, because they do not directly impact the plan. These activities are listed in Table 1.4-5.

Table 1.4-5 Related Activities That Are Independent Of SNF Consolidation

SNF Related, Independent Activity	Sponsor
INEL Transportation Safety Manual	DOE-EM
Programmatic SNF Management and INEL ER&WM EIS	DOE-EM
Development of DOE SNF Management Program	DOE-EM
INEL SNF Vulnerabilities, Phase I Remedial Actions	DOE-EM/NE
INEL SNF Vulnerabilities, Phase II Remedial Actions	DOE-EM/NE
INEL SNF Vulnerabilities, Phase III Remedial Actions	DOE-EM/NE
EG&G Idaho Facility DOE Order 5480.23 SAR Upgrades	DOE-NE
ICPP Facility DOE Order 5480.23 SAR Upgrades	DOE-EM
TMI SNF Transfer to TAN-607	DOE-NE
CPP-601 Process Cell Liquid SNM Solidification, Canning, and Transfer to CPP-651	DOE-EM
CPP-602 Denitrator Liquid SNM Solidification, Canning, and Transfer to CPP-651	DOE-EM
CPP-749 Upgrade	DOE-EM

Table 1.4-5 (continued)

SNF Related, Independent Activity	Sponsor
PBF Inactivation	DOE-NE
ARMF/CFRMF Inactivation	DOE-NE
MTR Canal Inactivation	DOE-NE
CPP-603 Fuel Storage Basins D&D	DOE-EM
CPP-603 Fuel Element Cutting Facility D&D	DOE-EM

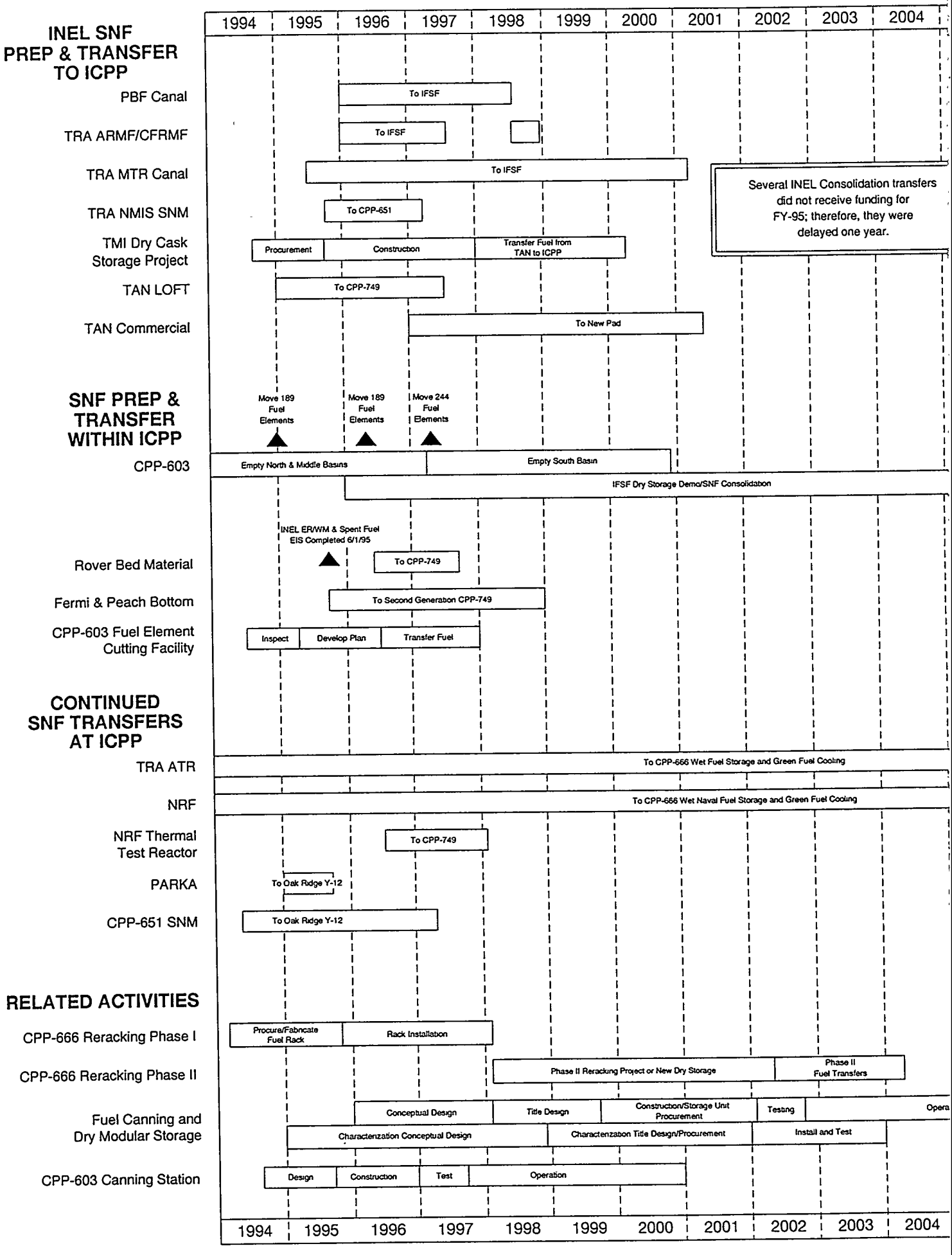
The activities in parts 1 and 2 are resource-loaded and integrated by the consolidation schedule using Open Plan™ software. Section 4 discusses the key resource requirements needed to implement the INEL SNF/SNM consolidation plan.

As previously mentioned, this INEL consolidation plan, if implemented, would only be a near-term task that is part of a much larger INEL SNF/SNM program. Figure 1.4-1 depicts the integration of related SNF storage projects at the INEL. Many of them are specific to the preferred storage location, the ICPP. It combines key activities from the AO, BO, CO, and DO INEL integrated SNF consolidation WBS elements. This long-term picture may be modified when the Programmatic SNF and INEL ER&WM EIS ROD defines a new direction.

1.5 SNF CONSOLIDATION ORGANIZATION ALTERNATIVES

It is recommended that the control and implementation of the SNF consolidation schedule and plan would occur through one lead operational area, i.e., ICPP. The funding required to implement the SNF transfers and receipts would be distributed by DOE-ID to each of the INEL SNF operational areas as part of their annual budget. This approach has the advantage of using existing planning groups to implement these additional SNF consolidation tasks. However, it requires an expanded management role to ensure the overall integration of the INEL/ICPP activities occur in a timely and integrated manner during this consolidation program.

An alternative option would be to organize the implementation of the plan using a formalized project structure. This approach would place the overall control and implementation of the plan with a project team that would interface with the operational areas. Since this is basically an expansion of on-going SNF management activities, control via operational areas appears to be a more effective strategy provided the additional manpower is allotted (see section 4.3).


FISCAL YE
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
INEL SNF PREP & TRANSFER TO ICPP
PBF Canal
To IFSF
TRA ARMF/CFRMF
To IFSF
TRA MTR Canal
To IFSF
TRA NMIS SNM
To CPP-651
TMI Dry Cask Storage Project
Procurement
Construction
Transfer Fuel from TAN to ICPP
TAN LOFT
To CPP-749
TAN Commercial
To New Pad
Several INEL Consolidation transfers did not receive funding for FY-95; therefore, they were delayed one year.
SNF PREP & TRANSFER WITHIN ICPP
Move 189 Fuel Elements
Move 189 Fuel Elements
Move 244 Fuel Elements
CPP-603
Empty North & Middle Basins
Empty South Basin
IFSF Dry Storage Demo/SNF Consolidation
INEL ER/WM & Spent Fuel EIS Completed 6/1/95
Rover Bed Material
To CPP-749
Fermi & Peach Bottom
To Second Generation CPP-749
CPP-603 Fuel Element Cutting Facility
Inspect
Develop Plan
Transfer Fuel
CONTINUED SNF TRANSFERS AT ICPP
TRA ATR
To CPP-666 Wet Fuel Storage and Green Fuel Cooling
NRF
To CPP-666 Wet Naval Fuel Storage and Green Fuel Cooling
NRF Thermal Test Reactor
To CPP-749
PARKA
To Oak Ridge Y-12
CPP-651 SNM
To Oak Ridge Y-12
RELATED ACTIVITIES
CPP-666 Reracking Phase I
Procure/Fabricate Fuel Rack
Rack Installation
CPP-666 Reracking Phase II
Phase II Reracking Project or New Dry Storage
Phase II Fuel Transfers
Fuel Canning and Dry Modular Storage
Conceptual Design
Title Design
Construction/Storage Unit Procurement
Testing
Characterization Conceptual Design
Characterization Title Design/Procurement
Install and Test
CPP-603 Canning Station
Design
Construction
Test
Operation
1994
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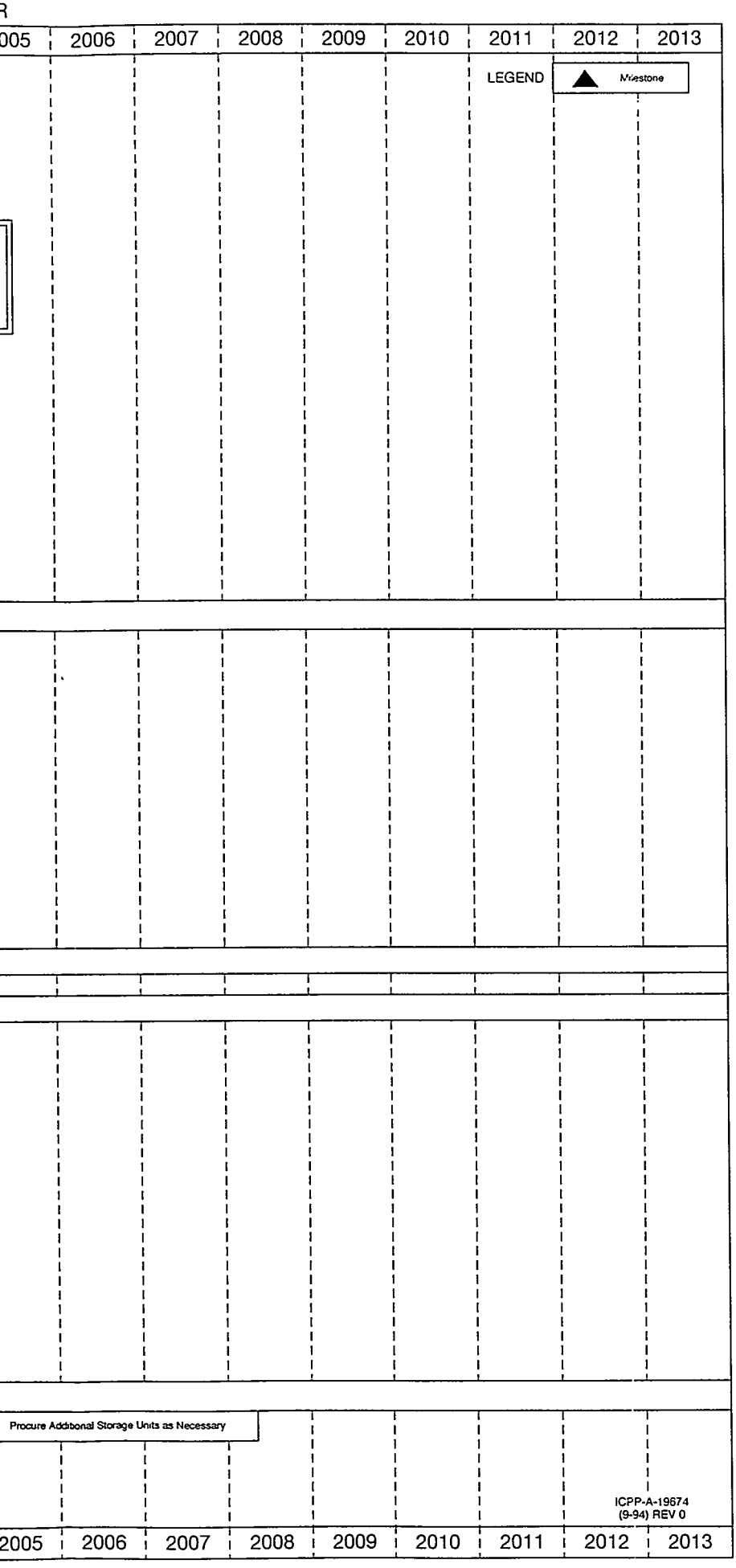


Figure 1.4-1 INEL Long-term Integrated Spent Fuel Program Plan

2.0 CONSOLIDATION STRATEGY

INEL SNF and SNM consolidation strategies were developed to eliminate INEL SNF storage facility ES&H vulnerabilities, and reduce long-term operating and capital costs prior to final SNF treatment for off-site disposition.

2.1 PRINCIPAL JUSTIFICATIONS

The ES&H vulnerabilities are part of a comprehensive baseline assessment of SNF storage facilities in the DOE complex. Elimination of these vulnerabilities; namely, operation of water-filled storage basins that are not stainless steel lined, not seismically hardened, and have no leak detection, will help reduce ES&H risks associated with wet SNF storage. DOE-ID also cited the DOE Vulnerability Assessment as a reason for urgency in INEL SNF consolidation.

Reducing long-term operating budgets will help decrease future SNF storage costs. Reducing the long-term operating budget is compatible with DOE-EM plans to D&D surplus DOE SNF storage facilities. The facility inactivation or transition phase requires removal of stored SNF or SNM. For example, retiring the PBF; Materials Test Reactor (MTR) canal, TAN facilities and CPP-603 will save about $6.3M/year.

Figure 2.1-1 depicts a block-flow diagram of the current, INEL SNF management facility long-range plan. The SNF consolidation is the first phase of the long-range plan. As illustrated in Figure 2.1-1, implementation of this plan will reduce the number of INEL SNF storage facilities from 10 to 6.

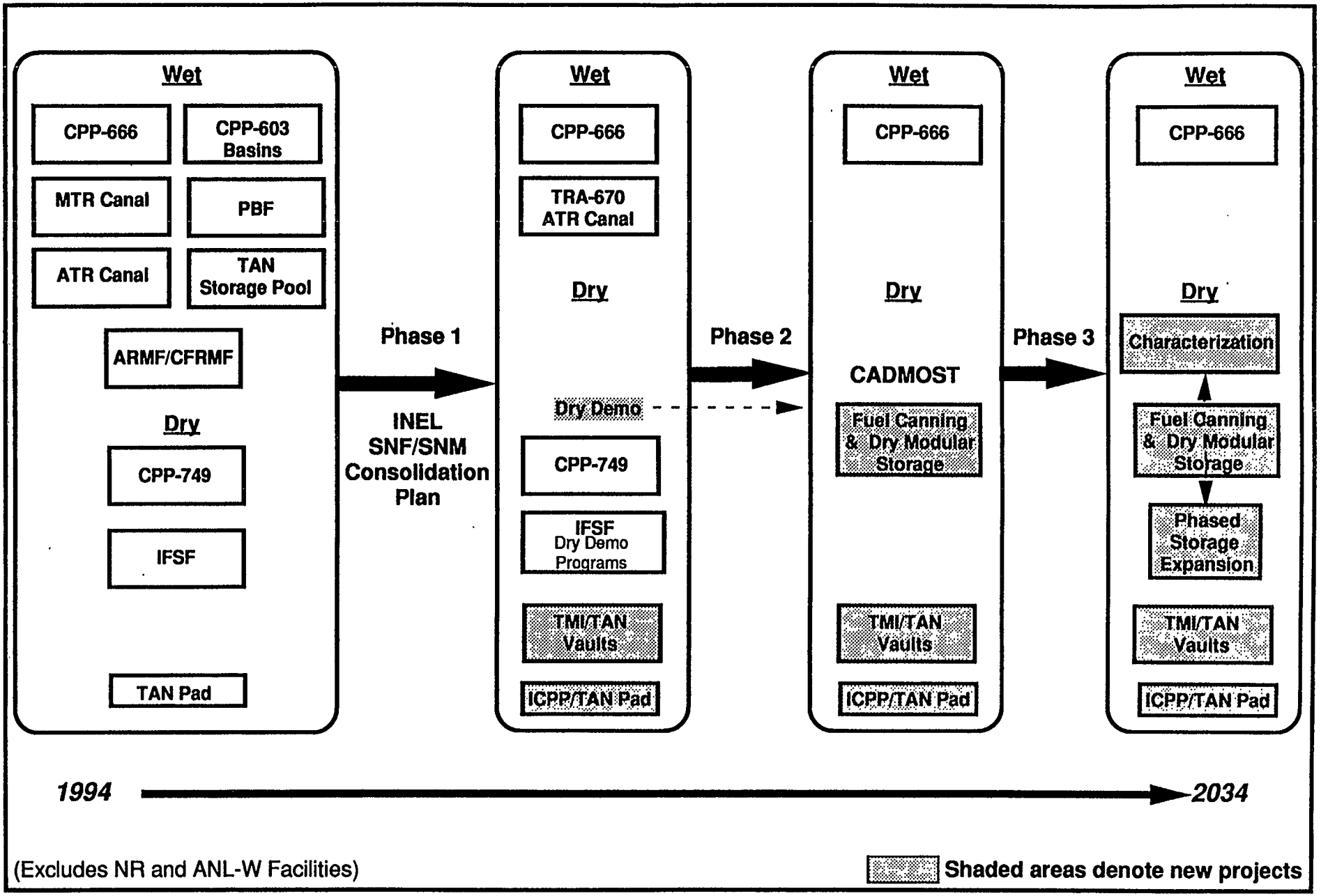
Consolidating TRA Nuclear Materials Inspection and Storage (NMIS) SNM, Advanced Reactivity Measurement Facility (ARMF)/ Coupled Fast Reactivity Measurement Facility (CFRMF), and Rover bed material at ICPP will reduce INEL costs due to a decrease in facilities needing safeguards and physical security. The annual cost savings for these activities is estimated to be $4.9M/year.

2.2 CONSOLIDATION GOALS

The underlying strategy of the Task Team was to achieve INEL SNF consolidation as soon as possible, initiate standardized dry SNF storage to the extent possible, provide maximum operational flexibility, minimize capital and operating risk, and impose no irreversible actions for any of the SNF storage facilities. Flexibility is a key requirement that must be provided to support future national plans and the Programmatic SNF and INEL ER&WM EIS.

General objectives that support these goals include activities to:

a. Consolidate irradiated and unirradiated fuel storage activities to fewer areas within the INEL,



Consol Plan View

Fig 2.1-1 Consolidation Of INEL SNF Storage Facilities

b. Retain a combination of wet and dry storage to take maximum advantage of dry storage costs and provide cooling for recently irradiated nuclear fuel,

c. Transfer all fuel types that do not require wet storage to dry storage,

d. Identify ways that will minimize the SNF storage risk and space requirements,

e. Establish a phased and expandable SNF characterization capacity that provides timely support for near-term INEL SNF consolidation tasks and future SNF dispositioning programs,

f. Retain the retired SNF storage areas in a safe and stabilized condition until their potential future uses are understood and finalized. Costs to retain these facilities in a safe and stabilized condition are not included in the scope of this study,

g. Develop modeling capability for INEL fuel transfers that ensure systems analyses for future transfers and determination of the best location for storing the additional fuel,

h. Use existing transfer equipment, procedures, safety documentation, experienced personnel, etc., to minimize unnecessary cost and confusion,

i. Minimize SNF receipts at IFSF during periods of high activity, e.g., SNF transfers for CPP-749 upgrades, and possible SNF transfer/canning from CPP-603 south basin,

j. Avoid scheduling any new INEL SNF consolidation transfers to CPP-666 for the next 10 years [current CPP-603 transfers and continued SNF receipts (ATR, Navy) fully schedule the facility],

k. Use available storage space in IFSF to expedite INEL SNF consolidation, i.e., avoid cost and time delays of new construction,

l. Use IFSF robotics support features to implement dry SNF storage demonstration programs,

m. Provide adequate safeguards and security for all fuel inventories,

n. Use related projects, SAR updates, etc. to share costs and minimize data development time for related SNF consolidation tasks,

o. Identify potential programmatic changes for individual facilities and SNF transfers that could produce significant improvements and reduce cost for the overall INEL SNF consolidation plan,

p. Utilize INEL resources for developing critical path deliverables; e.g., use INEL criticality safety experts for new or updated criticality safety calculations and SARs,

q. Develop the overall integrated consolidation schedule so that all or any part of it can be implemented in accordance with available funding,

r. Design new SNF support equipment using input from facility operators, and

s. Validate schedule assumptions and proposed activity integration via field/operations review.

2.3 BASE CASE OVERVIEW

The base case, consolidate INEL SNF as soon as possible, was developed to identify (1) how fast the various INEL ES&H vulnerability issues could be resolved, (2) the total resources needed, and (3) the critical path resource issues. The base case evolved from the assumptions listed in Appendix C and the following initial observations.

- CPP-666 is fully scheduled with CPP-603 transfers and continued receipts of Navy and ATR SNF. Therefore, SNF/SNM transfer scenarios from INEL SNF consolidation that require interacting with CPP-666 are to be avoided.

- Continued wet storage for the consolidated SNF will probably require additional packaging and is not preferred for long-term storage. Thus, transfer strategies involving dry storage options for the consolidated SNF are sought.

- The resource requirements (time, manpower, and money) to build new storage facilities should be avoided, if existing, safe storage facilities are available, namely, use IFSF or CPP-749 for consolidation.

- Because of the federal court order, CPP-603 transfers have priority over other SNF consolidation. Schedule dry canning of CPP-603 south basin SNF at the IFSF to envelop worst case transfer conditions, i.e., plans for maximum number of SNF interface issues and constraints of IFSF.

- Provide resources to support a dry storage demonstration program for all SNF that has not been stored dry, and select storage facilities that can provide remote inspection capability.

- Locate and design the new ICPP Three Mile Island (TMI) SNF dry storage facility to be expandable.

Given these baseline observations, the preliminary planning process proceeded to identify how the SNF would be transferred (casks, cranes, and other facility interfaces) and stored.

The three principal ICPP SNF receipt areas (see Figure 2.3-1) include CPP-666 (wet storage), IFSF, and CPP-749 (dry storage). Some new construction for dry storage of TMI and TAN commercial SNF would be needed. SNM would be consolidated and stored in CPP-651. These storage areas can operate almost independent of each other, provided their common resource requirements (e.g., trained personnel, shared equipment) are adequate.

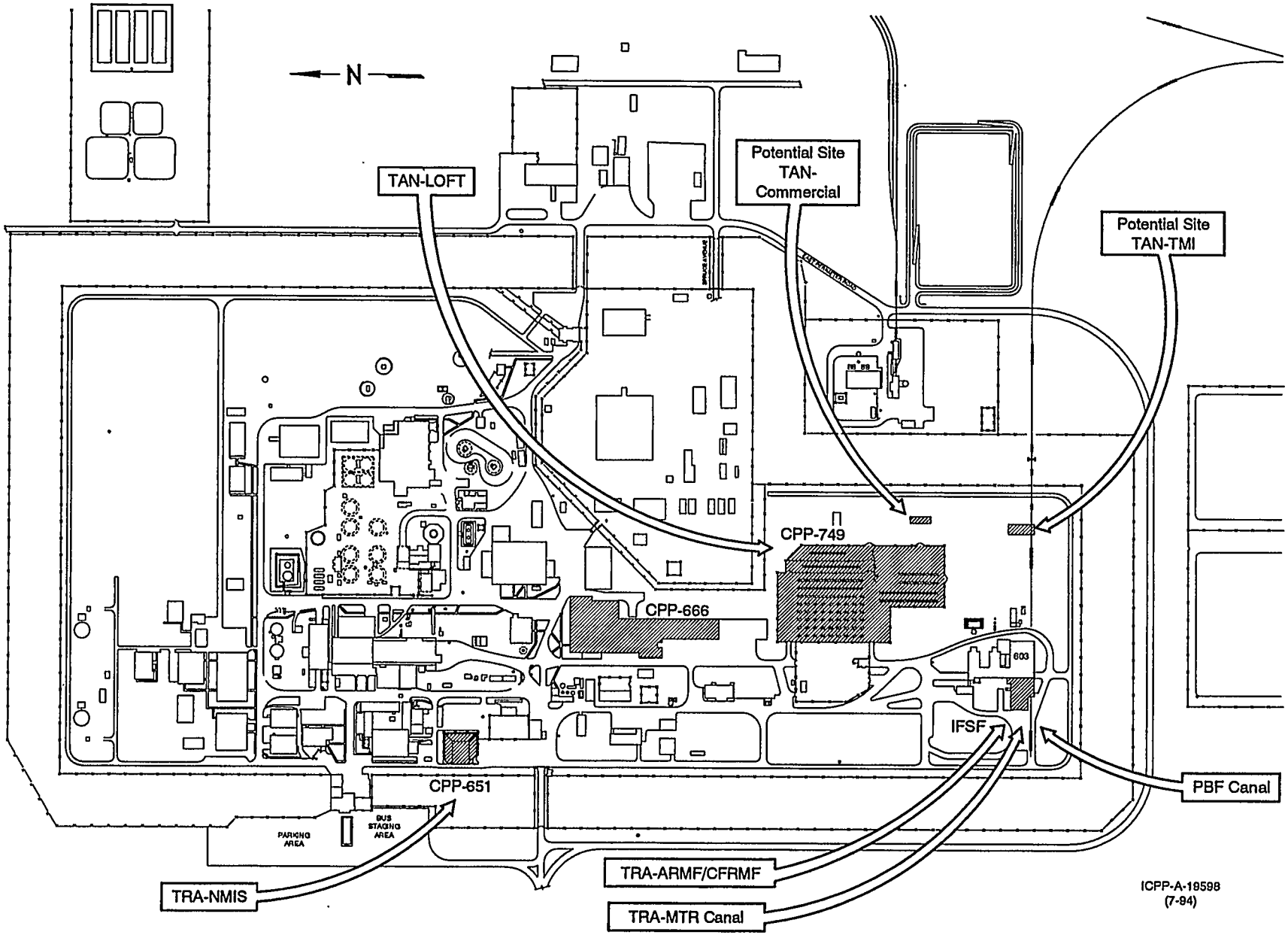


Figure 2.3-1 Overview of INEL SNF Consolidation Transfers to ICPP

The consolidation strategy for the "as soon as possible" base case attempted to minimize any interface requirements between these storage areas. This approach expedites the consolidation process by scheduling parallel rather than series transfers to these storage areas.

Figure 2.3-2 provides a summary overview of the initial planning strategy for each of the SNF transfers. PBF, TRA MTR canal, and TRA ARMF/CFRMF SNF is stored wet, but will be transitioned to dry storage at the IFSF (no physical interface with CPP-666 is required). The TAN SNF will be placed in dry storage. TAN TMI will be placed in a newly constructed facility, TAN LOFT will be placed in CPP-749, and TAN commercial will be relocated to a new pad (no physical interface with IFSF or CPP-666).

2.4 TECHNICAL TASK EXAMPLE (TRA MTR CANAL SNF CHARACTERIZATION, REPACKAGING, AND TRANSFER TO IFSF)

A description of the MTR canal transfer is provided as an example of the information that was developed and analyzed for each of the consolidation transfers. This section discusses the process used to move the MTR canal SNF to the ICPP. Summary information on the MTR canal transfer is given in Table 2.4-1.

Summary tables 2.4-2 through 2.4-12 were prepared for each of the INEL SNF or SNM consolidation transfers to and within the ICPP (AO and BO WBS series). Additional detailed information on each of the INEL transfers to ICPP (AO series) can be found in Appendix E.

2.4.1 Overview of SNF Transfers from the MTR Canal

The MTR canal was built in the early 1950s to support defueling and handling of experiments. Figure 2.4-1 shows the canal. The last program to use the canal was the Thermal Fuels Behavior Program (TFBP). SNF, predominantly from PBF experiments, is stored in the canal. The SNF is in rods, sections of rods, scrap, and metallographic mounts. Some rods are stored in sealed stainless steel tubes. However, most SNF has been accumulated into cylindrical aluminum canisters. Additional characterization and repackaging will be performed in the TRA Hot Cells before transfer to ICPP. Equipment will be needed in the Hot Cell to consolidate the SNF into new storage canisters.

Transporting the SNF to ICPP will require two moves. The first move will transfer SNF to a TRA Hot Cell. The existing Hot Cells Carrier, also known as the White Elephant Number 2 (WE-2), will be placed on the main floor of the MTR reactor building. The cask will be removed from the transport dolly with the existing MTR bridge crane. The bolts and lid will be removed and the cask lowered into the pool. A number of canisters will be transferred to the cask and the lid replaced. The WE-2 will then be lifted out of the canal and allowed to drain. The lid bolts will be installed, the cask decontaminated, and returned to the dolly.

Work at the TRA Hot Cell begins with unloading the WE-2. The cask is horizontal and is designed to interface with cell entry ports. An end plug

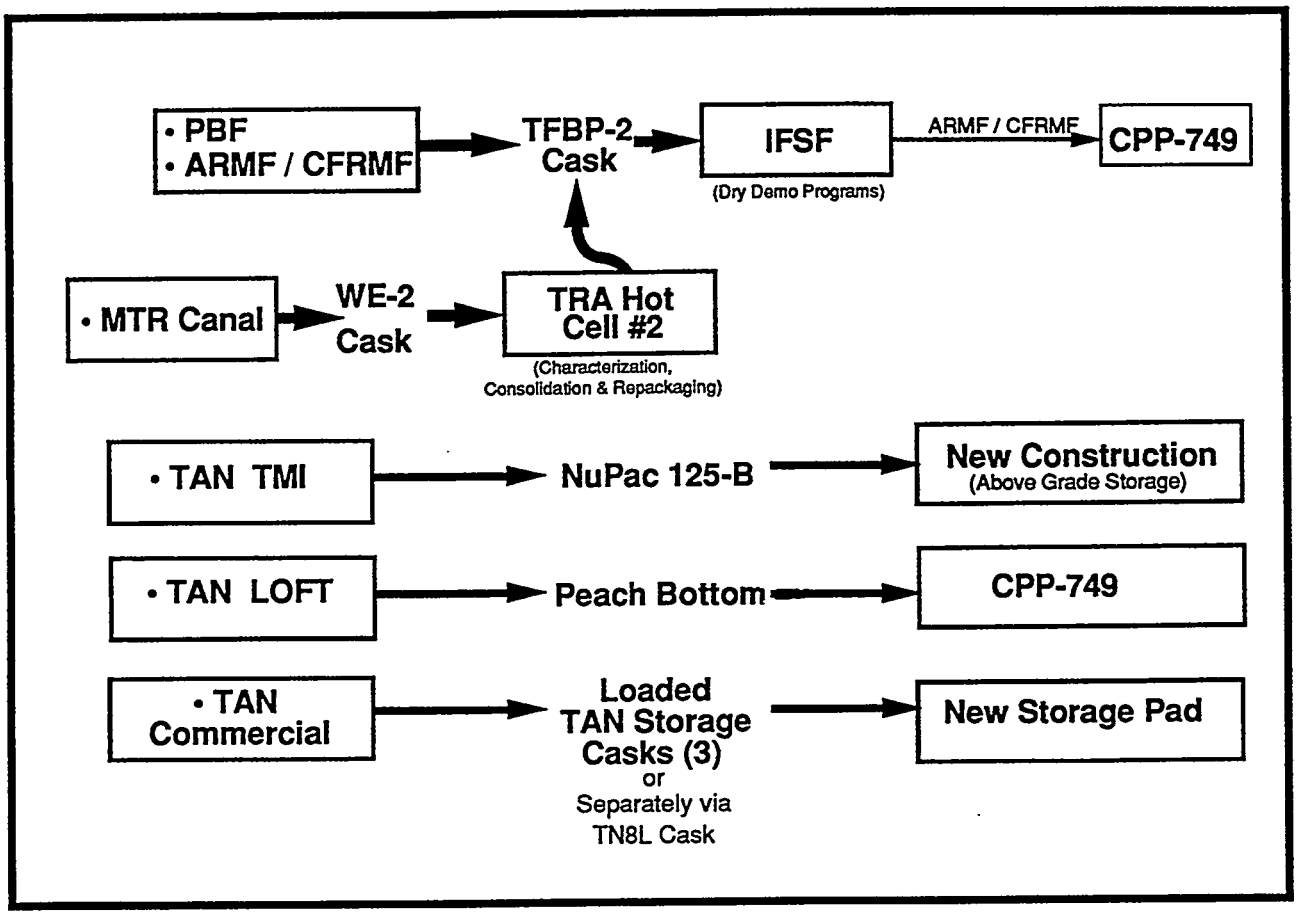


Figure 2.3-2 Overview of Fuel Transfer Scenarios

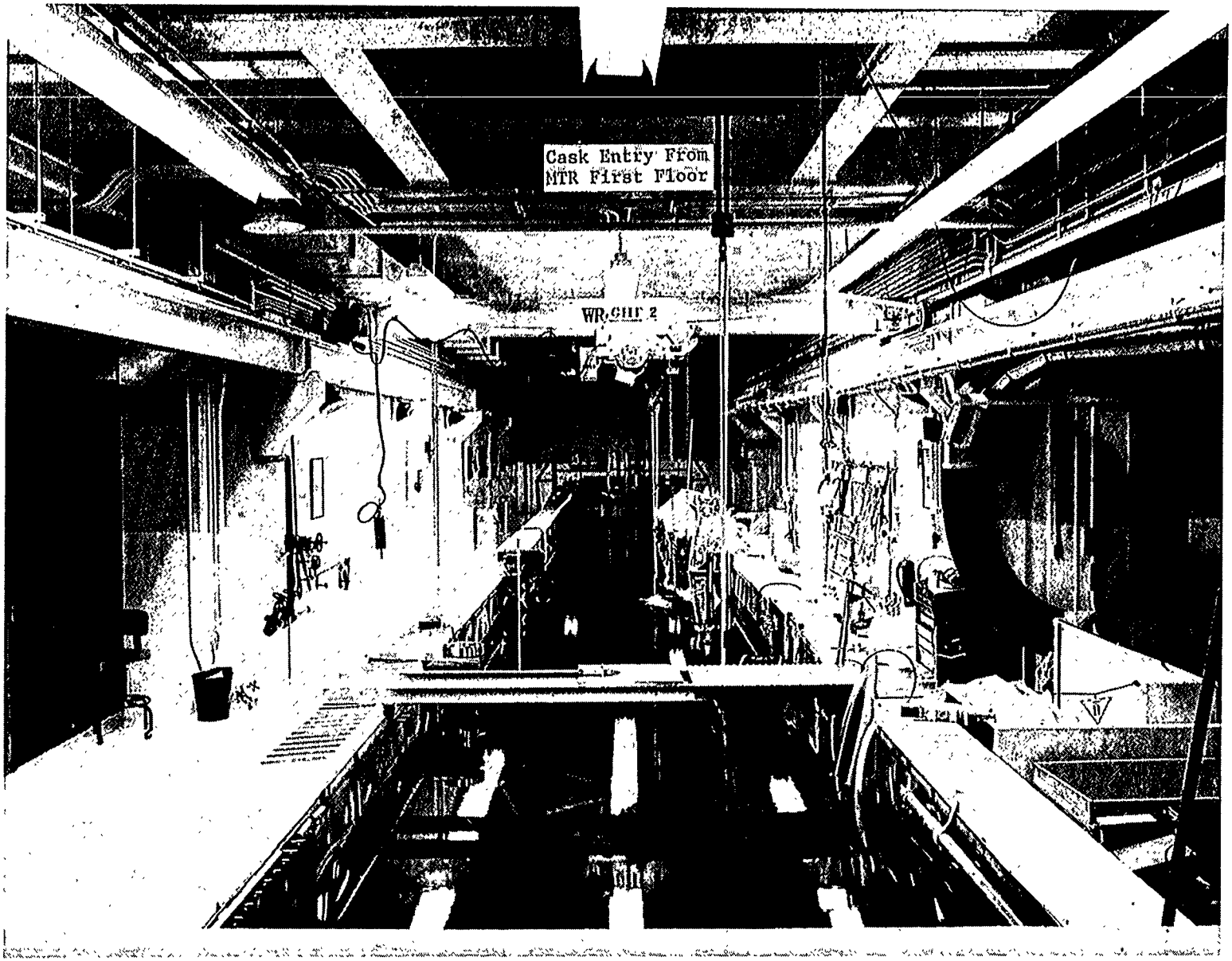


Figure 2.4-1 MTR canal was used as part of the test train assembly facility for underwater handling of irradiated components.

will be opened on WE-2 and the MTR canal canister will be pushed into the cell using a rod. The MTR pool canisters will be opened, dried, contents inspected, physical condition characterized, consolidated, and placed into a canister designed for ICPP interim storage. It is expected that several MTR canal canisters can be consolidated to one ICPP storage canister. After an ICPP storage canister is filled, the canister will be closed and loaded into the TFBP-2 cask.

The TFBP-2 cask will be used to transfer SNF to ICPP. The cask will be transported to ICPP during daylight hours at 5 to 15 mph. The transfer will be timed so it does not occur during peak traffic. Escort vehicles will be located in front and behind the truck. A similar procedure has proven to be safe in the past.

At the ICPP, the cask transporter will be surveyed for radiation and then accepted by the facility. The cask will then be moved to the IFSF where the cask will be removed from the transporter. Prior to placing the cask on the IFSF transfer cart, an adapter plate configured for the TFBP-2 cask will be placed in the cart. The cask will be loaded in the adapted IFSF transfer cart. The lid bolts will be loosened, the majority of them removed, and the rigging attached to the lid.

The cask will then be moved into the IFSF shielded area where the lid will be remotely removed. Loaded MTR canal SNF canisters will be remotely removed from the cask, placed into storage inserts, and then placed into IFSF storage canisters final storage in the IFSF. The cask lid will then be replaced and the cask removed from the IFSF. Lid bolts will be replaced, and the cask returned to the transporter. The cask will be surveyed for radioactive contamination and prepared for empty return to the TRA Hot Cells facility for reloading. A typical transfer cycle is expected to take about 11 days.

2.4.2 Development of Detailed Schedule and Cost Information

The additional planning detail provided in Appendix D clearly demonstrates the level of detail that has gone into this planning effort to ensure its completeness and accuracy. Numerous INEL personnel were consulted to help develop this data (see Appendix B). Their knowledge, combined with that of the Task Team, provided for the first time an in-depth, scoping analysis of the INEL SNF consolidation management issues.

Wherever possible, resource requirements were benchmarked against recent plant experience. The potential impacts of ever changing regulations and political policies were also monitored and incorporated to enhance the accuracy of the resource requirements. These estimates were reviewed by an ICPP validation committee in May and June. The validation committee provided additional independent review and detail.

Table 2.4-1 **WBS AO3 - TRA MTR Canal SNF Characterization, Repackaging, and Transfer to ICPP IFSF**

Background:	The MTR canal was constructed in 1952 as part of the MTR Program. The canal functioned as the storage and handling facility for irradiated fuel elements and experiments from the MTR. The MTR was shut down in 1970, and all MTR fuel and experiments were removed from the canal following reactor shutdown. Since about 1973, the canal has been used to store, refurbish, handle, and dismantle PBF reactor elements from the TFBP. The MTR canal is non-operational except for storage of the PBF SNF.
DOE Sponsor:	DOE-NE
Drivers:	**Economic** - DOE wants to reduce costs associated with maintaining the facility. One method is to remove the SNF from the facility and inactivate the MTR canal. **ES&H Vulnerabilities** - DOE wants to eliminate SNF storage vulnerabilities, which for MTR are: lack of leak detection and leak trending, inadequate corrosion monitoring, an unlined pool nearing its end of life, and canal and storage equipment that are not seismically qualified.
Preferred Action:	Transfer SNF (WE-2 cask) stored in the MTR canal to Hot Cell, repackage SNF (3-1 reduction), ship to ICPP (TFBP-2 cask), place in interim storage at the IFSF, and conduct a dry storage demonstration program.
Alternative Actions:	1) Leave SNF in place and maintain facility in current status. 2) Package the SNF and upgrade the facility.
Transfer Cask:	WE-2 to TRA Hot Cell TFBP-2 to ICPP IFSF
Transfers:	About 90 from the MTR canal to TRA hot cell, and about 33 to ICPP
Time Frame:	***Preps:*** Oct 94 through June 98 ***Transfers:*** June 98 through Nov 99
Prerequisites:	1) Update IFSF Plant Safety Document Approved Fuels List. 2) Design and fabricate IFSF canister inserts and canisters. 3) Write and approve MTR fuel handling characterization and transport procedures.* 4) Write MTR fuel inspection plan. 5) Train operators for MTR fuel characterization, transfer*, and receipt.* 6) Prepare and approve TFBP-2 Transport Plan. 7) Upgrade TRA Hot Cells Facility. 8) Design and fabricate MTR canal and Hot Cell operational equipment. 9) Prepare Hot Cell Safety Analysis Upgrades. 10) Perform Shipper Operational Readiness Review and Receiver Readiness Assessment.* *Both a shipper and a receiver activity.
NEPA:	The present assessment is that this transfer is encompassed under current activities.
Critical Issues:	FY-96 funding must be moved up to FY-95 to proceed with proposed work.
Est. Total Cost:	$8.203M
Funded:	No
Est. Pay Back Period:	31.0 years (Assumes the only savings are from reduced operating costs. The cost of possible accident recovery is not included).
Related Documents:	U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993. Buckland, R. J. et al, 1993, INEL D&D Long-Range Plan, October 1993. LaBuy, S. A., and Shaber, E. L., MTR Fuel Removal Program Plan, Report Number PG-T-94-003, Revision 0, April 27, 1994. LaBuy, S. A., MTR Canal Fuel Characterization Report, EDF-TRA-ATR-958, May 12, 1994.

Table 2.4-2 **WBS AO1 - PBF Canal SNF Transfer to ICPP IFSF**

Background:	The PBF canal was built in the late 1960s as part of the reactor facility. The PBF reactor and control areas formerly supported the TFBP and the Severe Fuel Damage Program testing. The PBF driver core is composed of stainless steel-clad, uranium dioxide and zirconia fuel pins. The driver core is stored in two fuel storage racks in the PBF canal. The fuel pins are stored in various size containers. The Boron Neutron Capture Therapy Program was proposed for the PBF. However, it has not been supported to date, and DOE shutdown PBF in 1992. A consortium of medical doctors recently expressed interest in leasing PBF for Boron Neutron Capture Therapy. This therapy is used to treat brain cancer. A decision concerning a possible lease agreement is expected in July 1994. If an agreement is reached, the SNF at PBF could remain in place.
DOE Sponsor:	DOE-NE
Drivers:	**Economic** - DOE wants to reduce costs associated with maintaining the facility. One method is to remove the SNF from the facility and inactivate PBF. **ES&H Vulnerabilities** - DOE wants to eliminate SNF storage vulnerabilities, which for PBF is inadequate corrosion monitoring.
Preferred Action:	Package SNF stored in the PBF canal, ship to ICPP, and place in interim storage at the IFSF.
Alternative Actions:	1) Store SNF at CPP-666 (wet). 2) Store SNF at MTR canal (wet). 3) Leave SNF in place and maintain facility in current status.
Transfer Cask:	TFBP-2
Transfers:	40
Time Frame:	***Preps:*** Oct 94 through March 96 ***Transfers:*** March 96 through April 97
Prerequisites:	1) Restaff and retrain PBF. 2) Restore PBF equipment to condition prior to shutdown. 3) Update IFSF Plant Safety Document Approved Fuels List. 4) Design and fabricate IFSF canister inserts baskets. 5) Design and fabricate an adapter plate for the IFSF transfer cart. 6) Write and approve PBF fuel handling procedures.* 7) Write PBF fuel inspection plan for dry storage. 8) Train operators for PBF fuel receipt. 9) Fabricate fuel handling tools. 10) Perform Shipper Operational Readiness Review and Receiver Readiness Assessment. *Both a shipper and a receiver activity.
NEPA:	The present assessment is that this transfer is encompassed under current activities.
Critical Issues:	1) FY-96 funding must be moved up to FY-95 to proceed with the proposed schedule. 2) TFBP-2 cask eligibility for PBF transfers must be verified. 3) IFSF transfer cart must be adapted to interface with the TFBP-2 cask.
Est. Total Cost:	$7.136M
Funded:	No
Est. Pay Back Period:	3.3 years
Related Documents:	U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety and Health Vulnerabilities, December 1993. Grumbly, T. P. letter to Acting Director of Nuclear Energy, NE-1, Transition of the Power Burst Facility, dated December 6, 1993. Hamer Jr., D. L. letter to W. C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993. Brolin, E. E. letter to A. A. Pitrolo, Power Burst Facility (PBF) Management Options, dated January 11, 1994. Pitrolo, A. A. letter to J. Okeson, RTD-110-92, dated April 8, 1992. Leatham, J., Project Management Plan for Fuel Relocation and Stand-Down of the Power Burst Facility, PG-T-94-005, May 23, 1994.

Table 2.4-3 **WBS AO2 - TRA ARMF/CFRMF SNF Transfer to ICPP IFSF**

Background:	The ARMF/CFRMF building and canal were designed and constructed from 1958 through 1960. The two facility reactors, ARMF-1 and CFRMF (known as ARMF-2 until it was modified in 1968) were designed and fabricated in the same time frame. The fuel is located in the two reactors. Both reactors use the same type of fuel, fully enriched U-235 Materials Test Reactor-type elements. Operation of the ARMF/CFRMF was suspended in February 1991. No programmatic use is planned for these reactors. The facility is scheduled for inactivation in FY-95, which requires removal of the enriched aluminum-clad fuel.
DOE Sponsor:	DOE-NE
Drivers:	**Economic** - DOE wants to reduce costs associated with maintaining the facility. One method is to remove the SNF from the facility and inactivate the ARMF/CFRMF building and canal. **ES&H Vulnerabilities** - DOE wants to eliminate SNF storage vulnerabilities, which for TRA ARMF/CFRMF is SNF stored in an inactive reactor.
Preferred Action:	Ship SNF stored in the ARMF/CFRMF canal to ICPP, place it in interim storage at the IFSF, and conduct a dry storage demonstration program. ARMF fuel will be transferred to CPP-749 at a later date.
Alternative Actions:	1) Leave SNF in place and maintain facility in current status. 2) Transfer SNF in fuel element form directly to CPP-749, and bypass ICPP IFSF and an opportunity to conduct a dry storage demonstration program. See Table 2.4-11 for description of the follow on activity.
Transfer Cask:	TFBP-2
Transfers:	17
Time Frame:	***Preps:*** Oct 94 through May 97 ***Transfers:*** May 97 through Sept 97
Prerequisites:	1) Update IFSF Plant Safety Document Approved Fuels List. 2) Design and fabricate IFSF canister inserts. 3) Write and approve ARMF/CFRMF fuel handling procedures.* 4) Write ARMF/CFRMF fuel inspection plan. 5) Design and fabricate an adapter plate for the IFSF transfer cart. 6) Train operators for ARMF/CFRMF fuel transfer and receipt.* 7) Perform Shipper and Receiver Readiness Assessments.* *Both a shipper and a receiver activity.
NEPA:	The present assessment is that this transfer is encompassed under current activities.
Critical Issues:	1) TFBP-2 cask eligibility for ARMF/CFRMF transfers must be verified. 2) IFSF transfer cart must be modified to interface with the TFBP-2 cask.
Est. Total Cost:	$4.302M
Funded:	No
Est. Pay Back Period:	15.6 years
Related Documents:	U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993. Hamer Jr., D. L. letter to W. C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993. LaBuy, S. A., ARMF/CFRMF Fuel Removal Program Plan, PG-T-94-004, May 12, 1994. LaBuy, S. A., ARMF/CFRMF Fuel Characterization Report, EDF-TRA-ATR-959, May 12, 1994.

Table 2.4-4 **WBS AO4 - TRA NMIS SNM Transfer to CPP-651**

Background:	Category I and II SNM inventories are maintained at three INEL areas: TRA, ICPP, and ANL-W. Because of the SNM quantities in inventory at these locations, complete consolidation (using existing facilities) is not possible. However, consolidation of TRA SNM and ICPP SNM can be accomplished in CPP-651.
DOE Sponsor:	DOE-NE
Drivers:	**Economic** - DOE wants to reduce costs associated with maintaining these facilities. One method is to remove the SNM from TRA and inactivate TRA-621. The saving is due to a reduction of safeguards and physical security needs.
Preferred Action:	Ship to ICPP and place in interim storage at CPP-651.
Alternative Actions:	Leave SNM in place at TRA and maintain current status.
Transfer Cask:	Existing ATR and Engineering Test Reactor (ETR) shipping containers (boxes).
Transfers:	24
Time Frame:	***Preps:*** Jan 95 through Mar 96 ***Transfers:*** Mar 96 through Jul 96
Prerequisites:	1) Discontinue hydraulic testing of ATR fuel elements at INEL prior to consolidation. 2) Refurbish and use ETR shipping containers for transferring the ETR and General Electric Test Reactor (GETR) fuels to the ICPP. 3) Complete readiness assessment to receive SNM. 4) Update safety documentation to allow receipt and storage of SNM. 5) Upgrade alarm system at CPP-651.
NEPA:	The present assessment is that this transfer is encompassed under current activities.
Critical Issues:	New racks will be designed, procured, and installed in north vault room for storage of ATR, ETR, and GETR fuel.
Est. Total Cost:	$1.414M
Funded:	No
Est. Pay Back Period:	1.8 years
Related Documents:	Hevlow, J. E. et al, 1994, Task Team Report - Consolidation of TRA and ICPP Special Nuclear Materials in CPP-651, February 28, 1994. Burns Jr., T. F. letter to E. N. Fray and W. C. Moffitt, AM/OPA-SSD-SMM-94-052, Task Team Report - Consolidation of TRA and ICPP Special Nuclear Materials in CPP-651, dated April 7, 1994. Burns Jr., T. F. letter to W. C. Moffitt and E. N. Fray, AM/OPA-SSD-SMM-94-076, Consolidation of TRA and ICPP Special Nuclear Materials in CPP-651, dated June 20, 1994. Dials, G. E. letter to E. N. Fray and W. C. Moffitt, AM/OPA-SSD-SMM-93-033, Joint EG&G-WINCO Cost/Benefit Study - Consolidation of Special Nuclear Materials, dated November 8, 1993.

Table 2.4-5 **WBS AO5 - TAN TMI SNF Transfer to New Facility at ICPP**

Background:	TMI core debris shipments to the INEL began in FY-86. The shipments were part of a contractual agreement between DOE and General Public Utilities Nuclear. DOE agreed to accept the core debris for examination, storage, and disposal.
DOE-Sponsor:	DOE-EM
Drivers:	**Economic** - DOE wants to reduce costs associated with maintaining the TAN facility. One method is to remove the SNF from the facility and inactivate it. **ES&H Vulnerability** - DOE wants to eliminate SNF storage vulnerabilities, which for TAN TMI are SNF stored in an aging facility with an unlined pool and other design features departing from current criteria.
Preferred Action:	Remove and dry TMI canisters, transfer to ICPP, and place in interim storage in new facility.
Alternative Actions:	1) Perform dry cask storage project at TAN as originally scoped. 2) Leave SNF in place and maintain facility in current status.
Transfer Cask:	NuPac 125-B
Transfers:	342 from TAN Storage Pool, and 49 from TAN to ICPP
Time Frame:	***Preps:*** Continue through Nov 97 ***Transfers:*** Nov 97 through Nov 99
Prerequisites:	1) Write and approve applicable safety documents and procedures. 2) Receive a Finding of No Significant Impact (FONSI) for TMI environmental assessment (EA). 3) Determine storage facility concept at ICPP. 4) Complete shipper and receiver ORR.
NEPA:	An EA is needed for construction of a new storage facility. An above grade, monolithic, vertical vault storage facility is proposed.
Critical Issues:	1) Issue a FONSI for TMI EA. 2) Issue fuel handling change notice. 3) Construct new facility. 4) Obtain suitable transport trailer.
Est. Total Cost:	$22.762M
Funded:	Yes
Est. Pay Back Period:	13.5 years
Related Documents:	EG&G Idaho, 1994, Quick Look Study. U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993.

Table 2.4-6 **WBS AO6 - TAN LOFT SNF Transfer to CPP-749**

Background:	Constructed during 1965-1975, the now closed LOFT facility was a scaled down version of a commercial pressurized water reactor. When the SNF was removed from the reactor, it was brought to the TAN Hot Shop and is presently stored in modified TMI canisters. The original intent of the TAN Pool Stabilization Project was to remove everything from the pool so it could be removed from service. LOFT fuel was destined to be dried, placed in a cask, and set on a pad until SNF consolidation planning and evaluation determined that 14 positions in CPP-749 are reserved for LOFT fuel assemblies. It is expected that only 7 positions are needed in CPP-749. One canister, FP-2, contains cut up assemblies/small pieces, and it will be placed in IFSF.
DOE Sponsor:	DOE-EM
Drivers:	**Economic** - DOE wants to reduce costs associated with maintaining the facility. One method is to remove the SNF from the facility and inactivate it. **ES&H Vulnerabilities** - DOE wants to eliminate SNF storage vulnerabilities, which for TAN LOFT is SNF stored in an unlined pool.
Preferred Action:	Repackage the fuel, ship it to ICPP, and place in interim storage at CPP-749 Dry Well Vaults, except for placing one canister (FP-2) in IFSF.
Alternative Actions:	1) Include positions for LOFT SNF in TMI storage facility design. 2) Dry and place in a cask on a pad at TAN as previously planned. 3) Leave SNF in place and maintain facility in current status.
Transfer Cask:	Peach Bottom-2 (PB-2)
Transfers:	7
Time Frame:	***Preps:*** Oct 94 through April 97 ***Transfers:*** April 97 through May 98
Prerequisites:	1) Update IFSF Plant Safety Document Approved Fuels List to include LOFT fuel. 2) Write and approve LOFT fuel handling procedures.* 3) Write LOFT fuel inspection plan. 4) Train operators for LOFT fuel transfer and receipt.* 5) Perform Shipper Operational Readiness Review and Receiver Readiness Assessment.* 6) Obtain DOT exemption for PB-2 cask use over public highway. * Both a shipper and a receiver activity.
NEPA:	The present assessment is that this transfer is encompassed under current activities.
Critical Issues:	The PB-2 cask does not have a Certificate of Compliance for the U.S. Department of Transportation (DOT). Preliminary discussion with DOE indicates that a DOT exemption or out-of-commerce variance will be obtainable.
Est. Total Cost:	$2.679M
Funded:	Yes - TAN Pool Stabilization Project
Est. Pay Back Period:	5.2 years
Related Documents:	U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993.

Table 2.4-7 **WBS AO7 - TAN Commercial SNF Transfer to New Pad at ICPP**

Background:	DOE has conducted a dry storage demonstration program (Thermal Fuel Behavior Project) for commercial SNF at TAN since 1985. Low-enriched-uranium (39.1 metric tons) was acquired from utilities processed, and installed in four dry storage casks (Castor-V/21, MC-10, TN-24P, and VSC-17). The casks are on a concrete pad (TAN-791) north of the TAN-607 Hot Shop. The SNF from the TN-24P and the VSC-17 casks has been consolidated by separating the fuel rods from the fuel assembly skeletons and placing the fuel rods in a close-packed configuration. The VSC-17 cask is unsuitable for dry storage use at ICPP, because ICPP has no dry shielded facility for cask repair. The remainder of the commercial SNF is located in wet storage in aluminum coffins, which are potentially vulnerable to corrosion. Transfer of the SNF from the coffins to dry storage in TAN-607 is planned for FY-94 to alleviate the vulnerability.
Drivers:	**Economic** - DOE wants to reduce costs associated with maintaining the facility. One method is to remove the pad from service.
DOE Sponsor:	DOE-RW/EM
Preferred Action:	Transport commercial casks to TAN Hot Shop, rearrange the SNF in casks, transfer loaded casks to ICPP, and place in interim storage on newly constructed pads near CPP-749.
Alternative Actions:	1) Leave SNF in place and maintain facility in current status. 2) Unload the casks, use commercial shipping casks to transfer SNF to CPP-666. Move storage casks to CPP-666 for reloading. Place loaded casks on new pads. 3) Include positions for this fuel in the TMI storage facility design.
Transfer Cask:	Ship in loaded storage cask using NuPac 125-B to transport
Transfers:	3
Time Frame:	***Preps:*** Oct 95 through Dec 99 ***Transfers:*** Dec 99 through Jan 00
Prerequisites:	1) Construct pad at ICPP. 2) Complete shipper and receiver ORR.* 3) SNF Recovery Plan and procedures. 4) Receive DOT exemption to ship. * Both a shipper and receiver activity.
NEPA:	A categorical exclusion (CX) would be needed to construct a new pad at ICPP.
Critical Issues:	1) Approval to transport loaded casks is needed. 2) Should the Thermal Fuel Behavior Project be continued after the casks are moved to ICPP? 3) Could the Thermal Fuel Behavior Project continue meaningfully, if the fuel is immersed during wet transfer at CPP-666?
Est. Total Cost:	$3.451M
Funded:	No
Est. Pay Back Period:	7.8 years
Related Documents:	U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993.

Table 2.4-8 **WBS B01 - CPP-603 SNF Repacking and Transfer to CPP-666**

Background:	The CPP-603 basins were built and placed into operation in the early 1950s for underwater storage of irradiated nuclear fuels awaiting processing or other disposition. In 1993, the three basins contained 2899 kg of uranium in a variety of SNF configurations and fissionable-isotope enrichments in 1993. The basins are unlined- concrete structures. The SNF is stored in racks or on monorail hangers. The SNF is being discharged from CPP-603 to comply with a U.S. District Court Order issued in September 1993. Removing SNF from CPP-603 will correct perceived deficiencies, which include corrosion-damaged SNF encapsulation and hangers, facility structure, resistance to seismic events, and water-leak detection.
Drivers:	**Economic** - DOE wants to reduce facility upgrade and operation costs by inactivating, and D&D of the CPP-603 wet storage basins. **ES&H Vulnerabilities** - DOE wants to correct the observed vulnerabilities of SNF storage in CPP-603 wet storage basins including; inadequate water leakage detection, inadequate seismic resistance, corrosion damage of SNF and SNF supports, and inadequate heating and ventilating system redundancy and radionuclide detection.
DOE Sponsor:	DOE-EM
Preferred Action:	Correct CPP-603 storage basin facility and SNF deficiencies. Relocate 189 FHU's from North Basin to CPP-666 by December 31, 1994. Transfer an additional 189 FHUs to CPP-666 by December 31, 1995. Transfer an additional 244 FHUs to CPP-666 by December 31, 1996. Acquire capability for recanning SNF. Transfer the South Basin fuel (755 positions) to CPP-666 by December 31, 2000.
Alternative Actions:	The U.S. District Court Order restrains consideration of alternate approaches, but state concurrence is being pursued to store some South Basin fuels in IFSF.
Transfer Cask:	STR Charger
Transfers:	~ 1200
Time Frame:	***Preps:*** Continue to Aug 00 ***Transfers:*** Mar 94 through Dec 00
Prerequisites:	1) Updates to CPP-666 PSD approved fuels list. 2) Write handling procedures. 3) Perform multiple Readiness Assessments. 4) Design and fabricate handling tools and storage buckets.
NEPA:	Task actions are already approved.
Critical Issues:	None
Est. Total Cost:	$10.490M
Funded:	Yes (Activity Data Sheet 1010)
Est. Pay Back Period:	8.7 years
Related Documents:	H. L. Ryan (Sr. U.S. District Court Judge), Order Modifying Order of June 28, 1993, dated September 28, 1993. U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993. Buckland, R. J. et al, INEL D&D Long Range Plan, October 1993. Task Team Report Accelerated Fuel Transfers from CPP-603 to CPP-666, dated October 29, 1993.

Table 2.4-9 **WBS B02 - Rover-Bed Material Repackaging and Transfer to CPP-749**

Background:	The CPP-640 facility contains the headend processing systems for the Rover rocket carbon-encapsulated SNF and stainless steel clad SNF. The fluidized-bed burning stage of the Rover SNF processing system, which was shutdown in 1984, contains a TBD quantity of uranium-containing ash. The facility is on the DOE Surplus Facilities List.
Drivers:	**Economic** - DOE wants to reduce facility upgrade and operation costs by inactivating and D&D the CPP-640 wet-storage basins. **ES&H Vulnerabilities** - DOE wants to correct the observed vulnerabilities of SNF storage in CPP-640 including inadequate leak protection of the piping systems.
DOE Sponsor:	DOE-EM
Preferred Action:	Determine the quantity of uranium and ash, satisfy regulation compliance requirements, and acquire canisters for storage in CPP-749 drywells.
Alternative Actions:	1) Leave SNF in place and maintain facility in current status, in hope that reprocessing SNF to separate the SNM from the hazardous high-level waste will be resumed for compliance to ALARA regulations. 2) Transfer the bed material to an interim storage facility as transuranic high-level waste after an appropriate authority defines conditions for exemption from the legal definitions and preservation-stipulations for SNF.
Transfer Cask:	Rover Transport Cask from CPP-640 to ICPP-IFSF PB-2 from ICPP-IFSF to CPP-749
Transfers:	12 from CPP-640 to ICPP-IFSF 3 from ICPP-IFSF to CPP-749
Time Frame:	***Preps:*** Feb 96 through June 97 ***Transfers:*** July 97 through Aug 97
Prerequisites:	1) Material is canned at CPP-640 prior to transfer to IFSF. 2) An ORR has been successfully completed for restart of ICPP SNF dry-storage facilities.
NEPA:	A CX would be sufficient.
Critical Issues:	Difficult to recover SNM from process lines and equipment.
Est. Total Cost:	$0.856M (transfer cost only)
Funded:	Proposed
Est. Pay Back Period:	0.2 years
Related Documents:	Buckland, R. J. et al, INEL D&D Long Range Plan, October 1993.

Table 2.4-10 **WBS B03 - Fermi and Peach Bottom SNF Repackaging and Transfers**

Background:	The CPP-749 facility was constructed to provide dry storage of chemically-reactive SNF for an indefinite period now believed to extend until CY-2014. Two generations of drywells (vaults) have been constructed. There are 83 1st-generation drywells and 135 2nd-generation drywells. The 1st-generation drywells extend 20 ft below grade and include a carbon-steel casing sealed at the top with a concrete plug and carbon steel cap and sealed at the bottom with cement grout. 1.6 metric tons of stainless steel clad, highly-enriched uranium from Fermi is stored in fourteen of the 1st-generation drywells and 34.2 metric tons of carbon-encapsulated low-enriched uranium from Peach Bottom is stored in 45 of the 1st-generation drywells. The 1st-generation drywells may be susceptible to corrosion and do not include provisions for determining the condition of the drywell or the SNF stored in the drywell.
Drivers:	**Economic** - None **ES&H Vulnerabilities** - DOE wants to correct the observed vulnerabilities of SNF storage in CPP-749 1st-generation drywells including; inadequate water leakage detection, and corrosion damage of drywell structures and SNF.
DOE Sponsor:	DOE-EM
Preferred Action:	Satisfy regulatory compliance requirements, and acquire equipment (handling tools, leak-test rig, and canisters for storage of Peach Bottom SNF in CPP-749 drywells. Transfer Peach Bottom SNF to ICPP-IFSF for recanning. Transfer recanned Peach Bottom SNF to CPP-749 2nd-generation drywells. Transfer Fermi SNF from 1st-generation to 2nd-generation drywells at CPP-749.
Alternative Actions:	1) Leave SNF in place and maintain facility in current status in hope that reprocessing SNF to separate the SNM from the hazardous high-level waste will be resumed for compliance to ALARA regulations. 2) Transfer the SNF to an interim storage facility as transuranic high-level waste after an appropriate authority defines conditions for exemption from the legal definitions and preservation stipulations for SNF.
Transfer Cask:	PB-2
Transfers:	45 from CPP-749 1st-generation drywells to ICPP-IFSF 45 from ICPP-IFSF to CPP-749 2nd-generation drywells 14 between CPP-749 1st and 2nd-generation drywells
Time Frame:	***Preps:*** May 94 through Oct 95 ***Transfers:*** Oct 95 through Aug 97
Prerequisites:	1) Tooling to package fuel for storage in CPP-749 available in IFSF. 2) Complete ORR for restart of ICPP SNF dry storage facilities.
NEPA:	A CX would be needed.
Critical Issues:	None
Est. Total Cost:	$4.560M
Funded:	Proposed
Est. Pay Back Period:	TBD
Related Documents:	U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993. Buckland, R. J. et al, INEL D&D Long Range Plan, October 1993.

Table 2.4-11 **WBS B04 - Follow-on Transfers of Consolidation Fuels**

Background:	ARMF/CFRMF SNF will be temporarily stored in CPP-IFSF after the consolidation transfer for conduct of dry storage demonstration. When the dry storage process is shown to be satisfactory, the ARMF/CFRMF SNF will be transferred to the CPP-749 drywells to improve the security of the SNM constituent of the SNF.
Drivers:	**Economic** - None **ES&H Vulnerabilities** - DOE may want to assure that the dry storage configuration of the consolidation SNF will not create additional vulnerability conditions.
DOE Sponsor:	TBD
Preferred Action:	Improve safeguards for storage of the SNM constituent of the ARMF/CFRMF SNF by transferring the SNF to CPP-749 drywells after completion of a successful dry storage demonstration program in ICPP-IFSF.
Alternative Actions:	1) Extend the storage of the ARMF/CFRMF SNF in ICPP-IFSF after completing the dry storage demonstration plan. 2) Transfer the SNF to an interim storage facility as transuranic high-level waste after an appropriate authority defines conditions for exemption from the legal definitions and preservation-stipulations.
Transfer Cask:	PB-2
Transfers:	2
Time Frame:	***Preps:*** Jun 99 through Oct 99 ***Transfers:*** Oct 99 through Nov 99
Prerequisites:	1) Tooling to package fuel for storage in CPP-749 available in IFSF. 2) A successful demonstration of dry storage of the ARMF/CFRMF SNF in ICPP-IFSF.
NEPA:	A CX will be sufficient.
Critical Issues:	None
Est. Total Cost:	$0.837M
Funded:	No
Est. Pay Back Period:	TBD
Related Documents:	D. L. Hamer letter to W.C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993.

Table 2.4-12 **WBS B05 - CPP-603 FECF-SNF Repackaging and Transfer to IFSF**

Background:	The CPP-603 Fuel Element Cutting Facility (FECF) was constructed in 1957 for preparing SNF for processing. The facility is a typical hot cell configuration with 5-ft thick concrete walls, shielded-viewing windows, manipulators, and interior lighting. The facility was shutdown in 1980 with two Peach Bottom SNF segments inside. The full size Peach Bottom fuel elements contain about 2.1 kg of heavy metal. The manipulators and interior lighting are currently inoperative. The facility is on the DOE surplus facilities list.
Drivers:	**Economic** - DOE wants to reduce facility upgrade and operation costs by inactivating and D&D the CPP-603 FECF. **ES&H Vulnerabilities** - Possible degraded Peach Bottom fuel.
DOE Sponsor:	DOE-EM
Preferred Action:	Recover the two Peach Bottom SNF segments from CPP-603 FECF and transfer them to ICPP IFSF for canning and storage.
Alternative Actions:	1) Expand the program to include execution of the recovery, canning, and storage actions. 2) Leave SNF in place and maintain facility in current status in hope that reprocessing SNF to separate the SNM from the hazardous high-level waste will be resumed for compliance to ALARA regulations. 3) Recover and transfer the SNF to an interim storage facility as transuranic high-level waste after an appropriate authority defines conditions for exemption from the legal definitions and preservation stipulations for SNF.
Transfer Cask:	PB-2
Transfers:	1 or 2
Time Frame:	***Preps:*** May 94 through Oct 95 ***Transfers:*** Not included
Prerequisites:	Tooling to package fuel for storage in CPP-749 available in IFSF.
NEPA:	A CX will be sufficient.
Critical Issues:	Task may be technically difficult due to inoperative manipulator and lighting systems.
Est. Total Cost:	$0.066M
Funded:	Yes (Activity Data Sheet 1010)
Est. Pay Back Period:	TBD
Related Documents:	U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, December 1993. Buckland, R. J. et al, INEL D&D Long Range Plan, October 1993.

2.5 PRIORITIZATION METHODOLOGY for SNF/SNM CONSOLIDATION TRANSFERS

The priority of SNF/SNM transfers is driven by several interrelated factors. Some of the key factors include safety (reduced risks for stakeholders), funding (reduced capital and operating dollars), environmental protection, regulatory compliance, and public perception.

A multi-variant, decision-making analysis was used to determine the transfer priority for each SNF or SNM inventory stored at the INEL. Table 2.5-1 presents the subjective INEL SNF/SNM prioritization (decision analyses) matrix for this plan. It is a combination of strategies from WIN-367, the Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety, and Health Vulnerabilities, and the draft INEL Risk-Based Prioritization Program.

Each category has a weighted value range (0-10). Nine INEL SNF storage facilities and the subsequent proposed transfers were given a subjective score for each criterion based on informed opinions from the Task Team and other knowledgeable personnel. The final score is determined by multiplying the weighted factor times the subjective score, which also had a range 0 to 10. Each of these individual products is then subtotaled in the "resource" and "benefits" sections, which are combined for a final total. Thus, the transfer of SNF or SNM that produced the most gain for the least amount of resources was the first to be scheduled for transfer. A short discussion of each criterion follows. The highest final total score is the first SNF to be transferred.

Resource Requirement:

Amount of SNF Transferred - How large and diverse is the inventory? Are multiple casks required for the transfer? Will the inventory require repackaging or characterization prior to transfer? A high score would indicate minimal resources are required, e.g., minimal transfers, no repackaging or characterization, casks are available, etc.

Availability of new storage for transferred SNF - Is the new storage space available for this inventory? Will the transfer consume all of this storage space or only a small part? A high score would indicate that no new construction is required and that the transfer did not require a significant amount of the available storage space.

NEPA, SAR, and special permits - Is the proposed transfer routine or does it require additional support and analysis to obtain the required approvals? A high score would indicate a routine transfer with no additional analysis.

Near-term funding - How much funding is required to implement the transfer? Is the funding level or peaked? A high score would indicate minimal funding at consistent levels.

Table 2.5-1 INEL SNF/SNM Transfer Prioritization Matrix

	Resource Requirements							Benefits					
Weighted Factor	**3**	**2**	**7**	**5**	**5**	**5**	**27**	**10**	**9**	**8**	**27**		
	Amount Of Transferred SNF	Availability Of New Storage	NEPA, SAR, and Special Permits	Available Near-Term Funding	Equipment, Time, Personnel etc.	Schedule Constraints	*Sub Total*	Reduction Of Safety & Env. Risk	Reduction Of Political Risk	Less Facility Life-Cycle Costs	*Sub Total*	**Final Total**	**Final Priority**
PBF Canal	7	8	8	5	6	5	*173*	3	4	9	*138*	311	**5th**
CPP-603	2	8	6	10	3	4	*149*	10	10	8	*254*	403	**1st**
CPP-749	5	8	9	9	6	5	*194*	8	7	2	*159*	353	**3rd**
Rover Bed	9	8	8	7	7	5	*194*	7	4	10	*186*	380	**2nd**
TRA-621 NMIS*	8	9	7	6	8	8	*201*	1	3	7	*93*	294	**6th**
TRA MTR Canal	5	8	6	5	4	5	*143*	9	8	4	*194*	337	**4th**
TRA-660 ARMF/ CFRMF	8	8	8	5	8	5	*186*	5	6	4	*136*	322	**5th**
TAN TMI**	3	3	3	8	3	9	*136*	6	9	8	*205*	364	**3rd**
TAN LOFT**	9	8	5	8	8	8	*198*	6	9	6	*189*	364	**3rd**
Commercial	7	4	3	2	6	9	*135*	2	2	6	*86*	221	**7th**
			0 ◄					► ***10***					
			Worst					**Best**					

* Cold unirriadiated ATR Fuel

** These SNF are moved together. Thus, the final total is an average of the two totals for each fuel.

Equipment, Time, and Personnel, etc. - Does the transfer use existing resources or is it necessary to purchase new equipment and hire and train new personnel? A high score would indicate use of existing resources and minimal new construction.

Schedule constraints - Can the receiving ICPP accept the inventory as soon as the shipper is prepared to implement the transfer? If not, how long is the delay? A high score would indicate no receiver delay.

Benefit:

Reduction of safety and environmental risk - For the purpose of this plan, the DOE-HQ ES&H SNF storage vulnerability results were used to rate the SNF storage facilities at the INEL. The safety and environmental risks were assumed to be essentially the same for severe accidents and extreme abnormal events. However, for routine operations the environmental concerns may be more controlling. The receiving facility must not increase its SNF storage risk if the overall INEL risk is to be reduced. A high score for this area indicates that the transfer has significantly reduced the ES&H risk. A probabilistic risk assessment of each INEL SNF shipper and receiver storage facility would provide a more comprehensive perspective on which fuel should be moved first. The "before" and "after" risk levels for each SNF storage facility would also provide insight on how to lower the overall INEL SNF storage risk the fastest. However, this type of analysis was not possible due to time and funding constraints. Thus, the collective judgement of the task team was utilized to appraise these issues.

Reduced political risk - SNF issues driven by court orders were deemed to have higher political risk than SNF that is not controlled by these legal directives. A high score would indicate that the "after" political risk has been significantly reduced.

Reduced facility life-cycle costs - Retirement of older SNF and SNM storage facilities will certainly reduce storage costs, but some radiological control cost will remain until the facility is decommissioned. A high score would indicate that the life-cycle costs have been significantly reduced.

Unfortunately, objective and complete data for all of these key factors are not available for every potential SNF transfer. The near-term and facility life-cycle cost data presented in this table are based on the best available information (see section 3.0). Obviously, low near-term funding requirements with short recovery time and high facility life-cycle savings would be desirable for every transfer. However, some safety issues may result in priority transfers. Thus, many trade-off analyses must be considered with all of the stakeholders before a final path forward can be selected. Table 2.5-1 represents the Task Team's best effort to include all of these drivers in a balanced format.

3.0 PROPOSED CONSOLIDATION SCHEDULE

As previously stated, the principal purpose of this Task Team was to develop a detailed and integrated INEL SNF consolidation plan. The plan includes schedules and costs to transfer INEL SNF to ICPP as soon as possible. The result of this effort is a report (individual cost accounts, work packages, basis for estimates) that, when printed, is about 2,000 pages, contains about 6,000 tasks, 8,000 logic-ties, and 26,100 individual resource calls. Obviously, this amount of information is not "user friendly" without summary overviews. Thus, the following subsections are provided to identify the key issues and summarize the results.

Open Plan™ is a software package produced by Welcom Software Technology. It is a comprehensive project planning, scheduling, cost control, and resource management tool. INEL SNF consolidation activities are entered in the Open Plan™ system. Open Plan™ can then be used to analyze and model different planning strategies. Use of Open Plan™ provided other deliverables, such as histograms of different resources on time (week, month, year) basis, to help assess resource shortfalls and consider planning options to level any peak demands.

The base case is presented first (Figure 3.0-1), and then three perturbations to the base case are discussed. These perturbations identify the impacts of funding delays and alternative consolidation strategies. This information is provided to assess the impacts of these potential developments and to help understand the trade-off issues that relate to the best path forward for implementing INEL SNF consolidation.

3.1 BASE CASE

Once the basic SNF transfer scenario was developed, (see section 2.3 for base case discussion) the next step was to determine how soon the shipper and receiver could be ready to transfer the SNF. This process identified the receiver preparations as the limiting activity for initiating the SNF transfers to the IFSF. (Shipper preparations, however, are the limiting step for the TAN transfers).

The IFSF cannot receive SNF until an adapter plate is designed and fabricated for the transfer cart so it can interface with the TFBP-2 cask. This activity is a key critical path item for consolidation activities at the IFSF. Once this modification is complete, the best time to receive fuel at the IFSF was determined to be after a new dry canning station is installed, and before SNF transfers from the CPP-603 south basin began. These conditions identified a preferred SNF transfer window that started in early FY-96 and ended in late FY-97.

Figure 3.1-1 shows this SNF transfer window (shaded area) and all other related SNF activities scheduled for the IFSF. The shaded window identifies a period when other competing IFSF activities are expected to be minimal, and therefore, a preferred target for SNF transfers. The planning bars identify the length of time required to complete each of the SNF consolidation programs. However, the planning bars for some of the other activities, simply

SNF Consolidation Summary Schedule

Base Case

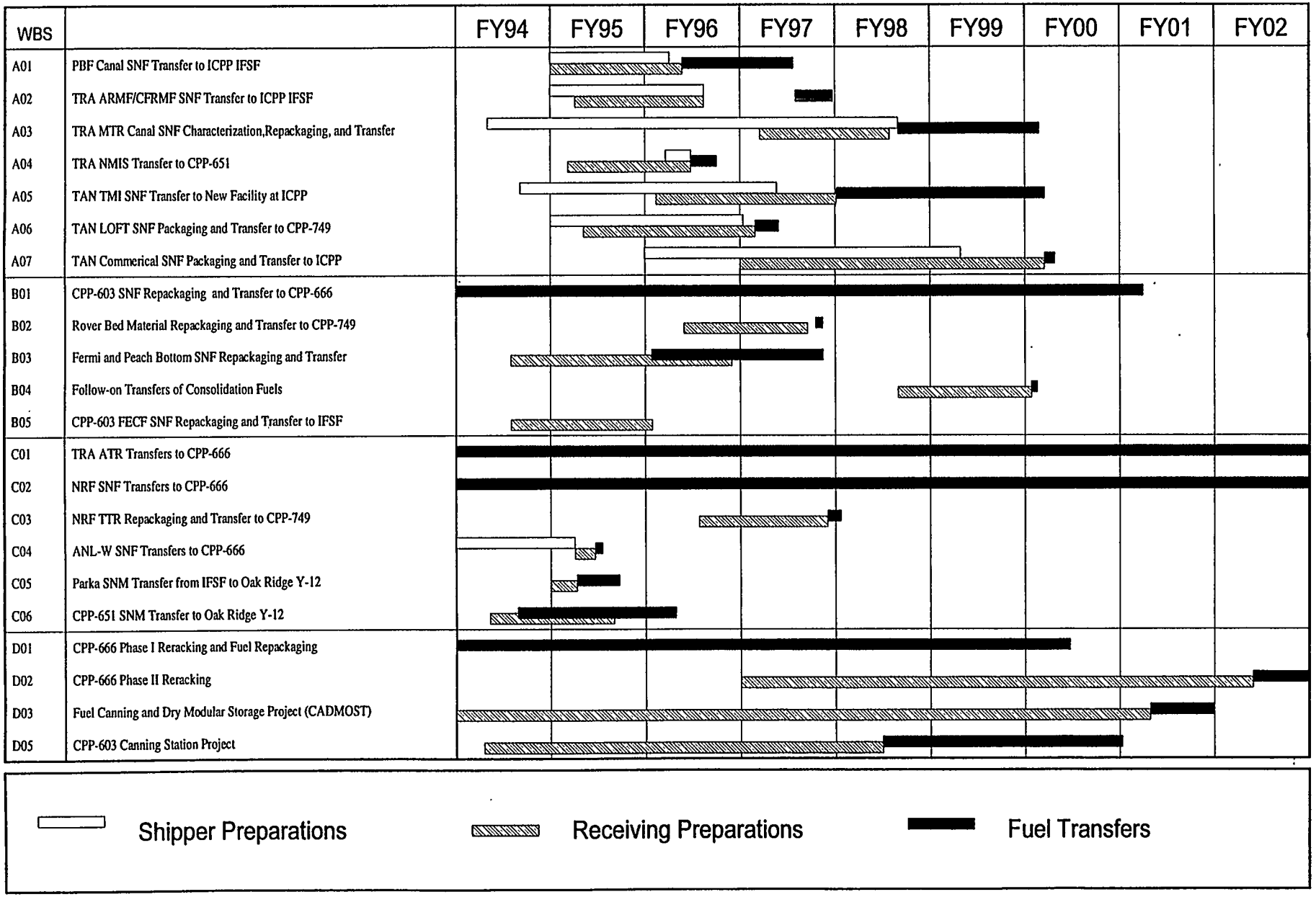


Figure 3.0-1 SNF/SNM Consolidation Schedule

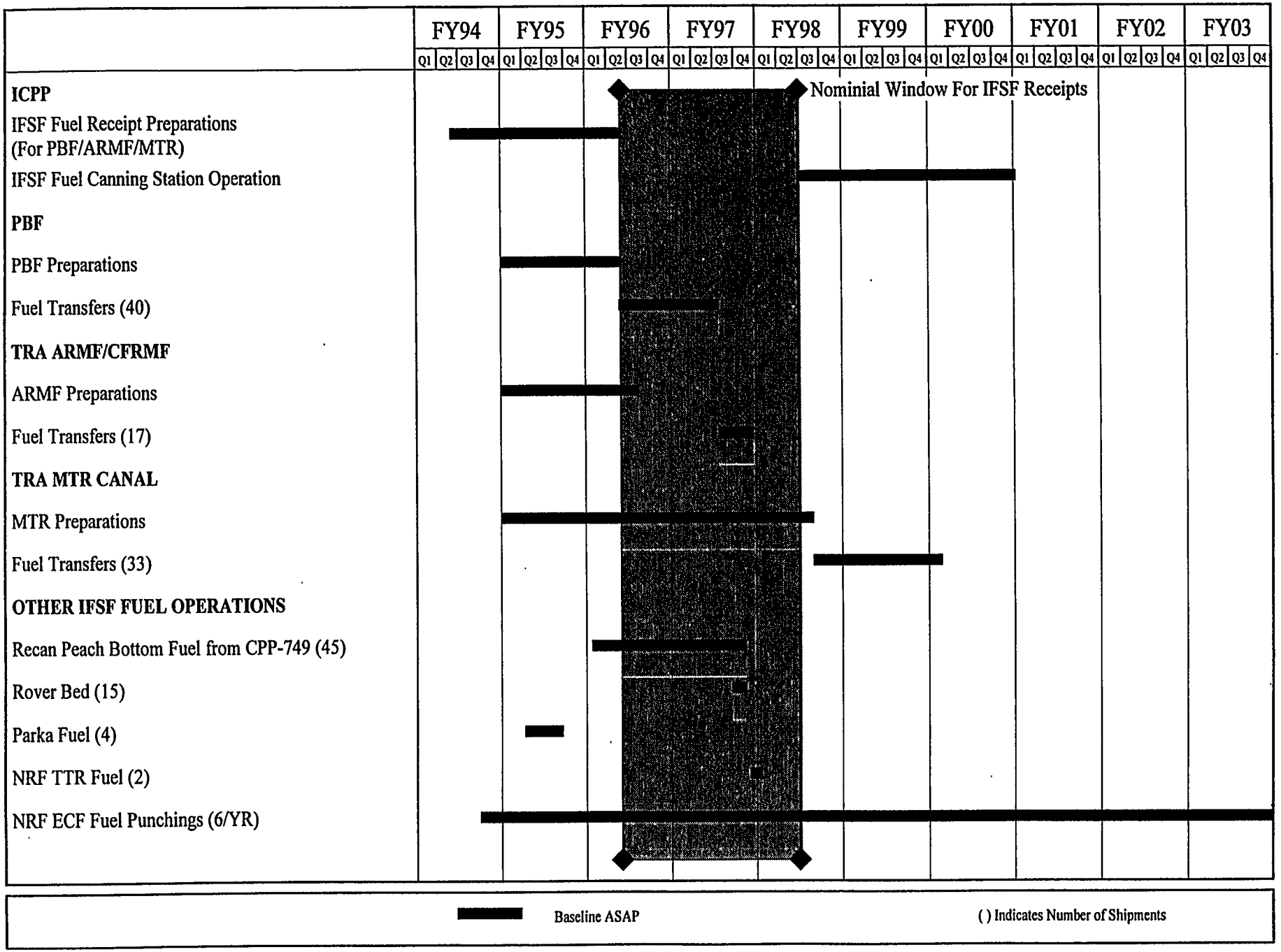


Figure 3.1-1 Base Case - IFSF SNF Consolidation Activities

indicate continuing transfer during that time. For example, Expended Core Facility fuel punchings require minimal transfers, even though they are scheduled to occur for several years. The actual number of transfers is shown on the left side of the figure. Thus, the higher the transfer activity within the IFSF for other tasks, the more difficult it becomes to find time for the SNF consolidation transfers.

The IFSF receipt window (Figure 3.1-1) is not intended to imply that SNF receipts cannot occur after this time frame. In fact, the MTR canal receipts must occur outside the window because they can not be prepared for transfer any sooner. SNF receipts before the window opens are not possible because the IFSF transfer cart is not ready for the TBFP-2 cask.

Conducting transfers after the window closes generally requires more time per transfer, which increases the consolidation schedule, cost, and time to recover the transfer cost. The next window would begin when the CPP-603 south basin transfers are completed in December 2000. It should also be recognized that if the CPP-603 south basin SNF transfers start sooner, then the transfer window will shorten accordingly, and the CPP-603 south basin completion date will occur earlier. Parallel transfers from CPP-603 south basin and PBF and ATR to the IFSF are possible. Their schedule impacts are discussed in section 3.2.

The shipper and receiver costs for the proposed WBS AO series are summarized on an annual basis in Table 3.1-1. The shipper costs include the SNF transfer charges to ICPP. Detailed breakdown of these costs to the individual work package and event level was completed. An example of this level of detail is provided in Appendix D for the MTR canal transfers. Table 3.1-1 also identifies the annual operating savings for each storage facility, and the number of years required to recover consolidation costs based on savings.

From an overall programmatic perspective, the total new funding required to implement the AO and BO WBS activities is about $25.2M. The time to recover these transfer costs is about 6.4 years. The time to recover the entire funding for the AO and BO WBS activities is about 6 years. These recovery times could be reduced even further, if the facilities with higher operating costs are retired first. However, this strategy would increase the SNF storage risk for the older facilities for which retirement is postponed.

Figure 3.1-2 presents the required funding profile for the proposed base case SNF consolidation plan. The upper line represents the total funding required to implement all of the AO and BO WBS elements previously identified in Section 1.4 (see Tables 1.4-1 and -2). Some of these activities are funded and underway, and others are not funded. The lower line in Figure 3.1-2 depicts the new or rescheduled funding required to implement the remaining parts of the SNF consolidation package. The peaks in the funding profile reflect on-going transfer activity between CPP-603 and CPP-666. The new or unfunded budget is 38% of the total consolidation costs and will only require about $6M/yr. of additional funding which is only about half of the projected annual savings rate.

Table 3.1-1 INEL SNF Consolidation Costs Summary

Consolidation Transfers - To ICPP		FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	Total Consolidation Costs (a)	Total Consolidation Shipper & Receiver (a)	Annual Operating Savings (b)	Years To Recover Costs (c)
AO1 PBF	Shipper	$0	$2,145,033	$1,669,794	$1,090,240	$0	$0	$0	$4,905,067	$7,136,208	$2,178,000	3.3
40 Transfers												
TFBP-2 cask	Receiver	$0	$311,617	$1,104,096	$476,529	$74,224	$74,224	$74,512	$2,231,141			
AO2 ARMF / CFRMF	Shipper	$0	$883,190	$935,412	$746,572	$0	$0	$0	$2,565,174	$4,301,606	$275,000	15.6
17 Transfers												
TFBP-2 cask	Receiver	$0	$308,397	$759,861	$447,228	$74,224	$74,224	$72,498	$1,736,432			
AO3 MTR CANAL	Shipper	$0	$1,080,585	$597,762	$1,714,366	$661,175	$1,272,855	$165,481	$5,492,224	$8,202,603	$265,000	31.0
33 Transfers												
TFBP-2 cask	Receiver	$0	$134,160	$134,160	$291,787	$927,533	$739,225	$174,247	$2,710,379			
A04 TRA NMIS SNM	Shipper	$0	$0	$439,935	$0	$0	$0	$0	$439,935	$1,414,365	$769,000	1.8
24 Transfers												
Boxes	Receiver	$0	$365,140	$609,290	$0	$0	$0	$0	$974,430			
A05 TAN - TMI	Shipper	$0	$6,631,648	$1,473,526	$332,821	$374,863	$401,800	$43,572	$9,258,230	$22,762,167	$1,690,463	13.5
49 Transfers												
NuPac125-B Cask	Receiver	$564,069	$2,377,827	$5,096,761	$3,658,515	$664,699	$720,397	$262,001	$13,503,937			
A06 TAN - LOFT	Shipper	$0	$411,953	$517,497	$69,477	$18,275	$0	$0	$1,017,202	$2,678,989	$518,870	5.2
7 Transfers												
Peach Bottom Cask	Receiver	$0	$204,210	$639,326	$354,294	$120,167	$74,224	$74,512	$1,661,787			
A07 TAN - COMMERCIAL	Shipper	$0	$0	$19,500	$83,880	$293,160	$93,724	$141,844	$632,108	$3,450,522	$444,667	7.8
3 Transfers												
Loaded Storage Casks	Receiver	$0	$0	$0	$751,554	$606,107	$1,254,314	$206,439	$2,818,414			
Consolidation Transfers - Within ICPP												
BO1 CPP-603 SNF	S/R	$2,572,107	$3,495,785	$1,695,303	$1,504,223	$820,188	$33,542	$248,636	$10,490,280	$10,490,280	$1,200,000	8.7
1,200 Transfers												
STR Charger Cask												
BO2 Rover Bed	S/R	$0	$0	$202,872	$653,511	$0	$0	$0	$856,383	$856,383	$3,895,000	0.2
15 Transfers												
Peach Bottom (3) & Rover (12) Casks												
BO3 Fermi/Peach Bottom	S/R	$130,630	$1,278,420	$1,351,466	$718,585	$522,588	$529,694	$28,743	$4,560,126	$4,560,126	$0	0.0
59 Transfers												
Peach Bottom Cask												
BO4 Follow-on SNF Transfer	S/R	$0	$0	$0	$0	$77,820	$705,633	$53,582	$837,035	$837,035	$0	0.0
2 Transfers												
Peach Bottom Cask												
BO5 CPP-603 FECF SNF	S/R	$21,672	$36,503	$7,800	$0	$0	$0	$0	$65,975	$65,975	$0	0.0
2 Transfers												
Peach Bottom Cask												
									Total Costs =	$66,756,259	$11,236,000	5.94
									Total Unfunded Costs =	$25,342,339	$3,931,667	6.45
									Percent Unfunded =	38%		

-- Shadowed box indicates an unfunded INEL consolidation task

(a) Cost to transfer and store the SNF at ICPP and conduct dry demo programs (PBF, ARMF/CFRMF, MTR Canal, TAN Commercial and TAN TMI).

(b) Savings equal the difference in operating cost for SNF storage before and after consolidation.

(c) Recovery time equals the total dollars spent to relocate the SNF divided by the annual savings.

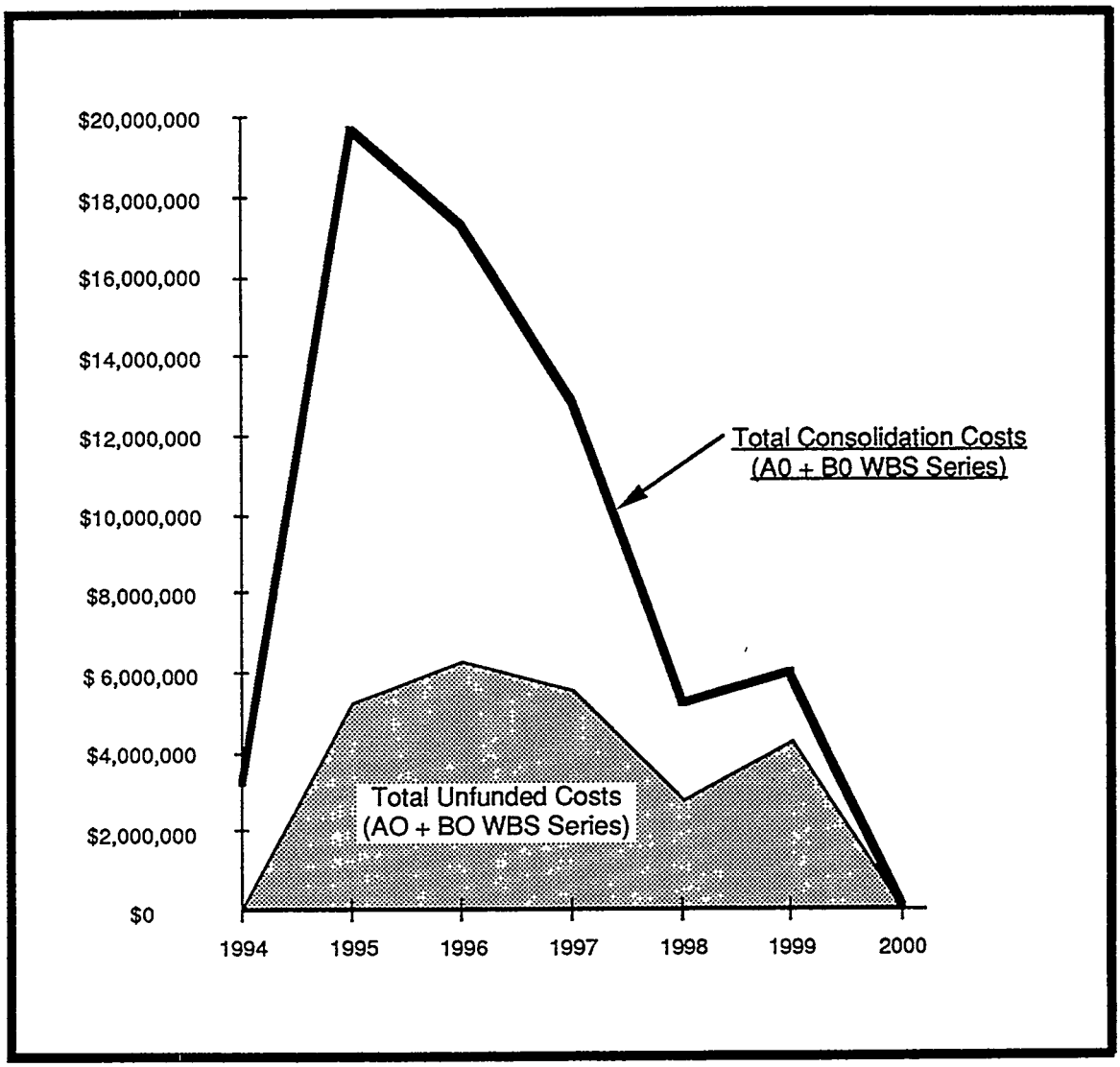


Figure 3.1-2 Base Case Cost Profiles for INEL SNF Consolidation (Funded vs Unfunded)

3.2 PERTURBATIONS OF THE BASE CASE

The number of possible alternatives to the consolidation as soon as possible base case is unlimited. Three perturbations were selected to demonstrate the usefulness of this planning model and address some logical "what if" questions. The ability to analyze and respond to these or any other new scenario is significantly enhanced by the techniques developed by the Task Team. The impacts of new SNF receipts can also be evaluated once their resource requirements are added to the existing plan.

This type of planning model should prove to be especially beneficial as national SNF management options are analyzed for their impact on the INEL site specific SNF issues. Impacts from changes to the CPP-666/CPP-603 transfer schedule and the TAN SNF transfers can also be evaluated. However, because the CPP-603 to CPP-666 transfers and TMI dry storage programs are already funded and underway, the SNF transfers to the IFSF presented the most potential for funding delays, and most complicated SNF interface and schedule issues. The following three alternative cases were identified to address issues related to funding delays, safety drivers, and schedule constraints.

Case A) Funding Delays - Funding is delayed for new transfers to IFSF from FY-95 until FY-96, see Figure 3.2-1.

Case B) Safety Drivers - MTR canal funded in FY-95; remaining new transfers to IFSF are funded in FY-96; and funding for the design and construction of the SNF canister, IFSF transfer cart modifications, and the TFBP-2 cask maintenance are provided in FY-95, see Figure 3.2-2.

Case C) Tighter Schedule Constraints/Closed SNF Transfer Window - IFSF receiving window is deleted because high priority SNF transfers (e.g., SNF from CPP-603 south basin) to IFSF start as soon as the IFSF canning station is completed, see Figure 3.2-3.

3.2.1 Case A--Funding Delays

The basic impacts of funding delays for the IFSF transfers are extended transfer time and its related cost, and extended operational cost for the delay in closing the facility operation. Table 3.2-1 summarizes these impacts.

The one year delay in funding requires SNF transfers from ARMF/CFRMF to IFSF to start after the CPP-603 south basin SNF transfers to the IFSF canning station have started. Thus, each transfer requires more time (fuel transfer bar in Figure 3.2-1 is more than twice as long), because the IFSF is not always available. The impact on the MTR canal and PBF SNF is zero, because the MTR canal and PBF SNF transfer times remain unchanged from the base case. The additional total operational time is 4 months for ARMF/CFRMF SNF, 10 months for PBF SNF, and 10 months for MTR canal SNF. Additional costs are incurred because of the delayed funding. Consolidation costs as well as facility operating costs are increased. The additional costs for Case A are $3.5M.

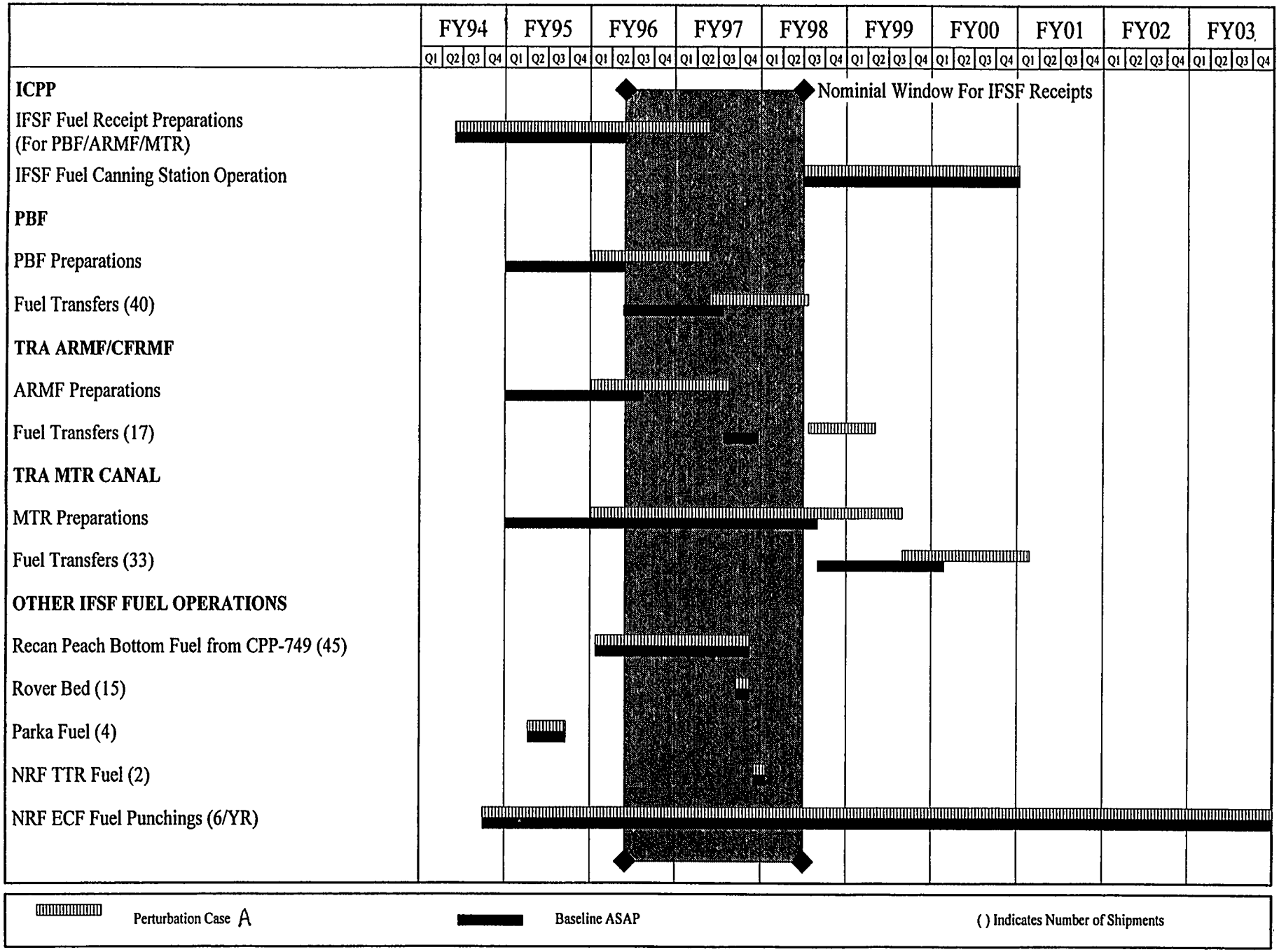


Figure 3.2-1 Case A - Funding Delayed One Year (FY-96)

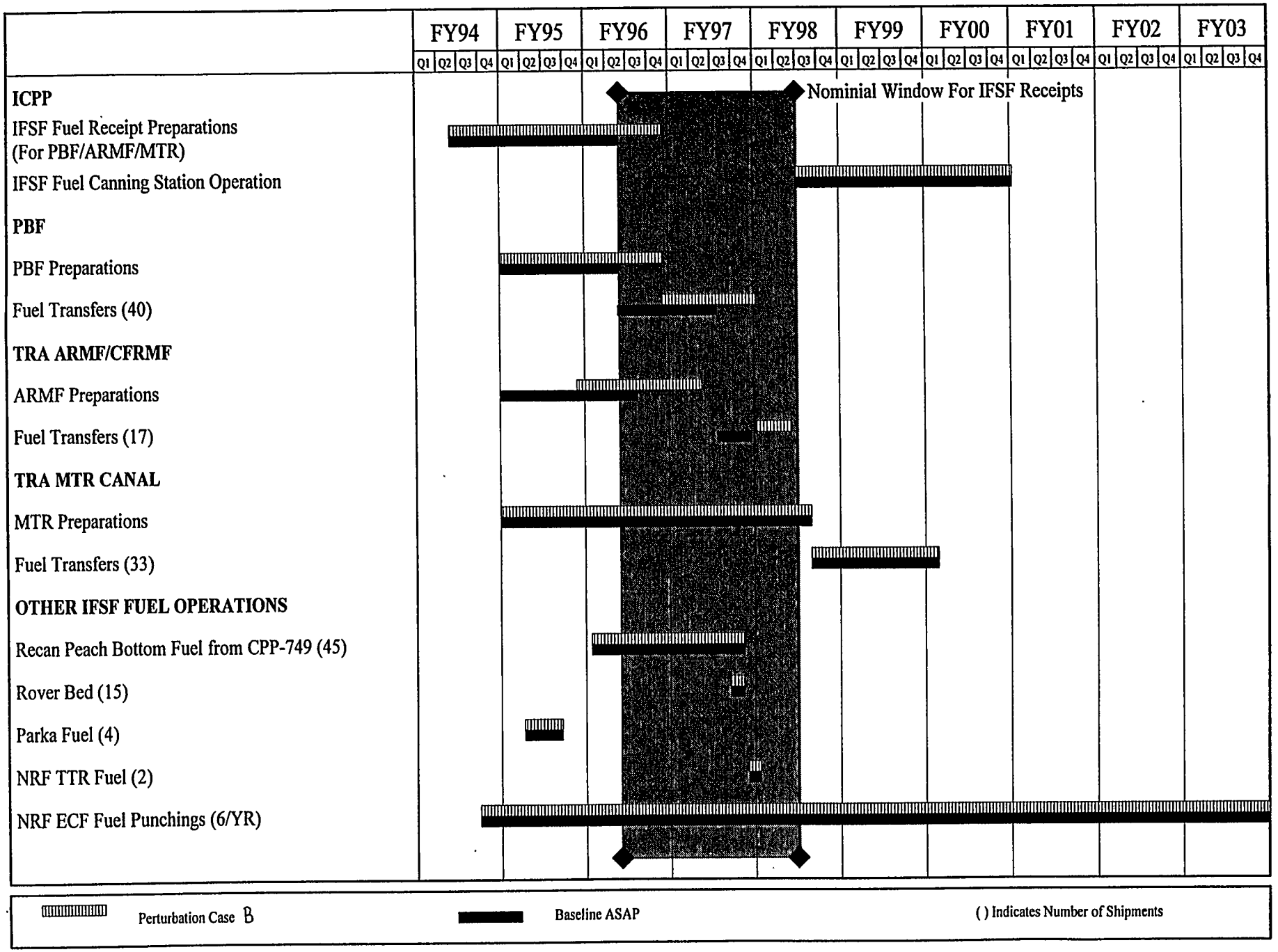


Figure 3.2-2 Case B - Safety Drivers (MTR Canal, Cask Maintenance,IFSF Transfer Cart)

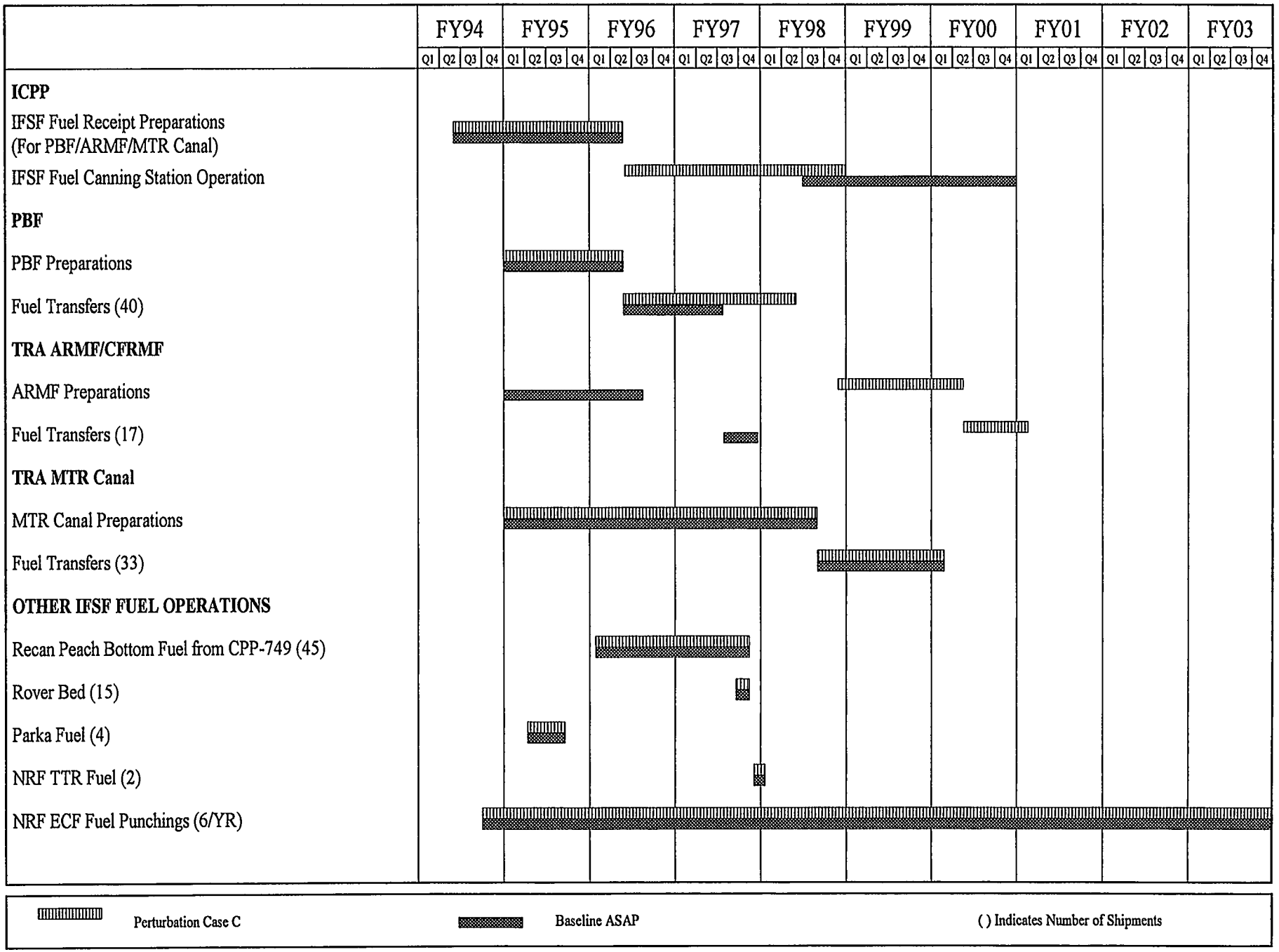


Figure 3.2-3 Case C - Schedule Constraints/Closed Transfer Window

Table 3.2-1 Additional Costs of Perturbation Cases

	CASE A	CASE B	CASE C
	Funding Delayed One Year (MTR Canal, ARMF/CFRMF, & PBF)	Safety Driver (MTR Canal Funded in FY-95; PBF & ARMF/CRFMF in FY-96)	Schedule Constraints, Closed Transfer Window (Parallel SNF Transfers to IFSF)
Increased Operational Costs	$2,830,583	$1,226,500	$2,844,417
Increased SNF Transfer Costs	$665,000	$0	$2,156,000
Total Cost	**$3,495,583**	**$1,226,500**	**$5,000,417**

3.2.2 Case B--Safety Drivers

Case B is very similar to Case A. The only difference is some tasks are funded in FY-95 instead of FY-96 (i.e., MTR canal, IFSF transfer cart, TFBP-2 cask preparation, and SNF canister design and construction). Funding for the MTR canal SNF is maintained in FY-95 because the fuel has a greater need to be repackaged due to prior destructive examinations. No additional SNF transfer time is required. Transfer of ARMF/CFRMF and PBF SNF is completed about 6 months later than the base case. Thus, the facility operating costs for Case B are increased over the base case by about $1.23M. The related costs are shown in Table 3.2-1.

3.2.3 Case C--Tighter Schedule Constraints/Closed Transfer Window

Closing the transfer window by interfacing with accelerated, higher priority SNF transfers in the IFSF would increase the overall consolidation time and costs compared to the base case. The operational closure for ARMF/CFRMF, PBF, and MTR canal are delayed 37, 11, and 10 months, respectively. Thus, consolidation costs and facility operating costs for Case C are increased over the base case and are calculated to be $5.00M.

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4.0 KEY RESOURCE REQUIREMENTS

4.1 INEL FACILITY REQUIREMENTS

Four existing ICPP storage facilities (IFSF, CPP-749, and CPP-666 for SNF, and CPP-651 for SNM) and two new structures are needed for the INEL SNF consolidation program. The new structures include a dry storage facility for TAN TMI SNF and a concrete pad for TAN commercial SNF storage casks. A brief discussion of these SNF and SNM storage facilities follows.

4.1.1 IFSF

The IFSF is a remotely-operated dry vault storage facility, built in 1974, for storing graphite fuels (one Peach Bottom core and nine Fort St. Vrain reactor segments). The IFSF consists of a truck bay, a cask transfer cart system, a fuel handling cell, a fuel storage room, a crane maintenance area, an operating area, and other support areas (see Figure 4.1-1).

The crane maintenance area, fuel handling area, and fuel storage area are serviced by an overhead 15-ton crane and a remote manipulator. The cask transfer cart is designed to transfer casks weighing up to 160-tons between the truck bay and the fuel handling cell. The cask handling crane has a 60-ton capacity, but the existing rails were designed to support a larger rail cask handling crane. The existing rail system would need to be replaced for future rail receipts. The cart can be adapted via specifically designed inserts for any top loading cask that can be shipped. Two ES&H vulnerabilities were identified for SNF stored at the IFSF. They include potential utilities and ventilation system malfunction, and the need for a seismic evaluation of the facility. Actions to resolve both vulnerabilities are underway.

Of the 636 (18 inch diameter x 132 inch long) storage positions, 309 are currently used for fuel storage. The remaining 327 positions are available for SNF consolidation. Nineteen positions will be used to consolidate PBF, TRA ARMF/CFRMF, and TRA MTR canal at IFSF. An additional 11 IFSF positions will be required for the remaining consolidation transfers; TAN LOFT SNF (7), NRF Thermal Test Reactor SNF (2), and Rover bed material (2). Table 4.1-1 shows the SNF storage requirements at the IFSF and CPP-749 for INEL SNF consolidation.

SNF consolidation actually requires very little space in the IFSF relative to the 327 positions that are available. The remaining 308 positions could be used to store CPP-603 south basin SNF that must be recanned (52 positions), and the aluminum SNF that is stored in CPP-666 (63 positions), and still have 214 empty positions after the PARKA SNM is transferred to Oak Ridge.

As noted very early in this plan, Fort St. Vrain (FSV) shipments to the IFSF were not included. The last column in Table 4.1-1 identifies the needed FSV storage capacity (366 positions), which is greater than the available 329 positions.

Table 4.1-1 Dry SNF Storage Requirements for INEL Consolidation

Dry Storage Positions in IFSF and CPP-749								
SNF Storage Location	Capacity (Storage Positions)	Capacity Required For Current Operations	Capacity Required for Operations After CPP-749 Vault Transfers	Capacity Available for Future Operations	Capacity Required For INEL SNF Consolidation	Capacity Available After INEL SNF Consolidation	Capacity After Consolidation & IFSF Transfers To CPP-749 & Oak Ridge	Capacity Required to Receive FSV SNF at PSC*
IFSF	636	309	309	327	19	308	329	366
CPP-749	62 (1st Generation)	59	0	0	0	0	0	0
	157 (2nd Generation)	70	129	28	11	17	15	0

INEL SNF Consolidation plans for ICPP dry storage facilities will require about 30 dry storage positions (PBF, ARMF/CFRMF and MTR Canal - 19 IFSF positions; LOFT/TAN - 7 IFSF positions; TTR - 2 IFSF positions; Rover Bed - 2 IFSF Positions. Future transfer of the ARMF/CFRMF inventory from IFSF to CPP-749 will free two positions in IFSF and require two more positions in CPP-749. PARKA Shipments from IFSF to Oak Ridge will free an additional 19 positions in IFSF.

* Public Service of Colorado

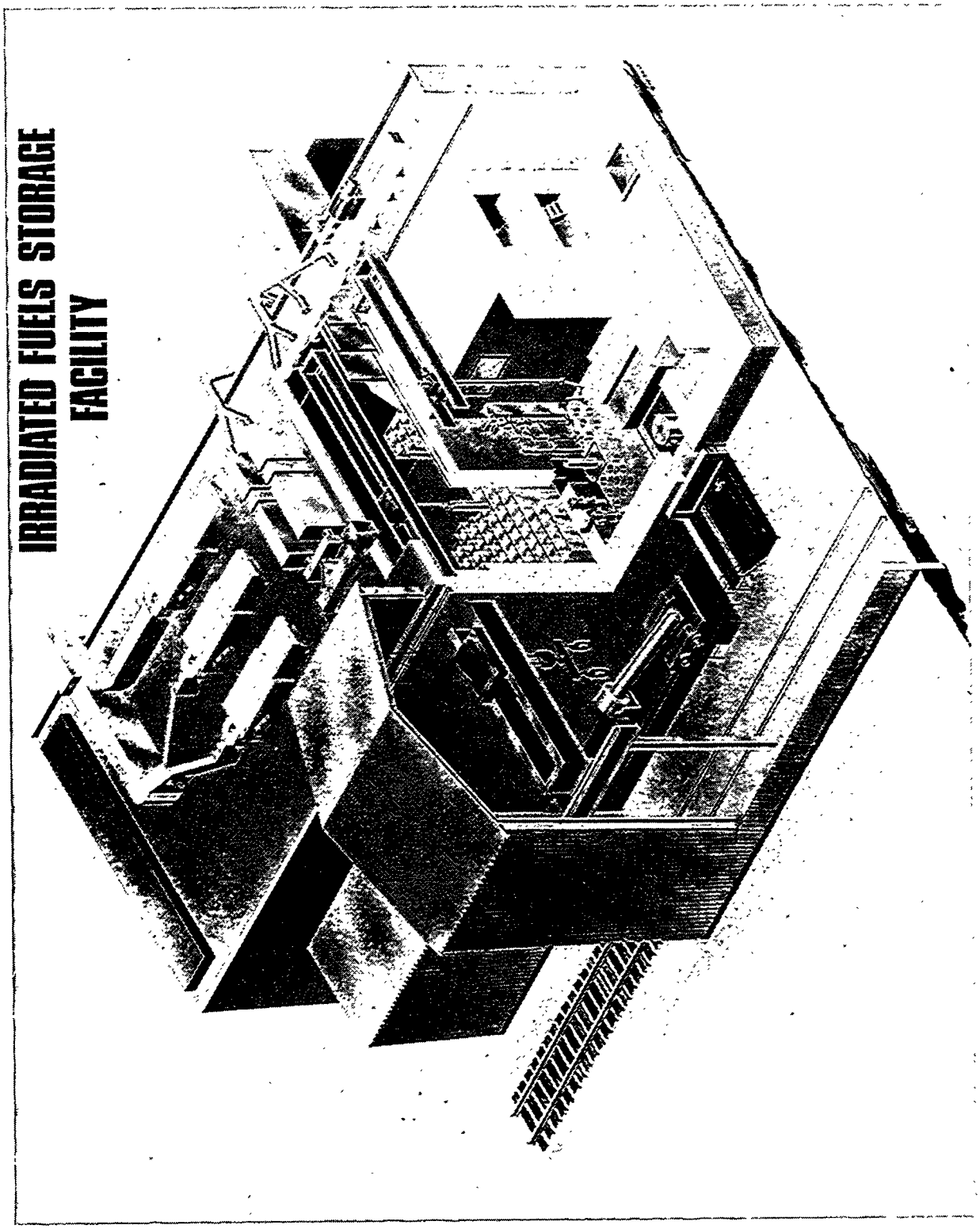


Figure 4.1-1 Cutaway of IFSF

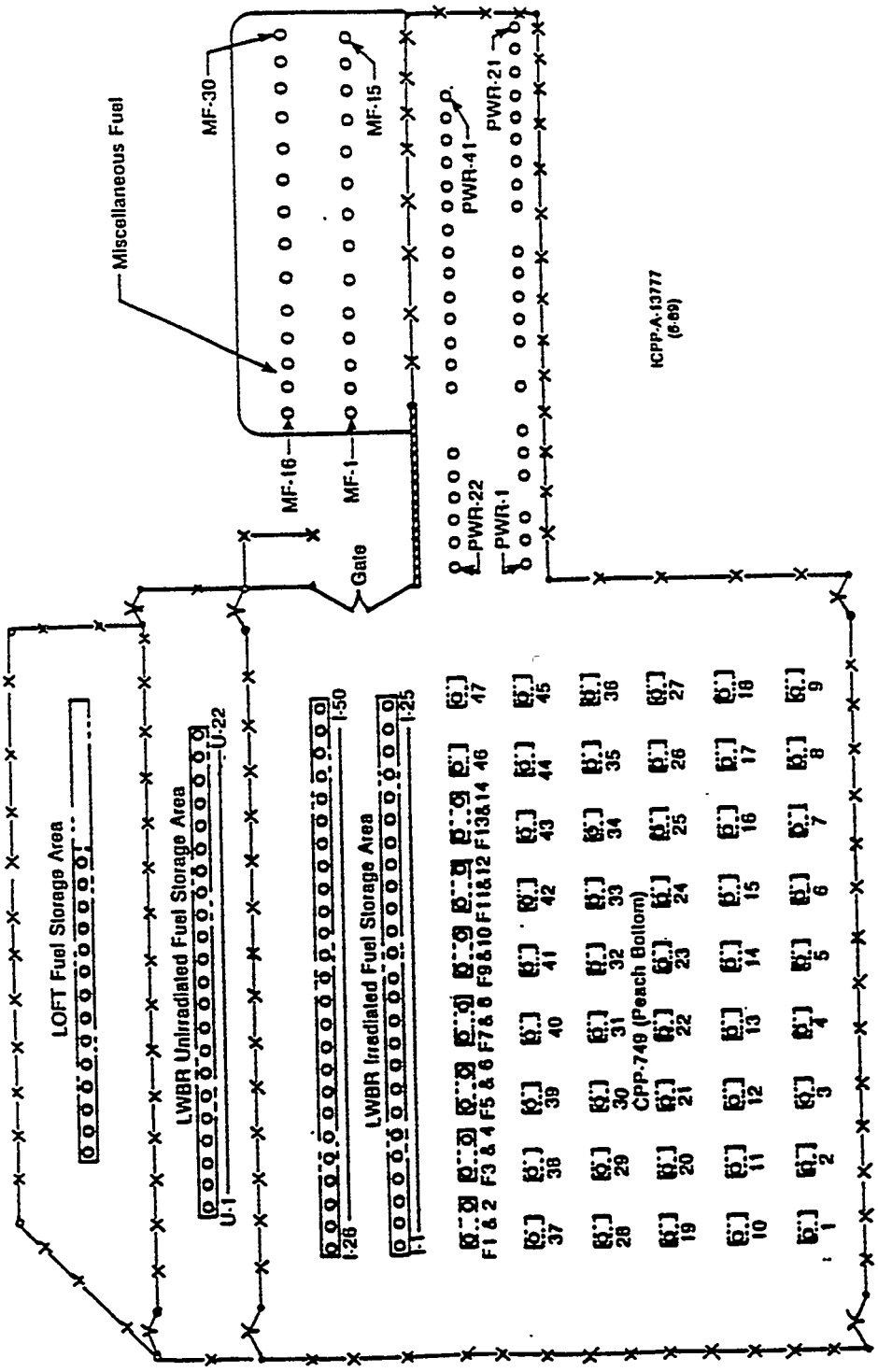


Figure 4.1-2 Layout of CPP-749

4.1.2 CPP-749

CPP-749 consists of 218 underground dry vaults (wells) that were built in seven separate projects between 1971 and 1987. Figure 4.1-2 shows a layout of CPP-749. All vaults except the unirradiated Light-Water Breeder Reactor wells are approximately 30 inches in diameter x 240 inches deep. They are loaded by placing a transfer cask centering device over the well, locating a transfer cask over the centering device, removing the cask bottom lid and finally lowering the spent fuel package with a rod that protrudes through a small hole in the cask top lid.

The Peach Bottom and Fermi dry vaults were built using carbon steel casings and caps, and grout-bottom plugs. Over the years, moisture has seeped through the grout via evaporation resulting from the SNF decay heat and consequent condensation on the metal cap. This has caused significant corrosion on the Peach Bottom fuel aluminum canisters. Plans are to recan the Peach Bottom fuel in the IFSF handling cell, as needed, and move the fuel to the second generation existing empty dry vaults. The Fermi fuel would also be moved, although no corrosion to the stainless steel storage canisters is suspected.

The Peach Bottom and Fermi dry vaults may be renovated; however, this study has assumed that they are not renovated. The change in storage capacity following the SNF transfers to the second generation vaults is shown in Table 4.1-1. Renovation of the first generation vaults would require new stainless steel liners, instrumentation to monitor for vault leaks, and sampling/purging capability for the vault (liquid and gas). Generally speaking, renovation is not likely because underground vaults have not been selected as the best future storage option.

The last five dry vault wells (second generation design) have improved features that include an all-metal storage well encased in grout. The design also provided capabilities for purging and sampling the dry vault interior. These dry vaults are 12 and 18 inches in diameter and about 273 inches deep. A 30-ton gantry crane is used to move the transfer casks from the transfer truck to the dry vaults.

4.1.3 CPP-666 Fuel Storage Area

CPP-666 Fuel Storage Area is an underwater fuel storage facility comprised of six storage pools, two unloading pools, two isolation pools, a fuel transfer canal, and an enclosed fuel cutting pool. The facility is designed to withstand a Design Basis Earthquake. The pools are stainless-steel lined with a leak detection system. The facility uses an extensive water chemistry control system, and has a heating, air conditioning and ventilation (HVAC)/confinement system.

CPP-666 is the most modern spent fuel wet storage facility in the DOE complex. Storage of spent fuel began there in 1984. Spent fuel from NRF, ATR, the High Flux Beam Reactor, Experimental Breeder Reactor-II, and the Fermi Blanket are in storage. Approximately 5.6 MTHM of non-Naval fuel is stored in free-standing SNF storage racks, which provide criticality-safe spacing. Projects to expand storage capacity and provide for inspection/characterization will be required if SNF is not removed from the basins. See Figure 1.4-2.

4.1.4 CPP-651 Unirradiated Fuel Storage Facility

The CPP-651 Unirradiated Fuel Storage Facility consists of a concrete building divided into an inner concrete structure with seven storage rooms, an annulus between the storage rooms and the outer concrete shed, and a receiving area. Six of the storage rooms are approximately 10 ft long x 12 ft wide. The seventh storage room is 19 ft long x 25 ft wide. The storage rooms can be used for shipping drum storage, or can be fitted with engineered racks that store fuel in individual canisters or bundles. Currently, two of the rooms are fitted with engineered racks. The annulus has been recently fitted with 100 storage caissons in the floor. The caissons (8 inches in diameter x 96 inches long) have seven-position racks that are lowered into the caissons with an overhead hoist. Originally designed for storage of UO_3 product from the ICPP processing operations, much of this storage is now available for other missions. Nuclear material with low surface radiation levels can be stored in these racks because they are stored in concrete shielded caissons.

CPP-651 is fitted with appropriate security and criticality alarm systems for unshielded facilities. Adequate room is available for some consolidation of unirradiated material from the DOE complex. Efforts are underway to develop markets for the unirradiated material where it can be recycled for reuse or for incorporation into the commercial nuclear fuel supply system. Figure 4.1-3 is a layout of CPP-651.

4.1.5 New Facilities for TAN SNF

One potential method of TMI canister storage at ICPP is in a single, above-ground, vault structure near CPP-749. Figure 4.1-4 shows the structure as presently envisioned. Canisters would be stored in shielded vertical ports that have both shielded covers and confinement capabilities. The structure would have a gantry crane with an enclosing cover. The cask would be unloaded in a receiving area then transferred to a single port. The cask and skid would be removed from the trailer and pinned to the floor of the receiving area. Cask opening and unloading would use equipment that GPU Nuclear Corporation used to load the casks at TMI. The canisters would be lifted into the shielded transfer device and the gantry crane moved to the storage location. The transfer device would be lowered to the receiving port and the canister lowered to the storage position. A shield plug and lid would then be replaced to seal the canister in location. That operation would be repeated until the cask is unloaded.

A concrete pad will be built near CPP-749 to store the TAN commercial SNF. The pad will consist of reinforced concrete 2 ft thick with design compressive strength of 27,580 kPa (4000 psi) at 28 days. The storage pad will be at the same level as the road bed to minimize the height that casks are raised during transfers. It will be sloped slightly (3%) to enhance water runoff. A movable fence may be installed around the casks to designate an administrative boundary and to post warning signs. All construction activities will be in compliance with the Building Officials and Code Administration International Basic Building Code and the American Concrete Institute Building Code Requirements for Reinforced Concrete (ACI 318-13 and Commentary).

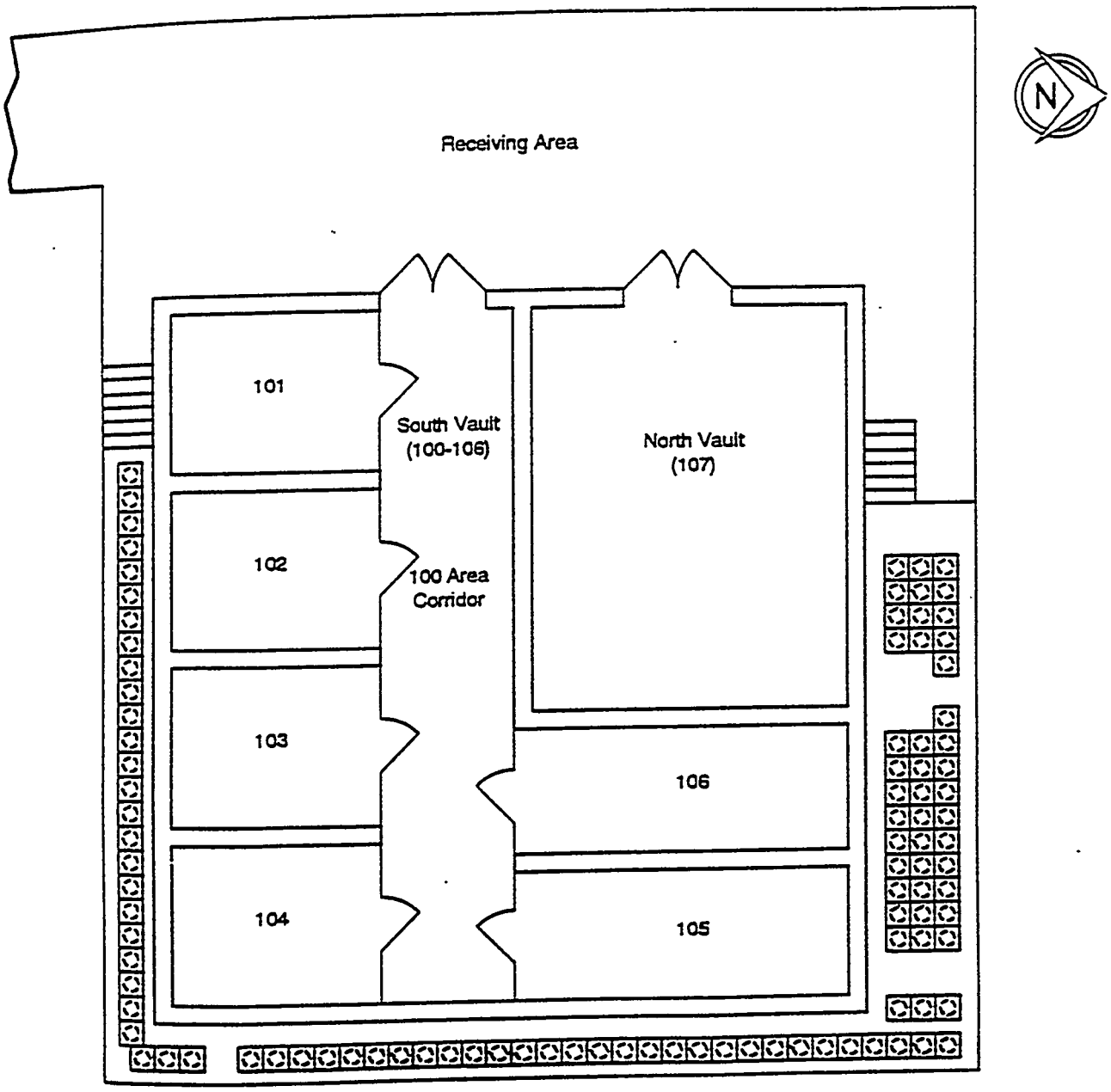


Figure 4.1-3 Layout of CPP-651

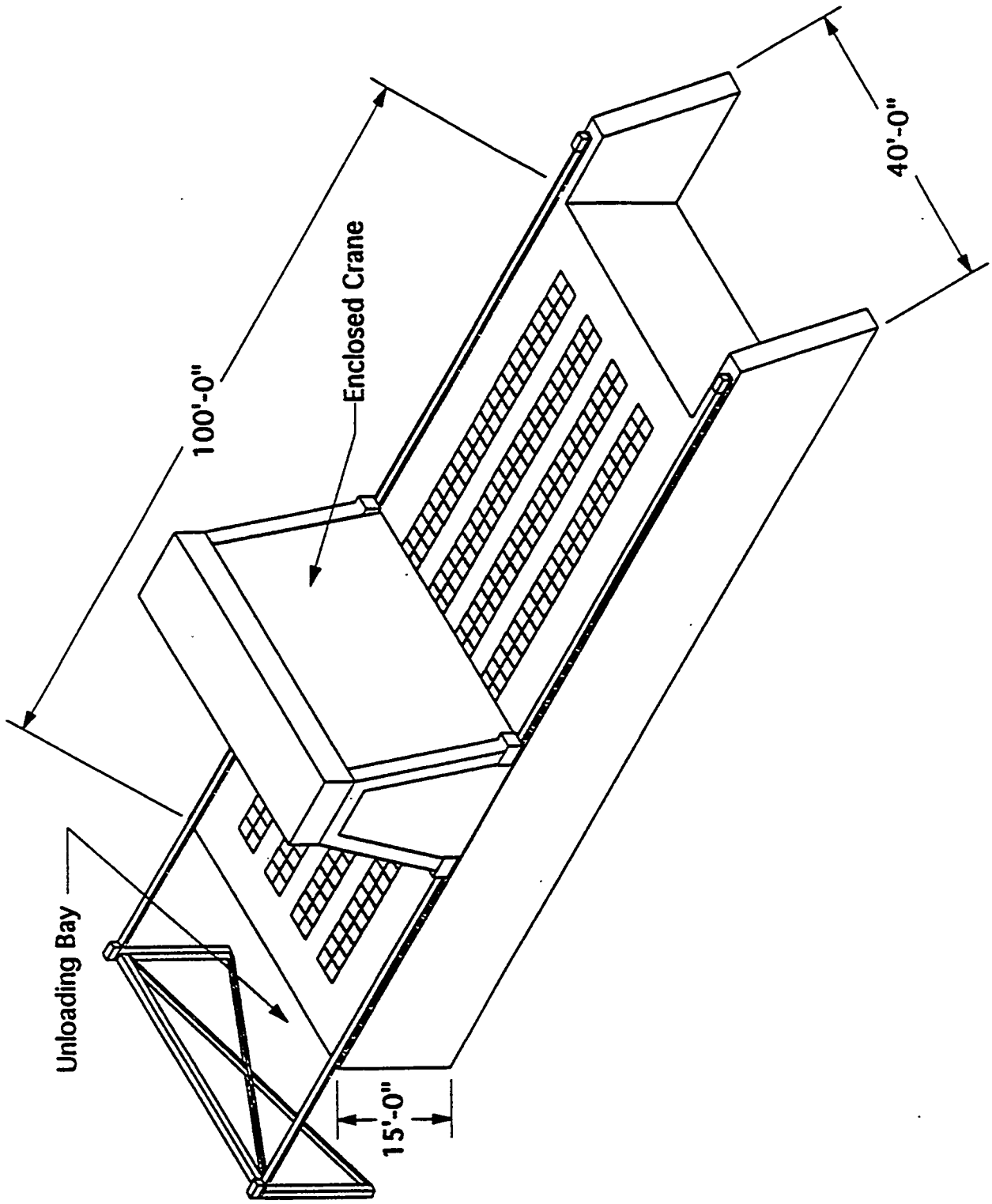


Figure 4.1-4 Conceptual Design for TMI Above Ground Vault Structure

4.2 INEL ROADS AND EQUIPMENT REQUIREMENTS

4.2.1 INEL Roads and Bridges

The road system at the INEL is adequate for transport of SNF. Most SNF transfers are within the INEL controlled boundaries. Lincoln Boulevard is the main north-south road on the INEL. The road was rebuilt in 1989-1990 and is in excellent condition for transport of casks in most weather conditions. The roads that connect between Lincoln Boulevard and NRF, TRA, and PBF are also expected to be in satisfactory condition. However, the routes taken need to be inspected before initiation of cask shipments. Two Lincoln Boulevard bridges, one between ICPP and TRA, the other north of the NRF junction, need to be analyzed for the expected loaded cask-trailer weight.

4.2.2 Description of Casks

4.2.2.1 TRA Hot Cells Carrier

The Hot Cell Carrier Number-2 cask (also known as WE-2) cask is used to transport SNF on the INEL. Figure 4.2-1 shows the major features of the cask. This cask has a carbon steel outer liner, a stainless steel inner liner, and lead shielding between the two liners. The cask is about 28 inches in outer diameter by 92 inches long. The cask has a 6 inch diameter by 62 inch long cavity. Two trunions are provided for lifting. The empty cask weighs about 21,600 pounds.

The cask has a rotating plug with a full cask inner diameter hole for closure at one end. A locking pin provides additional security during transport. The cask has a shovel that loads through the opposite end. A removable extension attaches to the shovel for loading and unloading.

A pallet is provided for truck transport, see Figure 4.2-1. The cask is tied to the truck with four 3/8-inch chains. The truck is limited to 35 mph during transport. An optional wheeled dolly is available for use inside an INEL facility.

4.2.2.2 Thermal Fuel Behavior Program Cask Number 2 (TFBP-2)

The TFBP-2 was designed as a versatile package for transporting experimental test assemblies and irradiated experiments between PBF and various TRA facilities. Figure 4.2-2 shows major cask system components. The TFBP-2 cask has a lower and an upper cask assembly. The lower cask has a 304 stainless steel inner and outer shell with lead fill between the shells for radiation shielding. The lower end of this cask section has a mechanically operated shield door. Bolted to the upper end of the lower cask is either the upper cask or a shielded closure head. The lower cask is 115 inches long. The outside diameter of the main body of the lower cask is 23 inches. Flanges, lifting attachments, and the shield door increase the radial clearance requirements considerably. The cavity size of the lower cask is 92 inches long by 10.20 inches in diameter.

The upper cask also has a 304 stainless steel inner and outer shell with lead fill. However, the shielding thickness is less than the thickness of the

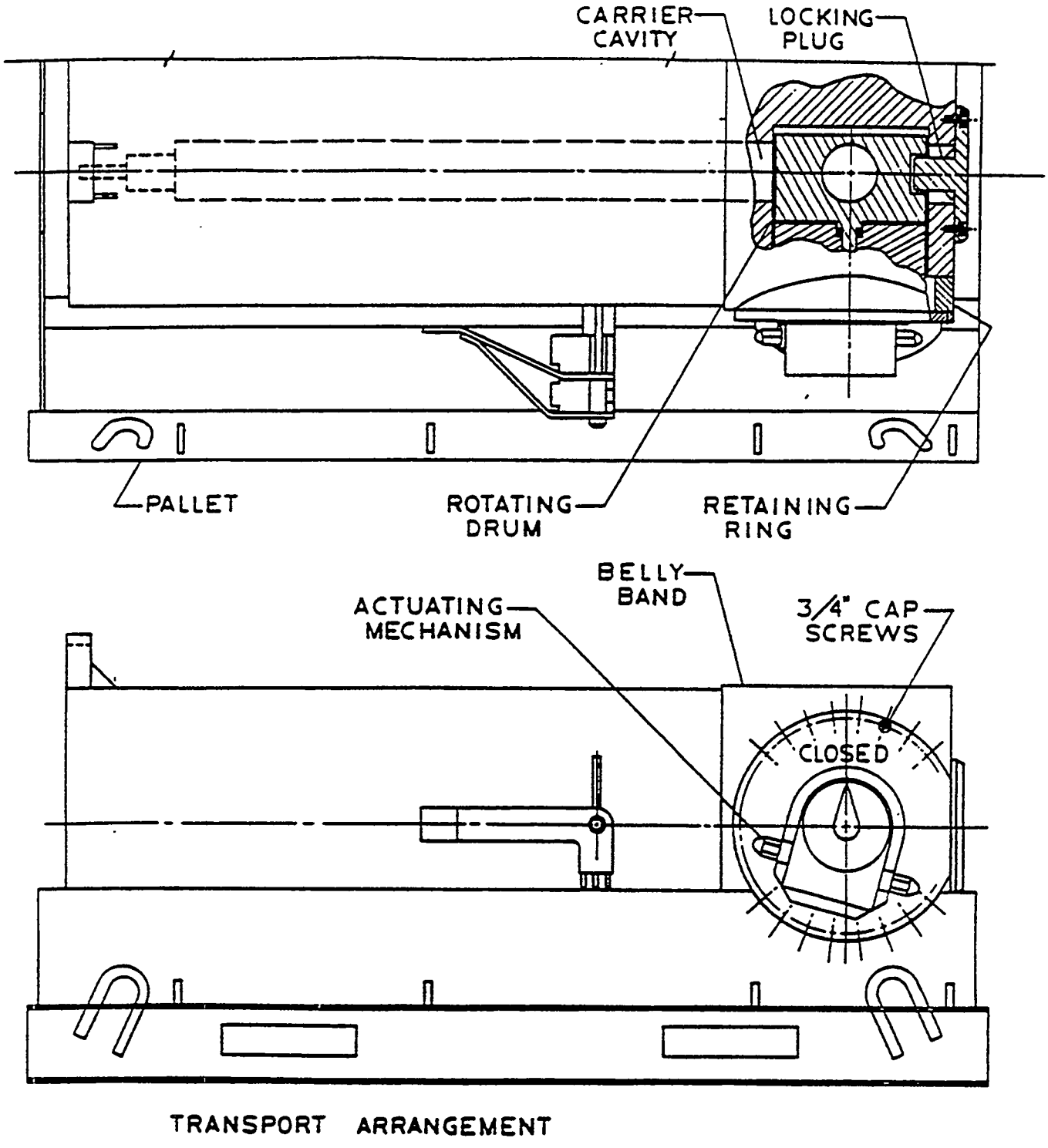


Figure 4.2-1 TRA Hot Cells Carrier

Note: Items 1 through 12 were designed by General Atomic Company. Item 13 (shown in phantom line) was designed by EG&G Idaho, Inc., and is shipped under Transport Plan ES-50653.

1. Trailer
2. Upper cask
3. Lower cask
4. Dolly
5. Hoist
6. Closure plate
7. Closure shell
8. Closure head (for lower cask)
9. Gate-type door
10. Tiedown fasteners
11. Pillow block (with tiedown fasteners)
12. Spacer plate
13. Strongback shipping container

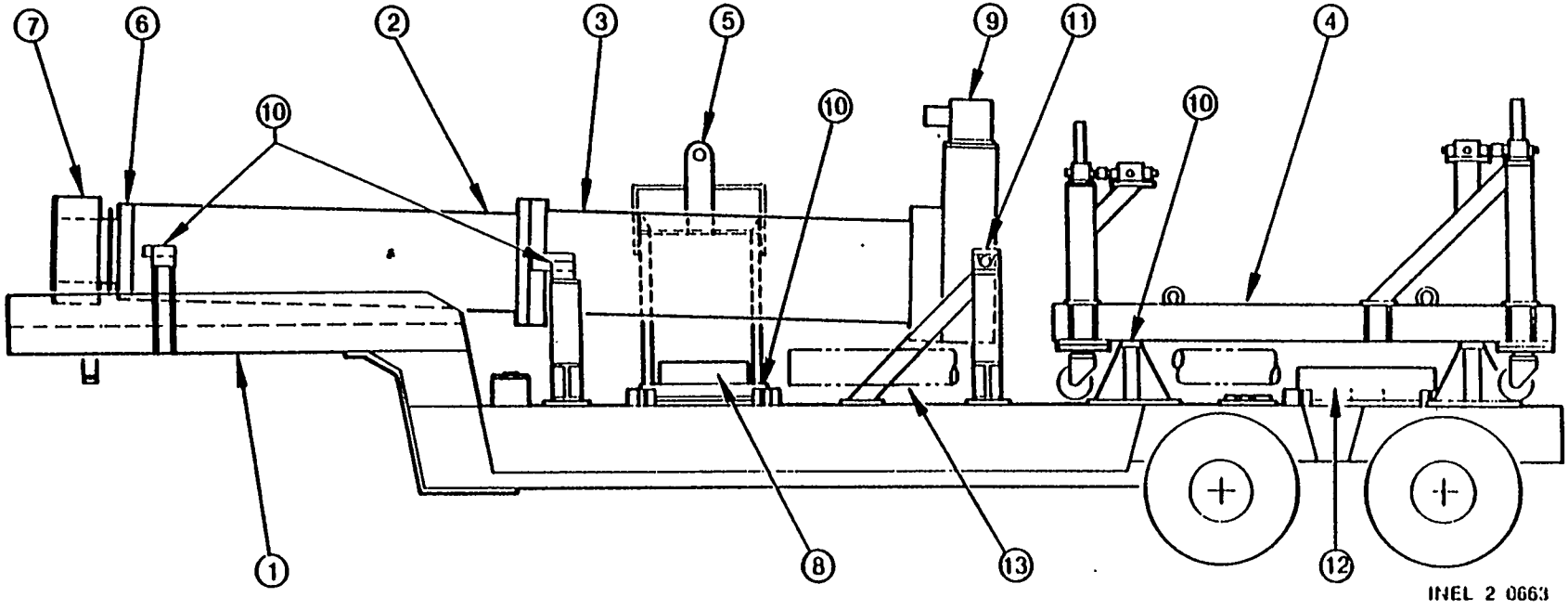


Figure 4.2-2 TFBP-2 Cask Transport System Major Components

lower cask. A closure shell and plate attach to the upper end of the upper cask. The upper cask section will not be used for transport of PBF SNF.

A dolly allows the cask to be handled in a horizontal orientation. This will be useful for loading the cask in the TRA Hot Cells. An integral electrical hoist is used to load and unload the cask. A trailer is provided for transport of the TFBP-2 cask between INEL facilities. The TFBP-2 cask has an existing DOE-ID-approved transport plan. However, the transport plan must be reviewed and approved to address new safe transport requirements, and the additional TRA ARMF/CFRMF and TRA MTR canal SNF transfers.

4.2.2.3 Peach Bottom Cask Number 2

Peach Bottom cask CA-SF-005 (formerly PB-2) is used at ICPP and could transport SNF at other sites on the INEL.

The cask is a cylindrical vessel with lids at both ends. The main cylinder has a stainless steel inner shell, a carbon steel outer shell, and lead shielding between the two shells. The original lids for the cask are lead filled stainless steel. Two new stainless steel lids have been fabricated to replace the original lids. External, cylindrical, energy absorbers are attached to both types of lids. The diameter of the cask is about 42.62 inches. The length of the cask with original lids is 173.12 inches. For a cask with new lids, the length increases to 176.06 inches. With overpacks, the lengths increase to 191.12 and 194.06 inches, respectively. The fully loaded cask weighs 68,360 pounds in the original configuration and 68,770 pounds for a cask with new lids. Two trunions are provided at each end of the cask for tie-down during shipping and for lifting the cask. The cask interior cavity is a 26 inches diameter by 159 inches long. Figure 4.2-3 shows the casks in original configuration.

The trailer used to transport the Peach Bottom cask at ICPP is based upon a standard flat bed design. The trailer has supports with cover blocks that connect to the cask trunions. The cask is transported in a horizontal position. A painted carbon steel cover provides weather protection for the cask assembly.

4.2.2.4 NuPac 125-B

The Nuclear Packaging (NuPac) 125-B cask was used to transport TMI core debris to the INEL. This cask is certified by the Nuclear Regulatory Commission (NRC). The certification is expected to be maintained. The cask was designed by Nuclear Packaging, Inc. in the mid-1980s for rail transport of the debris canisters followed by truck transport to the TAN-607 Hot Shop. The cask is a skid-mounted, double-contained cask with end-mounted Overpacks. Figure 4.2-4 shows the assembled cask and Figure 4.2-5 is an exploded view that shows the major components of the NuPac 125-B cask. The cask is about 66 inches in diameter by 208 inches long. Attached to each end of the cask is a 120 inch diameter by 75 inch long overpack. The overpacks provide energy absorption in case of an accident. The cask is attached to a rail car or truck transporter by a skid. A fully loaded cask weighs about 79 tons. Each overpack weighs an additional 5.9 tons and the transport skid weighs about 11 tons. The cask will transport seven TMI canisters.

CAPACITY:

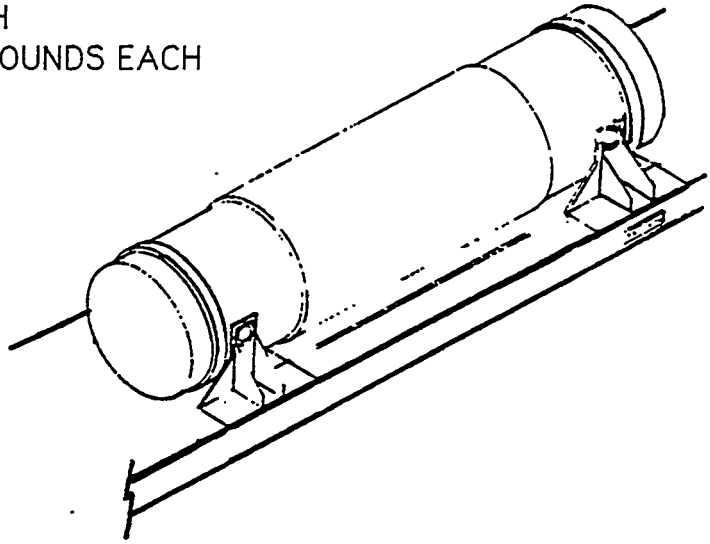
(4) 55 GALLON DRUMS
C R (1) 45 CU FT CONTAINER

WEIGHT

GROSS WEIGHT 68,360 POUNDS (EMPTY)
CASK BODY WEIGHT: 53,110 POUNDS
LIDS: 1,995 POUNDS EACH
IMPACT LIMITERS: 630 POUNDS EACH

MODE OF TRANSPORTATION

TRUCK/TRAILER



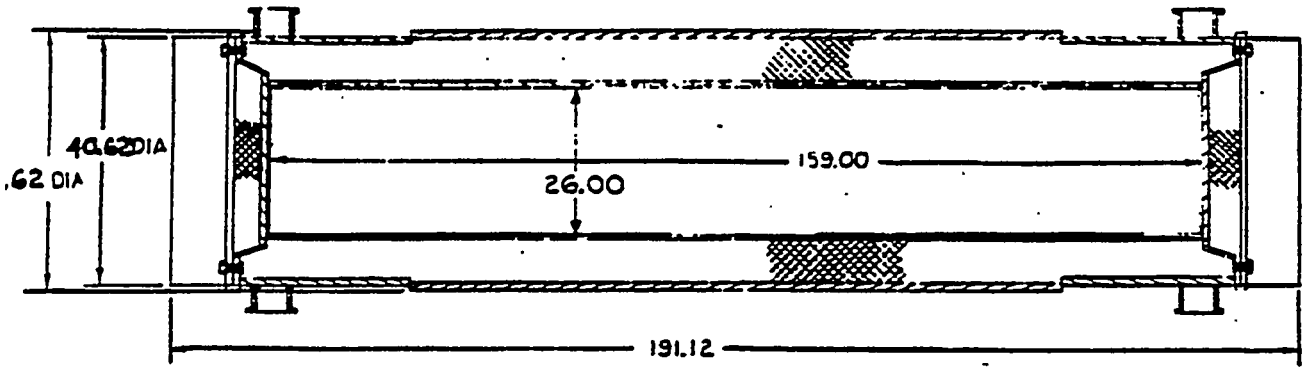


Figure 4.2-3 Peach Bottom Cask

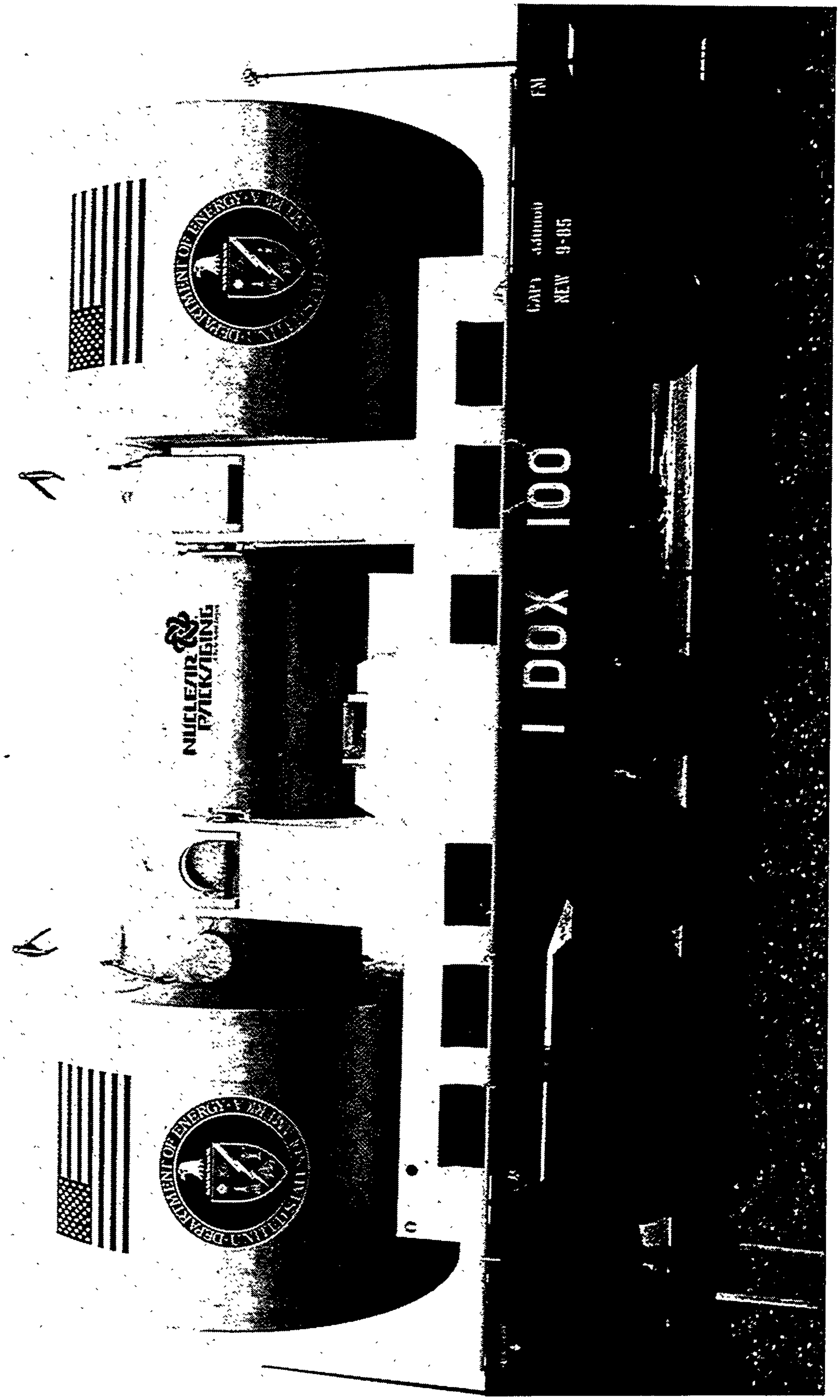


Figure 4.2-4 Assembled NuPac 125-B

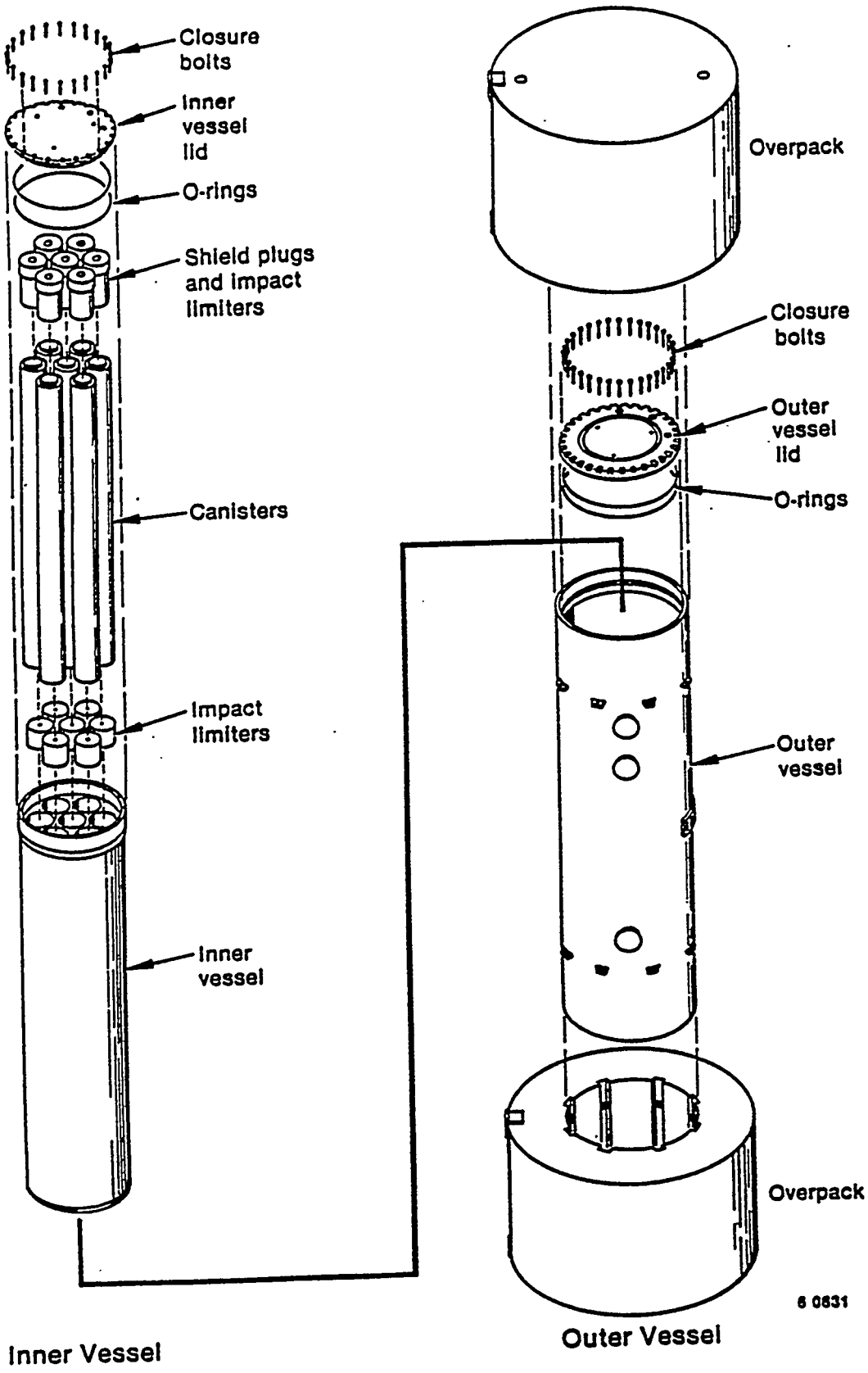


Figure 4.2-5 Major Components of the NuPac 125-B

The trailer originally used to transport the TMI core debris to TAN has inadequate capacity to transport the cask with overpacks from TAN to ICPP. The added weight of the overpacks will cause the package to exceed the rating of the trailer. In addition, the forward overpack cannot be removed from the cask if the existing trailer were used. A new transporter that is designed to transport the NuPac 125-B and the three TAN dry commercial SNF casks is required.

4.2.2.5 Dry Commercial Spent Nuclear Fuel Casks

CASTOR V/21

The Castor V/21 cask was designed and fabricated by General Nuclear Systems, Inc. for dry storage of commercial SNF. The cask is about 95 inches in diameter by 189 inches tall. The cask will store 21 commercial Pressurized Water Reactor fuel assemblies. Fully loaded, Castor V/21 will weigh about 90 (U.S.) tons. The cask is a thick-walled, nodular cast-iron container. The SNF is stored in an inert gas atmosphere. External fins are provided for heat removal. Two pairs of trunions are provided for lifting, tie-down, and rotation. The cask stores SNF in a vertical orientation. However, the cask has been tested in a horizontal orientation with no adverse consequences.

MC-10

The MC-10 was designed and fabricated by Westinghouse for the dry storage of commercial SNF. The cask is about 105 inches in diameter by 189 inches tall. Either 24 commercial fuel assemblies or canisters of consolidated SNF rods can be stored in the cask. Fully loaded, MC-10 will weigh about 112 tons. The cask is a forged steel container with an integrally welded forged steel bottom. Twenty-four nickel-plated fins are attached to the outside of the vessel for heat removal. Three bolted lids close the cask. The final closure is a fourth lid of stainless steel that is welded in place. Four removable trunions facilitate cask handling. The trunions are replaced with neutron shield plugs for storage. The cask stores SNF in a vertical orientation. However, the cask has been tested in a horizontal orientation with no adverse consequences.

TN-24P

The TN-24P cask was designed and fabricated by Transnuclear for the dry storage of commercial SNF. The cask is about 90 inches in diameter by 200 inches tall. Up to 24 commercial fuel assemblies or canisters of consolidated SNF rods can be stored in the cask. A fully loaded TN-24P will weigh about 97 tons. The cask is a forged steel container with an integrally welded forged steel bottom and a bolted forged steel lid. The SNF is stored in an inert gas atmosphere. Heat is removed from the cask through the external surface and cooling fins are not required. The cask has three pairs of trunions bolted to the cask for lifting, tie-down, and rotation. A neutron shield drum is installed on the cask lid during storage. A protective cover is installed on the cask for weather protection of the upper section. The cask stores SNF in a vertical orientation. However, the cask has been tested in a horizontal orientation with no adverse consequences.

4.2.2.6 TN-8L Spent Fuel Shipping Cask

The TN-8L spent fuel shipping cask is a truck mounted cask by Transnuclear, Inc. The cask will ship three commercial Pressurized Water Reactor or Boiling Water Reactor SNF assemblies. The cask is about 192 inches long. Figure 4.2-6 shows the cross-section of the cask. The inner-most layer is stainless steel surrounded by concentric layers of boron carbide/copper plates, lead gamma radiation shielding, cement, and steel. The outer layer is a borated resin neutron shield. The TN-8L has 104 rows of nickel-plated copper heat transfer fins. The three cavities for SNF fuel assemblies are each about 9 inches square by 168 inches long. A filled TN-8L weighs less than 39.7 tons. Trunions are provided for both tie-down and lifting. The cask is supplied with a dedicated trailer for transport.

4.3 PERSONNEL AND TRAINING REQUIREMENTS

The increase in IFSF SNF handling and receipts will require additional operating personnel. The manpower histograms for operators, supervisors, engineering support, and health physicists are shown in Figures 4.3-1 through 4.3-4, respectively. These figures depict the annual manpower requirements for supporting all of the ICPP SNF tasks during this consolidation program. The resources required for SNF consolidation are identified by the black boxes on the very top of each column. The horizontal line in each figure identifies the available manpower.

Those years that exceed this level represent shortfalls. These shortfalls can be eliminated by adding about 10 new fuel handling operations personnel, 2 operations supervisors, 2 facility support engineers, and 2 health physicists. Operations personnel need to be hired by 1995 in order to complete their training programs for the ICPP facilities. These personnel will be added to existing crews to minimize the impact of assimilating new employees.

These additional personnel are required for SNF consolidation activities only. New SNF tasks resulting from the Programmatic SNF and INEL ER&WM EIS Record of Decision will require additional personnel and adequate time for their training programs. The manpower requirements for the perturbation cases A, B, and C were not evaluated.

4.4 DOCUMENTATION REQUIREMENTS

4.4.1 Transportation

All shipments of radioactive materials on the INEL are required to be documented according to established procedures. A Radioactive Material Shipment form and DOE/NRC-741 for SNM transfer are the minimum documentation required. Other information may also be required depending upon the characteristics of the SNF and cask configuration.

Many SNF transfers will be made within controlled boundaries of the INEL and DOT/NRC licensed casks are not required. However, safety equivalent to that provided by DOT regulations is required for on-site transfers. Some casks

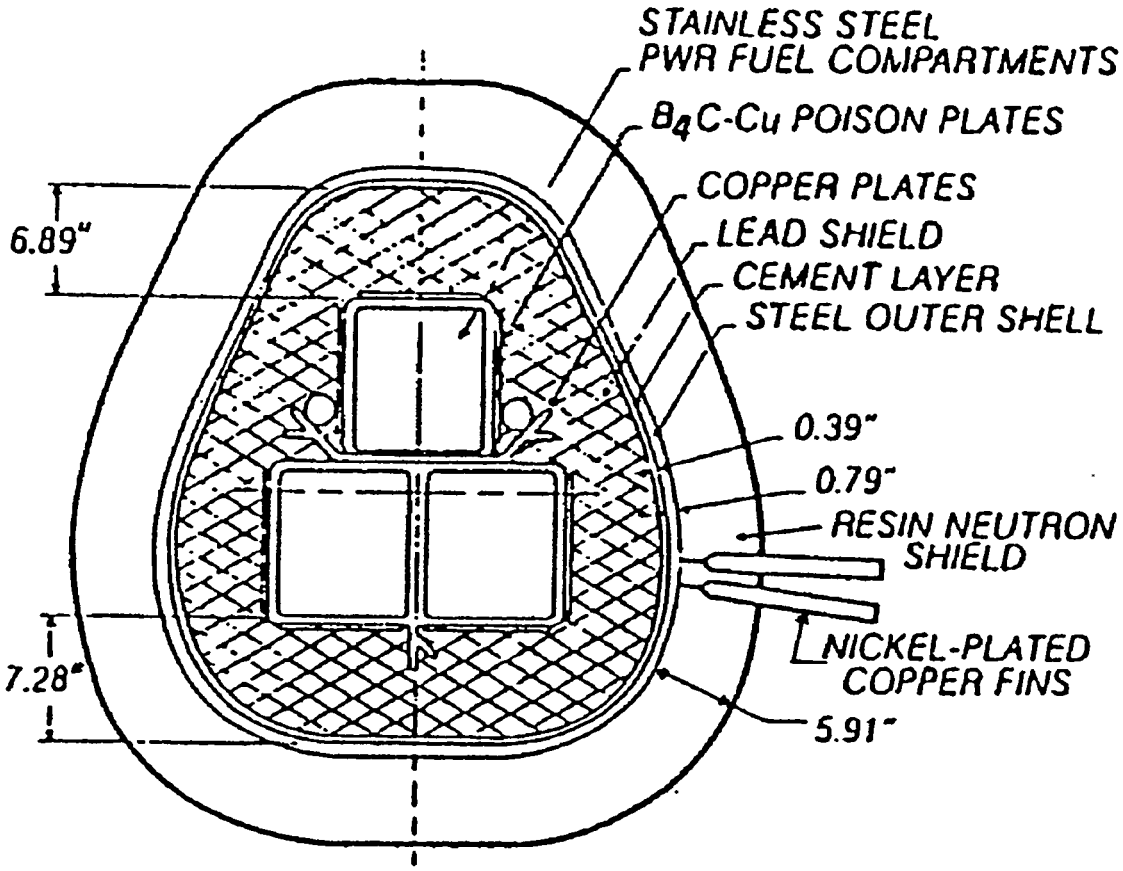


Figure 4.2-6 Cross-Section of the TN-8L Shipping Cask

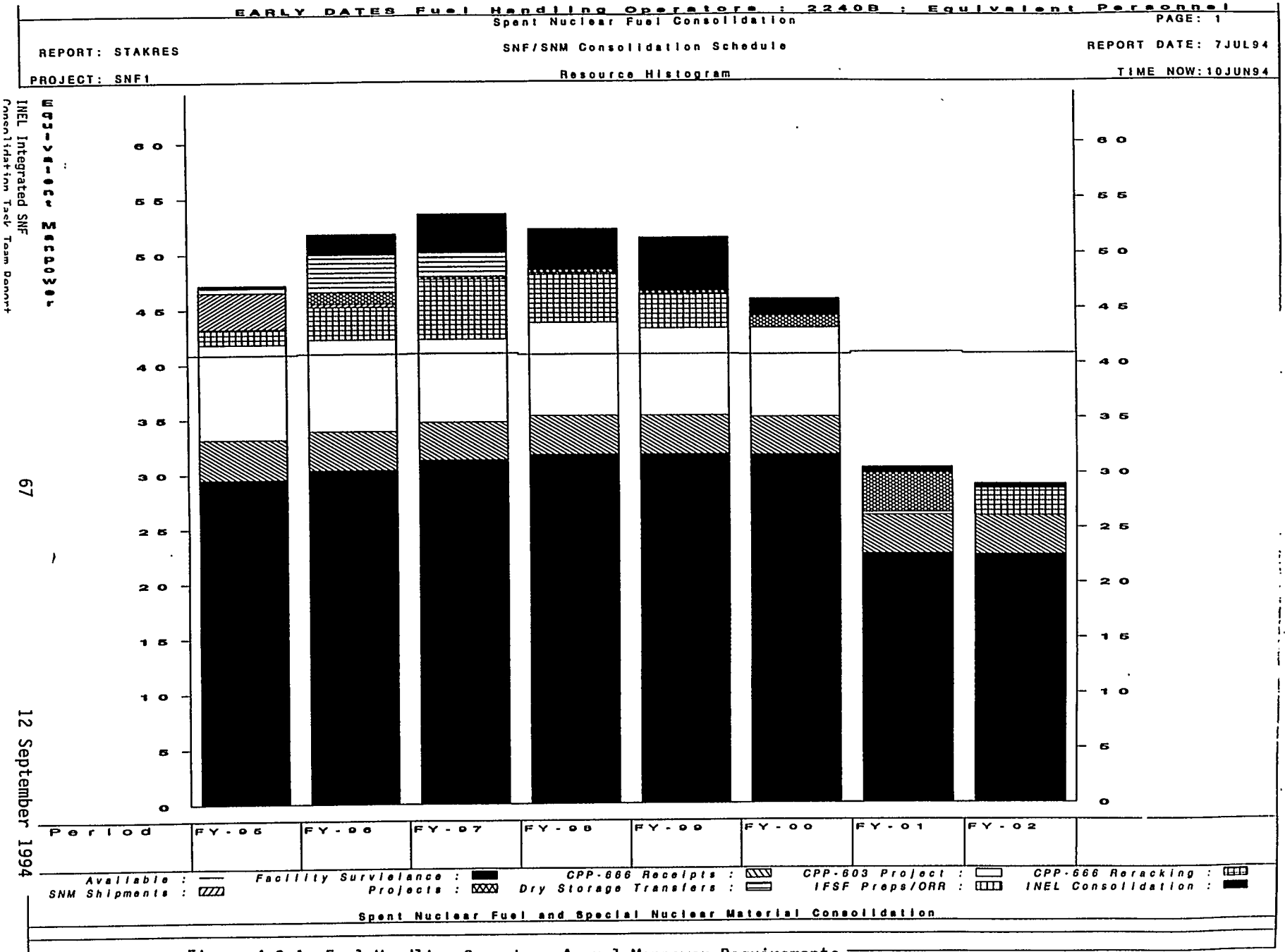


Figure 4.3-1 Fuel Handling Operators Annual Manpower Requirements

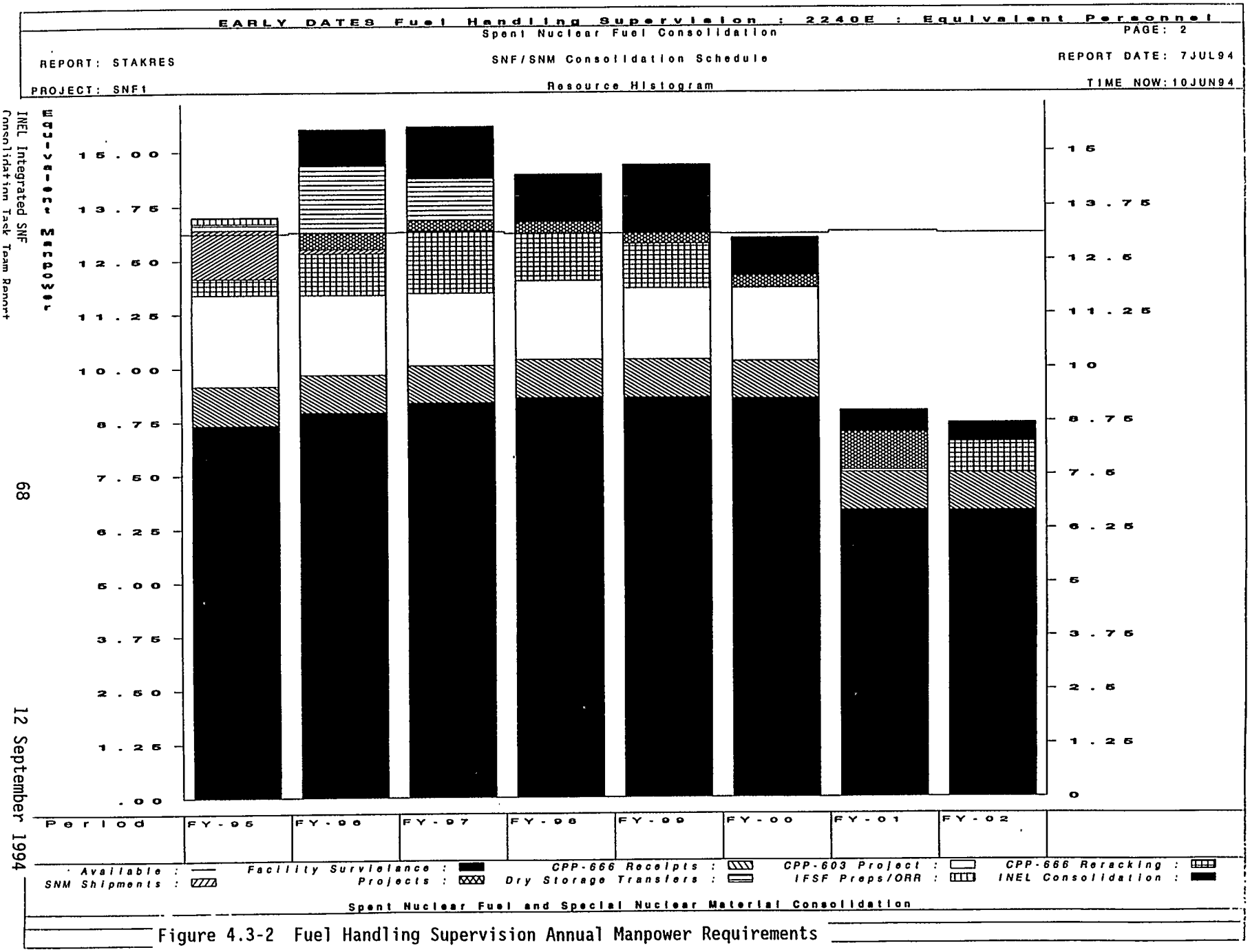


Figure 4.3-2 Fuel Handling Supervision Annual Manpower Requirements

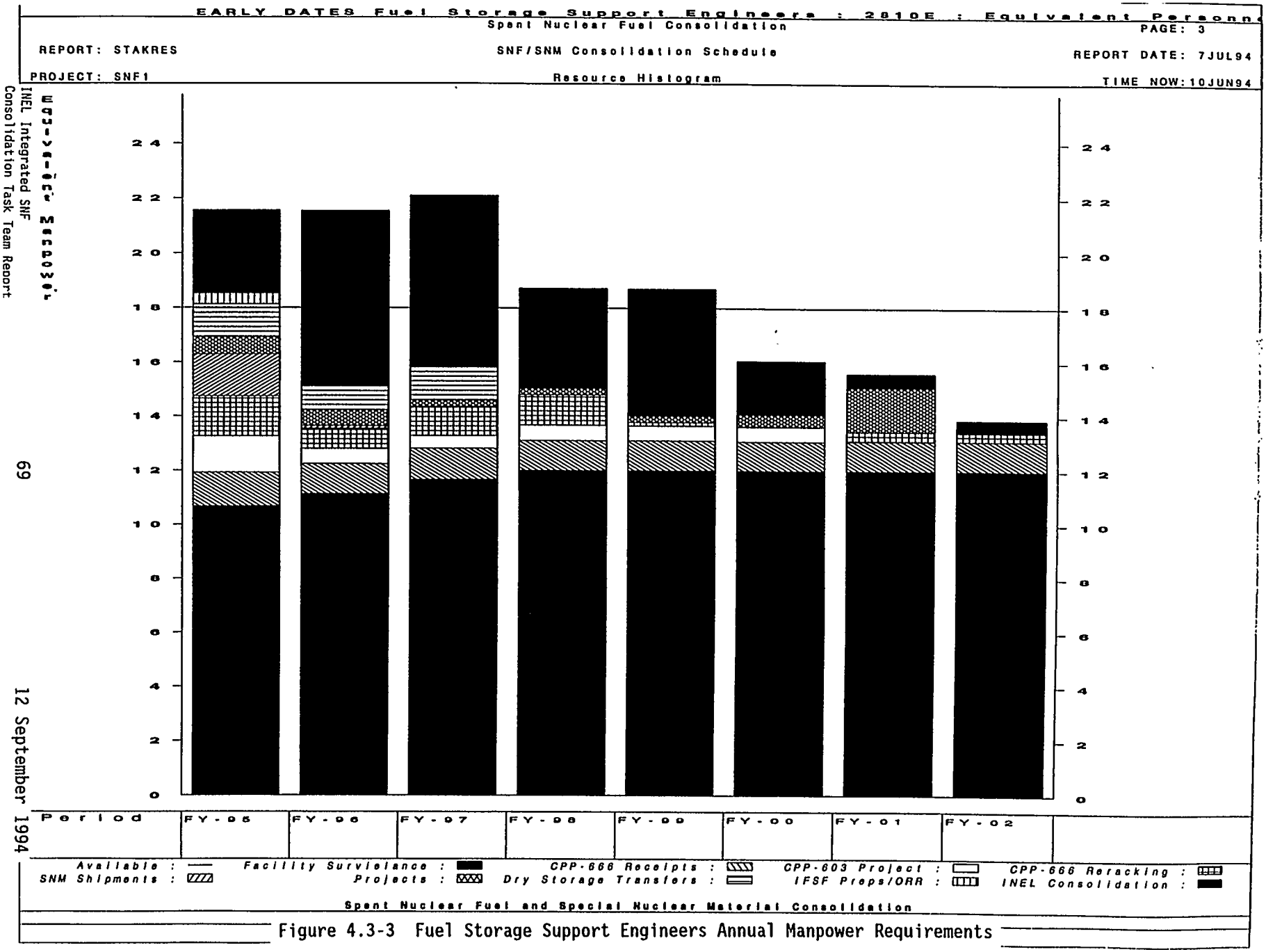


Figure 4.3-3 Fuel Storage Support Engineers Annual Manpower Requirements

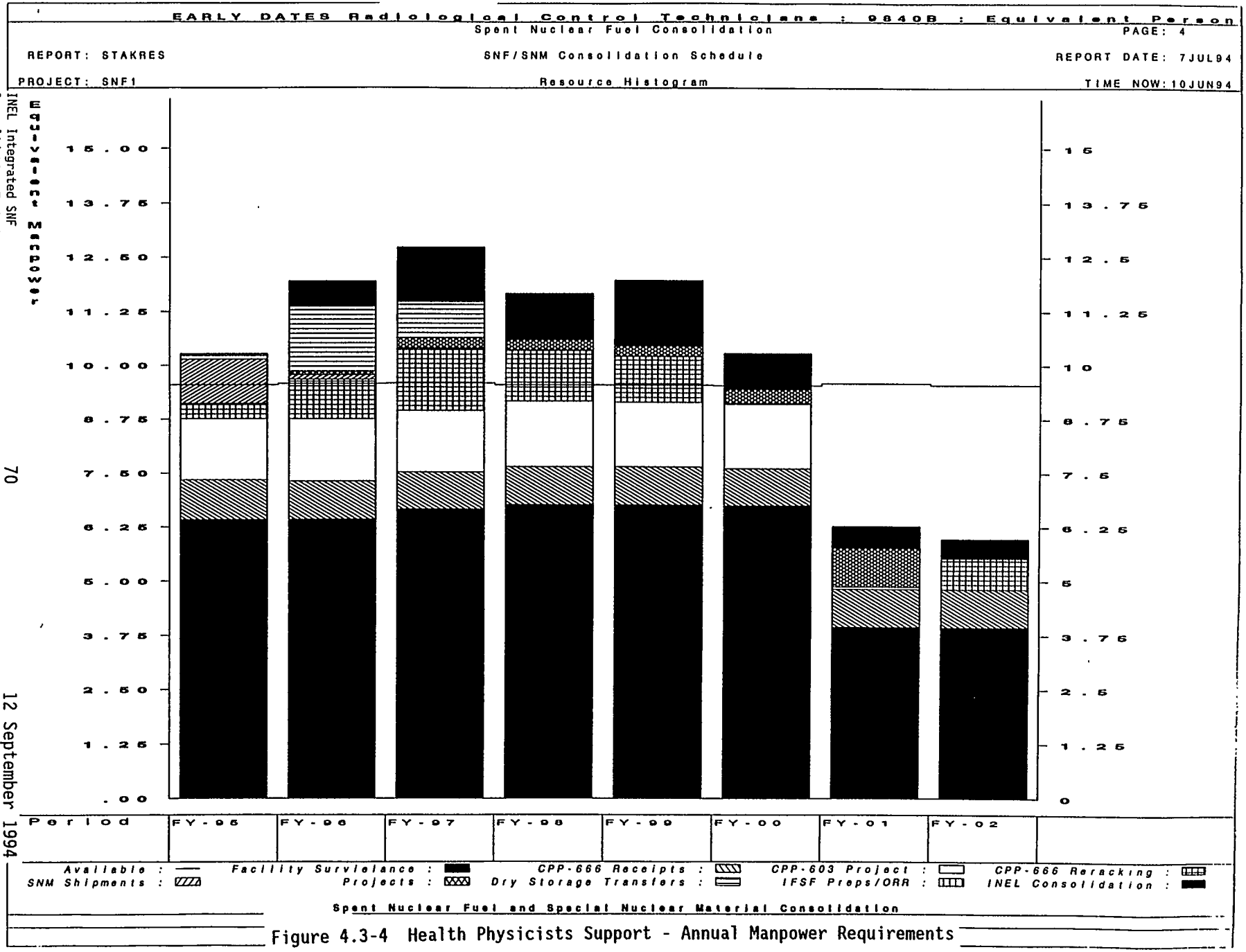


Figure 4.3-4 Health Physicists Support - Annual Manpower Requirements

have been approved by DOE for use in transporting SNF to ICPP. Methods for safe transport are documented in DOE-approved transport plans for each type of SNF. The transfers proceed within the limits imposed by the plan. Transport Plans have been approved for NRF and ATR transfers and such transfers are common at the INEL. Transport Plans must be developed and approved for SNF transfers from PBF, ARMF/CFRMF, and the MTR canal.

Transfers of TMI core debris are expected to be in a cask that has been specifically licensed for transport. Transfer of casks that have a NRC Certification of Compliance is similar to shipping the cask to an off-site location. No other consideration is required except paper work for transfer. Transferring the LOFT SNF (via PB-2 cask) and the dry storage casks from TAN to ICPP involves the use of non-NRC licensed casks on a five-mile section of a state highway. The highway is outside the controlled boundaries of the INEL.

One method for meeting the DOT regulations is to obtain a DOT exemption. This is a procedure within the Code of Federal Regulations that uses administrative controls for equivalent safety, as approved by DOT.

Another method for shipping the PB-2 cask is to make the transfers "out-of-commerce." This is another allowable procedure using DOE equipment and personnel.

A third method is to request permission from the state of Idaho to close the highway during the time (about one-hour) required to traverse that section of highway. Road closure could be performed by Idaho State Police. The cask would be moved at 5 to 15 miles per hour. Escort vehicles would be provided both ahead and behind the transporter for traffic control. Normal traffic would resume when the transporter left the state highway. A similar procedure has proven to be safe in the past.

4.4.2 NEPA

SNF transfer between facilities at the INEL is a routine activity. Existing facilities and components would generally be used (e.g., pools, hot shops, casks, transporters, etc.) for the proposed SNF consolidation transfers. The ICPP mission and the total INEL SNF storage capacity would remain essentially the same. Therefore, proposed SNF transfers would not require additional NEPA documentation. The cumulative effects of INEL SNF management and other ongoing INEL ER&WM activities will be addressed in the ongoing EIS.

Proposed TAN pool stabilization activities and related ICPP above ground vaults and dry cask storage construction projects are being addressed in an existing draft EA. These activities can proceed upon issuance of a Finding of No Significant Impact.

4.4.3 Safety Analyses

Safety Analysis Reports (SARs) and Technical Safety Requirements (TSRs) must be prepared for each potential (existing and new) ICPP SNF storage facility. These safety analyses are needed in order to store the additional SNF or SNM.

SARs and TSRs must be prepared in accordance with DOE Orders 5480.22 and 5480.23. Technical specification and standards (TS/S) also need to be revised for each existing and new facility. Each TS/S revision or new package costs approximately $40-$55K.

Table 4.4-1 shows the estimated resources needed to complete the projected safety analyses requirements. It lists the storage facility, the affected fuel transfer, the estimated SAR/TSR cost, and time needed to prepare and obtain DOE approval. All time estimates are based on one person preparing the safety documents and obtaining DOE approval. The schedules could be shortened by using two or three people for each task. However, the review cycles represent 10-13 months in each estimate and cannot be significantly reduced.

If SNF is initially stored in one facility and subsequently moved to another, additional safety document revisions would be needed for the second facility. In general, once a safety analysis has been updated to DOE Orders 5480.22 and 5480.23, subsequent revisions of SAR and TSR/TS/S packages can be prepared and approved by DOE for $70-$90K each. The update for the existing ICPP SNF storage facilities is assumed to occur independent of the SNF consolidation program.

Criticality safety evaluations (CSEs) need to be prepared for transporting, handling, and storing of each fuel type. A primary and independent CSE will be needed for each fuel type or designation. Independent reviews may range from a second analysis, complete with independent calculations, to a simple review of the methodology and assumptions, depending on the complexity of the analysis and the consequences of error. If a fuel is initially stored at one facility and later transferred to another one, new CSEs need to be generated. Each CSE is prepared at a cost of $45K and requires 2.25 months to prepare. A total of 10 CSEs would be prepared for NMIS, ARMF/CFRMF, PBF, LOFT, and commercial SNF. The total cost for CSEs for these transfers would be $450K.

It is estimated that the criticality safety analyses for MTR canal SNF would be equivalent to four CSEs or eight (total) with independent calculations. The total cost for criticality analysis of the MTR canal SNF would be about $360K.

4.5 FUNDING PROFILES

The funding profiles for implementing the base case were previously shown in Figure 3.1-2. The costs identified in this figure include the SNF/SNM consolidation activities that are integrated in this schedule (see Table 1.4-1). Several of these tasks are already funded. Thus, the dotted line in Figure 3.1-2 identifies new funding that is required to execute those tasks that are not currently funded i.e., PBF, TRA MTR canal, TRA ARMF/CFRMF, TAN commercial. If the IFSF window shown in Figure 3.1-1 closes due to early transfers from the CPP-603 south basin, then the total consolidation schedule will increase by about 12 months and $5.00M dollars over the as soon as possible base case.

Table 4.4-1 Safety Analyses Resource Estimates

SNF Storage Facility	Fuel Transfer	Cost Shipper Receiver	SAR/TSR Duration	Documentation Needed
ICPP IFSF[a]	TRA MTR Canal, PBF, ARMF/CFRMF	$1,352K $377K	12 months[b]	SAR, TSR, TS/S,
CPP-749[a]	TAN LOFT	$ 15K $121K	12 months[b]	SAR, TSR, TS/S, CSE
CPP-651[a]	TRA NMIS	$ 0K $126K	12 months[b]	SAR, TSR, TS/S, CSE
CPP-666[a]	potential storage area	$217K	9 months	SAR, TS/S, CSE for each fuel
New, cask storage pad	TAN commercial SNF	$44K $218K	30 months	PSAR, FSAR, TSR, TS/S CSE
New, aboveground storage vaults	TAN TMI	$250K	24 months	PSAR, FSAR, TSR, TS/S
Fuel transport containers		$120K/fuel	18 months/ fuel	SAR, TSR, TS/S, CSE for each fuel and each container

(a) Assumes the task of updating existing safety documentation to DOE orders 5480.22 and 5480.23 are accomplished independent of this SNF consolidation program. Thus, the cost estimates support the analysis that is only associated with the consolidation program.
(b) Requires a safety analysis engineer who is fully dedicated to this task.

4.6 RESOURCE CONSERVATION

Additional conservation of key resources may be obtained by completing the integration of the partially-integrated, SNF consolidation projects. The Task Team already developed resource conservation in the areas of Receiver's human resources, facilities and equipment, and Shipper's equipment. Additional resource conservation benefits may be obtained by evaluating the SNF consolidation as a single project entity with common administration and oversight. The CSE/SAR compliance program, the ORA/ORR compliance program, the SNF handling tool design and construction program, and the Shipper/Receiver SNF handling teams are areas where similar resources, now assigned to separate activities, could be combined.

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5.0 INEL SNF CONSOLIDATION ISSUES AND RISKS

Several issues and risks related to SNF consolidation were identified that could adversely affect the proposed INEL SNF consolidation schedule. These issues and risks are presented in Table 5.1-1 and involve project funding, documentation approvals, facility adequacy, equipment readiness, and transportation.

5.1 TECHNICAL RISKS

The technical risk for transferring SNF or SNM from facilities at NRF, TRA, PBF, and TAN to facilities at ICPP for the purpose of deactivating aged or surplus INEL SNF storage facilities is relatively low. The low risk is due to: (1) the administrative and technical expertise that is available to support the plan, (2) the priority assigned to this SNF consolidation mission, and (3) the 40 years of experience that exist with related SNF management activities.

5.2 MANAGEMENT RISKS

Management risks are conditions that could adversely affect the schedule, cost, or product quality of the SNF consolidation plan. Management risks associated with the related activities have been reported recently as vulnerabilities, issues, or concerns by several assessment teams in the past year. However, most of these have identified resolutions planned and are not listed in this document.

5.3 OTHER POTENTIAL CONSOLIDATION INVENTORIES

The impact of other SNF receipts from outside the INEL has not been addressed because of time limitations. However, the Open Plan™ software is designed to identify the impacts of any SNF receipt scenario.

New SNF receipt scenarios that may be of interest could include the impact of receiving foreign research reactor fuel (potential for near-term shipment of 6,000 elements; possibly stored in IFSF). Other scenarios can be generated by the Programmatic SNF and INEL ER&WM EIS ROD, e.g., centralization of all SNF at the INEL, transfer of INEL SNF to another site, or centralization of Uranium-233 (U-233) at the INEL. The following paragraphs discuss some specific SNF transfers that are likely to continue to be real possibilities and may justify further investigation.

5.3.1 INEL Radioactive Waste Management Complex (RWMC) U-233

U-233 is stored at two sites in the DOE complex and is another potential candidate for consolidation. Essentially all of the U-233 remaining in the complex is stored at INEL and Oak Ridge Y-12 Plant. Storage locations at INEL are the RWMC and ICPP. Consolidation of these weapons capable/useable inventories may be advantageous, but are not included in the SNF consolidation analyses or in this plan.

Table 5.1-1 INEL SNF Consolidation Issues and Risks

ISSUE	STRATEGY
A. The FY-96 budget planning packages submitted do not include FY-95 funding for critical path activities that are needed to support the proposed schedule for relocating SNF from PBF and MTR canal to ICPP.	The problem of earlier funding needs, (particularly for the MTR canal SNF) has been identified to DOE management. Finding funding for the early activities could alleviate this issue.
B. A quantitative limit for moisture in SNF dry storage cans is needed to optimize the drying process.	SNF dry demonstration programs are scheduled to determine the effects of moisture that is present after use of conventional SNF drying techniques and validate estimated drying time.
C. An assessment of hazards is needed to determine dry storage requirements for SNF encased in the epoxy matrix used in metallurgical sample preparation.	SNF dry storage demonstration programs will be used to assess these hazards and minimize the risks.
D. SNF stored at INEL is controlled by several DOE organizations. Considerable coordination will be required to develop agreement among the different organizations and with stakeholders for consistent criteria for storage and transport of the SNF.	DOE-ID will follow up on discussions with DP, NE, RW, EM, and stakeholders to reach agreement regarding these facilities and the consolidation plan.
E. The CPP-749 gantry crane is old and has not been operated for some time; therefore, its condition is unknown. Also, vendor support is no longer available, so repairs and maintenance may prove difficult.	Inspect the crane for operability and monitor its condition. The unit should be replaced if warranted, and vendor support should be arranged.
F. The proposed transfer of TAN LOFT and TAN commercial SNF to ICPP will use a short stretch of a state highway within the INEL boundaries, which normally requires the use of certified transport cask systems.	Preliminary discussion with DOE-ID indicates that DOT exemptions or other "out-of-commerce" transfer procedures may be obtainable. These procedures are permissible under the provisions of the INEL Transportation Safety Manual and DOT regulations.

Table 5.1-1. INEL SNF Consolidation Issues and Risks (Continued)

ISSUE	STRATEGY
G. Significant changes in the requirements for the TAN TMI SNF Dry Cask Storage Project have occurred or are being considered so that: (1) Some critical path work is on hold, and (2) Some project planning documentation may need to be updated.	The strategy is: 1) Continue hold on critical path work pending review of options at ICPP, 2) Develop above ground vault concept at ICPP for storage, 3) Seek approval of revised EA, and 4) Resume design after EA approval.
H. The eligibility of the TFBP-2 cask for the PBF and ARMF/CFRMF transfers needs to be verified early to validate the proposed SNF consolidation plan and to ensure that the planned modification of the IFSF Transfer Cart is appropriate.	Transfer the TFBP-2 cask to TAN for inspection and maintenance as soon as possible (prioritize funding if necessary).
I. The DOE Spent Fuel Working Group identified two vulnerabilities (from seismic events and ventilation system malfunction) for SNF stored at IFSF, which may delay facility readiness for receipt of additional SNF.	A study is underway to assess the perceived inadequacy in seismic resistance of the IFSF concrete structure including the roof and the fuel storage rack inside the IFSF storage vault. An electrical upgrade is in progress and should be completed by October 1994 to resolve the ventilation system issue.
J. The IFSF transfer cart must be modified to interface with the TFBP-2 cask.	Design, build, or modify adapter plate used in the IFSF transfer cart.
K. A resumption of shipments of graphite SNF from Fort St. Vrain would compromise availability of dry storage space in IFSF, which is planned for INEL SNF consolidation use.	Monitor the potential for shipping the Ft. St. Vrain fuel. Should shipments resume, alternate storage for some consolidation SNF would be required and continue to evaluate options that provide maximum safety for all stored SNF.

Uranium waste (major isotope U-233) was received from the Bettis Atomic Power Laboratory as transuranic waste following the experimental development of the Light Water Breeder Reactor. Because of the decay products of U-233, this material may now exceed the gamma radiation limit for contact handling. This material is stored at the RWMC in several configurations in the Transuranic Storage Area and the Intermediate-Level Transuranic Storage Facility. Some storage containers (68-55 gallon barrels 6M, and 77-110 gallon barrels 6M) contain unirradiated pellets and fuel rods. Most of the containers (about 1700 55 gallon barrels) contain fabrication scrap material. The unirradiated pellets and rods contain about 34 kg U-233.

5.3.2 Oak Ridge Y-12 Plant U-233

The Radiochemical Development Facility, Building 3019 at the Y-12 Plant, has served as the national repository for U-233 since 1963. The facility was constructed in 1943 to support uranium and plutonium recovery processes at Hanford. A shielded cell was modified for U-233 storage. Additional storage capacity was gained by drilling wells within the surrounding concrete cell walls. This inventory, resulting from experiments associated with pilot testing of the thorium fuel cycle, consists of approximately 423 kg U-233 and 1380 kg total uranium. The material has been chemically separated from thorium fuel cycle materials, solidified to an oxide form, and is stored in approximately 1000 cans.

The facility is reaching its end of useful life for this role. Additionally, some of its equipment is not adequately shielded for the energetic gamma radiation building-up from the decay of associated U-232. Thus, DOE-DP is evaluating options for continued storage, potential consolidation, and/or disposal of this material. If the INEL can accept this inventory in an existing facility (CPP-651 and/or TRA-620, for example), the cost advantage over new construction would be significant. Thus, the complex-wide consolidation of this material at INEL is a future possibility, but outside the scope of this plan.

5.3.3 INEL ICPP U-233

Uranium-233 is stored at ICPP in the form of irradiated and unirradiated fuel elements. These fuels are stored in the IFSF and in the CPP-749 Dry Vaults. The IFSF was constructed specifically for the receipt and storage of Fort St. Vrain fuel in 1974, and the dry vaults were constructed in the mid-1980s. Approximately 318 kg U-233 is stored as unirradiated Light Water Breeder Reactor fuel. Irradiated fuels from Fort St. Vrain reactor, Peach Bottom reactor (high-temperature gas cooled), and the Light Water Breeder Reactor program contain 645 kg U-233.

5.3.4 ATR SNF TRANSFERS FOR CORROSION STUDIES

Three ATR SNF elements are proposed to be destructively examined to assess the impacts of their post storage environments. One SNF element recently discharged from ATR will be used to benchmark the impacts of two storage situations at ICPP (i.e., one ATR SNF element will be examined from the CPP-666 storage area, and one ATR SNF element will be examined from the CPP-603 storage area). When the SNF examination facility is selected, each of these ATR elements will be scheduled for transfer.

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6.0 REMAINING CONCERNS AND ISSUES, AND POTENTIAL RESOLUTIONS

6.1 CRITICAL PATH ISSUES

If the consolidation schedule is implemented as proposed, there are several critical path issues that must receive prompt funding and checkout. This immediate action is needed to help assure completion INEL SNF consolidation as proposed. They would include:

- Checkout of the TFBP-2 cask; $0 in FY-94 and $135,000 in FY-95
- IFSF transfer cart adapter plate; $12,000 in FY-94 and $126,000 in FY-95
- SNF canister design and testing; $0 in FY-94 and $179,000 in FY-95
- Documentation - immediate start on SAR updates via modifications to existing WINCO support contracts for SAR update activities

6.2 SCHEDULE OWNERSHIP AND MAINTENANCE

It is recommended that this plan be placed under the control and ownership of ICPP Fuel Storage Planning. This group is headed by R. E. Cottam. He has played a lead role in the development of this plan, and supported R. J. Freeman (lead program scheduler) with input to the Open Plan™ software. Contacts from each of the prospective EG&G SNF storage area include: D. W. Colling - PBF; A. H. Clark - ARMF/CFRMF; A. H. Clark - MTR canal; and R. K. Elwood - TAN.

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Appendix A

PROPOSED SNF CONSOLIDATION INVENTORY

Spent nuclear fuel (SNF) is in various types of storage configurations at several different INEL facilities including: Power Burst Facility (PBF), Test Reactor Area (TRA), Test Area North (TAN), Idaho Chemical Processing Plant (ICPP), Argonne National Laboratory-West (ANL-W), and Naval Reactor Facility (NRF). SNF specifically proposed for transfer to the ICPP for consolidation of the INEL SNF inventory. Therefore, ICPP, ANL-W and NRF inventories are not listed here.

SNF inventory data from all INEL locations is stored in a database system. The database includes detailed descriptions of the fissile material amounts and storage locations. The inventories have been checked to ensure they are consistent with the accountability inventories in the Nuclear Materials Management and Safeguards System. The information on pages A-2 and A-3 was gleaned from data assembled by the National Spent Nuclear Fuel Support organization at the INEL.

INEL SNF Inventories as of
January 1, 1994

TAN

TAN Pool	Metric tons of heavy metal
TMI-2 Core debris	81.595
LOFT fuel	2.178
Commercial type fuel rods	1.164
Loose fuel rod storage basket	0.312
sub total	85.249
TAN Test Pad	
PWR intact and consolidated assemblies	38.370
TAN total	123.619

TRA

ATR Fuel Assemblies	
In the reactor	0.046
Awaiting shipment to ICPP	0.094
Recyclable	0.585
sub total	0.725
MTR Canal Tight Water Reactor fuel rods and pieces	
Commercial fuel rods in cans, PBF Driver Core rods in cans, and Other test fuel rods in cans	0.257
ARMF/CFRMF Canal	
MTR-type fuel assemblies	0.231
TRA total	1.213

PBF

PBF Canal	
Power Burst Facility Driver Core fuel rods	0.834
PBF total	0.834

Table A-1 Detailed Characteristics Of SNF Proposed For INEL Consolidation

LOCATION	STORAGE FACILITY	FUEL NAME	TOTAL MASS(kg)	VOLUME(m3)	NO. ITEMS	UNITS	URANIUM MASS(kg)	URANIUM ENRICH.	FISSILE MASS(kg)
TAN	TAN Pool	TMI-2	120,000.00	129.00	342.00	canst	82,000.00	2.20	2,100.00
	TAN Pool	LOFT	3,600.00	1.30	14.00	assm	2,200.00	4.10	90.20
	TAN Pool	LOFT Fines	6.20	0.00	5.00	can	4.33	10.50	0.45
	TAN Pool	Con Yankee	540.00	0.19	1.00	assem	380.00	1.40	10.90
	TAN Pool	Peach Bottom	234.00	0.17	1.00	assem	167.00	1.40	5.20
	TAN Pool	Peach Bottom	271.00	0.17	1.00	assem	188.00	0.70	13.00
	TAN Pool	Dresden	235.00	0.13	55.00	rod	165.00	depleted	0.70
	TAN Pool	HB Robinson	367.00	0.49	125.00	rod	257.00	0.70	5.00
	TAN Pool	BCD-LFRSB	441.00	0.19	1.00	assem	310.00	0.50	5.30
	TAN Test Pad	Surry	20,000.00	6.16	33.00	assem	14,000.00	0.70	291.00
	TAN Test Pad	DOD B17	657.00	0.19	1.00	assem	410.00	0.80	8.20
	TAN Test Pad	DRCT	30,000.00	4.54	24.00	can	21,000.00	0.80	423.00
	TAN Test Pad	EMAD	3,084.60	0.94	5.00	assem	2,200.00	0.70	41.80
TRA	MTR Canal	OPTRAN	28.00	0.08	5.00	canst	19.70	2.50	0.63
	MTR Canal	CANDU	19.40	0.03	2.00	canst	2.60	9.80	0.26
	MTR Canal	Dresden SA-1	40.40	0.13	31.00	rod	18.60	2.10	0.54
	MTR Canal	GAP CON	12.50	0.08	14.00	rod	8.94	10.00	0.89
	MTR Canal	HALDEN IFA	3.30	0.07	5.00	rod	2.30	9.60	0.23
	MTR Canal	LOFT LEAD ROD	5.00	0.02	7.00	rod	3.50	9.30	0.33
	MTR Canal	Halden	6.50	0.07	13.00	rod	4.55	depleted	0.46
	MTR Canal	HB Robinson	8.90	0.08	5.00	canst	6.30	0.75	0.13
	MTR Canal	MAPI	31.80	0.96	49.00	rod	22.30	5.70	1.39
	MTR Canal	Peach Bottom	13.40	0.08	5.00	canst	9.40	1.40	0.22
	MTR Canal	RIA	8.60	0.08	8.00	canst	6.10	5.70	0.36
	MTR Canal	Saxton	10.20	0.12	18.00	rod	7.10	8.90	0.68
	MTR Canal	TC	3.60	0.03	6.00	rod	3.10	10.00	0.30
	ARMF/CFRMF Canal	ARMF/CFRMF	20.00	0.08	67.00	unit	14.10	93.00	12.50
	ARMF/CFRMF Canal	Core Filter	1,600.00	0.00	1.00	unit	217.00	depleted	0.42
PBF	PBF Canal	PBF Driver	12,000.00	0.84	2,525.00	rod	560.00	18.30	102.80

Appendix B

TASK TEAM MEMBERSHIP AND RESPONSIBILITIES

At the direction of the Department of Energy, Idaho Operations Office, Westinghouse Idaho Nuclear, Inc. formed a multi-discipline, INEL-wide task team to produce this report. Knowledgeable and experienced INEL personnel provided the detail and insight necessary to scope the issues and provide the complex planning strategy for SNF consolidation. Representatives from the State (Idaho) Oversight Committee and DOE-ID were also included in the development of this draft plan. The task team organization is presented on Figure B-1.

Core team members were responsible for overall guidance of the report, interface within their company, developing the assumptions, creating and validating the work packages and schedules, identifying critical path issues and possible resolutions, and contractor review and concurrence of this report. People were called upon, as needed, to provide information in their area of expertise. The overall participation of this effort is shown in Figure B-2.

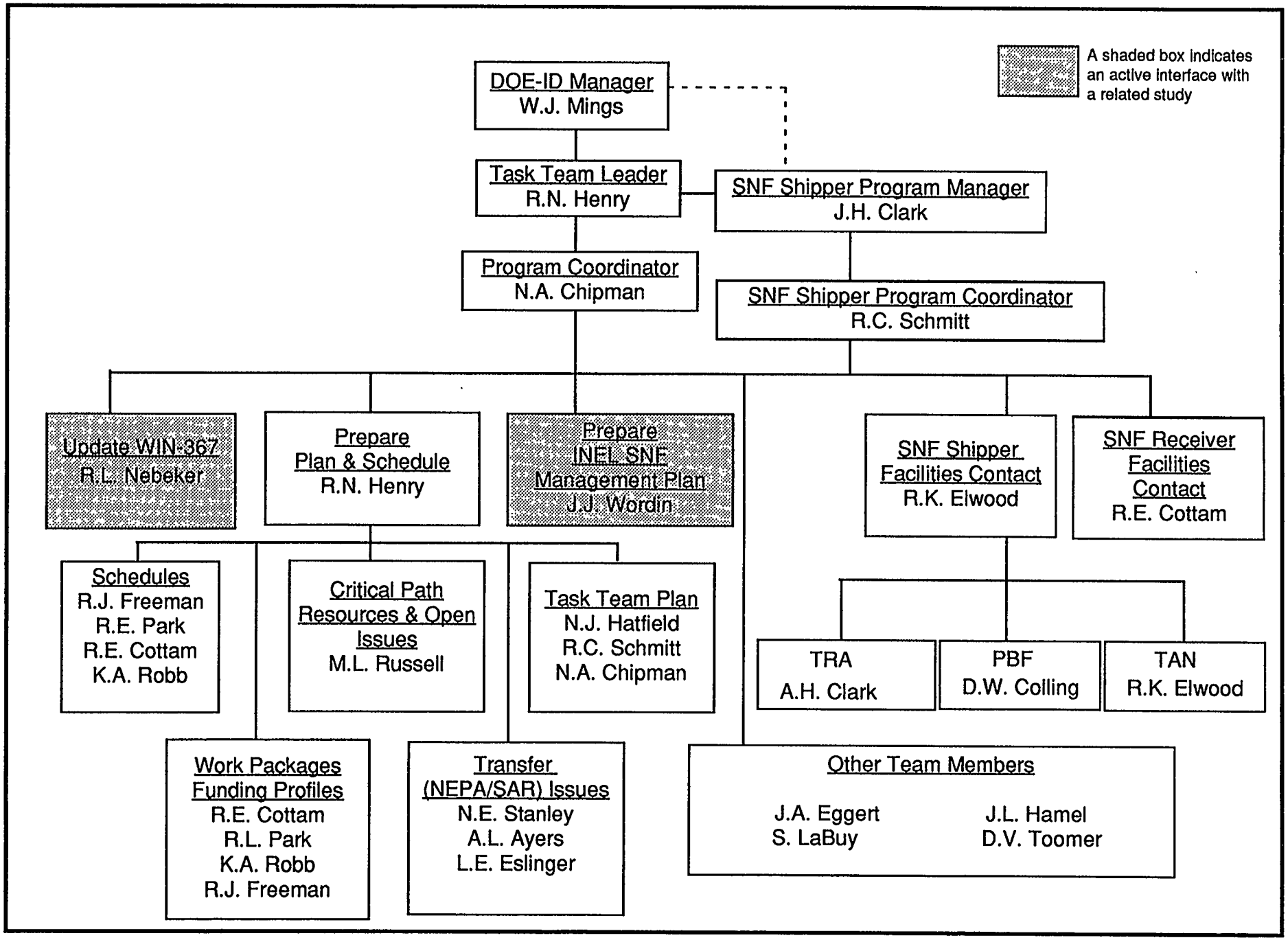

Figure B-1. INEL Integrated SNF Consolidation Task Team Organization

	Phone			Phone
WINCO			**EG&G**	
Roger Henry	6-1223		Jack Clark	6-8879
Nate Chipman	6-1424		Dick Schmitt	6-1837
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Mike Caldwell	6-8967		Scott Spaulding	6-2777
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Fred Roth	6-9198		**B&W**	
Dennis Pulsipher	6-7540		Elmer Johnson	6-1882
James Murphy	6-4453			
Merle Jackson	6-5263		**STATE OVERSIGHT**	
E.G. (Snuffy) Adams	6-3466		Robert Kress	8-2600
Gordon Johnson	6-5104		Nick Wade	8-2623
Corey Beebe	6-9172			
J.Stone	6-7103		**DOE-ID**	
Mike Beer	5-5761		Betsy Silver	6-1030
Edward Armstrong	6-3032		Mike Kuprenas	3-5316
Seeley Magnani	6-5958			

Figure B-2 INEL SNF Consolidation Task Team Overall Participation

Appendix C

PLAN ASSUMPTIONS

This section identifies assumptions that established a frame of reference, or planning basis for the subsequent analysis of Idaho National Engineering Laboratory (INEL) Spent Nuclear Fuel (SNF) and Special Nuclear Material (SNM) consolidation at the Idaho Chemical Processing Plant (ICPP). From this planning basis, cost estimates, secondary planning assumptions, and schedules for consolidation efforts were developed. Secondary assumptions are listed on the summary tables in subsection 2.4 and in the Planning Package Cost Account and Work Package Statements in Appendix D. Thus, the following assumptions were implemented to initiate the planning/scheduling process, and they do not include contingencies for uncertainties in the technical, cost, or budget baselines.

OVERALL --

1. Safety will have the highest priority.

2. INEL SNF and SNM will be consolidated at the ICPP as soon as possible to resolve environmental, safety, and health (ES&H) vulnerability assessment issues.

3. The INEL will receive SNF at previously predicted rates as soon as the Programmatic Spent Nuclear Fuel and INEL ER&WM Environmental Impact Statement (Programmatic SNF and INEL ER&WM EIS) is completed. That is, Navy fuel receipts continue and all other SNF shipments resume January 1, 1997. SNF receipts during the consolidation period will be bounded by: 1) Navy per their 40 year forecast, 2) INEL operating reactors (Advanced Test Reactor [ATR]), and 3) Off-site research and development SNF (10% of university and foreign research and development reactors are too small to impact the overall SNF consolidation schedule).

4. The initiating baseline priority of SNF and SNM receipt at ICPP facilities is:
1) transfers from CPP-603 wet storage, 2) Naval Reactor Facility, 3) ATR, 4) Rover-Bed, 5) Nuclear Material Inspection and Storage Test Reactors Area (TRA) SNM, 6) CPP-749 transfers (Fermi and Peach Bottom), 7) ICPP Dry Storage Demonstration Project, 8) TRA Materials Test Reactor Canal, 9) TRA Advanced Reactivity Measurement Facility/Coupled Fast Reactivity Measurement Facility, 10) Power Burst Facility Canal, 11) TAN Three Mile Island, 12) TAN Loss-of-Fluid Test, 13) TAN commercial, 14) Naval Reactor Facility Thermal Test Reactor, and 15) Argonne National Laboratory-West. The priority of the transfers can be expected to change as the Task Team and U.S. Department of Energy-Idaho Operations Office develop new insights.

5. Commitments described in the:

   - draft Programmatic SNF and INEL ER&WM EIS,
   - ICPP Spent Fuel and Waste Management Technology Development Program Plan,
   - EM-351 Spent Fuel Strategy document, and;

   will be implemented as scheduled, or revised in advance, with DOE and State of Idaho agreement.

6. Previously approved INEL transport systems will be used for on-site movement of SNF and SNM. That is, interfacility transfers within the boundaries of the INEL may be in non-certified casks subject to traditional INEL regulations. Exemptions will be required for at least three transfers of SNF-loaded dry storage casks and the LOFT transfers from TAN to ICPP.

7. SNM and SNF will continue to be defined and governed by the amended Atomic Energy Act of 1954 and the Nuclear Waste Policy Act. The term definitions are:

   > **Special Nuclear Material** - plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 [42 U.S.C.2071]m determines to be special nuclear material, but does not include source material;...[Atomic Energy Act of 1954, Sec.11(aa)].
   >
   > **Spent Nuclear Fuel** - fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing...[Nuclear Waste Policy Act, Sec. 2.(23)].

8. SNF storage space will be maintained to provide for recovery and repair of damaged SNF storage facilities and/or vaults.

9. ICPP SNF interim storage facilities retirement dates are forecasted as follows: IFSF--December 2014, CPP-749--December 2014, and CPP-651--to be determined.

SNF SPECIFIC --

10. The INEL will use a combination of wet and dry storage for INEL SNF.

11. Dry storage can be safely demonstrated for high enriched uranium SNF.

12. Corrosion and leak detection capability can be provided for dry

storage.

13. The empty storage space in the Irradiated Fuel Storage Facility (IFSF) at ICPP is available to expedite the consolidation program.

14. Improvement to the existing IFSF structural seismic resistance and ventilation system (non-redundancy) will provide acceptable risks (hardening improvements and HVAC upgrades will be economically feasible).

15. SNF from Fort St. Vrain, West Valley, foreign sources, DOE research and development universities, and the Integral Fast Reactor shutdown are not included in INEL SNF consolidation plan. However, a small amount of foreign research and development fuel could be received.

16. SNF storage facilities that cannot be reasonably upgraded to meet current design criteria will be retired in a manner that minimizes safety risk and cost.

17. Aging INEL SNF storage facilities will be replaced via a standardized dry storage system that is recognized and accepted by the public.

18. The potential use of newer, retired INEL SNF/SNM storage facilities to support the national SNF storage program will not be eliminated by this SNF consolidation plan (e.g., PBF, NMIS).

19. Stabilization and future decontamination and decommissioning of emptied SNF storage facilities are not included in this plan.

20. Security requirements will be modified to support the current ICPP SNF management mission.

SNM SPECIFIC --

21. The Uranium-233 at the Radioactive Waste Management Complex is not included in present SNF consolidation planning.

22. The PARKA SNM in IFSF at ICPP will be transferred to Oak Ridge Y-12.

23. The existing ATR and Engineering Test Reactor SNM shipping containers (boxes) will be used for SNM transfers from TRA-621 to CPP-651 with Department of Transportation certification renewal.

24. A ventilation system is not needed for the CPP-651 North Vault for high enriched uranium storage.

25. Surplus TRA security alarms and TRA-621 equipment for ATR SNM receiving inspection will be relocated to ICPP.

Appendix D

SCHEDULES AND COST ACCOUNT PLANS

TABLE OF CONTENTS

Cost Account Planning-Package Work Statements:

Planning Package Documentation Package Example:

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 7/6/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	A01	PBF Canal SNF Transfer to ICPP IFSF	NA
Level 3 (Work Pkgs):	A011	Shipper Preparations	TBD
	A012	Receiver Preparations	TBD
	A013	Fuel Transfer Operations	TBD
	A014	Follow Actions	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	Total
Budget ($x1000):	Operating:		2456.7	2773.9	1566.8	74.2	74.2	74.5	73.9	42.0	7136.2
	Capital:										
	Subtotals:		2456.7	2773.9	1566.8	74.2	74.2	74.5	73.9	42.0	7136.2

Objectives: Transfer the SNF in the PBF Canal to ICPP IFSF and conduct a dry-storage-demonstration program. Perform the work in accordance with all applicable federal regulations.

Drivers:

Program Guidance: E.E. Brolin letter to A.A. Pitrolo, Power Burst Facility (PBF) Management Options, dated January 11, 1994.

Other Documents: A.A. Pitrolo letter to J.C. Okeson, RTD-110-92, dated April 8, 1992.
P. Grumbly letter to Acting Director of Nuclear Energy, NE-1, Transition of the Power Burst Facility, dated November 8, 1993.
D.L. Hamer letter to W.C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993.

Scope of Work: Provide services and equipment for; (a) transfer of the SNF stored in the PBF Canal in building PER-620 to the IFSF dry storage facility at ICPP for interim storage of the fuel assemblies, and (b) conduct of a dry storage demonstration program. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Attractiveness	
Chemical Form:	Oxide			Oxide		NA	NA	NA	NA		C
Weight (kg):	560			102.8		457.2	102.8	560	low enriched uranium		NA

SNF/SNM Encapsulation:	Cladding			Canning			Fuel-Handling-Unit (FHU) Data			
	Material	Retentive	Robust	Material	Retentive	Robust	Length	Cross-Section	Weight	Units
	304L SS	Yes	Yes	NA	NA	NA	121 cm	1.9 cm dia.	4.9 kg	2425

SNF/SNM Station Data:	Storage Source		Transfer Package			Destination		
	Facility	Type	Cask	Gross Wt.	Capacity	Facility	Type	Retire
	PER-620	Wet	TFBP-2	8.35 T	63 FHUs	IFSF	Dry	2014

Prerequisites/Assumptions:

NEPA Compliance: Environmental Checklists will be sufficient for shipper (PER-620) and transfer (TFBP-2) operations. No documentation is needed for the receiving (ICPP-IFSF) operations.

DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.

QA Compliance: Quality Level: 1

Readiness Review Type: Formal Review with DOE Oversight ORR for shipper (PER-620) and transfer (TFBP-2) operations. Assessments for receiving (ICPP-IFSF) operations will be sufficient because a formal ORR with DOE oversight will have already been accomplished for the restart of the ICPP dry-storage facilities (ICPP-IFSF and CPP-749).

1. The IFSF transfer cart adapter design and construction program commences July 1, 1994 and is completed June 26, 1995. (See WBS D07)
2. The Shipper's Project Plan is developed in FY94.

	Description	Target Date
Deliverables:	All SNF discharged from PBF Canal	April 7, 1997
	2425 FHUs from PBF installed in IFSF vault racks.	April 9, 1997
	Decontaminated TFBP-2 Cask to equipment pool	April 24, 1997
Milestones:	Commence Shipper/Receiver preparations	October 3, 1994
	Commence 1st transfer to ICPP	March 25, 1996
	Complete dry-storage-demonstration program	April 24, 2002

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 8/9/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	A02	TRA ARMF/CFRMF SNF Transfer to ICPP IFSF	NA
Level 3 (Work Pkgs):	A021	Shipper Preparations	TBD
	A022	Receiver Preparations	TBD
	A023	Fuel Transfer Operations	TBD
	A024	Follow Actions	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	Total
Budget ($x1000):	Operating:		1191.6	1695.3	1193.8	74.2	74.2	72.5			4301.6
	Capital:										
	Subtotals:		1191.6	1695.3	1193.8	74.2	74.2	72.5			4301.6

Objectives: Transfer the SNF in the ARMF/CFRMF Canal to ICPP IFSF and TRA-632, Hot Cell #2.
Conduct a dry-storage-demonstration program in ICPP-IFSF.
Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: None
Other Documents: D.L. Hamer letter to W.C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993.

Scope of Work: Provide services and equipment for; (a) transfer of the SNF stored in the ARMF/CRFMF Canal in building TRA-660 to; the IFSF dry storage facility at ICPP for interim storage of the Mark I, II & III fuel assemblies, and to the Hot Cell #2 facility in building TRA-632 for disassembly of the Core Filter, and (b) conduct of a dry-storage-demonstration program in ICPP-IFSF. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Metal			Metal		NA	NA	NA	NA	C
Weight (kg):	14.1			12.5		1.6	12.5	14.1	II	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	FHU Data Length	FHU Data Cross-Section	FHU Data Weight	FHU Data Units
Mark I & II assys	Aluminum	Yes	Yes	NA	NA	NA	99 cm	8.3 cm sq.	5.8 kg	66
Mark III insert assy	Aluminum	Yes	Yes	NA	NA	NA	76 cm	3.1 cm sq.	4.7 kg	4
Core Filter	SST	Yes	Yes	NA	NA	NA	61 cm	15.2 cm sq.	TBD	1

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Transfer Package Gross Wt.	Transfer Package Capacity	Destination Facility	Destination Type	Destination Retire
Mark I,II & III assys	TRA-660	Wet	TFBP-2	8.35 T	5 FHUs	IFSF	Dry	2014
Core Filter	TRA-660	Wet	TBD	TBD	TBD	TRA-632	Dry	

Prerequisites/Assumptions:
NEPA Compliance: Checklists will be sufficient for shipper (TRA-660 & TRA-632) and transfer (TFBP-2) operations. No documentation is needed for Receiver operations because this is a Phase-in-a-Continuing-Activity.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: A formal ORR is needed for shipper actions. Assessments will be sufficient for the TFBP-2 transfer and ICPP IFSF.
1. The Shipper's Project Plan and Fuel Characterization report is completed in FY94.

	Description	Target Date
Deliverables:	70 FHUs from ARMF/CFRMF installed in IFSF vault racks	September 5, 1997
	All SNF discharged from ARMF/CFRMF Canal	September 10, 1997
	Decontaminated TFBP-2 Cask to equipment pool	September 19, 1997
Milestones:	Commence Shipper preparations	October 3, 1994
	Commence 1st transfer to ICPP	May 2, 1997
	Transfer Core Filter to MTR canal	September 10, 1997
	Complete dry-storage-demonstration program	September 20, 2000

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 8/9/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	A03	TRA MTR Canal SNF Characterization, Repackaging and Transfer to ICPP IFSF	NA
Level 3 (Work Pkgs):	A031	Shipper Preparations	TBD
	A032	Receiver Preparations	TBD
	A033	Fuel Transfer Operations	TBD
	A034	Follow Actions	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	Total
Budget ($x1000):	Operating:		1214.7	731.9	2006.2	1588.7	2012.0	339.7	739.4	74.2	73.9	74.5	8202.6
	Capital:												
	Subtotals:		1214.7	731.9	2006.2	1588.7	2012.0	339.7	739.4	74.2	73.9	74.5	8202.6

Objectives: Transfer the SNF in the MTR-657 Plug Storage area and the MTR canal to ICPP IFSF.
Conduct a dry-storage-demonstration program.
Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: None
Other Documents: Buckland, R.J. et al, 1993, INEL D&D Long-Range Plan, EG&G-WM-10924, October 1993.
USDOE, 1994, Plan of Action to Resolve Spent Nuclear Fuel Vulnerabilities, Phase 1; Volume 1 Executive Summary and Volume II, February 1994.

Scope of Work: Provide services and equipment for, (a) characterization, repackaging, and transfer of the SNF stored in the Plug Storage area of Building TRA-657 and the MTR canal in Building TRA-603 to the ICPP IFSF for interim storage with an intermediate stop at Hot Cell #2 in Building TRA-632 for recanning, and (b) conduct of a dry-storage-demonstration program. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Oxide			Oxide	Oxide	NA	NA	NA	NA	TBD
Weight (kg):	256.4			21.6	0.8	234.8	22.4	257.2	TBD	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	Fuel-Handling-Unit (FHU) Data Length	Cross-Section	Weight	Units
Plug Storage SNF	Zr & SS	Uncertain	Maybe	-- See Note a. --			-- See Note a. --			8
MTR Canal SNF	Zr & SS	Uncertain	Maybe	-- See Note a. --			-- See Note a. --			98
Hot Cell #2 SNF	Zr & SS	Uncertain	Maybe	TBD	Yes	Yes	TBD	Round	TBD	33

a. S.A. Labuy, 1994, MTR Canal Fuel Characterization Report, EDF-TRA-ATR-958, dated May 10,1994

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Transfer Package Gross Wt.	Transfer Package Capacity	Destination Facility	Destination Type	Destination Retire
Plug Storage SNF	TRA-657	Dry	Wh.El.#2	TBD	TBD	TRA-632	Dry	TBD
MTR Canal SNF	TRA-603	Wet	Wh.El.#2	TBD	TBD	TRA-632	Dry	TBD
Hot Cell #2 SNF	TRA-632	Dry	TFBP-2	8.35 T	1 FHU	IFSF	Dry	2014

Prerequisites/Assumptions:
NEPA Compliance: A checklist will be sufficient for the operations at MTR canal, TRA-632 Hot, and the transfers with the White Elephant #2 and TFBP casks.
No documentation is needed for the Receiver operations which are a Phase-in-a-Continuing-Activity.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: A formal ORR is needed for shipper operations at the MTR canal and the Hot Cell #2 restart.
Assessments will be sufficient for: operations at TRA-657 Plug Storage, Plug Storage SNF transfer, TFBP-2 transfer, and IFSF receipt.

1. The Shipper's Project Plan and Fuel Characterization report is completed in FY94.

	Description	Target Date
Deliverables:	All SNF discharged from the TRA-657 Plug Storage Area	June 1, 1998
	All SNF discharged from the TRA-603 MTR-Canal	May 10, 1999
	33 FHUs from TRA-632 Hot Cell #2 installed in IFSF vault racks	November 18, 1999
	Decontaminated White-Elephant #2 Cask to equipment pool	May 24, 1999
	Decontaminated TFBP-2 Cask to equipment pool	November 26, 1999
Milestones:	Commence Shipper preparations	October 3, 1994
	Commence 1st transfer from MTR canal to TRA-632 Hot Cell #2	June 2, 1998
	Commence 1st transfer to ICPP	June 23, 1998
	Complete dry-storage-demonstration program	December 2, 2004

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 8/9/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	A04	TRA NMIS-SNM Transfer to CPP-651	NA
Level 3 (Work Pkgs):	A041	Shipper Preparations	TBD
	A042	Receiver Preparations	TBD
	A043	Fuel Transfer Operations	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	Total
Budget ($x1000):	Operating:		365.1	1049.2							1414.4
	Capital:										
	Subtotals:		365.1	1049.2							1414.4

Objectives: Transfer the SNM in the TRA NMIS (TRA-621) facility to CPP-651.
Perform the work in accordance with all applicable federal regulations..

Drivers:

Program Guidance: T.F. Burns, Jr. letter to W.C. Moffitt and E.N. Fray, AM/OPA-SSD-SMM-94-076, Consolidation of TRA and ICPP Special Nuclear Materials in CPP-651, dated June 20 1994.

Other Documents: T.F. Burns, Jr. letter to E.N. Fray and W.C. Moffitt, AM/OPA-SSD-SMM-94-052, Task Team Report - Consolidation of TRA and ICPP Special Nuclear Materials in CPP-651, dated April 7, 1994.
G.E. Dials letter to E.N. Fray and W.C. Moffitt, AM/OPA-SSD-SMM-93-033, Joint EG&G-WINCO Cost/ Benefit Study - Consolidation of Special Nuclear Materials, dated November 8, 1993.

Scope of Work: Provide services and equipment for transfer of the SNM stored in the TRA NMIS (TRA-621) building to CPP-651 for storage of the fuel assemblies. The TRA fuel element receiving inspection equipment and some security alarm system components will also be transferred to CPP-651. A summary description of the SNM, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Metal			Metal		NA	NA	NA	NA	C
	Oxide			Oxide		NA	NA	NA	NA	C
Weight (kg):	TBD			TBD		TBD	TBD	TBD	I	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	FHU Data Length	FHU Data Cross-Section	FHU Data Weight	FHU Data Units
ATR fuel assemblies	Aluminum	Yes	Yes	NA	NA	NA	TBD	TBD	TBD	TBD
ETR fuel assemblies	Aluminum	Yes	Yes	NA	NA	NA	TBD	TBD	TBD	TBD
GETR fuel assemblies	TBD	Yes	Yes	NA	NA	NA	TBD	TBD	TBD	TBD
PBF fuel rods	304L SS	Yes	Yes	NA	NA	NA	121 cm	1.9 cm dia.	4.9 kg	TBD
Pellets & powder	NA	NA	NA	TBD	YES	YES	TBD	TBD	TBD	TBD

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Transfer Package Gross Wt.	Transfer Package Capacity	Destination Facility	Destination Type	Destination Retire
	TRA-621	Dry	ATR & ETR SNM boxes	TBD	TBD FHUs	CPP-651	Dry	TBD

Prerequisites/Assumptions:

NEPA Compliance: Environmental checklists will be sufficient for Receiver operations.
No documentation is needed for Shipper or transfer operations.

DOT Compliance: SNM transfers will comply with the INEL Transferation Safety Manual.

QA Compliance: Quality Level: 1

Readiness Review Type: An ORR or RA is not planned for the TRA NMIS packaging for transfer operations or the transfer operations. An RA will be performed for the Receiver (CPP-651) operations.

	Description	Target Date
Deliverables:	ATR security system components installed and SO-tested at ICPP.	TBD
	ATR fuel receiving inspection station installed and SO-tested at CPP-651	TBD
	All SNM discharged from ATR NMIS facility	July 2, 1996
	TBD FHUs from ATR NMIS facility installed in CPP-651 vault racks.	July 3, 1996
Milestones:	Commence Receiver CSE/SAR preparation	January 6, 1995
	Commence 1st transfer to ICPP	March 26, 1996

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 8/9/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	A05	TAN TMI-SNF Transfer to New Facility at ICPP	C.D. Roberts
Level 3 (Work Pkgs):	A051	Shipper Preparations	TBD
	A052	Receiver Preparations	TBD
	A053	Fuel Transfer Operations	TBD
	A054	Follow Actions	TBD
	A055	Storage Facility Construction	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
Budget ($x1000):	Operating:											13287.6
	Capital:											9474.2
	Subtotals:	564.1	9009.6	6570.3	3991.3	1039.6	1122.2	305.6	73.9	74.2	11.5	22762.2

Objectives: Transfer the TMI-2 SNF (core debris) in the TAN-607 Storage Pool to a new dry storage facility at CPP-749.
Conduct a dry-storage-demonstration program in CPP-749.
Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: Action Description Memorandum for Dry Cask Storage Project approved on May 26, 1993.
Other Documents: D.L. Hamer letter to W.C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993.
USDOE, 1994, Plan of Action to Resolve Spent Nuclear Fuel Vulnerabilities, Phase 1; Volume 1 Executive Summary and Volume II, February 1994.

Scope of Work: Provide services, facilities, and equipment for; (a) transfer of the TMI-2 SNF stored in the TAN-607 Storage Pool to a new facility at CPP-749, and (b) conduct of a dry-storage-demonstration program. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification: Category	Weapon Classification: Attractiveness
Chemical Form:	Oxide			Oxide		NA	NA	NA	NA	E
Weight (kg):	82000			2100		79900	2100	82000	I	NA

SNF/SNM Encapsulation:	Cladding: Material	Cladding: Retentive	Cladding: Robust	Canning: Material	Canning: Retentive	Canning: Robust	FHU Data: Length	FHU Data: Cross-Section	FHU Data: Weight	FHU Data: Units
	Zircaloy	Destroyed		304L SS	Vented	Yes	3.81m	35.6 cm OD	1.33MT	542

SNF/SNM Station Data:	Storage Source: Facility	Storage Source: Type	Transfer Package: Cask	Transfer Package: Gross Wt.	Transfer Package: Capacity	Destination: Facility	Destination: Type	Destination: Retire
	TAN-607	Wet	NuPac 125B	79 T	7 FHUs	CPP-749	Dry	2014

Prerequisites/Assumptions:
NEPA Compliance: An Environmental Assessment is needed for the new equipment (canister dryer) acquisition and the storage facility construction.
Environmental checklists will be prepared for shipping and receiving operations, which are phases in a continuing activity.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: Formal Review with DOE Oversight ORR will be needed for; the Shipper (TAN-607) operations, and the new dry-storage facility at ICPP.
An Assessment may be sufficient for the NuPac 125B transfers.

1. The Cost Account will be extensively revised when DOE approves the revised Draft Environmental Assessment for the TAN Pool Stabilization Project which proposes an above-grade, monolithic, horizontal-vault, storage facility instead of the grade-level pad with modular, vertical-vault, transfer-&-storage, casks.
2. The LOFT and Commercial SNF has been removed from the TAN-607 Storage Pool.

	Description	Target Date
Deliverables:	All SNF discharged from TAN-607 Storage Pool	November 9, 1999
	542 FHUs from TAN installed in new dry storage facility at CPP-749	November 17, 1999
	Decontaminated NuPac 125B Cask returned to equipment pool	December 17, 1999
Milestones:	Resume Title I design of interim storage facility at CPP-749	December 15, 1994
	DOE approve revised Draft Environmental Assessment document	April 6, 1995
	Commence construction of interim storage facility at CPP-749	August 24, 1995
	Commence 1st TMI-2 SNF transfer to ICPP	November 4, 1997
	Complete dry-storage-demonstration program at ICPP	November 26, 2002

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 8/9/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	A06	TAN LOFT-SNF Packaging & Transfer to ICPP	NA
Level 3 (Work Pkgs):	A061	Shipper Preparations	TBD
	A062	Receiver Preparations	TBD
	A063	Fuel Transfer Operations	TBD
	A064	Follow Actions	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
Budget ($x1000):	Operating:		616.2	1156.8	423.8	138.4	74.2	74.5	73.9	74.2	46.9	2679.0
	Capital:											
	Subtotals:		616.2	1156.8	423.8	138.4	74.2	74.5	73.9	74.2	46.9	2679.0

Objectives: Transfer the LOFT SNF in the TAN-607 Storage Pool to ICPP.
Conduct a dry-storage-demonstration program in CPP-749.
Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: Action Description Memorandum for Dry Cask Storage Project approved on May 26, 1993.
Other Documents: D.L. Hamer letter to W.C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993.
USDOE, 1994, Plan of Action to Resolve Spent Nuclear Fuel Vulnerabilities, Phase 1; Volume 1 Executive Summary and Volume II, February 1994.

Scope of Work: Provide services and equipment for; (a) packaging and transfer of the LOFT SNF stored in the TAN-607 Storage Pool to a ICPP dry storage (CPP-749 or IFSF), and (b) conduct of a dry-storage-demonstration program in CPP-749. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Oxide			Oxide		NA	NA	NA	NA	E
Weight (kg):	2204			90.7		2113	90.7	2204	I	NA

	Cladding			Canning			Fuel-Handling-Unit (FHU) Data			
SNF/SNM Encapsulation:	Material	Retentive	Robust	Material	Retentive	Robust	Length	Cross-Section	Weight	Units
A1,A2,A3 & F1 assys	Zircaloy	Likely	Yes	TBD	TBD	TBD	TBD	22 cm sq.	TBD	4
Control & FP-1 assys	Zircaloy	Possible	Maybe	TBD	TBD	TBD	TBD	22 cm sq.	TBD	5
Corner assemblies	Zircaloy	Probable	Maybe	TBD	TBD	TBD	TBD	19.3cm-leg ▲	TBD	4
FP-2 debris	Zircaloy	Destroyed		TBD	TBD	TBD	TBD	TBD	TBD	TBD

	Storage Source		Transfer Package			Destination		
SNF/SNM Station Data:	Facility	Type	Cask	Gross Wt.	Capacity	Facility	Type	Retire
Intact assemblies	TAN-607	Wet	PeachBtm #2	34.5 T	2-4 FHUs	CPP-749	Dry	2014
FP-2 debris	TAN-607	Wet	PeachBtm #2	34.5 T	2-4 FHUs	CPP-IFSF	Dry	2014

Prerequisites/Assumptions:
NEPA Compliance: Environmental checklists will be prepared for shipper, shipping, and receiving operations, which are phases in a continuing activity.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: An ORR will be needed for the shipper (TAN-607) and transfer operations. An RA will be sufficient for receiver operations.

	Description	Target Date
Deliverables:	13 LOFT-SNF FHUs from TAN installed in CPP-749 vaults	January 17, 1997
	FP-2 debris from TAN installed in CPP-IFSF	May 6, 1998
	Decontaminated PeachBottom #2 Cask returned to equipment pool	May 20, 1998
Milestones:	Commence Shipper preparations	October 3, 1994
	Commence 1st LOFT-SNF transfer to ICPP	December 3, 1996
	Complete dry-storage-demonstration program at ICPP	May 20, 2003

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 8/9/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	A07	TAN Commercial SNF Transfer to CPP-749	NA
Level 3 (Work Pkgs):	A071	Shipper Preparations	TBD
	A072	Receiver Preparations	TBD
	A073	Fuel Transfer Operations	TBD
	A074	Follow Actions	TBD
	A075	Storage Pad Construction	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
Budget ($x1000):	Operating:											2919.9
	Capital:											530.6
	Subtotals:			19.5	835.4	899.3	1348.0	348.3				3450.5

Objectives: Transfer the Commercial-SNF at TAN to CPP-749.
Perform the work in accordance with all applicable federal regulations.

Drivers:

Program Guidance: None

Other Documents: D.L. Hamer letter to W.C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993.
USDOE, 1994, Plan of Action to Resolve Spent Nuclear Fuel Vulnerabilities, Phase 1; Volume 1 Executive Summary and Volume II, February 1994.

Scope of Work: Provide services, facility, and equipment for transfer of the DOE-owned, Commercial-SNF stored at TAN to CPP-749. The Commercial-SNF is stored in the TAN-607 Storage Pool in aluminum coffins and in four dry-storage-casks on a concrete pad (TAN-791) outside the TAN-607 Hot Shop. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Oxide			Oxide		NA	NA	NA	NA	E
Weight (kg):	39077			804.1		38272	804.1	39077	I	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	Fuel-Handling-Unit (FHU) Data Length	Cross-Section	Weight	Units
Partial fuel assys	Zircaloy	Possible	Maybe	NA	NA	NA	TBD	22cm sq.	TBD	8
Loose fuel rod bskt	Zr & SS	Possible	Maybe	Aluminum	Yes	Maybe	TBD	3.2-4.8cm OD	TBD	108
Castor-V/21 Cask	Zircaloy	Possible	Maybe	NA	NA	NA	TBD	22cm sq.	TBD	21
MC-10 dry-stg-cask	Zircaloy	Possible	Maybe	NA	NA	NA	TBD	TBD	TBD	18
TN-24P dry-stg-cask	Zircaloy	Unknown	Maybe	304 SS	Yes	Yes	4.05M	21.6cm sq.	TBD	7
VSC-17 dry-stg-cask	Zircaloy	Unknown	Maybe	304 SS	Yes	Yes	4.05M	21.6cm sq.	TBD	17

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Transfer Package Gross Wt.	Transfer Package Capacity	Destination Facility	Destination Type	Destination Retire
	TAN-791	Dry:	Castor-V/21	90 T	21 FHUs	CPP-749	Dry	TBD
			MC-10	112 T	24 FHUs	TAN-607	Dry	TBD
			TN-24P	97 T	24 FHUs	TAN-607	Dry	TBD
	TAN-607	Dry:	MC-10	11? T	24 FHUs	CPP-749	Dry	TBD
			TN-24P	9? T	24 FHUs	CPP-749	Dry	TBD

Prerequisites/Assumptions:

NEPA Compliance: Environmental checklists will be prepared for shipper, shipping, and receiving operations which are phases in a continuing activity.

DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.

QA Compliance: Quality Level: 1

Readiness Review Type: Assessments will be sufficient for shipper and transfer operations. An ORR with DOE oversight is needed for receiver operations.

1. The 6 partially-disassembled BWR and PWR fuel assemblies and the loose fuel rod pieces encapsulated in 108 tubes in Loose Fuel Rod Storage Basket are transferred to the TAN-607 Silo in FY-1994.
2. There is sufficient space available in the MC-10 and TN-24P casks for all the Commercial SNF at TAN.

	Description	Target Date
Deliverables:	SNF removed from the VSC-17 Cask	December 27, 1999
	All SNF removed from TAN-791 (concrete pad outside TAN-607 Hot Shop)	January 13, 2000
	Commercial-SNF from TAN transferred to CPP-749	January 24, 2000
Milestones:	Commence Shipper preparations (DOT exemption application)	October 3, 1995
	Commence construction of dry-storage-cask pad at CPP-749	June 3, 1998
	Commence 1st Commercial-SNF transfer to ICPP	December 30, 1999

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 7/5/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	B01	CPP-603 SNF Repackaging and Transfer to CPP-666	NA
Level 3 (Work Pkgs):	B012	Receiver Preparations	TBD
	B013	Fuel Transfer Operations	TBD

ADS/FWP No: 1010.02/ Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
Budget ($x1000):	Operating:											
	Capital:											
	Subtotals:	2572.1	3495.8	1695.3	1504.2	820.2	33.5	248.6	120.5			10490.3

Objectives: Discharge all SNF from the CPP-603 wet-storage basins.
Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: TBD
Other Documents: H.L. Ryan (Sr. U.S. District Judge) Order Modifying Order of June 28, 1993, dated September 20, 1993.

Scope of Work: Provide services, facilities, and equipment for repackaging as needed and transfer of the SNF stored in the three (North, Middle & South) CPP-603 wet storage basins to CPP-666. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Variety			Variety		NA	NA	NA	NA	E
Weight (kg):	2899			TBD		TBD	TBD	2899	I	NA

SNF/SNM Encapsulation:	Cladding			Canning			Fuel-Handling-Unit (FHU) Data			
	Material	Retentive	Robust	Material	Retentive	Robust	Length	Cross-Section	Weight	Units
See Note a	Variety	Mixture	Mix	Variety	Mixture	Mix	-- See Note a --			1340

a. SNF-5800-450-004, Spent Fuel Background Report Predecisional Draft Volume II, EG&G Idaho, February 1994.

SNF/SNM Station Data:	Storage Source		Transfer Package			Destination		
	Facility	Type	Cask	Gross Wt.	Capacity	Facility	Type	Retire
	CPP-603	Wet	STR Charger	<15 T	TBD	CPP-666	Wet	TBD

Prerequisites/Assumptions:
NEPA Compliance: Appropriate documentation has been submitted and approved.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: The ORR has been completed.

	Description	Target Date
Deliverables:	SNF removed from CPP-603 wet storage basins	December 31, 2000
Milestones:	Commence 1st SNF transfer (Fuel Transfer #5) to CPP-666	March 1, 1994

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 7/5/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	B02	Rover-Bed Material Repackaging and Transfer to CPP-749	NA
Level 3 (Work Pkgs):	B022	Receiver Preparations	TBD
	B023	Fuel Transfer Operations	TBD
	B024	Follow Actions	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
Budget ($x1000):	Operating:			202.9	653.5							856.4
	Capital:											
	Subtotals:			202.9	653.5							856.4

Objectives: Transfer Rover-Bed ash from CPP-640 to CPP-749 drywells.
Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: TBD
Other Documents: EG&G-WM-10924, INEL D&D Long-Range Plan, EG&G Idaho, October 1993.

Scope of Work: Provide services, facilities, and equipment for; (a) receipt and packaging-for-storage of the Rover Bed ash from CPP-640 in ICPP-IFSF, and (b) transfer of the Rover-Bed SNF to CPP-749 drywells. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Oxide			Oxide		NA	NA	NA	NA	C
Weight (kg):	TBD			TBD		TBD	TBD	TBD	TBD	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	FHU Data Length	FHU Data Cross-Section	FHU Data Weight	FHU Data Units
Ash from CPP-640	None	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	12
After IFSF canning	None	NA	NA	TBD	Yes	Yes	TBD	TBD	TBD	3

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Transfer Package Gross Wt.	Transfer Package Capacity	Destination Facility	Destination Type	Destination Retire
	CPP-640	Dry	Rover Tr.Cask	TBD	TBD	ICPP-IFSF	Dry	2014
	ICPP-IFSF	Dry	PeachBtm #2	34.5T	TBD	CPP-749	Dry	2014

Prerequisites/Assumptions:
NEPA Compliance: Environmental checklists will be sufficient for the IFSF, Peach-Bottom #2 transfers, and CPP-749 actions.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: Readiness assessments will be sufficient for the IFSF, Peach-Bottom #2 transfers and CPP-749 activities.

1. A new dry-canning station is operational in ICPP-IFSF.
2. An ORR has been successfully completed for restart of ICPP SNF dry-storage facilities (IFSF & CPP-749).

	Description	Target Date
Deliverables:	Rover-Bed ash removed from CPP-640	August 11, 1997
	Rover-Bed ash installed in CPP-749 vaults	August 14, 1997
Milestones:	Commence ICPP-IFSF (receiver) preparation	February 28, 1996
	Commence 1st SNF transfer to ICPP-IFSF	July 17, 1997

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 7/5/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	B03	FERMI and Peach-Bottom SNF Repackaging and Transfers	NA
Level 3 (Work Pkgs):	B032	Receiver Preparations	TBD
	B033	Fuel Transfer Operations	TBD
	B034	Facility Maintenance	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
Budget ($x1000):	Operating:	130.6	1278.4	1351.5	718.6	522.6	529.7	28.7				4560.1
	Capital:											
	Subtotals:	130.6	1278.4	1351.5	718.6	522.6	529.7	28.7				4560.1

Objectives: Transfer FERMI and Peach-Bottom SNF from ICPP-IFSF 1st-generation drywells to 2nd-generation dry wells. Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: TBD
Other Documents: U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety and Health Vulnerabilities, December 7, 1993.

Scope of Work: Provide services, facilities, and equipment for; (a) transfer of Peach-Bottom SNF from CPP-749 1st-generation drywells to ICPP-IFSF for recanning, (b) transfer of the recanned SNF to CPP-749 2nd-generation drywells, and (c) transfer of FERMI-SNF from 1st to 2nd-generation drywells. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Peach Bottom:										
Chemical Form	Carbide			Carbide		NA	NA	NA	NA	E
Weight (kg):	34172			123		34149	123	35.8	I	NA
FERMI:										
Chemical Form	Metal			Metal		NA	NA	NA	NA	E
Weight (kg):	1627			1513		114	1513	34.2	I	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	Fuel-Handling-Unit (FHU) Data Length	Cross-Section	Weight	Units
Peach-Bottom SNF	Carbon	Unlikely	No	TBD	TBD	TBD	366 cm	8.89 cm OD	41 kg	796
FERMI SNF	304 SS	Possible	Maybe	TBD	TBD	TBD	108 cm	8.25 cm OD	98 kg	510

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Gross Wt.	Capacity	Destination Facility	Destination Type	Destination Retire
	CPP-749	Dry	PeachBtm #2	34.5T	TBD	ICPP-IFSF	Dry	2014
	ICPP-IFSF	Dry	PeachBtm #2	34.5T	TBD	CPP-749	Dry	2014

Prerequisites/Assumptions:
NEPA Compliance: Environmental checklists will be sufficient for the IFSF, Peach-Bottom #2 transfers, and CPP-749 actions.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: An ORR will be performed for this SNF transfer project.
1. A new dry-canning station is operational in ICPP-IFSF.

	Description	Target Date
Deliverables:	All SNF discharged from CPP-749 1st generation drywells	August 14, 1997
	FERMI and Peach Bottom SNF installed in CPP-749 2nd-generation drywells	August 15, 1997
Milestones:	Commence ICPP preparation	May 1, 1994
	Commence 1st (Peach Bottom) SNF transfer to ICPP-IFSF	October 27, 1995

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 7/6/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	B04	Follow-on Transfers of Consolidation Fuels	NA
Level 3 (Work Pkgs):	B042	Receiver Preparations	TBD
	B043	Fuel Transfer Operations	TBD

ADS/FWP No: Planning Package Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	Total
Budget ($x1000):	Operating:				77.8	705.6	53.6						837.0
	Capital:												
	Subtotals:				77.8	705.6	53.6						837.0

Objectives: Transfer the ARMF/CFRMF-SNF from ICPP-IFSF to CPP-749 drywells.
Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: None.
Other Documents: D.L. Hamer letter to W.C. Moffitt, OPE-SNF-WJM-93067, Program Execution Guidance for Site Fuel Consolidation, dated December 29, 1993.

Scope of Work: Provide services and equipment for transferring the ARMF/CFRMF-SNF from ICPP-IFSF to CPP-749. A summary description of the SNF and storage facilities is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Metal			Metal		NA	NA	NA	NA	C
Weight (kg):	14.1			12.5		1.6	12.5	14.1	. II	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	Fuel-Handling-Unit (FHU) Data Length	Cross-Section	Weight	Units
Mark I & II assys	Aluminum	Yes	Yes	NA	NA	NA	99 cm	8.3 cm sq.	5.8 kg	66
Mark III insert assy	Aluminum	Yes	Yes	NA	NA	NA	76 cm	3.1 cm sq.	4.7 kg	4

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Transfer Package Gross Wt.	Transfer Package Capacity	Destination Facility	Destination Type	Destination Retire
	ICPP-IFSF	Dry	PchBtm #2	34.5T	TBD	CPP-749	Dry	2014

Prerequisites/Assumptions:
NEPA Compliance: Environmental checklists will be sufficient.
DOT Compliance: Not Applicable
QA Compliance: Quality Level: 1
Readiness Review Type: Assessments will be sufficient for the SNF dry-storage demonstration activities.

	Description	Target Date
Deliverables:	70 FHUs from ARMF/CFRMF installed in CPP-749 drywells	November 16, 1999
Milestones:	Commence ICPP preparations	June 23, 1999
	Commence 1st ARMF/CFRMF-SNF transfer to CPP-749 drywells	October 27,1999

Planning Package Work Statement

INEL M&O Contractor: TBD

Date: 7/5/94

CWBS Dictionary:	Number	Title	Manager
Level 1 (Project) :	NA	INEL SNF & SNM Consolidation	NA
Level 2 (Cost Acct):	B05	CPP-603 FECF SNF Repackaging and Transfer to IFSF	NA
Level 3 (Work Pkgs):	B052	ICPP Preparations	TBD

ADS/FWP No: 1010.02/ Budget and Reporting Classification:

Cost Account Data:		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
Budget ($x1000):	Operating:	21.7	36.5	7.8								66.0
	Capital:											
	Subtotals:	21.7	36.5	7.8								66.0

Objectives: Develop plan for discharging all SNF (two Peach Bottom units) from the CPP-603 FECF. Perform the work in accordance with all applicable federal regulations.

Drivers:
Program Guidance: TBD
Other Documents: EG&G-WM-10924, INEL D&D Long-Range Plan, EG&G Idaho, October 1993.

U.S. DOE, 1993, Spent Fuel Working Group Report on Inventory and Storage of the Department's Spent Nuclear Fuel and Other Reactor Irradiated Nuclear Materials and Their Environmental, Safety and Health Vulnerabilities, December 7, 1993.

Scope of Work: Provide services for preparing and verifying the planning for transferring the two Peach Bottom SNF segments from the CPP-603 FECF to ICPP-IFSF for canning and storage. A summary description of the SNF, storage facilities, and transfer equipment is as follows:

SNF/SNM Inventory:	Uranium	Thorium	U-233	U-235	Plutonm	Source	Fission	Hvy-Metal	Weapon Classification Category	Weapon Classification Attractiveness
Chemical Form:	Carbide			Carbide		NA	NA	NA	NA	E
Weight (kg):	<4.1			<3.8		<0.3	<3.8	<4.1	II	NA

SNF/SNM Encapsulation:	Cladding Material	Cladding Retentive	Cladding Robust	Canning Material	Canning Retentive	Canning Robust	FHU Data Length	FHU Data Cross-Section	FHU Data Weight	FHU Data Units
	Carbon	Unlikely	No	None	NA	NA	<366cm	8.9 cm OD	<41 kg	2

SNF/SNM Station Data:	Storage Source Facility	Storage Source Type	Transfer Package Cask	Transfer Package Gross Wt.	Transfer Package Capacity	Destination Facility	Destination Type	Destination Retire
	CPP-603	Dry	PeachBtm #2	34.5 T	TBD	ICPP-IFSF	Dry	2014

Prerequisites/Assumptions:
NEPA Compliance: An Environmental Checklist will be sufficient.
DOT Compliance: SNF transfers will comply with the INEL Transportation Safety Manual.
QA Compliance: Quality Level: 1
Readiness Review Type: An ORR may be performed for restart of operations in CPP-603 FECF.

	Description	Target Date
Deliverables:	Project Plan for transfer of SNF from CPP-603 FECF to ICPP-IFSF storage basket	October 25, 1995
Milestones:	Commence development of Project Plan	May 1, 1994

INEL
Cost Account Package
Fiscal Year 1996 Budget Request

Cost Account Title: TRA MTR Canal SNF Characterization, Repackaging, and Transfer

Program Title: Spent Nuclear Fuel/Special Nuclear Material Consolidation

Date Prepared:

CWBS Code: A03 Accounting Charge Number:

Activity Data Sheet:

Budget and Reporting Classification:

INEL Approvals

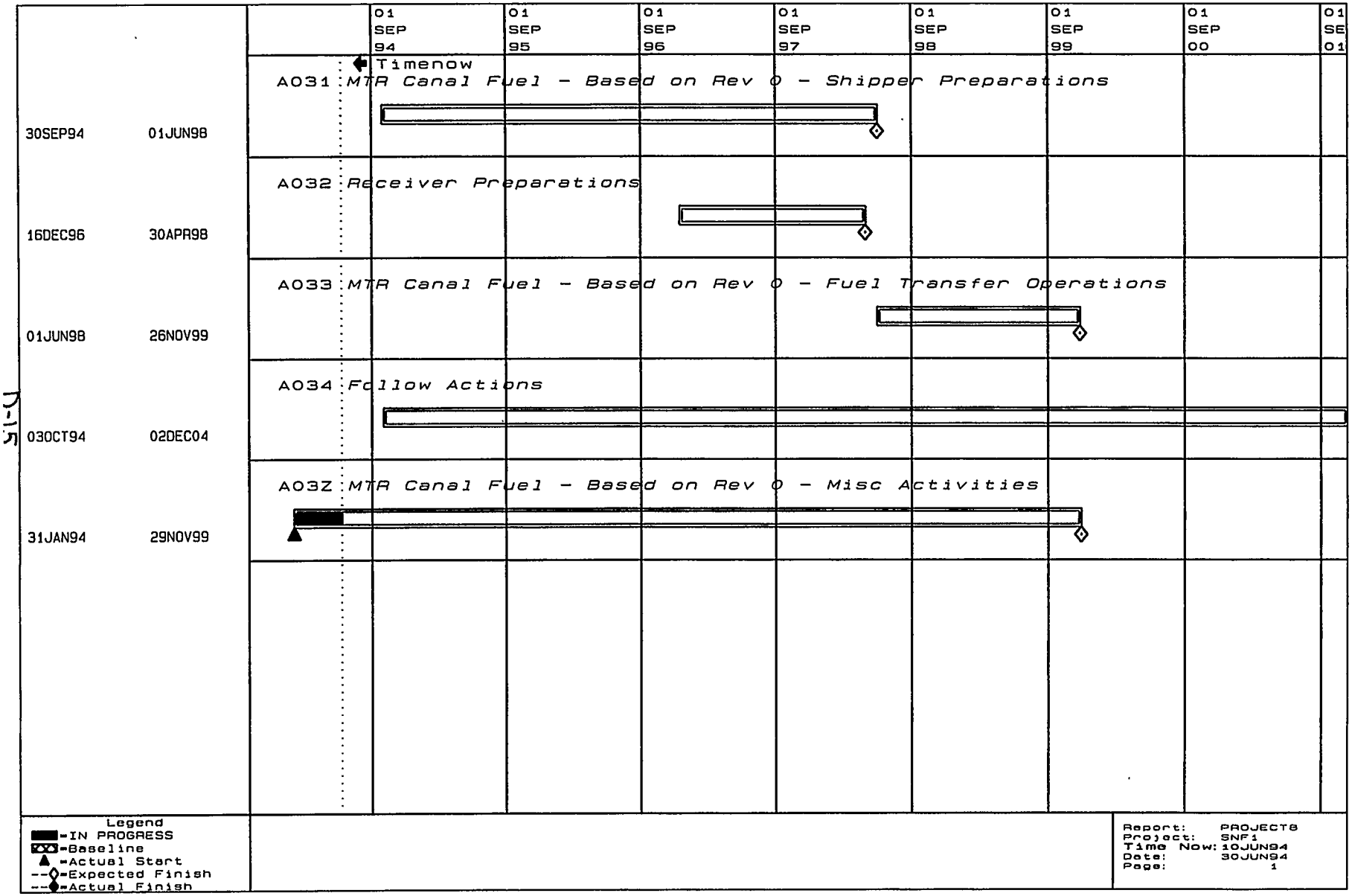
Cost Account Manager	Date
ADS Manager	Date
Cost Control and Budgets	Date

DOE-ID Concurrence:

Program/Project Manager	Date
Resource Management Division	Date

SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation



OPEN PLAN | Spent Nuclear Fuel Consolidation | PAGE: 1

REPORT: PAGE3C | SNF/SNM Consolidation Schedule | REPORT DATE:30JUN94

PROJECT:SNF1 | Basis of Estimate | TIME NOW:10JUN94

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

WBS	DESCRIPTION	START DATE	FINISH DATE	COST	
A0311	Shipper General Preparations	30SEP94	08OCT97	Planning Package=	$ 60,460
A0312	CSE/SAR/TSD	30SEP94	09FEB96	Planning Package=	$ 948,094
A0313	Environmental	03OCT94	26FEB98	Planning Package=	$ 8,948
A0314	Transportation Issues	03OCT94	22SEP95	Planning Package=	$ 199,741
A0315	Equipment/Tools Preps or Fabrication	26MAR96	05FEB98	Planning Package=	$ 2,302,189
A0316	Operational Readiness Review	25AUG97	30APR98	Planning Package=	$ 125,144
A0317	Reactor and Fuel Preparations	30APR98	01JUN98	Planning Package=	$ 7,829
	A031			Cost:	$ 3,652,405
A0321	Receiver General Preparations	16DEC96	29APR98	Planning Package=	$ 385,061
A0322	CSE/SAR/TSD	17JAN97	12JAN98	Planning Package=	$ 134,290
A0323	Environmental	29OCT97	02FEB98	Planning Package=	$ 3,250
A03251	Equipment design and Fabrication	25APR97	29APR98	Planning Package=	$ 56,456
A03252	Procedures	03SEP97	02FEB98	Planning Package=	$ 21,345
A03253	Training	05DEC97	04MAR98	Planning Package=	$ 23,925
A0326	Readiness Assessment	05MAR98	30APR98	Planning Package=	$ 164,739
	A032			Cost:	$ 789,066
A0331	Fuel Preparations	01JUN98	19NOV99	Planning Package=	$ 1,615,744
A0332	Cask Preps	29SEP98	26NOV99	Planning Package=	$ 106,380
A0333	Load Cask	22JUN98	18NOV99	Planning Package=	$ 115,736
A0334	Transport Cask	22JUN98	19NOV99	Planning Package=	$ 1,959
A0335	Unload Cask	23JUN98	19NOV99	Planning Package=	$ 367,584
	A033			Cost:	$ 2,207,403
A0342	Follow Actions - Receiver	03OCT94	02DEC04	Planning Package=	$ 1,553,729
	A034			Cost:	$ 1,553,729
A03 -	TRA MTR Canal SNF Characterization, Repackaging, and Transfe			Project Cost:	$ 8,202,603

OPEN PLAN				Spent Nuclear Fuel Consolidation							PAGE: 1
REPORT: NCPR5				COST PERFORMANCE REPORT -							REPORT DATE:30JUN94
PROJECT: SNF1				SNF/SNM Consolidation Schedule							TIME NOW:10JUN94
	FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	Complete
A031	Shipper Preparations											
A0311	0	2925	57535	0	0	0	0	0	0	0	0	60460
A0312	0	868971	79123	0	0	0	0	0	0	0	0	948094
A0313	0	8948	0	0	0	0	0	0	0	0	0	8948
A0314	0	199741	0	0	0	0	0	0	0	0	0	199741
A0315	0	0	461104	1697769	143316	0	0	0	0	0	0	2302189
A0316	0	0	0	16597	108547	0	0	0	0	0	0	125144
A0317	0	0	0	0	7829	0	0	0	0	0	0	7829
Total	0	1080585	597762	1714366	259692	0	0	0	0	0	0	3652405
A032	Receiver Preparations											
A0321	0	0	0	7540	377521	0	0	0	0	0	0	385061
A0322	0	0	0	124280	10010	0	0	0	0	0	0	134290
A0323	0	0	0	0	3250	0	0	0	0	0	0	3250
A03251	0	0	0	23392	33064	0	0	0	0	0	0	56456
A03252	0	0	0	2935	18410	0	0	0	0	0	0	21345
A03253	0	0	0	0	23925	0	0	0	0	0	0	23925
A0326	0	0	0	0	164739	0	0	0	0	0	0	164739
Total	0	0	0	158147	630919	0	0	0	0	0	0	789066
A033	Fuel Transfer Operations											
A0331	0	0	0	0	370414	1108491	136839	0	0	0	0	1615744
A0332	0	0	0	0	7092	81558	17730	0	0	0	0	106380
A0333	0	0	0	0	22018	82806	10912	0	0	0	0	115736
A0334	0	0	0	0	1959	0	0	0	0	0	0	1959
A0335	0	0	0	0	67140	258713	41731	0	0	0	0	367584
Total	0	0	0	0	468623	1531568	207212	0	0	0	0	2207403
A034	Follow Actions											
A0342	0	134160	134160	133640	229474	480512	132516	73937	74224	73936	74512	1553729
Total	0	134160	134160	133640	229474	480512	132516	73937	74224	73936	74512	1553729
A03Z	Misc Activities											
A03Z	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
GRAND	0	1214745	731922	2006153	1588708	2012080	339728	73937	74224	73936	74512	8202603

INEL Spent Nuclear Fuel Consolidation
Planning Package
Fiscal Year 1996 Budget Request

Cost Account Title: TRA MTR Canal SNF Characterization, Repackaging, and Transfe

CWBS Code: A03 | Cost Account Manager:

Activity Data Sheet: | Budget and Reporting Classification:

Funding Type: Operating | Date Prepared:

Objective of Cost Account:
Repackage all nuclear fuel stored in the MTR canal, transfer it to ICPP, and store it in the Irradiated Fuel Storage Facility (IFSF).

Planning Package - A031 - Shipper Preparations

Driver Code(s):
Driver Reference:
None

Scope of Work: Prepare to ship the fuel stored in the MTR Canal by: designing & manufacturing the tools & equipment; developing and obtaining approval on procedures; completing the ORR Process; upgrading Hot Cell 2; and consolidating fuel in Hot Cell #2.

Assumptions/Prequestites/Program Guidance:
MTR fuel cans will be shipped in the TFBP-2 cask.
TFBP-2 cask may be fitted with a neutron shielding sleeve for some shipments..
TFBP-2 Cask will be refurbished in another Cost Account
Hot Cell #2 will be available for fuel consolidation
The White Elephant-2 (WE-2) cask will be used between the MTR Canal & Hot Cell 2
Visual fuel inspection, drying & recanning is required by ICPP.

Deliverables:

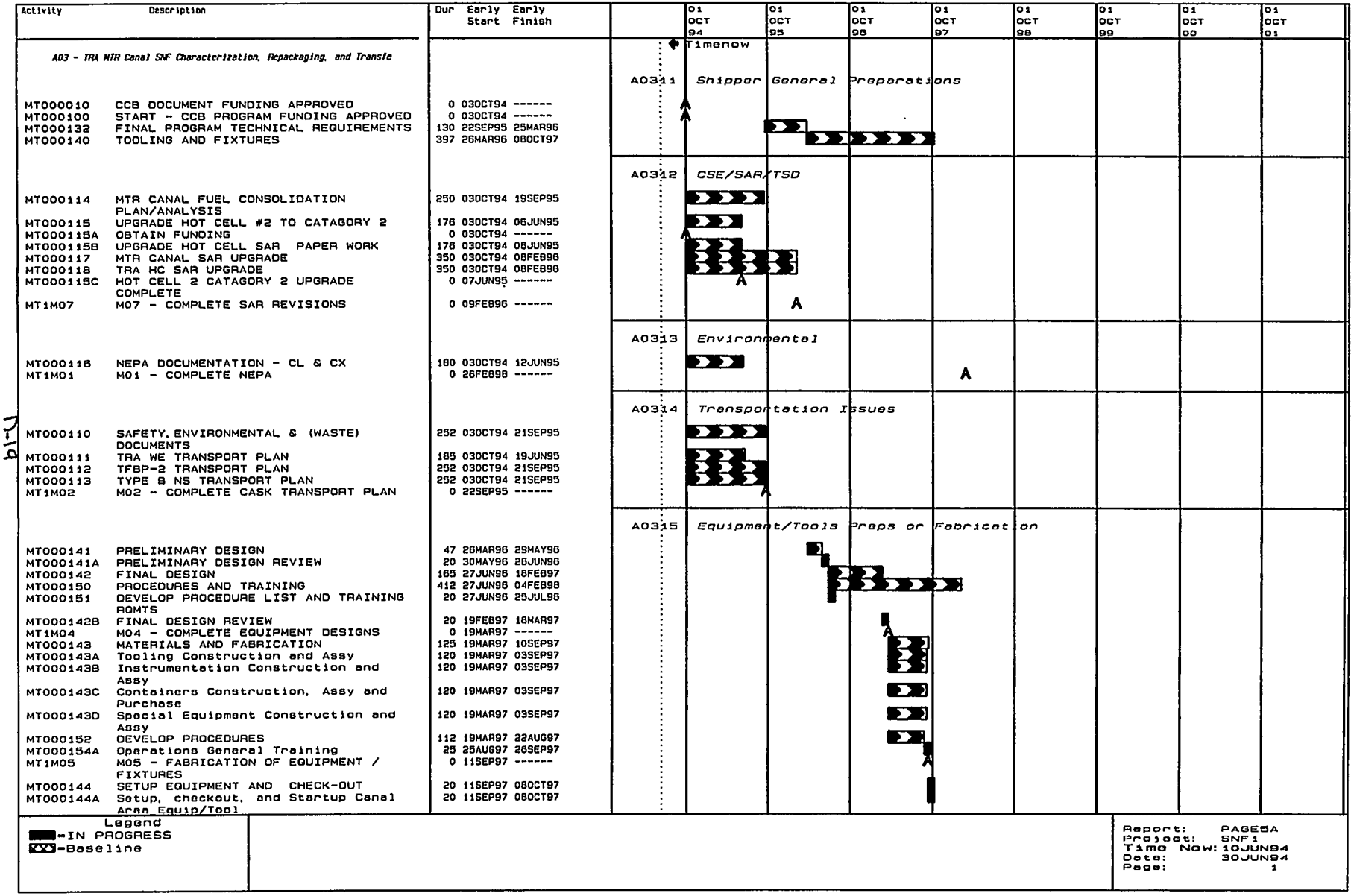
Ready to perform MTR Canal Fuel Consolidation Ops

Milestones:

Hot Cell # 2 Ready
Fuel Shipping ORR Completed
Fuel Consolidation ORR Completed

SNF/SNM Consolidation Schedule

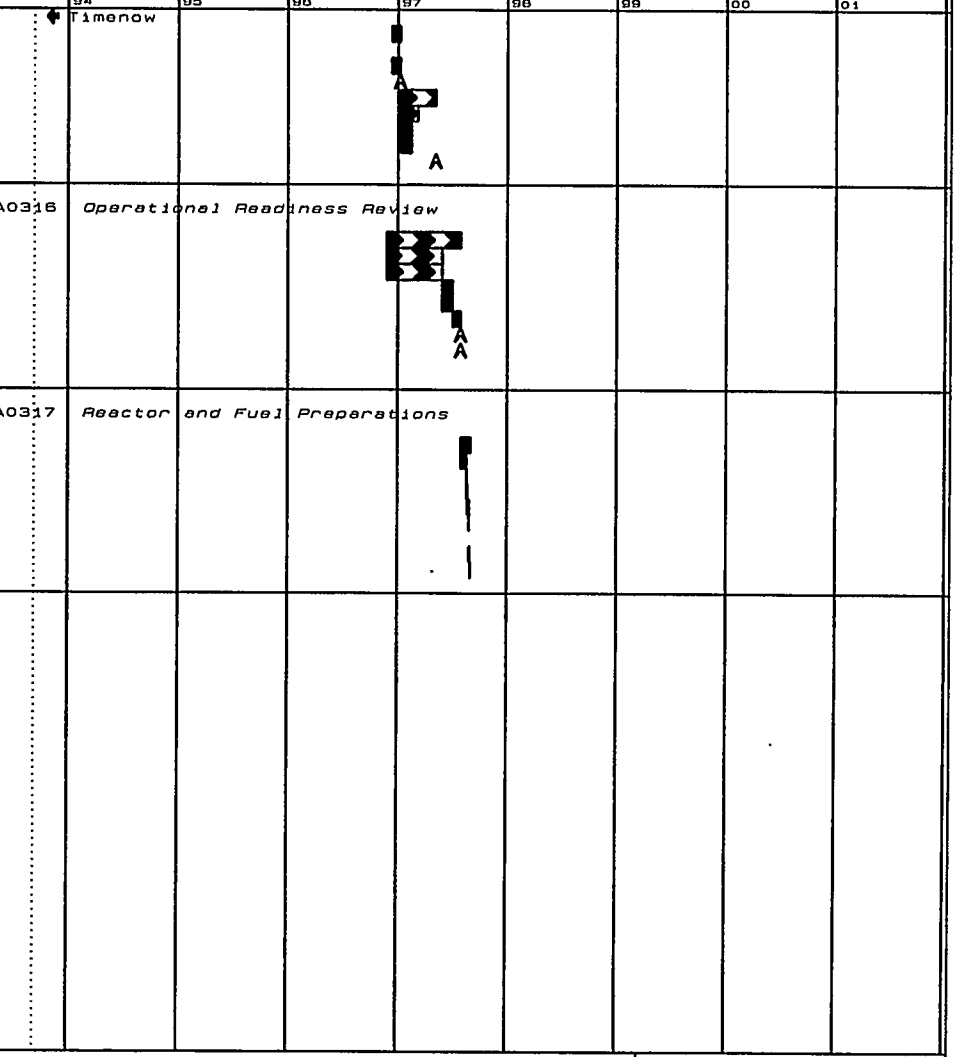
Spent Nuclear Fuel
Consolidation



SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation

Activity	Description	Dur	Early Start	Early Finish
MT000144B	Setup, checkout, and Startup Hot Cell Area Equip/Tool	20	11SEP97	08OCT97
MT000153	VALIDATE PROCEDURES	20	11SEP97	08OCT97
MT1M06	M06 - COMPLETE PROCEDURES	0	09OCT97	------
MT000154	TRAINING AND QUAL. & DRY RUNS	82	09OCT97	04FEB98
MT000154B	Operations Task Specfic Training	40	09OCT97	04DEC97
MT000155	Develop Rad Work Permits	25	09OCT97	13NOV97
MT000156	Develop Site Work Releases	25	09OCT97	13NOV97
MT1M08	M08 - COMPLETE TRAINING	0	05FEB98	------
MT000160	ORR	175	25AUG97	29APR98
MT000161	START PREP FOR MTR CANAL ORR	130	25AUG97	25FEB98
MT000161A	START PREP FOR TRAHC ORR	130	25AUG97	25FEB98
MT000162	MTR CANAL ORR	25	26FEB98	01APR98
MT000162A	TRA HC ORR	25	26FEB98	01APR98
MT000163	ORR RESOLUTIONS	20	02APR98	29APR98
MT1M09	M09 - COMPLETE ORR	0	30APR98	------
MT000164	READY TO MOVE FUEL CANAL/HOT CELL - 2	0	30APR98	------
MT001000	PLUG STORAGE FUEL REMOVAL	23	30APR98	01JUN98
MT001010	CLEAR AREA AND SURVEY PORTS	14	30APR98	19MAY98
MT001020	MOVE WE-2 CASK INTO POSITION	1	20MAY98	20MAY98
MT001030	LOAD FIRST FUELS INTO CASK	1	21MAY98	21MAY98
MT001040	TRANSFER CASK TO TRA CELL 2 & RETURN	4	22MAY98	27MAY98
MT001050	MOVE WE-2 CASK INTO POSITION (2ND PORT)	1	28MAY98	28MAY98
MT001060	LOAD LAST FUELS INTO CASK	1	29MAY98	29MAY98
MT001070	TRANSFER CASK TO TRA CELL 2	1	01JUN98	01JUN98



Legend
■-IN PROGRESS
▨-Baseline

Report: PAGE5A
Project: SNF1
Time Now: 10JUN94
Date: 30JUN94
Page: 2

OPEN PLAN	Spent Nuclear Fuel Consolidation	PAGE: 1
REPORT: PAGE3C	SNF/SNM Consolidation Schedule Basis of Estimate	REPORT DATE:30JUN94
PROJECT:SNF1		TIME NOW:10JUN94

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

WBS	DESCRIPTION	START DATE	FINISH DATE	COST	
A0311	Shipper General Preparations	30SEP94	08OCT97	Planning Package=	$ 60,460
A0312	CSE/SAR/TSD	30SEP94	09FEB96	Planning Package=	$ 948,094
A0313	Environmental	03OCT94	26FEB98	Planning Package=	$ 8,948
A0314	Transportation Issues	03OCT94	22SEP95	Planning Package=	$ 199,741
A0315	Equipment/Tools Preps or Fabrication	26MAR96	05FEB98	Planning Package=	$ 2,302,189
A0316	Operational Readiness Review	25AUG97	30APR98	Planning Package=	$ 125,144
A0317	Reactor and Fuel Preparations	30APR98	01JUN98	Planning Package=	$ 7,829
	A031			Cost:	$ 3,652,405
A03 -				Project Cost:	$ 3,652,405

E-0

OPEN PLAN				Spent Nuclear Fuel Consolidation						PAGE: 1	
REPORT: NCPR5				COST PERFORMANCE REPORT -						REPORT DATE:30JUN94	
PROJECT: SNF1				SNF/SNM Consolidation Schedule						TIME NOW:10JUN94	
	FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	Complete
A03	TRA MTR Canal SNF Characterization, Repackaging, and Transfe											
A0311	0	2925	57535	0	0	0	0	0	0	0	0	60460
A0312	0	868971	79123	0	0	0	0	0	0	0	0	948094
A0313	0	8948	0	0	0	0	0	0	0	0	0	8948
A0314	0	199741	0	0	0	0	0	0	0	0	0	199741
A0315	0	0	461104	1697769	143316	0	0	0	0	0	0	2302189
A0316	0	0	0	16597	108547	0	0	0	0	0	0	125144
A0317	0	0	0	0	7829	0	0	0	0	0	0	7829
Total	0	1080585	597762	1714366	259692	0	0	0	0	0	0	3652405
GRAND	0	1080585	597762	1714366	259692	0	0	0	0	0	0	3652405

OPEN PLAN	Spent Nuclear Fuel Consolidation	PAGE: 1
REPORT: PAGE3C	SNF/SNM Consolidation Schedule Basis of Estimate	REPORT DATE:30JUN94
PROJECT:SNF1		TIME NOW:10JUN94

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

A0311 - Shipper General Preparations

MT000010 CCB DOCUMENT FUNDING APPROVED (A0311) Duration: 0
PLANNED % COMP: 0 ES 03OCT94 EF 30SEP94 LS 03OCT94 LF 30SEP94 BS 03OCT94 BF 30SEP94 AS --/--/-- AF --/--/--

MT000100 START - CCB PROGRAM FUNDING APPROVED (A0311) Duration: 0
PLANNED % COMP: 0 ES 03OCT94 EF 30SEP94 LS 03OCT94 LF 30SEP94 BS 03OCT94 BF 30SEP94 AS --/--/-- AF --/--/--

MT000132 FINAL PROGRAM TECHNICAL REQUIREMENTS (A0311) Duration: 130

- E11-7M	EG&G Mechanical Engineer	425 Total hrs	Unit Cost:	$70.51	$29967
- E06-7M	EG&G Electricial Engineer	225 Total hrs	Unit Cost:	$70.51	$15865
- E16-7M	EG&G Project Mgmt Engr Serv	200 Total hrs	Unit Cost:	$73.14	$14628

TOTALS $ 60,460

PLANNED % COMP: 0 ES 22SEP95 EF 25MAR96 LS 22SEP95 LF 25MAR96 BS 22SEP95 BF 25MAR96 AS --/--/-- AF --/--/--

MT000140 TOOLING AND FIXTURES (A0311) Duration: 397
PLANNED % COMP: 0 ES 26MAR96 EF 08OCT97 LS 26MAR96 LF 29OCT97 BS 26MAR96 BF 08OCT97 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0311 Shipper General Preparations >>>>>>>>>
WBS Total= $ 60,460

A0312 - CSE/SAR/TSD

MT000115A OBTAIN FUNDING (A0312) Duration: 0
PLANNED % COMP: 0 ES 03OCT94 EF 30SEP94 LS 23OCT95 LF 20OCT95 BS 03OCT94 BF 30SEP94 AS --/--/-- AF --/--/--

MT000115 UPGRADE HOT CELL #2 TO CATAGORY 2 (A0312) Duration: 176
PLANNED % COMP: 0 ES 03OCT94 EF 06JUN95 LS 23OCT95 LF 26JUN96 BS 03OCT94 BF 06JUN95 AS --/--/-- AF --/--/--

MT000115B UPGRADE HOT CELL SAR PAPER WORK (A0312) Duration: 176

- NLD-K	EG&G Non Labor Dollars - (x1000)	480 Total hrs	Unit Cost:	$1000.00	$480000

TOTALS $ 480,000
PLANNED % COMP: 0 ES 03OCT94 EF 06JUN95 LS 23OCT95 LF 26JUN96 BS 03OCT94 BF 06JUN95 AS --/--/-- AF --/--/--

MT000114 MTR CANAL FUEL CONSOLIDATION PLAN/ANALYSIS (A0312) Duration: 250

- E14-7M	Nuc & Rad Physics	1200 Total hrs	Unit Cost:	$76.38	$91656
- E18-6M	EG&G Radiological Engineering	450 Total hrs	Unit Cost:	$68.88	$30996
- E11-7M	EG&G Mechanical Engineer	500 Total hrs	Unit Cost:	$70.51	$35255
- P22-5M	EG&G Tech Writing / Editing	80 Total hrs	Unit Cost:	$52.20	$4176
- NLD-K	EG&G Non Labor Dollars - (x1000)	5 Non-Labor $	Unit Cost:	$1000.00	$5000

TOTALS $ 167,083
PLANNED % COMP: 0 ES 03OCT94 EF 19SEP95 LS 06APR95 LF 25MAR96 BS 03OCT94 BF 19SEP95 AS --/--/-- AF --/--/--

MT000117 MTR CANAL SAR UPGRADE (A0312) Duration: 350

- E14-7M	Nuc & Rad Physics	600 Total hrs	Unit Cost:	$76.38	$45828
- E19-7M	EG&G Safety Analysis / SSDC	850 Total hrs	Unit Cost:	$77.15	$65578
- E16-7M	EG&G Project Mgmt Engr Serv	300 Total hrs	Unit Cost:	$73.14	$21942
- NLD-K	EG&G Non Labor Dollars - (x1000)	5 Non-Labor $	Unit Cost:	$1000.00	$5000
- E11-7M	EG&G Mechanical Engineer	200 Total hrs	Unit Cost:	$70.51	$14102
- P22-5M	EG&G Tech Writing / Editing	160 Total hrs	Unit Cost:	$52.20	$8352
- T12-5M	EG&G Quality Control	40 Total hrs	Unit Cost:	$56.26	$2250

TOTALS $ 163,052
PLANNED % COMP: 0 ES 03OCT94 EF 08FEB96 LS 17NOV94 LF 25MAR96 BS 03OCT94 BF 08FEB96 AS --/--/-- AF --/--/--

MT000118 TRA HC SAR UPGRADE (A0312) Duration: 350

- E14-7M	Nuc & Rad Physics	500 Total hrs	Unit Cost:	$76.38	$38190
- E19-7M	EG&G Safety Analysis / SSDC	600 Total hrs	Unit Cost:	$77.15	$46290
- E16-7M	EG&G Project Mgmt Engr Serv	400 Total hrs	Unit Cost:	$73.14	$29256

- E11-7M	EG&G Mechanical Engineer	200 Total hrs	Unit Cost: $70.51	$14102
- P22-5M	EG&G Tech Writing / Editing	140 Total hrs	Unit Cost: $52.20	$7308
- T12-5M	EG&G Quality Control	50 Total hrs	Unit Cost: $56.26	$2813

TOTALS $ 137,959

PLANNED % COMP: 0 ES 03OCT94 EF 08FEB96 LS 17NOV94 LF 25MAR96 BS 03OCT94 BF 08FEB96 AS --/--/-- AF --/--/--

MT000115C HOT CELL 2 CATAGORY 2 UPGRADE COMPLETE (A0312) Duration: 0
PLANNED % COMP: 0 ES 07JUN95 EF 06JUN95 LS 27JUN96 LF 26JUN96 BS 07JUN95 BF 06JUN95 AS --/--/-- AF --/--/--

MT1M07 M07 - COMPLETE SAR REVISIONS (A0312) Duration: 0
PLANNED % COMP: 0 ES 09FEB96 EF 08FEB96 LS 26FEB98 LF 25FEB98 BS 09FEB96 BF 08FEB96 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0312 CSE/SAR/TSD >>>>>>>>>
WBS Total= $ 948,094

A0313 - Environmental

MT000116	NEPA DOCUMENTATION - CL & CX		(A0313)	Duration: 180	
- E08-5M	EG&G Environmental Engineer	60 Total hrs	Unit Cost:	$55.11	$3307
- E11-7M	EG&G Mechanical Engineer	80 Total hrs	Unit Cost:	$70.51	$5641

TOTALS $ 8,948

PLANNED % COMP: 0 ES 03OCT94 EF 12JUN95 LS 22JAN97 LF 01OCT97 BS 03OCT94 BF 12JUN95 AS --/--/-- AF --/--/--

MT1M01 M01 - COMPLETE NEPA (A0313) Duration: 0

PLANNED % COMP: 0 ES 26FEB98 EF 25FEB98 LS 26FEB98 LF 25FEB98 BS 26FEB98 BF 25FEB98 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0313 Environmental >>>>>>>>>

WBS Total= $ 8,948

A0314 - Transportation Issues

MT000111	TRA WE TRANSPORT PLAN			(A0314) Duration: 185	
- E19-7M	EG&G Safety Analysis / SSDC	125	Total hrs	Unit Cost: $77.15	$9644
- NLD-K	EG&G Non Labor Dollars - (x1000)	2	Non-Labor $	Unit Cost: $1000.00	$2000
- E11-7M	EG&G Mechanical Engineer	150	Total hrs	Unit Cost: $70.51	$10577
				TOTALS $	22,221
	PLANNED % COMP: 0 ES 03OCT94 EF 19JUN95 LS 05JAN95 LF 21SEP95 BS 03OCT94 BF 19JUN95 AS --/--/-- AF --/--/--				
MT000110	SAFETY,ENVIRONMENTAL & (WASTE) DOCUMENTS			(A0314) Duration: 252	
	PLANNED % COMP: 0 ES 03OCT94 EF 21SEP95 LS 03OCT94 LF 25MAR96 BS 03OCT94 BF 21SEP95 AS --/--/-- AF --/--/--				
MT000112	TFBP-2 TRANSPORT PLAN			(A0314) Duration: 252	
- E14-7M	Nuc & Rad Physics	800	Total hrs	Unit Cost: $76.38	$61104
- E11-7M	EG&G Mechanical Engineer	400	Total hrs	Unit Cost: $70.51	$28204
- NLD-K	EG&G Non Labor Dollars - (x1000)	4	Non-Labor $	Unit Cost: $1000.00	$4000
				TOTALS $	93,308
	PLANNED % COMP: 0 ES 03OCT94 EF 21SEP95 LS 03OCT94 LF 21SEP95 BS 03OCT94 BF 21SEP95 AS --/--/-- AF --/--/--				
MT000113	TYPE B NS TRANSPORT PLAN			(A0314) Duration: 252	
- E14-7M	Nuc & Rad Physics	600	Total hrs	Unit Cost: $76.38	$45828
- E11-7M	EG&G Mechanical Engineer	450	Total hrs	Unit Cost: $70.51	$31730
- P22-5M	EG&G Tech Writing / Editing	70	Total hrs	Unit Cost: $52.20	$3654
- NLD-K	EG&G Non Labor Dollars - (x1000)	3	Non-Labor $	Unit Cost: $1000.00	$3000
				TOTALS $	84,212
	PLANNED % COMP: 0 ES 03OCT94 EF 21SEP95 LS 03OCT94 LF 21SEP95 BS 03OCT94 BF 21SEP95 AS --/--/-- AF --/--/--				
MT1M02	M02 - COMPLETE CASK TRANSPORT PLAN			(A0314) Duration: 0	
	PLANNED % COMP: 0 ES 22SEP95 EF 21SEP95 LS 26FEB98 LF 25FEB98 BS 22SEP95 BF 21SEP95 AS --/--/-- AF --/--/--				

<<<<<<<<<< End of WBS A0314 Transportation Issues >>>>>>>>>
WBS Total= $ 199,741

A0315 - Equipment/Tools Preps or Fabrication

MT000141	PRELIMINARY DESIGN			(A0315) Duration: 47	
- E11-7M	EG&G Mechanical Engineer	1880	Total hrs	Unit Cost: $70.51	$132559
- E06-7M	EG&G Electricial Engineer	350	Total hrs	Unit Cost: $70.51	$24679
- E16-7M	EG&G Project Mgmt Engr Serv	670	Total hrs	Unit Cost: $73.14	$49004
- E05-5M	EG&G Drafting	630	Total hrs	Unit Cost: $52.39	$33006
- T12-5M	EG&G Quality Control	100	Total hrs	Unit Cost: $56.26	$5626
				TOTALS $	244,874
PLANNED % COMP: 0 ES 26MAR96 EF 29MAY96 LS 26MAR96 LF 29MAY96 BS 26MAR96 BF 29MAY96 AS --/--/-- AF --/--/--					
MT000141A	PRELIMINARY DESIGN REVIEW			(A0315) Duration: 20	
- E11-7M	EG&G Mechanical Engineer	140	Total hrs	Unit Cost: $70.51	$9871
- E06-7M	EG&G Electricial Engineer	60	Total hrs	Unit Cost: $70.51	$4231
- E16-7M	EG&G Project Mgmt Engr Serv	60	Total hrs	Unit Cost: $73.14	$4388
				TOTALS $	18,490
PLANNED % COMP: 0 ES 30MAY96 EF 26JUN96 LS 30MAY96 LF 26JUN96 BS 30MAY96 BF 26JUN96 AS --/--/-- AF --/--/--					
MT000151	DEVELOP PROCEDURE LIST AND TRAINING RQMTS			(A0315) Duration: 20	
- E16-7M	EG&G Project Mgmt Engr Serv	40	Total hrs	Unit Cost: $73.14	$2926
- F06-7M	EG&G Non Reactor Operations	56	Total hrs	Unit Cost: $73.14	$4096
- P23-6M	EG&G TRA Training	30	Total hrs	Unit Cost: $67.51	$2025
				TOTALS $	9,047
PLANNED % COMP: 0 ES 27JUN96 EF 25JUL96 LS 19FEB97 LF 18MAR97 BS 27JUN96 BF 25JUL96 AS --/--/-- AF --/--/--					
MT000142	FINAL DESIGN			(A0315) Duration: 165	
- E11-7M	EG&G Mechanical Engineer	3200	Total hrs	Unit Cost: $70.51	$225632
- E06-7M	EG&G Electricial Engineer	840	Total hrs	Unit Cost: $70.51	$59228
- E16-7M	EG&G Project Mgmt Engr Serv	1000	Total hrs	Unit Cost: $73.14	$73140
- E05-5M	EG&G Drafting	1070	Total hrs	Unit Cost: $52.39	$56057
- T12-5M	EG&G Quality Control	900	Total hrs	Unit Cost: $56.26	$50634
				TOTALS $	464,691
PLANNED % COMP: 0 ES 27JUN96 EF 18FEB97 LS 27JUN96 LF 18FEB97 BS 27JUN96 BF 18FEB97 AS --/--/-- AF --/--/--					

MT000150 PROCEDURES AND TRAINING (A0315) Duration: 412
PLANNED % COMP: 0 ES 27JUN96 EF 04FEB98 LS 19FEB97 LF 25FEB98 BS 27JUN96 BF 04FEB98 AS --/--/-- AF --/--/--

MT000142B FINAL DESIGN REVIEW (A0315) Duration: 20

- E11-7M	EG&G Mechanical Engineer	200	Total hrs	Unit Cost: $70.51	$14102
- E06-7M	EG&G Electricial Engineer	90	Total hrs	Unit Cost: $70.51	$6346
- E16-7M	EG&G Project Mgmt Engr Serv	150	Total hrs	Unit Cost: $73.14	$10971
- T12-5M	EG&G Quality Control	50	Total hrs	Unit Cost: $56.26	$2813
- F06-7M	EG&G Non Reactor Operations	50	Total hrs	Unit Cost: $73.14	$3657

TOTALS $ 37,889
PLANNED % COMP: 0 ES 19FEB97 EF 18MAR97 LS 19FEB97 LF 18MAR97 BS 19FEB97 BF 18MAR97 AS --/--/-- AF --/--/--

MT1M04 M04 - COMPLETE EQUIPMENT DESIGNS (A0315) Duration: 0
PLANNED % COMP: 0 ES 19MAR97 EF 18MAR97 LS 08SEP97 LF 05SEP97 BS 19MAR97 BF 18MAR97 AS --/--/-- AF --/--/--

MT000152 DEVELOP PROCEDURES (A0315) Duration: 112

- E11-7M	EG&G Mechanical Engineer	860	Total hrs	Unit Cost: $70.51	$60639
- NLD-K	EG&G Non Labor Dollars - (x1000)	5	Non-Labor $	Unit Cost: $1000.00	$5000
- E16-7M	EG&G Project Mgmt Engr Serv	240	Total hrs	Unit Cost: $73.14	$17554
- E18-6M	EG&G Radiological Engineering	200	Total hrs	Unit Cost: $68.88	$13776
- T12-5M	EG&G Quality Control	200	Total hrs	Unit Cost: $56.26	$11252
- F06-7M	EG&G Non Reactor Operations	200	Total hrs	Unit Cost: $73.14	$14628
- P22-5M	EG&G Tech Writing / Editing	180	Total hrs	Unit Cost: $52.20	$9396

TOTALS $ 132,245
PLANNED % COMP: 0 ES 19MAR97 EF 22AUG97 LS 19MAR97 LF 22AUG97 BS 19MAR97 BF 22AUG97 AS --/--/-- AF --/--/--

MT000143A Tooling Construction and Assy (A0315) Duration: 120

- E11-7M	EG&G Mechanical Engineer	680	Total hrs	Unit Cost: $70.51	$47947
- U29-4M	EG&G TRA Mech Crafts	3190	Total hrs	Unit Cost: $47.82	$152546
- NLD-K	EG&G Non Labor Dollars - (x1000)	21	Non-Labor $	Unit Cost: $1000.00	$21000

TOTALS $ 221,493
PLANNED % COMP: 0 ES 19MAR97 EF 03SEP97 LS 08SEP97 LF 25FEB98 BS 19MAR97 BF 03SEP97 AS --/--/-- AF --/--/--

MT000143B	Instrumentation Construction and Assy			(A0315) Duration: 120	
- E06-7M	EG&G Electricial Engineer	168	Total hrs	Unit Cost: $70.51	$11846
- U19-5M	EG&G TRA Instr Elect Crafts	1320	Total hrs	Unit Cost: $53.45	$70554
- E16-7M	EG&G Project Mgmt Engr Serv	40	Total hrs	Unit Cost: $73.14	$2926
- NLD-K	EG&G Non Labor Dollars - (x1000)	150	Non-Labor $	Unit Cost: $1000.00	$150000
				TOTALS $	235,326
PLANNED % COMP: 0 ES 19MAR97 EF 03SEP97 LS 08SEP97 LF 25FEB98 BS 19MAR97 BF 03SEP97 AS --/--/-- AF --/--/--					
MT000143C	Containers Construction, Assy and Purchase			(A0315) Duration: 120	
- E11-7M	EG&G Mechanical Engineer	448	Total hrs	Unit Cost: $70.51	$31588
- U29-4M	EG&G TRA Mech Crafts	1180	Total hrs	Unit Cost: $47.82	$56428
- NLD-K	EG&G Non Labor Dollars - (x1000)	325	Non-Labor $	Unit Cost: $1000.00	$325000
				TOTALS $	413,016
PLANNED % COMP: 0 ES 19MAR97 EF 03SEP97 LS 08SEP97 LF 25FEB98 BS 19MAR97 BF 03SEP97 AS --/--/-- AF --/--/--					
MT000143D	Special Equipment Construction and Assy			(A0315) Duration: 120	
- U29-4M	EG&G TRA Mech Crafts	1000	Total hrs	Unit Cost: $47.82	$47820
- E11-7M	EG&G Mechanical Engineer	440	Total hrs	Unit Cost: $70.51	$31024
- E18-6M	EG&G Radiological Engineering	60	Total hrs	Unit Cost: $68.88	$4133
- E06-7M	EG&G Electricial Engineer	80	Total hrs	Unit Cost: $70.51	$5641
- NLD-K	EG&G Non Labor Dollars - (x1000)	72	Non-Labor $	Unit Cost: $1000.00	$72000
				TOTALS $	160,618
PLANNED % COMP: 0 ES 19MAR97 EF 03SEP97 LS 08SEP97 LF 25FEB98 BS 19MAR97 BF 03SEP97 AS --/--/-- AF --/--/--					
MT000143	MATERIALS AND FABRICATION			(A0315) Duration: 125	
PLANNED % COMP: 0 ES 19MAR97 EF 10SEP97 LS 09APR97 LF 01OCT97 BS 19MAR97 BF 10SEP97 AS --/--/-- AF --/--/--					
MT000154A	Operations General Training			(A0315) Duration: 25	
- P23-6M	EG&G TRA Training	600	Total hrs	Unit Cost: $67.51	$40506
- U34-4M	EG&G Operator	280	Total hrs	Unit Cost: $43.62	$12214
- T06-4M	EG&G TRA Hot Cell	140	Total hrs	Unit Cost: $45.01	$6301
				TOTALS $	59,021
PLANNED % COMP: 0 ES 25AUG97 EF 26SEP97 LS 25NOV97 LF 30DEC97 BS 25AUG97 BF 26SEP97 AS --/--/-- AF --/--/--					

MT1M05 M05 - FABRICATION OF EQUIPMENT / FIXTURES (A0315) Duration: 0

PLANNED % COMP: 0 ES 11SEP97 EF 10SEP97 LS 26FEB98 LF 25FEB98 BS 11SEP97 BF 10SEP97 AS --/--/-- AF --/--/--

MT000144 SETUP EQUIPMENT AND CHECK-OUT (A0315) Duration: 20

PLANNED % COMP: 0 ES 11SEP97 EF 08OCT97 LS 02OCT97 LF 29OCT97 BS 11SEP97 BF 08OCT97 AS --/--/-- AF --/--/--

MT000144A Setup, checkout, and Startup Canal Area Equip/Tool (A0315) Duration: 20

- E11-7M	EG&G Mechanical Engineer	230	Total hrs	Unit Cost: $70.51	$16217
- E16-7M	EG&G Project Mgmt Engr Serv	160	Total hrs	Unit Cost: $73.14	$11702
- F06-7M	EG&G Non Reactor Operations	220	Total hrs	Unit Cost: $73.14	$16091
- U29-4M	EG&G TRA Mech Crafts	320	Total hrs	Unit Cost: $47.82	$15302
- U19-5M	EG&G TRA Instr Elect Crafts	220	Total hrs	Unit Cost: $53.45	$11759
- T12-5M	EG&G Quality Control	100	Total hrs	Unit Cost: $56.26	$5626
- NLD-K	EG&G Non Labor Dollars - (x1000)	4	Non-Labor $	Unit Cost: $1000.00	$4000

TOTALS $ 80,697

PLANNED % COMP: 0 ES 11SEP97 EF 08OCT97 LS 02OCT97 LF 29OCT97 BS 11SEP97 BF 08OCT97 AS --/--/-- AF --/--/--

MT000144B Setup, checkout, and Startup Hot Cell Area Equip/Tool (A0315) Duration: 20

- E11-7M	EG&G Mechanical Engineer	210	Total hrs	Unit Cost: $70.51	$14807
- E16-7M	EG&G Project Mgmt Engr Serv	115	Total hrs	Unit Cost: $73.14	$8411
- F06-7M	EG&G Non Reactor Operations	220	Total hrs	Unit Cost: $73.14	$16091
- U29-4M	EG&G TRA Mech Crafts	440	Total hrs	Unit Cost: $47.82	$21041
- U19-5M	EG&G TRA Instr Elect Crafts	250	Total hrs	Unit Cost: $53.45	$13363
- T12-5M	EG&G Quality Control	120	Total hrs	Unit Cost: $56.26	$6751
- NLD-K	EG&G Non Labor Dollars - (x1000)	6	Non-Labor $	Unit Cost: $1000.00	$6000

TOTALS $ 86,464

PLANNED % COMP: 0 ES 11SEP97 EF 08OCT97 LS 02OCT97 LF 29OCT97 BS 11SEP97 BF 08OCT97 AS --/--/-- AF --/--/--

MT000153 VALIDATE PROCEDURES (A0315) Duration: 20

- F06-7M	EG&G Non Reactor Operations	320	Total hrs	Unit Cost: $73.14	$23405
- E16-7M	EG&G Project Mgmt Engr Serv	80	Total hrs	Unit Cost: $73.14	$5851
- U34-4M	EG&G Operator	320	Total hrs	Unit Cost: $43.62	$13958
- T12-5M	EG&G Quality Control	40	Total hrs	Unit Cost: $56.26	$2250

- T06-4M	EG&G TRA Hot Cell	320	Total hrs	Unit Cost: $45.01	$14403

TOTALS $ 59,867

PLANNED % COMP: 0 ES 11SEP97 EF 08OCT97 LS 02OCT97 LF 29OCT97 BS 11SEP97 BF 08OCT97 AS --/--/-- AF --/--/--

MT1M06 M06 - COMPLETE PROCEDURES (A0315) Duration: 0
PLANNED % COMP: 0 ES 09OCT97 EF 08OCT97 LS 26FEB98 LF 25FEB98 BS 09OCT97 BF 08OCT97 AS --/--/-- AF --/--/--

MT000155 Develop Rad Work Permits (A0315) Duration: 25

- NLD-K	EG&G Non Labor Dollars - (x1000)	2	Total hrs	Unit Cost: $1000.00	$2000
- E18-6M	EG&G Radiological Engineering	320	Total hrs	Unit Cost: $68.88	$22042
- E16-7M	EG&G Project Mgmt Engr Serv	40	Total hrs	Unit Cost: $73.14	$2926

TOTALS $ 26,968

PLANNED % COMP: 0 ES 09OCT97 EF 13NOV97 LS 22JAN98 LF 25FEB98 BS 09OCT97 BF 13NOV97 AS --/--/-- AF --/--/--

MT000156 Develop Site Work Releases (A0315) Duration: 25

- A10-5M	Planning & Scheduling	200	Total hrs	Unit Cost: $56.26	$11252
- E16-7M	EG&G Project Mgmt Engr Serv	20	Total hrs	Unit Cost: $73.14	$1463

TOTALS $ 12,715

PLANNED % COMP: 0 ES 09OCT97 EF 13NOV97 LS 22JAN98 LF 25FEB98 BS 09OCT97 BF 13NOV97 AS --/--/-- AF --/--/--

MT000154B Operations Task Specfic Training (A0315) Duration: 40

- P23-6M	EG&G TRA Training	300	Total hrs	Unit Cost: $67.51	$20253
- U34-4M	EG&G Operator	280	Total hrs	Unit Cost: $43.62	$12214
- T06-4M	EG&G TRA Hot Cell	140	Total hrs	Unit Cost: $45.01	$6301

TOTALS $ 38,768

PLANNED % COMP: 0 ES 09OCT97 EF 04DEC97 LS 31DEC97 LF 25FEB98 BS 09OCT97 BF 04DEC97 AS --/--/-- AF --/--/--

MT000154 TRAINING AND QUAL. & DRY RUNS (A0315) Duration: 82
PLANNED % COMP: 0 ES 09OCT97 EF 04FEB98 LS 30OCT97 LF 25FEB98 BS 09OCT97 BF 04FEB98 AS --/--/-- AF --/--/--

MT1M08 M08 - COMPLETE TRAINING (A0315) Duration: 0
PLANNED % COMP: 0 ES 05FEB98 EF 04FEB98 LS 26FEB98 LF 25FEB98 BS 05FEB98 BF 04FEB98 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0315 Equipment/Tools Preps or Fabrication >>>>>>>>>
WBS Total= $ 2,302,189

A0316 - Operational Readiness Review

MT000161	START PREP FOR MTR CANAL ORR			(A0316) Duration: 130	
- E11-7M	EG&G Mechanical Engineer	190	Total hrs	Unit Cost: $70.51	$13397
- E16-7M	EG&G Project Mgmt Engr Serv	212	Total hrs	Unit Cost: $73.14	$15506
- F06-7M	EG&G Non Reactor Operations	148	Total hrs	Unit Cost: $73.14	$10825
- NLD-K	EG&G Non Labor Dollars - (x1000)	2	Non-Labor $	Unit Cost: $1000.00	$2000
				TOTALS $	41,728
PLANNED % COMP: 0 ES 25AUG97 EF 25FEB98 LS 25AUG97 LF 25FEB98 BS 25AUG97 BF 25FEB98 AS --/--/-- AF --/--/--					
MT000161A	START PREP FOR TRAHC ORR			(A0316) Duration: 130	
- E11-7M	EG&G Mechanical Engineer	190	Total hrs	Unit Cost: $70.51	$13397
- E16-7M	EG&G Project Mgmt Engr Serv	212	Total hrs	Unit Cost: $73.14	$15506
- F06-7M	EG&G Non Reactor Operations	148	Total hrs	Unit Cost: $73.14	$10825
				TOTALS $	39,728
PLANNED % COMP: 0 ES 25AUG97 EF 25FEB98 LS 25AUG97 LF 25FEB98 BS 25AUG97 BF 25FEB98 AS --/--/-- AF --/--/--					
MT000160	ORR			(A0316) Duration: 175	
PLANNED % COMP: 0 ES 25AUG97 EF 29APR98 LS 25AUG97 LF 01JUN98 BS 25AUG97 BF 29APR98 AS --/--/-- AF --/--/--					
MT000162	MTR CANAL ORR			(A0316) Duration: 25	
- E11-7M	EG&G Mechanical Engineer	80	Total hrs	Unit Cost: $70.51	$5641
- E16-7M	EG&G Project Mgmt Engr Serv	80	Total hrs	Unit Cost: $73.14	$5851
- F06-7M	EG&G Non Reactor Operations	80	Total hrs	Unit Cost: $73.14	$5851
- T12-5M	EG&G Quality Control	80	Total hrs	Unit Cost: $56.26	$4501
				TOTALS $	21,844
PLANNED % COMP: 0 ES 26FEB98 EF 01APR98 LS 26FEB98 LF 01APR98 BS 26FEB98 BF 01APR98 AS --/--/-- AF --/--/--					
MT000162A	TRA HC ORR			(A0316) Duration: 25	
- E11-7M	EG&G Mechanical Engineer	80	Total hrs	Unit Cost: $70.51	$5641
- E16-7M	EG&G Project Mgmt Engr Serv	80	Total hrs	Unit Cost: $73.14	$5851
- F06-7M	EG&G Non Reactor Operations	80	Total hrs	Unit Cost: $73.14	$5851
- T12-5M	EG&G Quality Control	80	Total hrs	Unit Cost: $56.26	$4501
				TOTALS $	21,844
PLANNED % COMP: 0 ES 26FEB98 EF 01APR98 LS 26FEB98 LF 01APR98 BS 26FEB98 BF 01APR98 AS --/--/-- AF --/--/--					

MT000163 ORR RESOLUTIONS (A0316) Duration: 20
PLANNED % COMP: 0 ES 02APR98 EF 29APR98 LS 02APR98 LF 29APR98 BS 02APR98 BF 29APR98 AS --/--/-- AF --/--/--

MT1M09 M09 - COMPLETE ORR (A0316) Duration: 0
PLANNED % COMP: 0 ES 30APR98 EF 29APR98 LS 02JUN98 LF 01JUN98 BS 30APR98 BF 29APR98 AS --/--/-- AF --/--/--

MT000164 READY TO MOVE FUEL CANAL/HOT CELL - 2 (A0316) Duration: 0
PLANNED % COMP: 0 ES 30APR98 EF 29APR98 LS 02JUN98 LF 01JUN98 BS 30APR98 BF 29APR98 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0316 Operational Readiness Review >>>>>>>>>
WBS Total= $ 125,144

A0317 - Reactor and Fuel Preparations

MT001010	CLEAR AREA AND SURVEY PORTS			(A0317) Duration:	14
- U13-4M	EG&G Equip Operator	32	Total hrs	Unit Cost: $47.82	$1530
- T13-4M	EG&G Radiological Operations	16	Total hrs	Unit Cost: $49.59	$793
				TOTALS $	2,323
	PLANNED % COMP: 0 ES 30APR98 EF 19MAY98 LS 30APR98 LF 19MAY98 BS 30APR98 BF 19MAY98 AS --/--/-- AF --/--/--				
MT001000	PLUG STORAGE FUEL REMOVAL			(A0317) Duration:	23
	PLANNED % COMP: 0 ES 30APR98 EF 01JUN98 LS 30APR98 LF 01JUN98 BS 30APR98 BF 01JUN98 AS --/--/-- AF --/--/--				
MT001020	MOVE WE-2 CASK INTO POSITION			(A0317) Duration:	1
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
- U34-4M	EG&G Operator	16	Total hrs	Unit Cost: $43.62	$698
- T13-4M	EG&G Radiological Operations	8	Total hrs	Unit Cost: $49.59	$397
- F06-7M	EG&G Non Reactor Operations	8	Total hrs	Unit Cost: $73.14	$585
				TOTALS $	1,680
	PLANNED % COMP: 0 ES 20MAY98 EF 20MAY98 LS 20MAY98 LF 20MAY98 BS 20MAY98 BF 20MAY98 AS --/--/-- AF --/--/--				
MT001030	LOAD FIRST FUELS INTO CASK			(A0317) Duration:	1
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
	PLANNED % COMP: 0 ES 21MAY98 EF 21MAY98 LS 21MAY98 LF 21MAY98 BS 21MAY98 BF 21MAY98 AS --/--/-- AF --/--/--				
MT001040	TRANSFER CASK TO TRA CELL 2 & RETURN			(A0317) Duration:	4
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
- U13-4M	EG&G Equip Operator	8	Total hrs	Unit Cost: $47.82	$383
- T13-4M	EG&G Radiological Operations	8	Total hrs	Unit Cost: $49.59	$397
- F06-7M	EG&G Non Reactor Operations	4	Total hrs	Unit Cost: $73.14	$293
				TOTALS $	1,073
	PLANNED % COMP: 0 ES 22MAY98 EF 27MAY98 LS 22MAY98 LF 27MAY98 BS 22MAY98 BF 27MAY98 AS --/--/-- AF --/--/--				
MT001050	MOVE WE-2 CASK INTO POSITION (2ND PORT)			(A0317) Duration:	1
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
- U34-4M	EG&G Operator	16	Total hrs	Unit Cost: $43.62	$698
- T13-4M	EG&G Radiological Operations	8	Total hrs	Unit Cost: $49.59	$397
- F06-7M	EG&G Non Reactor Operations	8	Total hrs	Unit Cost: $73.14	$585
				TOTALS $	1,680
	PLANNED % COMP: 0 ES 28MAY98 EF 28MAY98 LS 28MAY98 LF 28MAY98 BS 28MAY98 BF 28MAY98 AS --/--/-- AF --/--/--				

MT001060	LOAD LAST FUELS INTO CASK			(A0317) Duration:	1
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 29MAY98 EF 29MAY98 LS 29MAY98 LF 29MAY98 BS 29MAY98 BF 29MAY98 AS --/--/-- AF --/--/--					
MT001070	TRANSFER CASK TO TRA CELL 2			(A0317) Duration:	1
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
- P06-7M	EG&G Non Reactor Operations	4	Total hrs	Unit Cost: $73.14	$293
- U13-4M	EG&G Equip Operator	8	Total hrs	Unit Cost: $47.82	$383
- T13-4M	EG&G Radiological Operations	8	Total hrs	Unit Cost: $49.59	$397
				TOTALS $	1,073
PLANNED % COMP: 0 ES 01JUN98 EF 01JUN98 LS 01JUN98 LF 01JUN98 BS 01JUN98 BF 01JUN98 AS --/--/-- AF --/--/--					

<<<<<<<<<< End of WBS A0317 >>>>>>>>>
WBS Total= $ 7,829

INEL Spent Nuclear Fuel Consolidation
Planning Package
Fiscal Year 1996 Budget Request

Cost Account Title: TRA MTR Canal SNF Characterization, Repackaging, and Transfe

CWBS Code: A03 | Cost Account Manager:

Activity Data Sheet: | Budget and Reporting Classification:

Funding Type: Operating | Date Prepared:

Objective of Cost Account:
Repackage all nuclear fuel stored in the MTR canal, transfer it to ICPP, and store it in the Irradiated Fuel Storage Facility (IFSF).

Planning Package - A032 - Receiver Preparations

Driver Code(s):
Driver Reference:
None

Scope of Work: Prepare to receive MTR canned fuel at the IFSF in the TFBP-2 cask, including SAR updates, equipment fabrication, procedure development, operator training, and a Readiness Assessment.

Assumptions/Prequestites/Program Guidance:
MTR fuel cans will be stored in the IFSF until new dry storage is availa
MTR fuel cans will be shipped in the TFBP-2 cask.
TFBP-2 cask will be fitted with a neutron shielding sleeve for some shipments..
Current CSEs for MTR fuel are not adequate for dry storage in the IFSF.
Neither a CX nor an EA is required to receive MTR fuel cans at the IFSF.
MTR fuel cans can be handled with existing tools.
An ORR will not be required. A contractor RA will be performed.
A single enveloping CSE will be performed, vice one for each fuel type.
TFBP-2 cask will be fitted with a neutron shielding sleeve for some shipments.

Deliverables:

Updated IFSF PSD Approved Fuels List for MTR fuel cans.
Certified IFSF cannister inserts for MTR fuel cans and documentation.
Approved handling procedure to receive MTR fuel cans in the IFSF.
A detailed inspection plan for MTR fuel cans stored in the IFSF.
Operator training for receipt of MTR fuel cans in the IFSF.
A contractor Readiness Assessment for receipt and storage of MTR cans.

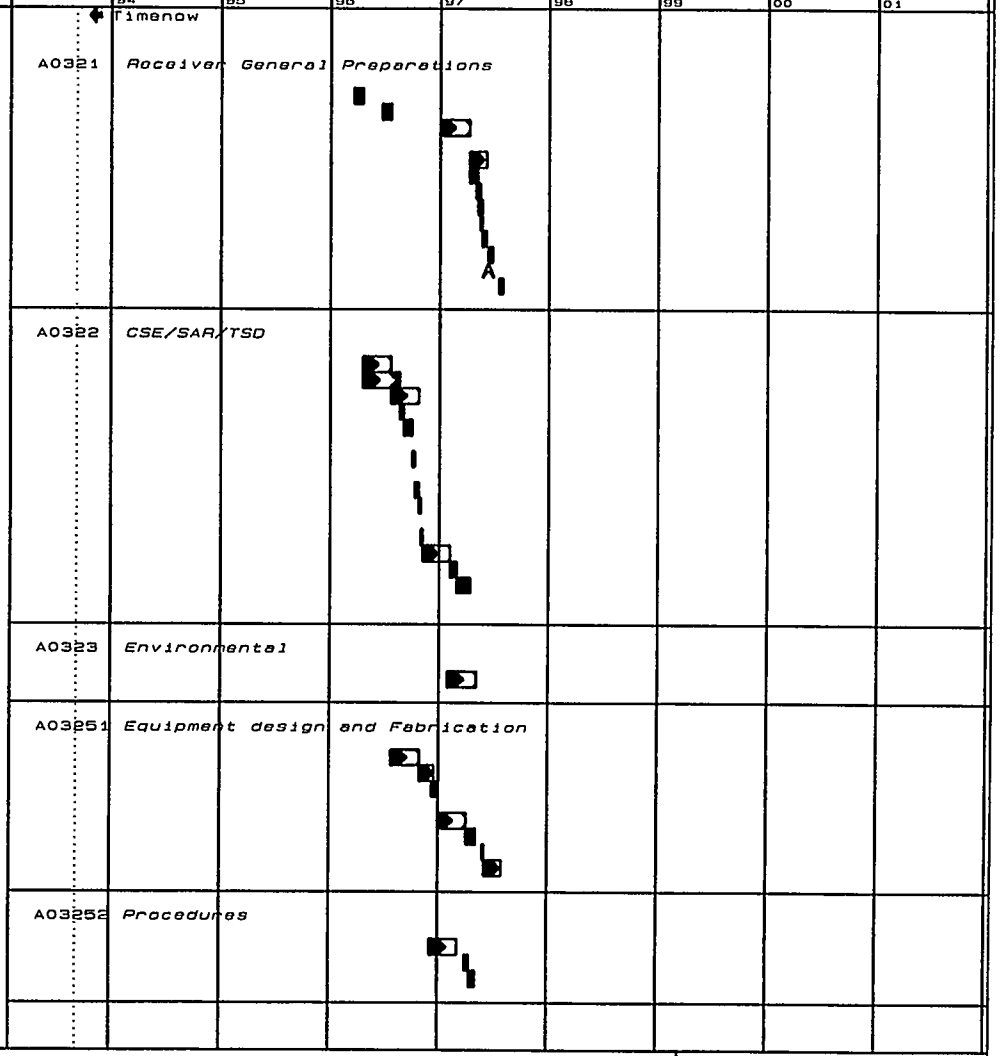
Milestones:

Commence receiver preparations.
Ready to receive canned MTR Canal fuel.

SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation

Activity	Description	Dur	Early Start	Early Finish
A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe				
MTFRC1	Review Fuel Receipt Criteria	22	16DEC96	16JAN97
MTFRC2	Resolve Comments on FRC	22	21MAR97	21APR97
MTIP	Prepare Inspection Plan for Dry Storage Demo	66	03OCT97	07JAN98
MTOP	Department Self Assessment	40	08JAN98	04MAR98
MTOR01	Prepare Plan-of-Action	20	08JAN98	04FEB98
MTOR03	Appoint RA Team	10	29JAN98	11FEB98
MTOR02	DOE Review POA	10	05FEB98	18FEB98
MTOR04	Train RA Team	5	12FEB98	18FEB98
MTOR05	Prepare Implementation Plan	10	19FEB98	04MAR98
MTOR06	DOE Review IP	10	12MAR98	25MAR98
MTOR07	Department Certification	0	12MAR98	------
MTFRC3	Review and Approve FRC Part B	10	16APR98	29APR98
MTCSEP	Prepare Primary CSE	67	17JAN97	21APR97
MTFLIFSF	Update Fuel List TS for IFSF	88	17JAN97	20MAY97
MTCSEI	Prepare Independent CSE	67	21APR97	23JUL97
MTCS02	Review CSE's/TS	10	21MAY97	03JUN97
MTCS03	Resolve CSE/TS comments / Tech Editing	20	04JUN97	01JUL97
MTCS06A	Environmental Safety and Health Review	5	02JUL97	09JUL97
MTCS06B	Resolve ES&H comments	10	10JUL97	23JUL97
MTCS07	Radiation and Environmental Safety Commitee Review	5	24JUL97	30JUL97
MTCS08	Resolve RESC Comments	5	31JUL97	06AUG97
MTCS11	DOE Review and Approval	65	07AUG97	05NOV97
MTCS12	Resolve DOE Comments	15	06NOV97	27NOV97
MTIPVR	Independent Procedure Validation Review (IPVR)	30	28NOV97	12JAN98
MTCOP	Review Compliance Issues	66	29OCT97	02FEB98
MTEQ1	Identify/Design Equipment - Insert	66	25APR97	28JUL97
MTEQ2	Procure Equipment - Insert	35	29JUL97	15SEP97
MTEQ3	Planning for Equipment Fabrication - Insert	14	09SEP97	26SEP97
MTEQ4	Equipment Fabrication - Insert (40)	66	29SEP97	31DEC97
MTEQCO	Equipment Checkout - Insert	22	02JAN98	02FEB98
MTEQ5	Closeout for Equipment Fabrication	3	26FEB98	02MAR98
MTEQ6	As-Built for Febed Equipment	42	03MAR98	29APR98
MTPR01	Develop Procedures	66	03SEP97	04DEC97
MTPR02	Validate Procedures	10	29DEC97	12JAN98
MTPR03	ICPP Review	15	13JAN98	02FEB98



Legend
■-IN PROGRESS
▩-Baseline

Report: PAGE5A
Project: SNF1
Time Now: 10JUN94
Date: 30JUN94
Page: 1

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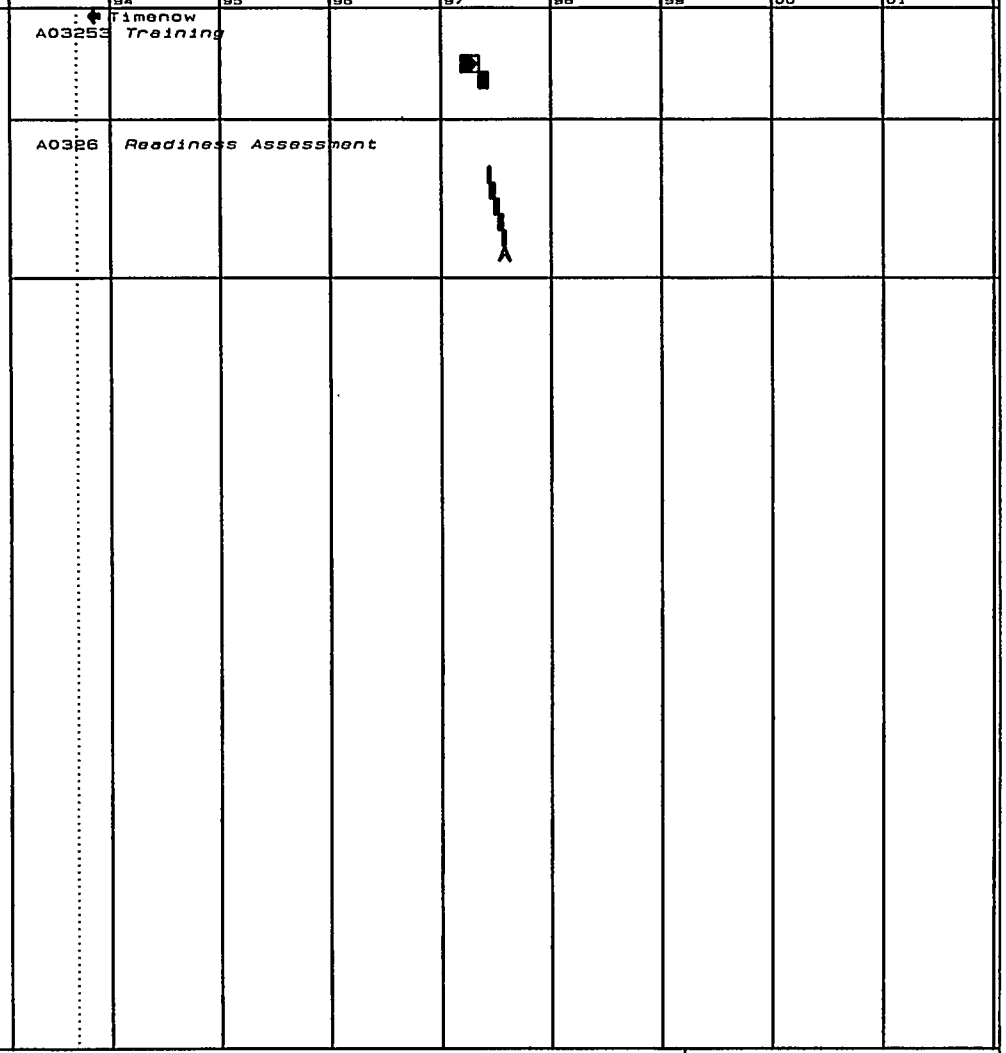
SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation

Activity	Description	Dur	Early Start	Early Finish
MTTR1	Preparations for Training	40	05DEC97	02FEB98
MTTR2	Training (20 Hours, 2 crews, 4 op each)	22	03FEB98	04MAR98
MTORRDR	Dry Run for Fuel Handling	5	05MAR98	11MAR98
MTOR08	Readiness Assessment	10	12MAR98	25MAR98
MTOR09	Prepare Final Report	10	26MAR98	08APR98
MTOR10	Closure of Prestart Findings	10	09APR98	22APR98
MTORR	Approval to Start Operation	5	23APR98	29APR98
MTRR	Ready for Receipt of fuel	0	30APR98	------



Legend
-IN PROGRESS
-Baseline

Report: PAGE5A
Project: SNF1
Time Now: 10JUN94
Date: 30JUN94
Page: 2

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OPEN PLAN | Spent Nuclear Fuel Consolidation | PAGE: 1

REPORT: PAGE3C | SNF/SNM Consolidation Schedule | REPORT DATE:30JUN94

PROJECT:SNF1 | Basis of Estimate | TIME NOW:10JUN94

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

WBS	DESCRIPTION	START DATE	FINISH DATE	COST		
A0321	Receiver General Preparations	16DEC96	29APR98	Planning Package=	$	385,061
A0322	CSE/SAR/TSD	17JAN97	12JAN98	Planning Package=	$	134,290
A0323	Environmental	29OCT97	02FEB98	Planning Package=	$	3,250
A03251	Equipment design and Fabrication	25APR97	29APR98	Planning Package=	$	56,456
A03252	Procedures	03SEP97	02FEB98	Planning Package=	$	21,345
A03253	Training	05DEC97	04MAR98	Planning Package=	$	23,925
A0326	Readiness Assessment	05MAR98	30APR98	Planning Package=	$	164,739
	A032			Cost:	$	789,066
A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe				Project Cost:	$	789,066

040

OPEN PLAN				Spent Nuclear Fuel Consolidation						PAGE: 1	
REPORT: NCPR5				COST PERFORMANCE REPORT -						REPORT DATE:30JUN94	
PROJECT: SNF1				SNF/SNM Consolidation Schedule						TIME NOW:10JUN94	
	FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	Complete
A03	TRA MTR Canal SNF Characterization, Repackaging, and Transfe											
A0321	0	0	0	7540	377521	0	0	0	0	0	0	385061
A0322	0	0	0	124280	10010	0	0	0	0	0	0	134290
A0323	0	0	0	0	3250	0	0	0	0	0	0	3250
A03251	0	0	0	23392	33064	0	0	0	0	0	0	56456
A03252	0	0	0	2935	18410	0	0	0	0	0	0	21345
A03253	0	0	0	0	23925	0	0	0	0	0	0	23925
A0326	0	0	0	0	164739	0	0	0	0	0	0	164739
Total	0	0	0	158147	630919	0	0	0	0	0	0	789066
GRAND	0	0	0	158147	630919	0	0	0	0	0	0	789066

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

A0321 - Receiver General Preparations

MTFRC1	Review Fuel Receipt Criteria			(A0321)	Duration:	22
- 2810E	Fast & Storage Staff	40	Total hrs	Unit Cost:	$65.00	$2600
- 9520E	Fuel Safety	8	Total hrs	Unit Cost:	$65.00	$520
- 4600E	Spent Fuel Cond & Mat Tech	8	Total hrs	Unit Cost:	$65.00	$520
- 2001E	Operations Staff	4	Total hrs	Unit Cost:	$65.00	$260
- 6100E	Quality Engineering	8	Total hrs	Unit Cost:	$65.00	$520
- 7130E	Fuel Storage & Fire Protection	8	Total hrs	Unit Cost:	$65.00	$520
					TOTALS $	4,940
PLANNED % COMP: 0 ES 16DEC96 EF 16JAN97 LS 16DEC96 LF 16JAN97 BS 16DEC96 BF 16JAN97 AS --/--/-- AF --/--/--						
MTFRC2	Resolve Comments on FRC			(A0321)	Duration:	22
- 2810E	Fast & Storage Staff	40	Total hrs	Unit Cost:	$65.00	$2600
					TOTALS $	2,600
PLANNED % COMP: 0 ES 21MAR97 EF 21APR97 LS 21MAR97 LF 21APR97 BS 21MAR97 BF 21APR97 AS --/--/-- AF --/--/--						
MTIP	Prepare Inspection Plan for Dry Storage Demo			(A0321)	Duration:	66
- 4600E	Spent Fuel Cond & Mat Tech	4	hrs/day	Unit Cost:	$65.00	$17160
- 6100E	Quality Engineering	1	hrs/day	Unit Cost:	$65.00	$4290
					TOTALS $	21,450
PLANNED % COMP: 0 ES 03OCT97 EF 07JAN98 LS 03OCT97 LF 07JAN98 BS 03OCT97 BF 07JAN98 AS --/--/-- AF --/--/--						
MTOR01	Prepare Plan-of-Action			(A0321)	Duration:	20
- 2810E	Fast & Storage Staff	8	hrs/day	Unit Cost:	$65.00	$10400
- 6600E	ORR Coordination	20	Total hrs	Unit Cost:	$65.00	$1300
					TOTALS $	11,700
PLANNED % COMP: 0 ES 08JAN98 EF 04FEB98 LS 08JAN98 LF 04FEB98 BS 08JAN98 BF 04FEB98 AS --/--/-- AF --/--/--						
MTOP	Department Self Assessment			(A0321)	Duration:	40
- 2810E	Fast & Storage Staff	8	hrs/day	Unit Cost:	$65.00	$20800
- 2240E	Fuel Handling & Dissolution Supervision	60	Total hrs	Unit Cost:	$65.00	$3900
- 2240B	Fuel Handling & Dissolution Operators	80	Total hrs	Unit Cost:	$40.64	$3251
- 2810E	Fast & Storage Staff	8	hrs/day	Unit Cost:	$65.00	$20800
- 2001E	Operations Staff	16	hrs/day	Unit Cost:	$65.00	$41600
- 6600E	ORR Coordination	8	hrs/day	Unit Cost:	$65.00	$20800
- 1352E	Training & Development	8	hrs/day	Unit Cost:	$65.00	$20800

- 4300E	Calcine Immobilization	16	hrs/day	Unit Cost: $65.00	$41600
- 9720E	Occupational Safty	8	hrs/day	Unit Cost: $65.00	$20800
- 9830E	RADCON Engineering	8	hrs/day	Unit Cost: $65.00	$20800
- 6500E	Performance Evaluation	8	hrs/day	Unit Cost: $65.00	$20800
- 9510E	Criticality Safety	8	hrs/day	Unit Cost: $65.00	$20800

TOTALS $ 256,751

PLANNED % COMP: 0 ES 08JAN98 EF 04MAR98 LS 08JAN98 LF 04MAR98 BS 08JAN98 BF 04MAR98 AS --/--/-- AF --/--/--

MTOR03 Appoint RA Team (A0321) Duration: 10

- 2001E	Operations Staff	8	Total hrs	Unit Cost: $65.00	$520

TOTALS $ 520

PLANNED % COMP: 0 ES 29JAN98 EF 11FEB98 LS 29JAN98 LF 11FEB98 BS 29JAN98 BF 11FEB98 AS --/--/-- AF --/--/--

MTOR02 DOE Review POA (A0321) Duration: 10

PLANNED % COMP: 0 ES 05FEB98 EF 18FEB98 LS 05FEB98 LF 18FEB98 BS 05FEB98 BF 18FEB98 AS --/--/-- AF --/--/--

MTOR04 Train RA Team (A0321) Duration: 5

- 2810E	Fast & Storage Staff	8	hrs/day	Unit Cost: $65.00	$2600
- 2001E	Operations Staff	16	hrs/day	Unit Cost: $65.00	$5200
- 6600E	ORR Coordination	8	hrs/day	Unit Cost: $65.00	$2600
- 1352E	Training & Development	8	hrs/day	Unit Cost: $65.00	$2600
- 4300E	Calcine Immobilization	16	hrs/day	Unit Cost: $65.00	$5200
- 9720E	Occupational Safty	8	hrs/day	Unit Cost: $65.00	$2600
- 9830E	RADCON Engineering	8	hrs/day	Unit Cost: $65.00	$2600
- 6500E	Performance Evaluation	8	hrs/day	Unit Cost: $65.00	$2600
- 9510E	Criticality Safety	8	hrs/day	Unit Cost: $65.00	$2600

TOTALS $ 28,600

PLANNED % COMP: 0 ES 12FEB98 EF 18FEB98 LS 12FEB98 LF 18FEB98 BS 12FEB98 BF 18FEB98 AS --/--/-- AF --/--/--

MTOR05 Prepare Implementation Plan (A0321) Duration: 10

- 2810E	Fast & Storage Staff	8	hrs/day	Unit Cost: $65.00	$5200
- 2001E	Operations Staff	16	hrs/day	Unit Cost: $65.00	$10400
- 6600E	ORR Coordination	8	hrs/day	Unit Cost: $65.00	$5200
- 1352E	Training & Development	8	hrs/day	Unit Cost: $65.00	$5200
- 4300E	Calcine Immobilization	16	hrs/day	Unit Cost: $65.00	$10400
- 9720E	Occupational Safty	8	hrs/day	Unit Cost: $65.00	$5200
- 9830E	RADCON Engineering	8	hrs/day	Unit Cost: $65.00	$5200

- 6500E	Performance Evaluation	8	hrs/day	Unit Cost:	$65.00	$5200
- 9510E	Criticality Safety	8	hrs/day	Unit Cost:	$65.00	$5200

TOTALS $ 57,200

PLANNED % COMP: 0 ES 19FEB98 EF 04MAR98 LS 19FEB98 LF 04MAR98 BS 19FEB98 BF 04MAR98 AS --/--/-- AF --/--/--

MTOR07 Department Certification (A0321) Duration: 0

- 2810E	Fast & Storage Staff	8	hrs/day	Unit Cost:	$65.00	$0
- 2001E	Operations Staff	8	hrs/day	Unit Cost:	$65.00	$0

PLANNED % COMP: 0 ES 12MAR98 EF 11MAR98 LS 12MAR98 LF 11MAR98 BS 12MAR98 BF 11MAR98 AS --/--/-- AF --/--/--

MTOR06 DOE Review IP (A0321) Duration: 10

PLANNED % COMP: 0 ES 12MAR98 EF 25MAR98 LS 12MAR98 LF 25MAR98 BS 12MAR98 BF 25MAR98 AS --/--/-- AF --/--/--

MTFRC3 Review and Approve FRC Part B (A0321) Duration: 10

- 2810E	Fast & Storage Staff	16	Total hrs	Unit Cost:	$65.00	$1040
- 2001E	Operations Staff	4	Total hrs	Unit Cost:	$65.00	$260

TOTALS $ 1,300

PLANNED % COMP: 0 ES 16APR98 EF 29APR98 LS 16APR98 LF 29APR98 BS 16APR98 BF 29APR98 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0321 >>>>>>>>>

WBS Total= $ 385,061

A0322 - CSE/SAR/TSD

MTCSEP	Prepare Primary CSE			(A0322) Duration: 67	
- 9510E	Criticality Safety	8	hrs/day	Unit Cost: $65.00	$34840
- 2810E	Fast & Storage Staff	10	Total hrs	Unit Cost: $65.00	$650
				TOTALS $	35,490
PLANNED % COMP: 0 ES 17JAN97 EF 21APR97 LS 17JAN97 LF 21APR97 BS 17JAN97 BF 21APR97 AS --/--/-- AF --/--/--					
MTFLIFSF	Update Fuel List TS for IFSF			(A0322) Duration: 88	
- 2810E	Fast & Storage Staff	20	Total hrs	Unit Cost: $65.00	$1300
- 9520E	Fuel Safety	4	hrs/day	Unit Cost: $65.00	$22880
				TOTALS $	24,180
PLANNED % COMP: 0 ES 17JAN97 EF 20MAY97 LS 17JAN97 LF 20MAY97 BS 17JAN97 BF 20MAY97 AS --/--/-- AF --/--/--					
MTCSEI	Prepare Independent CSE			(A0322) Duration: 67	
- 9510E	Criticality Safety	8	hrs/day	Unit Cost: $65.00	$34840
				TOTALS $	34,840
PLANNED % COMP: 0 ES 21APR97 EF 23JUL97 LS 21APR97 LF 23JUL97 BS 21APR97 BF 23JUL97 AS --/--/-- AF --/--/--					
MTCS02	Review CSE's/TS			(A0322) Duration: 10	
- 9510E	Criticality Safety	20	Total hrs	Unit Cost: $65.00	$1300
- 2810E	Fast & Storage Staff	20	Total hrs	Unit Cost: $65.00	$1300
- 9520E	Fuel Safety	20	Total hrs	Unit Cost: $65.00	$1300
- 9001E	Envronmental Safety & Health Staff	80	Total hrs	Unit Cost: $65.00	$5200
- 1001E	Presidents Staff	10	Total hrs	Unit Cost: $65.00	$650
- 6100E	Quality Engineering	20	Total hrs	Unit Cost: $65.00	$1300
				TOTALS $	11,050
PLANNED % COMP: 0 ES 21MAY97 EF 03JUN97 LS 21MAY97 LF 03JUN97 BS 21MAY97 BF 03JUN97 AS --/--/-- AF --/--/--					
MTCS03	Resolve CSE/TS comments / Tech Editing			(A0322) Duration: 20	
- 9510E	Criticality Safety	2	hrs/day	Unit Cost: $65.00	$2600
- 9520E	Fuel Safety	4	hrs/day	Unit Cost: $65.00	$5200
				TOTALS $	7,800
PLANNED % COMP: 0 ES 04JUN97 EF 01JUL97 LS 04JUN97 LF 01JUL97 BS 04JUN97 BF 01JUL97 AS --/--/-- AF --/--/--					
MTCS06A	Environmental Safety and Health Review			(A0322) Duration: 5	
- 9400E	Regulatory Affairs	8	Total hrs	Unit Cost: $65.00	$520
				TOTALS $	520
PLANNED % COMP: 0 ES 02JUL97 EF 09JUL97 LS 02JUL97 LF 09JUL97 BS 02JUL97 BF 09JUL97 AS --/--/-- AF --/--/--					
MTCS06B	Resolve ES&H comments			(A0322) Duration: 10	
- 9510E	Criticality Safety	2	hrs/day	Unit Cost: $65.00	$1300
- 9520E	Fuel Safety	4	hrs/day	Unit Cost: $65.00	$2600
				TOTALS $	3,900
PLANNED % COMP: 0 ES 10JUL97 EF 23JUL97 LS 10JUL97 LF 23JUL97 BS 10JUL97 BF 23JUL97 AS --/--/-- AF --/--/--					

MTCS07	Radiation and Environmental Safety Commitee Review			(A0322) Duration: 5	
- 1001E	Presidents Staff	10	Total hrs	Unit Cost: $65.00	$650
- 4001E	Technical Department	10	Total hrs	Unit Cost: $65.00	$650
- 7001E	Engineering Staff	10	Total hrs	Unit Cost: $65.00	$650
- 9210E	Environmental Permitting and Regulations	10	Total hrs	Unit Cost: $65.00	$650
- 9810E	Radiation Safety	10	Total hrs	Unit Cost: $65.00	$650
- 8001E	Operations Support Services Staff	10	Total hrs	Unit Cost: $65.00	$650
- 6600E	ORR Coordination	10	Total hrs	Unit Cost: $65.00	$650
				TOTALS $	4,550
	PLANNED % COMP: 0 ES 24JUL97 EF 30JUL97 LS 24JUL97 LF 30JUL97 BS 24JUL97 BF 30JUL97 AS --/--/-- AF --/--/--				
MTCS08	Resolve RESC Comments			(A0322) Duration: 5	
- 9510E	Criticality Safety	2	hrs/day	Unit Cost: $65.00	$650
- 9520E	Fuel Safety	4	hrs/day	Unit Cost: $65.00	$1300
				TOTALS $	1,950
	PLANNED % COMP: 0 ES 31JUL97 EF 06AUG97 LS 31JUL97 LF 06AUG97 BS 31JUL97 BF 06AUG97 AS --/--/-- AF --/--/--				
MTCS11	DOE Review and Approval			(A0322) Duration: 65	
- DOE	Department of Energy	2	hrs/day	Unit Cost: $.00	$0
	PLANNED % COMP: 0 ES 07AUG97 EF 05NOV97 LS 07AUG97 LF 05NOV97 BS 07AUG97 BF 05NOV97 AS --/--/-- AF --/--/--				
MTCS12	Resolve DOE Comments			(A0322) Duration: 15	
- 9510E	Criticality Safety	2	hrs/day	Unit Cost: $65.00	$1950
- 9520E	Fuel Safety	4	hrs/day	Unit Cost: $65.00	$3900
				TOTALS $	5,850
	PLANNED % COMP: 0 ES 06NOV97 EF 27NOV97 LS 06NOV97 LF 27NOV97 BS 06NOV97 BF 27NOV97 AS --/--/-- AF --/--/--				
MTIPVR	Independent Procedure Validation Review (IPVR)			(A0322) Duration: 30	
- 2810E	Fast & Storage Staff	40	Total hrs	Unit Cost: $65.00	$2600
- 7140E	Tech Shift Engineers	24	Total hrs	Unit Cost: $65.00	$1560
				TOTALS $	4,160
	PLANNED % COMP: 0 ES 28NOV97 EF 12JAN98 LS 28NOV97 LF 12JAN98 BS 28NOV97 BF 12JAN98 AS --/--/-- AF --/--/--				

<<<<<<<<<< End of WBS A0322 >>>>>>>>>
WBS Total= $ 134,290

A0323 - Environmental

MTCOP Review Compliance Issues (A0323) Duration: 66

- 9400E	Regulatory Affairs	40 Total hrs	Unit Cost:	$65.00	$2600
- 2810E	Fast & Storage Staff	10 Total hrs	Unit Cost:	$65.00	$650

TOTALS $ 3,250

PLANNED % COMP: 0 ES 29OCT97 EF 02FEB98 LS 29OCT97 LF 02FEB98 BS 29OCT97 BF 02FEB98 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0323 >>>>>>>>>
WBS Total= $ 3,250

A03251 - Equipment design and Fabrication

MTEQ1	Identify/Design Equipment - Insert			(A03251)	Duration:	66
- 2810E	Fast & Storage Staff	40	Total hrs	Unit Cost:	$65.00	$2600
- 7130E	Fuel Storage & Fire Protection	40	Total hrs	Unit Cost:	$65.00	$2600
- 7260E	Mechanical & Process Components	120	Total hrs	Unit Cost:	$65.00	$7800
- 7340N	Drafting	40	Total hrs	Unit Cost:	$45.53	$1821
- 7340E	Drafting	8	Total hrs	Unit Cost:	$65.00	$520
- 6100E	Quality Engineering	8	Total hrs	Unit Cost:	$65.00	$520
- 4600E	Spent Fuel Cond & Mat Tech	4	Total hrs	Unit Cost:	$65.00	$260
					TOTALS $	16,121
PLANNED % COMP: 0 ES 25APR97 EF 28JUL97 LS 25APR97 LF 28JUL97 BS 25APR97 BF 28JUL97 AS --/--/-- AF --/--/--						
MTEQ2	Procure Equipment - Insert			(A03251)	Duration:	35
- 1530E	Procurement and Admin Services	10	Total hrs	Unit Cost:	$65.00	$650
- NLD-C	Non Labor Dollars - Hundreds	40	Non-Labor $	Unit Cost:	$100.00	$4000
- 6200N	Inspection	2	Total hrs	Unit Cost:	$65.00	$130
- 6100E	Quality Engineering	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	4,910
PLANNED % COMP: 0 ES 29JUL97 EF 15SEP97 LS 29JUL97 LF 15SEP97 BS 29JUL97 BF 15SEP97 AS --/--/-- AF --/--/--						
MTEQ3	Planning for Equipment Fabrication - Insert			(A03251)	Duration:	14
- 8230N	Production Planning	20	Total hrs	Unit Cost:	$45.53	$911
- 2810E	Fast & Storage Staff	8	Total hrs	Unit Cost:	$65.00	$520
- 6100E	Quality Engineering	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	1,561
PLANNED % COMP: 0 ES 09SEP97 EF 26SEP97 LS 09SEP97 LF 26SEP97 BS 09SEP97 BF 26SEP97 AS --/--/-- AF --/--/--						
MTEQ4	Equipment Fabrication - Insert (40)			(A03251)	Duration:	66
- 8121B	Yardman	80	Total hrs	Unit Cost:	$45.53	$3642
- 8116B	Machinist	120	Total hrs	Unit Cost:	$45.53	$5464
- 8114B	Mechanic	0	Total hrs	Unit Cost:	$45.53	$0
- 8115B	Welders	160	Total hrs	Unit Cost:	$45.53	$7285
- 2810E	Fast & Storage Staff	20	Total hrs	Unit Cost:	$65.00	$1300
- 8110E	Plant Services Support	10	Total hrs	Unit Cost:	$65.00	$650
- 6200N	Inspection	120	Total hrs	Unit Cost:	$65.00	$7800
- 6100E	Quality Engineering	4	Total hrs	Unit Cost:	$65.00	$260

TOTALS $ 26,401

PLANNED % COMP: 0 ES 29SEP97 EF 31DEC97 LS 29SEP97 LF 31DEC97 BS 29SEP97 BF 31DEC97 AS --/--/-- AF --/--/--

MTEQCO	Equipment Checkout - Insert		(A03251)	Duration:	22
- 2810E	Fast & Storage Staff	8 Total hrs	Unit Cost:	$65.00	$520
- 2240E	Fuel Handling & Dissolution Supervision	4 Total hrs	Unit Cost:	$65.00	$260
- 2240B	Fuel Handling & Dissolution Operators	8 Total hrs	Unit Cost:	$40.64	$325
- 8119B	Equipment Operators	0 Total hrs	Unit Cost:	$45.53	$0
- 9840B	Radcon Techs	4 Total hrs	Unit Cost:	$52.05	$208
- 6100N	Quality Engineering	4 Total hrs	Unit Cost:	$45.53	$182
- 6200N	Inspection	4 Total hrs	Unit Cost:	$65.00	$260

TOTALS $ 1,755

PLANNED % COMP: 0 ES 02JAN98 EF 02FEB98 LS 02JAN98 LF 02FEB98 BS 02JAN98 BF 02FEB98 AS --/--/-- AF --/--/--

MTEQ5	Closeout for Equipment Fabrication		(A03251)	Duration:	3
- 8230N	Production Planning	4 Total hrs	Unit Cost:	$45.53	$182
- 2810E	Fast & Storage Staff	4 Total hrs	Unit Cost:	$65.00	$260
- 7130E	Fuel Storage & Fire Protection	2 Total hrs	Unit Cost:	$65.00	$130
- 6100E	Quality Engineering	2 Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 702

PLANNED % COMP: 0 ES 26FEB98 EF 02MAR98 LS 26FEB98 LF 02MAR98 BS 26FEB98 BF 02MAR98 AS --/--/-- AF --/--/--

MTEQ6	As-Build for Fabed Equipment		(A03251)	Duration:	42
- 7340N	Drafting	20 Total hrs	Unit Cost:	$45.53	$911
- 7340E	Drafting	20 Total hrs	Unit Cost:	$65.00	$1300
- 7110E	Support Facility and Design Team	4 Total hrs	Unit Cost:	$65.00	$260
- 2810E	Fast & Storage Staff	20 Total hrs	Unit Cost:	$65.00	$1300
- 8114E	Mech Foreman	4 Total hrs	Unit Cost:	$65.00	$260
- 7250E	Field Engineer	15 Total hrs	Unit Cost:	$65.00	$975

TOTALS $ 5,006

PLANNED % COMP: 0 ES 03MAR98 EF 29APR98 LS 03MAR98 LF 29APR98 BS 03MAR98 BF 29APR98 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A03251 >>>>>>>>>

WBS Total= $ 56,456

A03252 - Procedures

MTPRO1	Develop Procedures			(A03252) Duration:	66
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	8	Total hrs	Unit Cost: $65.00	$520
- 2810E	Fast & Storage Staff	20	Total hrs	Unit Cost: $65.00	$1300
- 8420E	Fuel Processing Util & Admin DC	112	Total hrs	Unit Cost: $65.00	$7280
- 6100E	Quality Engineering	4	Total hrs	Unit Cost: $65.00	$260
				TOTALS $	9,685
PLANNED % COMP: 0 ES 03SEP97 EF 04DEC97 LS 03SEP97 LF 04DEC97 BS 03SEP97 BF 04DEC97 AS --/--/-- AF --/--/--					
MTPRO2	Validate Procedures			(A03252) Duration:	10
- 2240B	Fuel Handling & Dissolution Operators	15	Total hrs	Unit Cost: $40.64	$610
- 2240E	Fuel Handling & Dissolution Supervision	15	Total hrs	Unit Cost: $65.00	$975
- 2810E	Fast & Storage Staff	15	Total hrs	Unit Cost: $65.00	$975
- 8420E	Fuel Processing Util & Admin DC	40	Total hrs	Unit Cost: $65.00	$2600
				TOTALS $	5,160
PLANNED % COMP: 0 ES 29DEC97 EF 12JAN98 LS 29DEC97 LF 12JAN98 BS 29DEC97 BF 12JAN98 AS --/--/-- AF --/--/--					
MTPRO3	ICPP Review			(A03252) Duration:	15
- 2810E	Fast & Storage Staff	20	Total hrs	Unit Cost: $65.00	$1300
- 6100E	Quality Engineering	16	Total hrs	Unit Cost: $65.00	$1040
- 7130E	Fuel Storage & Fire Protection	16	Total hrs	Unit Cost: $65.00	$1040
- 9240E	Environmental Assurance	16	Total hrs	Unit Cost: $65.00	$1040
- 9400E	Regulatory Affairs	16	Total hrs	Unit Cost: $65.00	$1040
- 9830E	RADCON Engineering	16	Total hrs	Unit Cost: $65.00	$1040
				TOTALS $	6,500
PLANNED % COMP: 0 ES 13JAN98 EF 02FEB98 LS 13JAN98 LF 02FEB98 BS 13JAN98 BF 02FEB98 AS --/--/-- AF --/--/--					

<<<<<<<<<< End of WBS A03252 >>>>>>>>>
WBS Total= $ 21,345

A03253 - Training

MTTR1	Prepartions for Training			(A03253) Duration: 40	
- 1352E	Training & Development	80	Total hrs	Unit Cost: $65.00	$5200
- 2240E	Fuel Handling & Dissolution Supervision	8	Total hrs	Unit Cost: $65.00	$520
- 2810E	Fast & Storage Staff	20	Total hrs	Unit Cost: $65.00	$1300
				TOTALS $	7,020
PLANNED % COMP: 0 ES 05DEC97 EF 02FEB98 LS 05DEC97 LF 02FEB98 BS 05DEC97 BF 02FEB98 AS --/--/-- AF --/--/--					
MTTR2	Training (20 Hours, 2 crews, 4 op each)			(A03253) Duration: 22	
- 1352E	Training & Development	40	Total hrs	Unit Cost: $65.00	$2600
- 2240B	Fuel Handling & Dissolution Operators	160	Total hrs	Unit Cost: $40.64	$6502
- 2240E	Fuel Handling & Dissolution Supervision	40	Total hrs	Unit Cost: $65.00	$2600
- 8119B	Equipment Operators	40	Total hrs	Unit Cost: $45.53	$1821
- 9840B	Radcon Techs	40	Total hrs	Unit Cost: $52.05	$2082
- 2810E	Fast & Storage Staff	20	Total hrs	Unit Cost: $65.00	$1300
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- IFSF	Iradiated Fuel Storage Facility	40	Each	Unit Cost: $.00	$0
				TOTALS $	16,905
PLANNED % COMP: 0 ES 03FEB98 EF 04MAR98 LS 03FEB98 LF 04MAR98 BS 03FEB98 BF 04MAR98 AS --/--/-- AF --/--/--					

<<<<<<<<<< End of WBS A03253 >>>>>>>>>
WBS Total= $ 23,925

A0326 - Readiness Assessment

MTORRDR	Dry Run for Fuel Handling			(A0326)	Duration:	5
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 2240E	Fuel Handling & Dissolution Supervision	16	Total hrs	Unit Cost:	$65.00	$1040
- 2240B	Fuel Handling & Dissolution Operators	32	Total hrs	Unit Cost:	$40.64	$1300
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	16	Total hrs	Unit Cost:	$52.05	$833
- 2810E	Fast & Storage Staff	16	hrs/day	Unit Cost:	$65.00	$5200
- 2001E	Operations Staff	16	hrs/day	Unit Cost:	$65.00	$5200
- 6600E	ORR Coordination	8	hrs/day	Unit Cost:	$65.00	$2600
- 1352E	Training & Development	8	hrs/day	Unit Cost:	$65.00	$2600
- 4300E	Calcine Immobilization	16	hrs/day	Unit Cost:	$65.00	$5200
- 9720E	Occupational Safty	8	hrs/day	Unit Cost:	$65.00	$2600
- 9830E	RADCON Engineering	8	hrs/day	Unit Cost:	$65.00	$2600
- 6500E	Performance Evaluation	8	hrs/day	Unit Cost:	$65.00	$2600
- 9510E	Criticality Safety	8	hrs/day	Unit Cost:	$65.00	$2600

TOTALS $ 34,737

PLANNED % COMP: 0 ES 05MAR98 EF 11MAR98 LS 05MAR98 LF 11MAR98 BS 05MAR98 BF 11MAR98 AS --/--/-- AF --/--/--

MTOR08	Readiness Assessment			(A0326)	Duration:	10
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 2240B	Fuel Handling & Dissolution Operators	80	Total hrs	Unit Cost:	$40.64	$3251
- 2810E	Fast & Storage Staff	8	hrs/day	Unit Cost:	$65.00	$5200
- 2001E	Operations Staff	16	hrs/day	Unit Cost:	$65.00	$10400
- 6600E	ORR Coordination	8	hrs/day	Unit Cost:	$65.00	$5200
- 1352E	Training & Development	8	hrs/day	Unit Cost:	$65.00	$5200
- 4300E	Calcine Immobilization	16	hrs/day	Unit Cost:	$65.00	$10400
- 9720E	Occupational Safty	8	hrs/day	Unit Cost:	$65.00	$5200

- 9830E	RADCON Engineering	8 hrs/day	Unit Cost: $65.00	$5200
- 6500E	Performance Evaluation	8 hrs/day	Unit Cost: $65.00	$5200
- 9510E	Criticality Safety	8 hrs/day	Unit Cost: $65.00	$5200

TOTALS $ 61,751

PLANNED % COMP: 0 ES 12MAR98 EF 25MAR98 LS 12MAR98 LF 25MAR98 BS 12MAR98 BF 25MAR98 AS --/--/-- AF --/--/--

MTOR09 Prepare Final Report (A0326) Duration: 10

- 2810E	Fast & Storage Staff	8 hrs/day	Unit Cost: $65.00	$5200
- 2001E	Operations Staff	16 hrs/day	Unit Cost: $65.00	$10400
- 6600E	ORR Coordination	8 hrs/day	Unit Cost: $65.00	$5200
- 1352E	Training & Development	8 hrs/day	Unit Cost: $65.00	$5200
- 4300E	Calcine Immobilization	16 hrs/day	Unit Cost: $65.00	$10400
- 9720E	Occupational Safty	8 hrs/day	Unit Cost: $65.00	$5200
- 9830E	RADCON Engineering	8 hrs/day	Unit Cost: $65.00	$5200
- 6500E	Performance Evaluation	8 hrs/day	Unit Cost: $65.00	$5200
- 9510E	Criticality Safety	8 hrs/day	Unit Cost: $65.00	$5200

TOTALS $ 57,200

PLANNED % COMP: 0 ES 26MAR98 EF 08APR98 LS 26MAR98 LF 08APR98 BS 26MAR98 BF 08APR98 AS --/--/-- AF --/--/--

MTOR10 Closure of Prestart Findings (A0326) Duration: 10

- 2810E	Fast & Storage Staff	8 hrs/day	Unit Cost: $65.00	$5200
- 2240E	Fuel Handling & Dissolution Supervision	4 hrs/day	Unit Cost: $65.00	$2600
- 2240B	Fuel Handling & Dissolution Operators	8 hrs/day	Unit Cost: $40.64	$3251

TOTALS $ 11,051

PLANNED % COMP: 0 ES 09APR98 EF 22APR98 LS 09APR98 LF 22APR98 BS 09APR98 BF 22APR98 AS --/--/-- AF --/--/--

MTORR Approval to Start Operation (A0326) Duration: 5

PLANNED % COMP: 0 ES 23APR98 EF 29APR98 LS 23APR98 LF 29APR98 BS 23APR98 BF 29APR98 AS --/--/-- AF --/--/--

MTRR Ready for Receipt of fuel (A0326) Duration: 0

PLANNED % COMP: 0 ES 30APR98 EF 29APR98 LS 30APR98 LF 29APR98 BS 30APR98 BF 29APR98 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0326 Readiness Assessment >>>>>>>>>

WBS Total= $ 164,739

INEL Spent Nuclear Fuel Consolidation
Planning Package
Fiscal Year 1996 Budget Request

Cost Account Title: TRA MTR Canal SNF Characterization, Repackaging, and Transfe

CWBS Code: A03 | Cost Account Manager:

Activity Data Sheet: | Budget and Reporting Classification:

Funding Type: Operating | Date Prepared:

Objective of Cost Account:
Repackage all nuclear fuel stored in the MTR canal, transfer it to ICPP, and store it in the Irradiated Fuel Storage Facility (IFSF).

Planning Package - A033 - Fuel Transfer Operations

Driver.Code(s):
Driver Reference:
None

Scope of Work: Remove canned fuel from storage in the MTR Canal, repackage, transport to the IFSF in the TFBP-2 cask and store it in the IFSF.

Assumptions/Prequestites/Program Guidance:
Shipper ORR completed prior to starting fuel handling operations.
Receiver RA completed prior to starting fuel handling operations.
Shipper and receiver dry runs will be coordinated to demonstrate complete cyclle
IFSF will be operated by crews on shift, 24 hours/day, 7 days/week.
ATR Hot Cell # 2 Upgrade Completed.
Shipments will include the canned ARMF/CFRMF filter block.
Shipments will include the canned LOFT center assembly.
One shipment per week can be received and stored at the IFSF in parallel with other activities scheduled for the facility.

Deliverables:

All MTR Canal canned fuel stored in the IFSF.

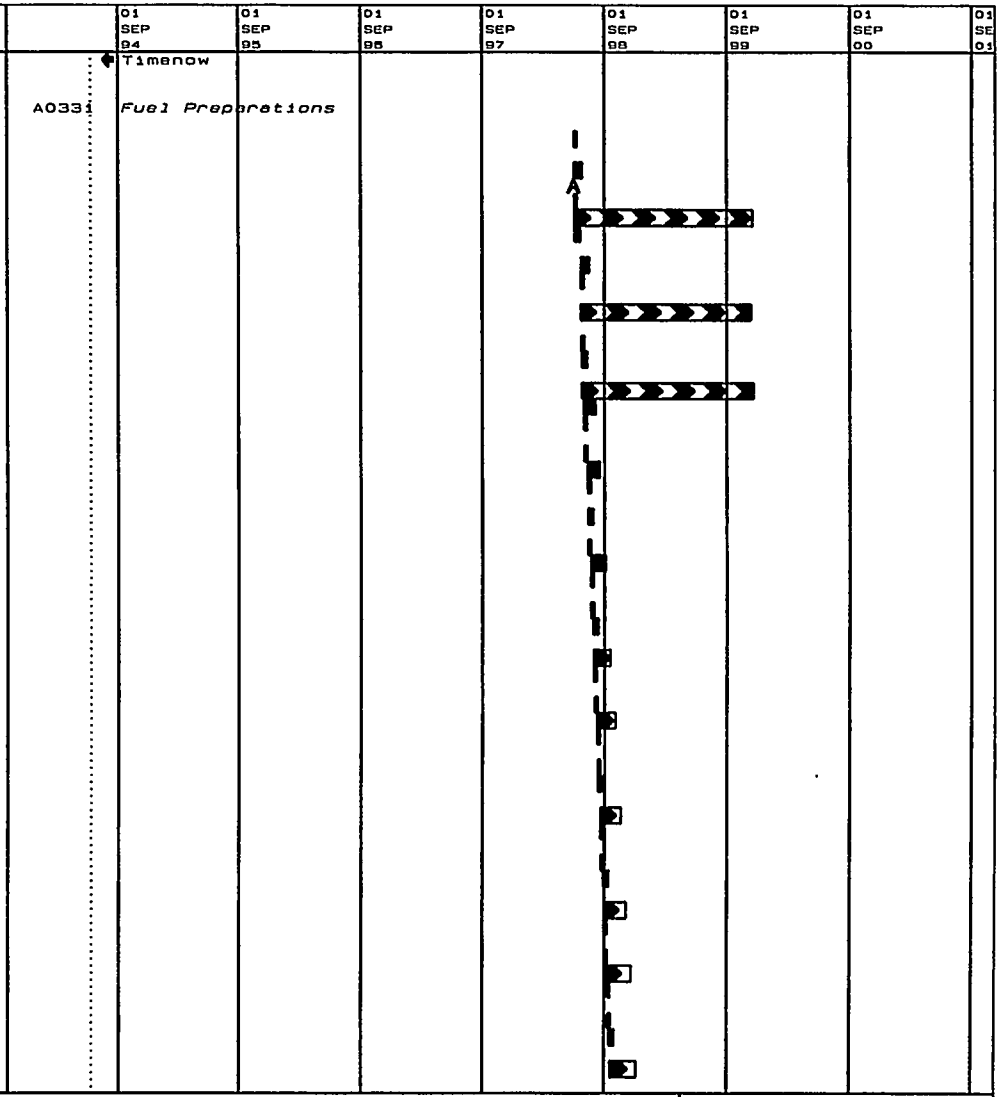
Milestones:

Commence fuel transfers.
All MTR Canal canned fuel stored at ICPP.

SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation

Activity	Description	Dur	Early Start	Early Finish
A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe				
MT01001	CANAL OPS SEQUENCE A, B & C CYCLE 01	6	02JUN98	09JUN98
MT01000	CYCLE -01	18	02JUN98	25JUN98
MT001090	START FUEL TRANSFER OPERATIONS	0	02JUN98	------
MT01002	WE-2 CASK SEQUENCE A, B & C CYCLE 01	6	03JUN98	10JUN98
MT01102	CYCLE 02 THRU 33 WE CASK	376	03JUN98	16NOV99
MT01004	HOT CELL OPS SEQUENCE A, B & C CYCLE 01	11	05JUN98	19JUN98
MT02000	CYCLE -02	18	23JUN98	16JUL98
MT02001	CANAL OPS SEQUENCE A, B & C CYCLE 02	6	23JUN98	30JUN98
MT01101	CYCLE 02 THRU 33 - CANAL OPS SEQ A, B & C	360	23JUN98	12NOV99
MT02002	WE-2 CASK SEQUENCE A, B & C CYCLE 02	6	24JUN98	01JUL98
MT02004	HOT CELL OPS SEQUENCE A, B & C CYCLE 02	11	25JUN98	10JUL98
MT01104	CYCLE 02 THRU 33 HOT CELL OPERATIONS	362	26JUN98	19NOV99
MT03000	CYCLE -03	23	02JUL98	03AUG98
MT03001	CANAL OPS SEQUENCE A, B & C CYCLE 03	6	02JUL98	09JUL98
MT03002	WE-2 CASK SEQUENCE A, B & C CYCLE 03	6	03JUL98	10JUL98
MT04000	CYCLE -04	27	13JUL98	18AUG98
MT04001	CANAL OPS SEQUENCE A, B & C CYCLE 04	6	13JUL98	20JUL98
MT03004	HOT CELL OPS SEQUENCE A, B & C CYCLE 03	11	14JUL98	28JUL98
MT04002	WE-2 CASK SEQUENCE A, B & C CYCLE 04	6	14JUL98	21JUL98
MT05000	CYCLE -05	31	22JUL98	02SEP98
MT05001	CANAL OPS SEQUENCE A, B & C CYCLE 05	6	22JUL98	29JUL98
MT05002	WE-2 CASK SEQUENCE A, B & C CYCLE 05	6	23JUL98	30JUL98
MT04004	HOT CELL OPS SEQUENCE A, B & C CYCLE 04	11	29JUL98	12AUG98
MT06000	CYCLE -06	35	31JUL98	17SEP98
MT06001	CANAL OPS SEQUENCE A, B & C CYCLE 06	6	31JUL98	07AUG98
MT06002	WE-2 CASK SEQUENCE A, B & C CYCLE 06	6	03AUG98	10AUG98
MT07000	CYCLE -07	39	11AUG98	02OCT98
MT07001	CANAL OPS SEQUENCE A, B & C CYCLE 07	6	11AUG98	18AUG98
MT07002	WE-2 CASK SEQUENCE A, B & C CYCLE 07	6	12AUG98	19AUG98
MT05004	HOT CELL OPS SEQUENCE A, B & C CYCLE 05	11	13AUG98	27AUG98
MT08000	CYCLE -08	43	20AUG98	19OCT98
MT08001	CANAL OPS SEQUENCE A, B & C CYCLE 08	6	20AUG98	27AUG98
MT08002	WE-2 CASK SEQUENCE A, B & C CYCLE 08	6	21AUG98	28AUG98
MT06004	HOT CELL OPS SEQUENCE A, B & C CYCLE 06	11	28AUG98	11SEP98
MT09000	CYCLE -09	47	31AUG98	03NOV98
MT09001	CANAL OPS SEQUENCE A, B & C CYCLE 09	6	31AUG98	07SEP98
MT09002	WE-2 CASK SEQUENCE A, B & C CYCLE 09	6	01SEP98	08SEP98
MT10000	CYCLE -10	51	09SEP98	19NOV98
MT10001	CANAL OPS SEQUENCE A, B & C CYCLE 10	6	09SEP98	16SEP98
MT10002	WE-2 CASK SEQUENCE A, B & C CYCLE 10	6	10SEP98	17SEP98
MT07004	HOT CELL OPS SEQUENCE A, B & C CYCLE 07	11	14SEP98	28SEP98
MT11000	CYCLE -11	55	18SEP98	04DEC98



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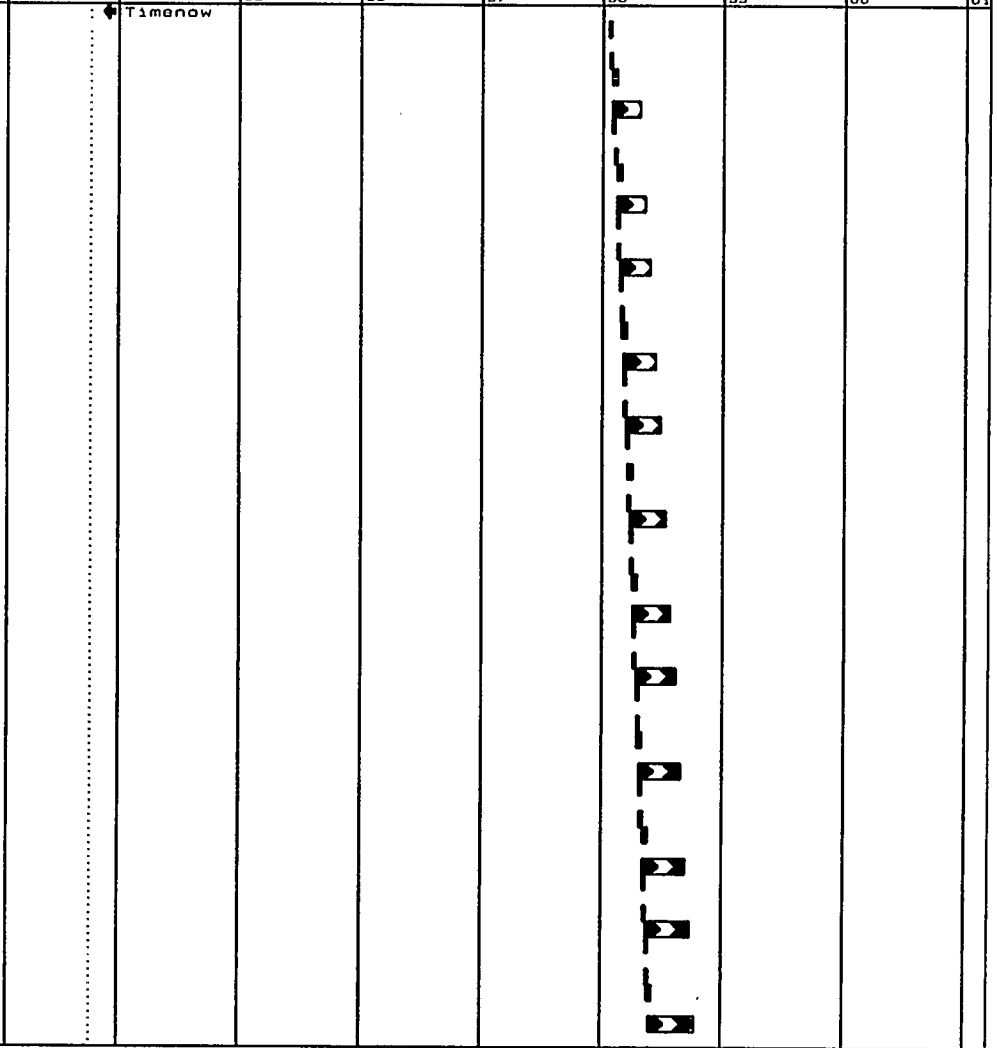
Activity	Description	Dur	Early Start	Early Finish
MT11001	CANAL OPS SEQUENCE A, B & C CYCLE 11	6	18SEP98	25SEP98
MT11002	WE-2 CASK SEQUENCE A, B & C CYCLE 11	6	21SEP98	28SEP98
MT08004	HOT CELL OPS SEQUENCE A, B & C CYCLE 08	11	29SEP98	13OCT98
MT12000	CYCLE -12	59	29SEP98	21DEC98
MT12001	CANAL OPS SEQUENCE A, B & C CYCLE 12	6	29SEP98	06OCT98
MT12002	WE-2 CASK SEQUENCE A, B & C CYCLE 12	6	06OCT98	13OCT98
MT09004	HOT CELL OPS SEQUENCE A, B & C CYCLE 09	11	14OCT98	28OCT98
MT13000	CYCLE -13	59	14OCT98	07JAN99
MT13001	CANAL OPS SEQUENCE A, B & C CYCLE 13	6	14OCT98	21OCT98
MT13002	WE-2 CASK SEQUENCE A, B & C CYCLE 13	6	15OCT98	22OCT98
MT14000	CYCLE -14	63	23OCT98	22JAN99
MT14001	CANAL OPS SEQUENCE A, B & C CYCLE 14	6	23OCT98	30OCT98
MT14002	WE-2 CASK SEQUENCE A, B & C CYCLE 14	6	26OCT98	02NOV98
MT10004	HOT CELL OPS SEQUENCE A, B & C CYCLE 10	11	29OCT98	13NOV98
MT15000	CYCLE -15	67	03NOV98	08FEB99
MT15001	CANAL OPS SEQUENCE A, B & C CYCLE 15	6	03NOV98	10NOV98
MT15002	WE-2 CASK SEQUENCE A, B & C CYCLE 15	6	04NOV98	12NOV98
MT16000	CYCLE -16	72	13NOV98	24FEB99
MT16001	CANAL OPS SEQUENCE A, B & C CYCLE 16	6	13NOV98	20NOV98
MT11004	HOT CELL OPS SEQUENCE A, B & C CYCLE 11	11	16NOV98	30NOV98
MT16002	WE-2 CASK SEQUENCE A, B & C CYCLE 16	6	16NOV98	23NOV98
MT17000	CYCLE -17	76	24NOV98	11MAR99
MT17001	CANAL OPS SEQUENCE A, B & C CYCLE 17	6	24NOV98	01DEC98
MT17002	WE-2 CASK SEQUENCE A, B & C CYCLE 17	6	25NOV98	02DEC98
MT12004	HOT CELL OPS SEQUENCE A, B & C CYCLE 12	11	01DEC98	15DEC98
MT18000	CYCLE -18	80	03DEC98	26MAR99
MT18001	CANAL OPS SEQUENCE A, B & C CYCLE 18	6	03DEC98	10DEC98
MT18002	WE-2 CASK SEQUENCE A, B & C CYCLE 18	6	04DEC98	11DEC98
MT19000	CYCLE -19	84	14DEC98	12APR99
MT19001	CANAL OPS SEQUENCE A, B & C CYCLE 19	6	14DEC98	21DEC98
MT19002	WE-2 CASK SEQUENCE A, B & C CYCLE 19	6	15DEC98	22DEC98
MT13004	HOT CELL OPS SEQUENCE A, B & C CYCLE 13	11	16DEC98	31DEC98
MT20000	CYCLE -20	88	23DEC98	27APR99
MT20001	CANAL OPS SEQUENCE A, B & C CYCLE 20	6	23DEC98	31DEC98
MT20002	WE-2 CASK SEQUENCE A, B & C CYCLE 20	6	24DEC98	04JAN99
MT14004	HOT CELL OPS SEQUENCE A, B & C CYCLE 14	11	04JAN99	18JAN99
MT21000	CYCLE -21	92	05JAN99	12MAY99
MT21001	CANAL OPS SEQUENCE A, B & C CYCLE 21	6	05JAN99	12JAN99
MT21002	WE-2 CASK SEQUENCE A, B & C CYCLE 21	6	06JAN99	13JAN99
MT22000	CYCLE -22	96	14JAN99	27MAY99
MT22001	CANAL OPS SEQUENCE A, B & C CYCLE 22	6	14JAN99	21JAN99
MT22002	WE-2 CASK SEQUENCE A, B & C CYCLE 22	6	15JAN99	22JAN99
MT15004	HOT CELL OPS SEQUENCE A, B & C CYCLE 15	11	19JAN99	02FEB99
MT23000	CYCLE -23	100	25JAN99	11JUN99



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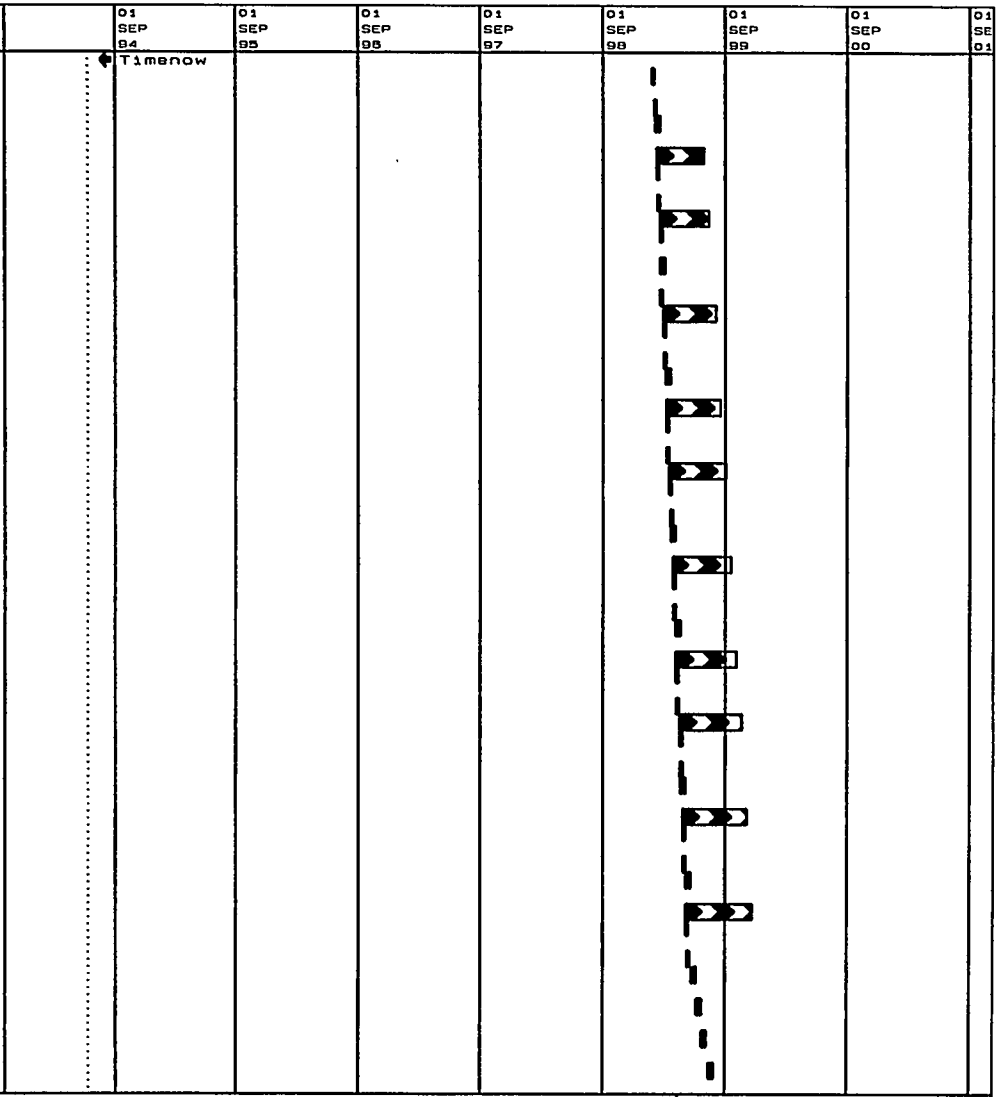
MT23001	CANAL OPS SEQUENCE A, B & C CYCLE 23	6	25JAN99	01FEB99
MT23002	WE-2 CASK SEQUENCE A, B & C CYCLE 23	6	01FEB99	08FEB99
MT16004	HOT CELL OPS SEQUENCE A, B & C CYCLE 16	11	04FEB99	18FEB99
MT24000	CYCLE -24	100	09FEB99	28JUN99
MT24001	CANAL OPS SEQUENCE A, B & C CYCLE 24	6	09FEB99	16FEB99
MT24002	WE-2 CASK SEQUENCE A, B & C CYCLE 24	6	10FEB99	17FEB99
MT25000	CYCLE -25	104	18FEB99	13JUL99
MT25001	CANAL OPS SEQUENCE A, B & C CYCLE 25	6	18FEB99	25FEB99
MT17004	HOT CELL OPS SEQUENCE A, B & C CYCLE 17	11	19FEB99	05MAR99
MT25002	WE-2 CASK SEQUENCE A, B & C CYCLE 25	6	19FEB99	26FEB99
MT26000	CYCLE -26	112	01MAR99	03AUG99
MT26001	CANAL OPS SEQUENCE A, B & C CYCLE 26	6	01MAR99	08MAR99
MT26002	WE-2 CASK SEQUENCE A, B & C CYCLE 26	6	02MAR99	09MAR99
MT18004	HOT CELL OPS SEQUENCE A, B & C CYCLE 18	11	08MAR99	22MAR99
MT27000	CYCLE -27	116	10MAR99	18AUG99
MT27001	CANAL OPS SEQUENCE A, B & C CYCLE 27	6	10MAR99	17MAR99
MT27002	WE-2 CASK SEQUENCE A, B & C CYCLE 27	6	11MAR99	18MAR99
MT28000	CYCLE -28	120	19MAR99	02SEP99
MT28001	CANAL OPS SEQUENCE A, B & C CYCLE 28	6	19MAR99	26MAR99
MT28002	WE-2 CASK SEQUENCE A, B & C CYCLE 28	6	22MAR99	29MAR99
MT19004	HOT CELL OPS SEQUENCE A, B & C CYCLE 19	11	23MAR99	06APR99
MT29000	CYCLE -29	124	30MAR99	17SEP99
MT29001	CANAL OPS SEQUENCE A, B & C CYCLE 29	6	30MAR99	06APR99
MT29002	WE-2 CASK SEQUENCE A, B & C CYCLE 29	6	31MAR99	07APR99
MT20004	HOT CELL OPS SEQUENCE A, B & C CYCLE 20	11	07APR99	21APR99
MT30000	CYCLE -30	128	08APR99	04OCT99
MT30001	CANAL OPS SEQUENCE A, B & C CYCLE 30	6	08APR99	15APR99
MT30002	WE-2 CASK SEQUENCE A, B & C CYCLE 30	6	09APR99	16APR99
MT31000	CYCLE -31	132	19APR99	19OCT99
MT31001	CANAL OPS SEQUENCE A, B & C CYCLE 31	6	19APR99	26APR99
MT31002	WE-2 CASK SEQUENCE A, B & C CYCLE 31	6	20APR99	27APR99
MT21004	HOT CELL OPS SEQUENCE A, B & C CYCLE 21	11	22APR99	06MAY99
MT32000	CYCLE -32	136	28APR99	03NOV99
MT32001	CANAL OPS SEQUENCE A, B & C CYCLE 32	6	28APR99	05MAY99
MT32002	WE-2 CASK SEQUENCE A, B & C CYCLE 32	6	29APR99	06MAY99
MT22004	HOT CELL OPS SEQUENCE A, B & C CYCLE 22	11	07MAY99	21MAY99
MT33000	CYCLE -33	140	07MAY99	19NOV99
MT33001	CANAL OPS SEQUENCE A, B & C CYCLE 33	6	07MAY99	14MAY99
MT33002	WE-2 CASK SEQUENCE A, B & C CYCLE 33	6	10MAY99	17MAY99
MT23004	HOT CELL OPS SEQUENCE A, B & C CYCLE 23	11	24MAY99	07JUN99
MT24004	HOT CELL OPS SEQUENCE A, B & C CYCLE 24	11	08JUN99	22JUN99
MT25004	HOT CELL OPS SEQUENCE A, B & C CYCLE 25	11	23JUN99	07JUL99
MT26004	HOT CELL OPS SEQUENCE A, B & C CYCLE 26	11	14JUL99	28JUL99



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SNF/SNM Consolidation Schedule

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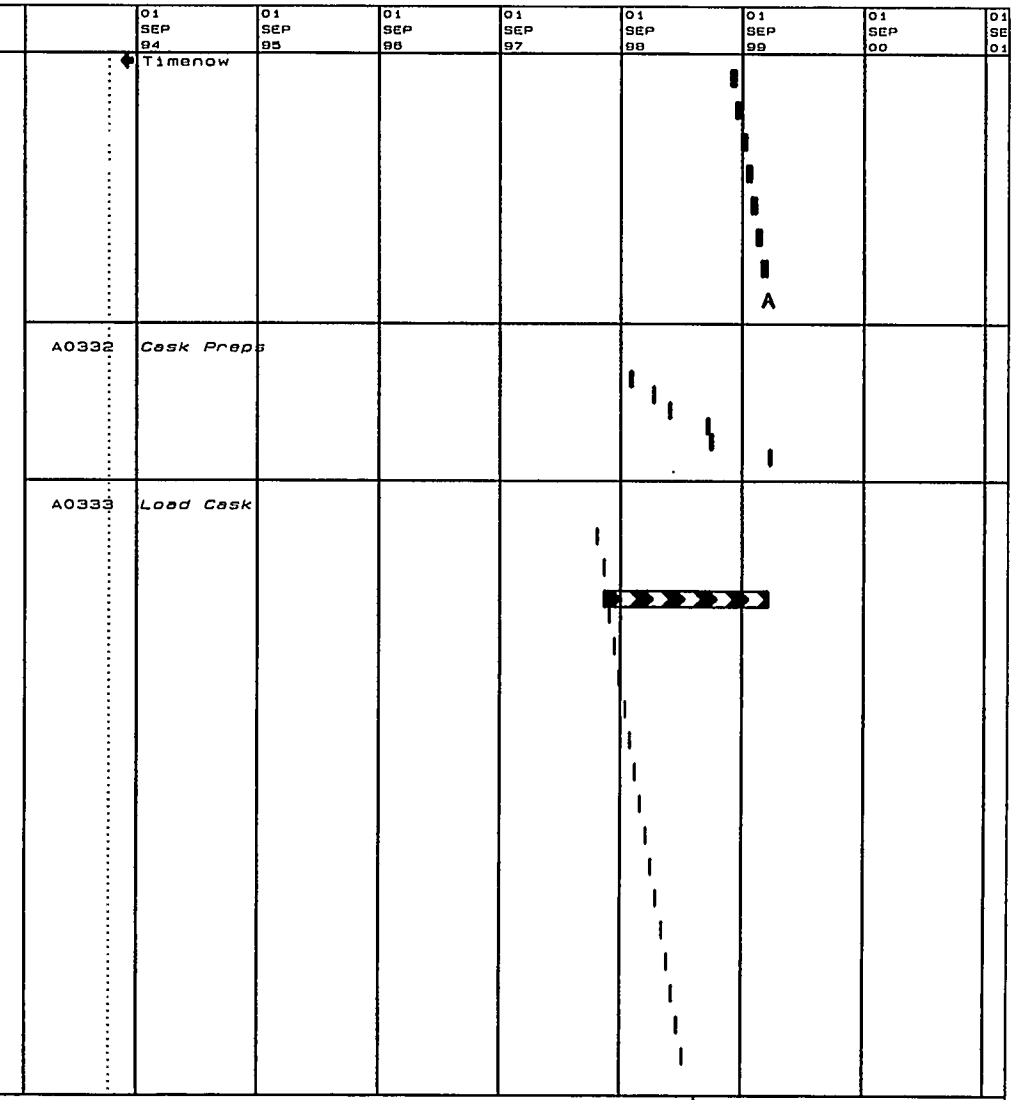
Activity	Description	Dur	Early Start	Early Finish
MT27004	HOT CELL OPS SEQUENCE A, B & C CYCLE 27	11	29JUL99	12AUG99
MT28004	HOT CELL OPS SEQUENCE A, B & C CYCLE 28	11	13AUG99	27AUG99
MT29004	HOT CELL OPS SEQUENCE A, B & C CYCLE 29	11	30AUG99	13SEP99
MT30004	HOT CELL OPS SEQUENCE A, B & C CYCLE 30	11	14SEP99	28SEP99
MT31004	HOT CELL OPS SEQUENCE A, B & C CYCLE 31	11	29SEP99	13OCT99
MT32004	HOT CELL OPS SEQUENCE A, B & C CYCLE 32	11	14OCT99	28OCT99
MT33004	HOT CELL OPS SEQUENCE A, B & C CYCLE 33	11	29OCT99	15NOV99
MT3M10	M10 - COMPLETE FUEL SHIPMENTS TO CPP	0	19NOV99	------
MT11008	Decon and PM WE-2 Cask	5	29SEP98	05OCT98
MT11013	Decon and PM TFBP-2 Cask	5	07DEC98	11DEC98
MT22008	Decon and PM WE-2 Cask	5	25JAN99	29JAN99
MT33008	DECON WE-2 AND STORE	5	18MAY99	24MAY99
MT22013	Decon and PM TFBP-2 Cask	5	28MAY99	03JUN99
MT33013	Decon and PM TFPB-2 Cask	5	22NOV99	26NOV99
MT01007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	22JUN98	22JUN98
MT02007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	13JUL98	13JUL98
MT01107	CYCLE 02 THRU 33 CASK LOADING	350	13JUL98	18NOV99
MT03007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	29JUL98	29JUL98
MT04007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	13AUG98	13AUG98
MT05007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	28AUG98	28AUG98
MT06007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	14SEP98	14SEP98
MT07007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	29SEP98	29SEP98
MT08007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	14OCT98	14OCT98
MT09007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	29OCT98	29OCT98
MT10007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	16NOV98	16NOV98
MT11007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	01DEC98	01DEC98
MT12007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	16DEC98	16DEC98
MT13007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	04JAN99	04JAN99
MT14007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	19JAN99	19JAN99
MT15007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	03FEB99	03FEB99
MT16007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	19FEB99	19FEB99
MT17007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	08MAR99	08MAR99



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SNF/SNM Consolidation Schedule

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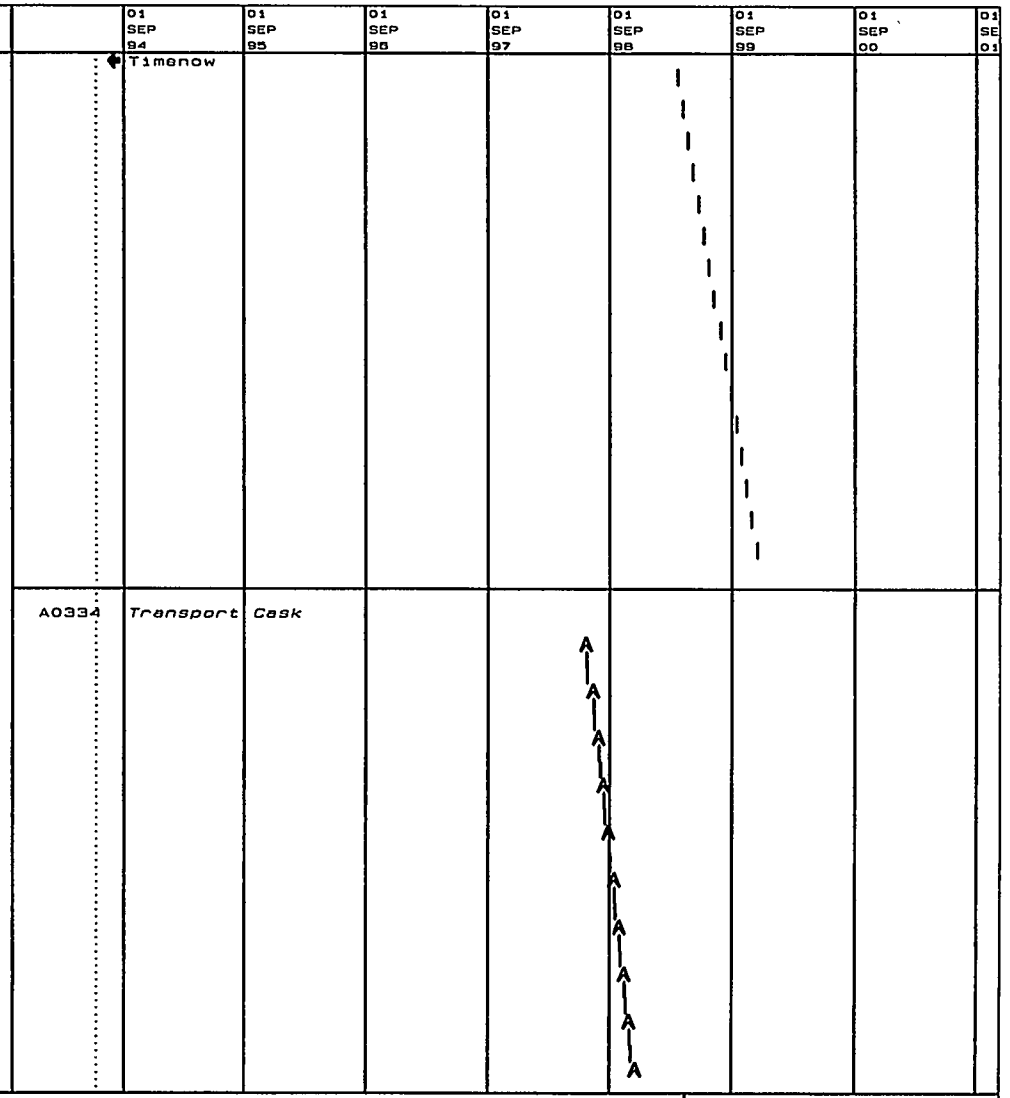
MT18007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	23MAR99	23MAR99
MT19007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	07APR99	07APR99
MT20007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	22APR99	22APR99
MT21007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	07MAY99	07MAY99
MT22007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	24MAY99	24MAY99
MT23007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	08JUN99	08JUN99
MT24007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	23JUN99	23JUN99
MT25007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	08JUL99	08JUL99
MT26007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	29JUL99	29JUL99
MT27007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	13AUG99	13AUG99
MT28007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	30AUG99	30AUG99
MT29007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	14SEP99	14SEP99
MT30007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	29SEP99	29SEP99
MT31007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	14OCT99	14OCT99
MT32007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	29OCT99	29OCT99
MT33007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE	1	16NOV99	16NOV99
A0334	Transport Cask			
MT01009	TFBP-2 CASK LOADED	0	23JUN98	------
MT01010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	23JUN98	23JUN98
MT01012	RETURN TFBP-2 TO ATR	1	25JUN98	25JUN98
MT02009	TFBP-2 CASK LOADED	0	14JUL98	------
MT02010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	14JUL98	14JUL98
MT02012	RETURN TFBP-2 TO ATR	1	16JUL98	16JUL98
MT03009	TFBP-2 CASK LOADED	0	30JUL98	------
MT03010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	30JUL98	30JUL98
MT03012	RETURN TFBP-2 TO ATR	1	03AUG98	03AUG98
MT04009	TFBP-2 CASK LOADED	0	14AUG98	------
MT04010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	14AUG98	14AUG98
MT04012	RETURN TFBP-2 TO ATR	1	18AUG98	18AUG98
MT05009	TFBP-2 CASK LOADED	0	31AUG98	------
MT05010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	31AUG98	31AUG98
MT05012	RETURN TFBP-2 TO ATR	1	02SEP98	02SEP98
MT06009	TFBP-2 CASK LOADED	0	15SEP98	------
MT06010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	15SEP98	15SEP98
MT06012	RETURN TFBP-2 TO ATR	1	17SEP98	17SEP98
MT07009	TFBP-2 CASK LOADED	0	30SEP98	------
MT07010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	30SEP98	30SEP98
MT07012	RETURN TFBP-2 TO ATR	1	02OCT98	02OCT98
MT08009	TFBP-2 CASK LOADED	0	15OCT98	------
MT08010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	15OCT98	15OCT98
MT08012	RETURN TFBP-2 TO ATR	1	19OCT98	19OCT98
MT09009	TFBP-2 CASK LOADED	0	30OCT98	------
MT09010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	30OCT98	30OCT98
MT09012	RETURN TFBP-2 TO ATR	1	03NOV98	03NOV98
MT10009	TFBP-2 CASK LOADED	0	17NOV98	------



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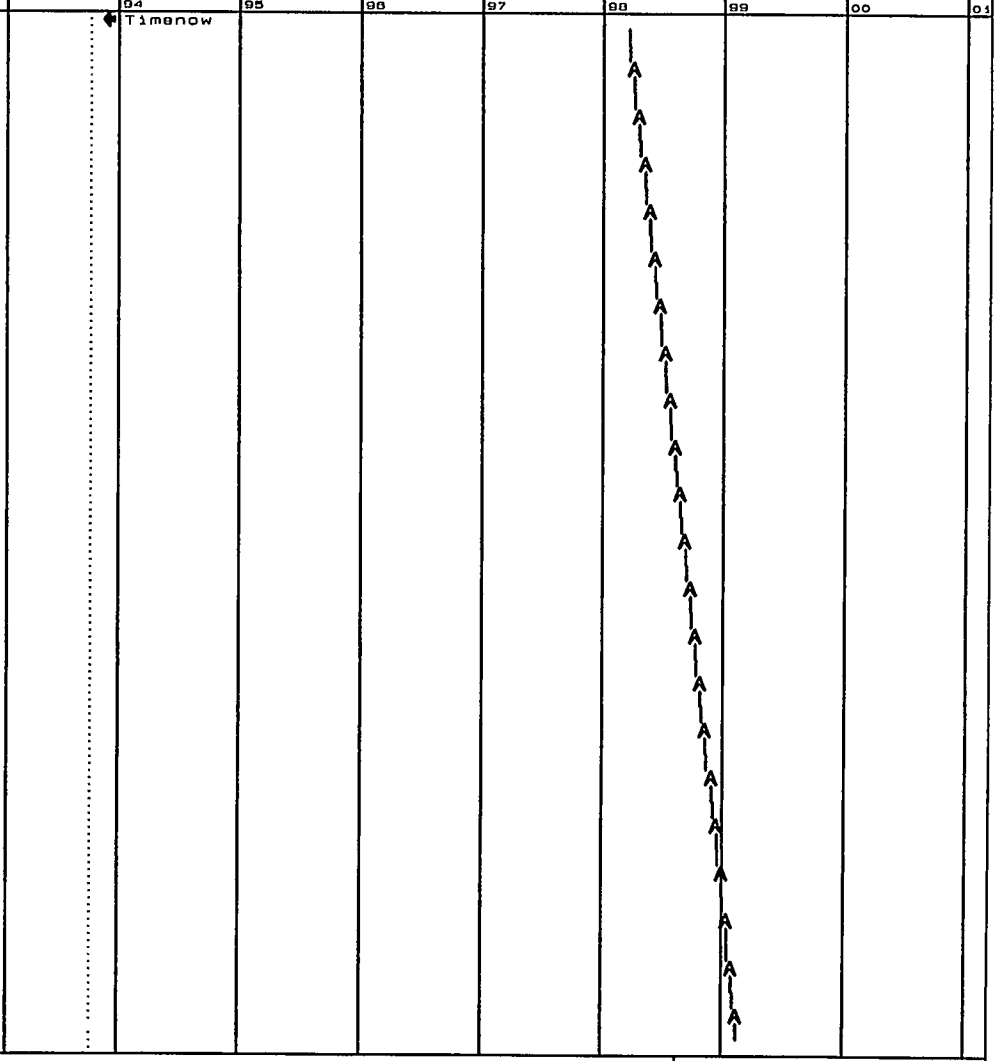
MT10010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	17NOV98	17NOV98
MT10012	RETURN TF8P-2 TO ATR	1	19NOV98	19NOV98
MT11009	TF8P-2 CASK LOADED	0	02DEC98	------
MT11010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	02DEC98	02DEC98
MT11012	RETURN TF8P-2 TO ATR	1	04DEC98	04DEC98
MT12009	TF8P-2 CASK LOADED	0	17DEC98	------
MT12010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	17DEC98	17DEC98
MT12012	RETURN TF8P-2 TO ATR	1	21DEC98	21DEC98
MT13009	TF8P-2 CASK LOADED	0	05JAN99	------
MT13010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	05JAN99	05JAN99
MT13012	RETURN TF8P-2 TO ATR	1	07JAN99	07JAN99
MT14009	TF8P-2 CASK LOADED	0	20JAN99	------
MT14010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	20JAN99	20JAN99
MT14012	RETURN TF8P-2 TO ATR	1	22JAN99	22JAN99
MT15009	TF8P-2 CASK LOADED	0	04FEB99	------
MT15010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	04FEB99	04FEB99
MT15012	RETURN TF8P-2 TO ATR	1	08FEB99	08FEB99
MT16009	TF8P-2 CASK LOADED	0	22FEB99	------
MT16010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	22FEB99	22FEB99
MT16012	RETURN TF8P-2 TO ATR	1	24FEB99	24FEB99
MT17009	TF8P-2 CASK LOADED	0	09MAR99	------
MT17010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	09MAR99	09MAR99
MT17012	RETURN TF8P-2 TO ATR	1	11MAR99	11MAR99
MT18009	TF8P-2 CASK LOADED	0	24MAR99	------
MT18010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	24MAR99	24MAR99
MT18012	RETURN TF8P-2 TO ATR	1	26MAR99	26MAR99
MT19009	TF8P-2 CASK LOADED	0	08APR99	------
MT19010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	08APR99	08APR99
MT19012	RETURN TF8P-2 TO ATR	1	12APR99	12APR99
MT20009	TF8P-2 CASK LOADED	0	23APR99	------
MT20010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	23APR99	23APR99
MT20012	RETURN TF8P-2 TO ATR	1	27APR99	27APR99
MT21009	TF8P-2 CASK LOADED	0	10MAY99	------
MT21010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	10MAY99	10MAY99
MT21012	RETURN TF8P-2 TO ATR	1	12MAY99	12MAY99
MT22009	TF8P-2 CASK LOADED	0	25MAY99	------
MT22010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	25MAY99	25MAY99
MT22012	RETURN TF8P-2 TO ATR	1	27MAY99	27MAY99
MT23009	TF8P-2 CASK LOADED	0	09JUN99	------
MT23010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	09JUN99	09JUN99
MT23012	RETURN TF8P-2 TO ATR	1	11JUN99	11JUN99
MT24009	TF8P-2 CASK LOADED	0	24JUN99	------
MT24010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	24JUN99	24JUN99
MT24012	RETURN TF8P-2 TO ATR	1	28JUN99	28JUN99
MT25009	TF8P-2 CASK LOADED	0	09JUL99	------
MT25010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	09JUL99	09JUL99
MT25012	RETURN TF8P-2 TO ATR	1	13JUL99	13JUL99
MT26009	TF8P-2 CASK LOADED	0	30JUL99	------
MT26010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	30JUL99	30JUL99
MT26012	RETURN TF8P-2 TO ATR	1	03AUG99	03AUG99
MT27009	TF8P-2 CASK LOADED	0	16AUG99	------
MT27010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	16AUG99	16AUG99
MT27012	RETURN TF8P-2 TO ATR	1	18AUG99	18AUG99
MT28009	TF8P-2 CASK LOADED	0	31AUG99	------
MT28010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	31AUG99	31AUG99
MT28012	RETURN TF8P-2 TO ATR	1	02SEP99	02SEP99
MT29009	TF8P-2 CASK LOADED	0	15SEP99	------
MT29010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	15SEP99	15SEP99
MT29012	RETURN TF8P-2 TO ATR	1	17SEP99	17SEP99
MT30009	TF8P-2 CASK LOADED	0	30SEP99	------
MT30010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	30SEP99	30SEP99
MT30012	RETURN TF8P-2 TO ATR	1	04OCT99	04OCT99
MT31009	TF8P-2 CASK LOADED	0	15OCT99	------
MT31010	TRANSPORT TF8P-2 TO CPP AND RECEIVE	1	15OCT99	15OCT99



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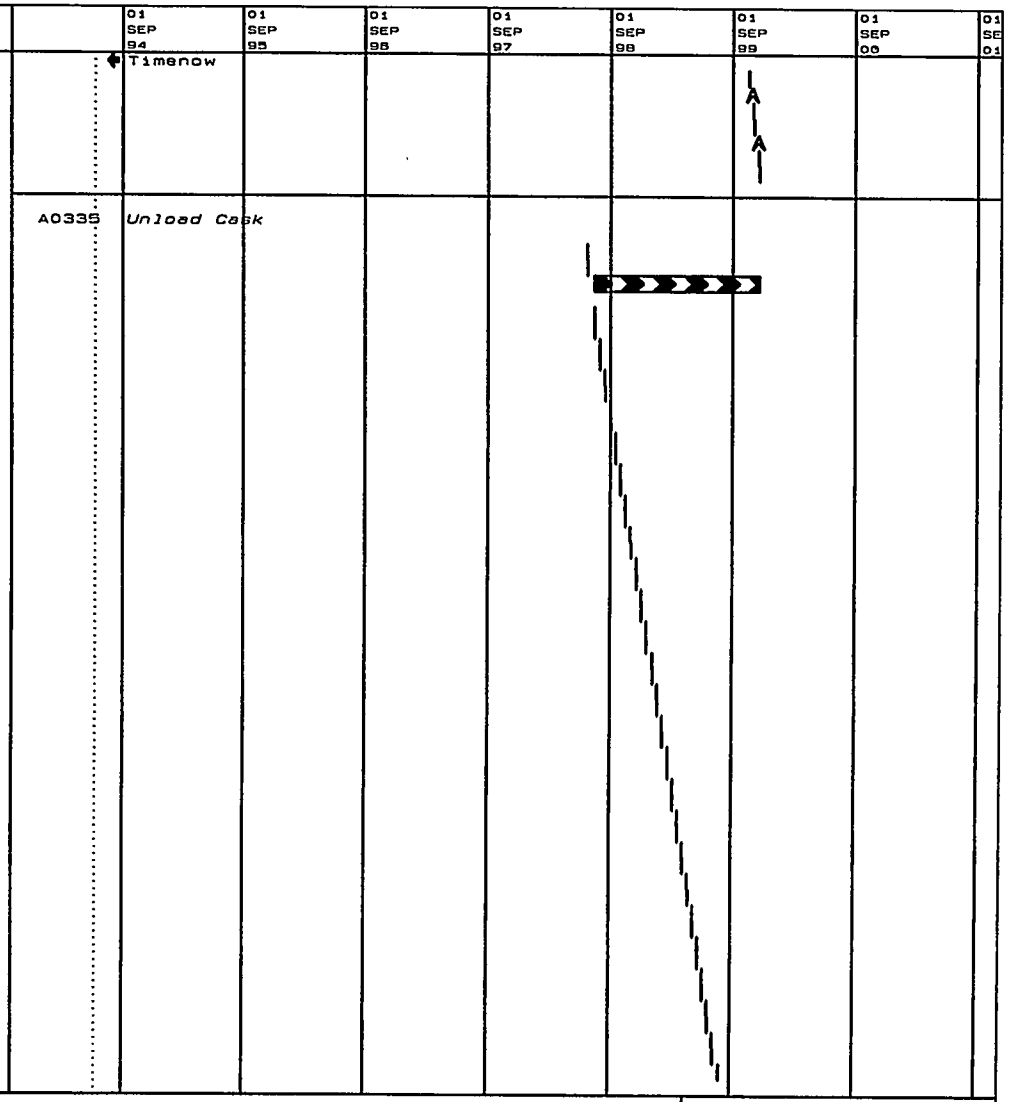
SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation

Activity	Description	Dur	Early Start	Early Finish
MT31012	RETURN TFBP-2 TO ATR	1	19OCT99	19OCT99
MT32009	TFBP-2 CASK LOADED	0	01NOV99	------
MT32010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	01NOV99	01NOV99
MT32012	RETURN TFBP-2 TO ATR	1	03NOV99	03NOV99
MT33009	TFBP-2 CASK LOADED	0	17NOV99	------
MT33010	TRANSPORT TFBP-2 TO CPP AND RECEIVE	1	17NOV99	17NOV99
MT33012	RETURN TFBP-2 TO ATR	1	19NOV99	19NOV99
MT01013	Swap Transfer Cart Adapters	1	23JUN98	23JUN98
MT01011	UNLOAD TFBP-2 AT CPP	1	24JUN98	24JUN98
MT01110	CYCLE 02 THRU 33 TRANSPORT TO CPP/RETURN TO ATR	350	14JUL98	19NOV99
MT02013	Swap Transfer Cart Adapters	1	14JUL98	14JUL98
MT02011	UNLOAD TFBP-2 AT CPP	1	15JUL98	15JUL98
MT03013	Swap Transfer Cart Adapters	1	30JUL98	30JUL98
MT03011	UNLOAD TFBP-2 AT CPP	1	31JUL98	31JUL98
MT04013	Swap Transfer Cart Adapters	1	14AUG98	14AUG98
MT04011	UNLOAD TFBP-2 AT CPP	1	17AUG98	17AUG98
MT05013	Swap Transfer Cart Adapters	1	31AUG98	31AUG98
MT05011	UNLOAD TFBP-2 AT CPP	1	01SEP98	01SEP98
MT06013	Swap Transfer Cart Adapters	1	15SEP98	15SEP98
MT06011	UNLOAD TFBP-2 AT CPP	1	16SEP98	16SEP98
MT07013	Swap Transfer Cart Adapters	1	30SEP98	30SEP98
MT07011	UNLOAD TFBP-2 AT CPP	1	01OCT98	01OCT98
MT08013	Swap Transfer Cart Adapters	1	15OCT98	15OCT98
MT08011	UNLOAD TFBP-2 AT CPP	1	16OCT98	16OCT98
MT09013	Swap Transfer Cart Adapters	1	30OCT98	30OCT98
MT09011	UNLOAD TFBP-2 AT CPP	1	02NOV98	02NOV98
MT10013	Swap Transfer Cart Adapters	1	17NOV98	17NOV98
MT10011	UNLOAD TFBP-2 AT CPP	1	18NOV98	18NOV98
MT11014	Swap Transfer Cart Adapters	1	02DEC98	02DEC98
MT11011	UNLOAD TFBP-2 AT CPP	1	03DEC98	03DEC98
MT12013	Swap Transfer Cart Adapters	1	17DEC98	17DEC98
MT12011	UNLOAD TFBP-2 AT CPP	1	18DEC98	18DEC98
MT13013	Swap Transfer Cart Adapters	1	05JAN99	05JAN99
MT13011	UNLOAD TFBP-2 AT CPP	1	06JAN99	06JAN99
MT14013	Swap Transfer Cart Adapters	1	20JAN99	20JAN99
MT14011	UNLOAD TFBP-2 AT CPP	1	21JAN99	21JAN99
MT15013	Swap Transfer Cart Adapters	1	04FEB99	04FEB99
MT15011	UNLOAD TFBP-2 AT CPP	1	05FEB99	05FEB99
MT16013	Swap Transfer Cart Adapters	1	22FEB99	22FEB99
MT16011	UNLOAD TFBP-2 AT CPP	1	23FEB99	23FEB99
MT17013	Swap Transfer Cart Adapters	1	09MAR99	09MAR99
MT17011	UNLOAD TFBP-2 AT CPP	1	10MAR99	10MAR99
MT18013	Swap Transfer Cart Adapters	1	24MAR99	24MAR99
MT18011	UNLOAD TFBP-2 AT CPP	1	25MAR99	25MAR99
MT19013	Swap Transfer Cart Adapters	1	08APR99	08APR99
MT19011	UNLOAD TFBP-2 AT CPP	1	09APR99	09APR99
MT20013	Swap Transfer Cart Adapters	1	23APR99	23APR99
MT20011	UNLOAD TFBP-2 AT CPP	1	26APR99	26APR99
MT21013	Swap Transfer Cart Adapters	1	10MAY99	10MAY99
MT21011	UNLOAD TFBP-2 AT CPP	1	11MAY99	11MAY99
MT22014	Swap Transfer Cart Adapters	1	25MAY99	25MAY99
MT22011	UNLOAD TFBP-2 AT CPP	1	26MAY99	26MAY99
MT23013	Swap Transfer Cart Adapters	1	09JUN99	09JUN99
MT23011	UNLOAD TFBP-2 AT CPP	1	10JUN99	10JUN99
MT24013	Swap Transfer Cart Adapters	1	24JUN99	24JUN99
MT24011	UNLOAD TFBP-2 AT CPP	1	25JUN99	25JUN99
MT25013	Swap Transfer Cart Adapters	1	09JUL99	09JUL99
MT25011	UNLOAD TFBP-2 AT CPP	1	12JUL99	12JUL99
MT26013	Swap Transfer Cart Adapters	1	30JUL99	30JUL99



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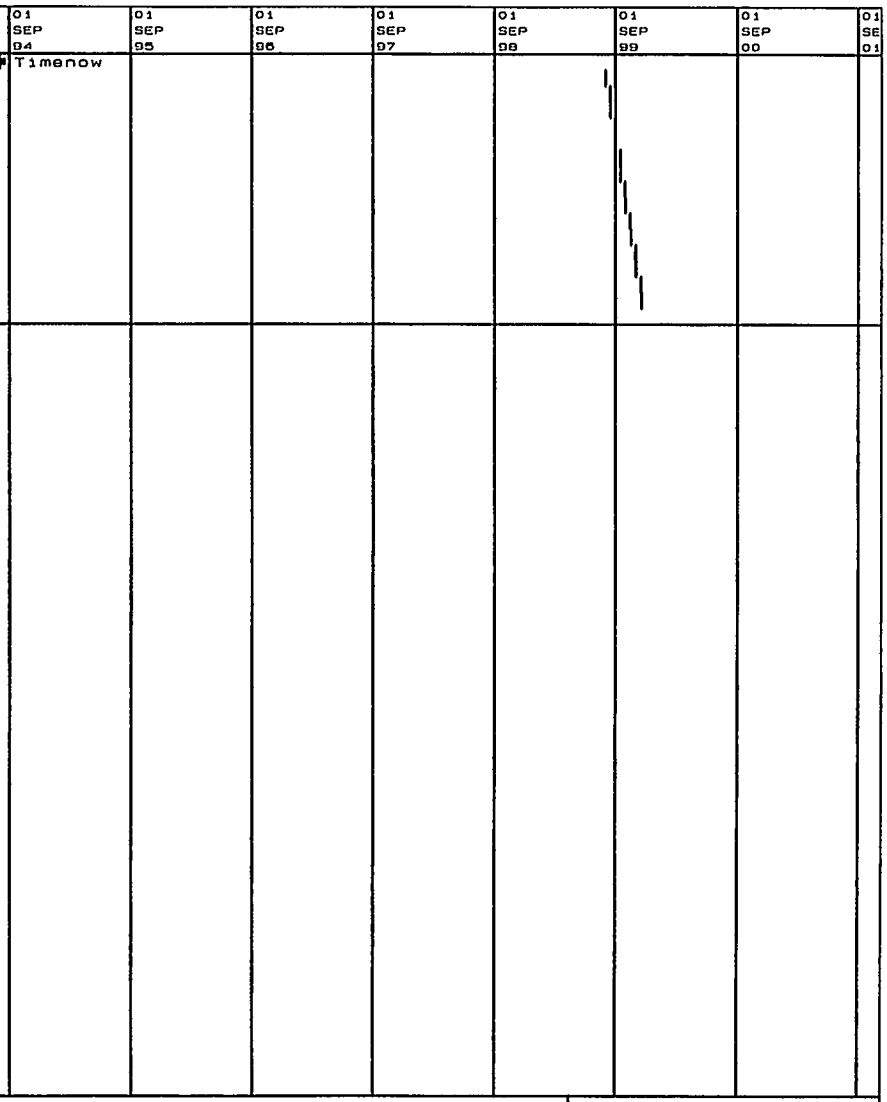
SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation

Activity	Description	Dur	Early Start	Early Finish
MT26011	UNLOAD TFBP-2 AT CPP	1	02AUG99	02AUG99
MT27013	Swap Transfer Cart Adapters	1	16AUG99	16AUG99
MT27011	UNLOAD TFBP-2 AT CPP	1	17AUG99	17AUG99
MT28013	Swap Transfer Cart Adapters	1	31AUG99	31AUG99
MT28011	UNLOAD TFBP-2 AT CPP	1	01SEP99	01SEP99
MT29013	Swap Transfer Cart Adapters	1	15SEP99	15SEP99
MT29011	UNLOAD TFBP-2 AT CPP	1	16SEP99	16SEP99
MT30013	Swap Transfer Cart Adapters	1	30SEP99	30SEP99
MT30011	UNLOAD TFBP-2 AT CPP	1	01OCT99	01OCT99
MT31013	Swap Transfer Cart Adapters	1	15OCT99	15OCT99
MT31011	UNLOAD TFBP-2 AT CPP	1	18OCT99	18OCT99
MT32013	Swap Transfer Cart Adapters	1	01NOV99	01NOV99
MT32011	UNLOAD TFBP-2 AT CPP	1	02NOV99	02NOV99
MT33014	Swap Transfer Cart Adapters	1	17NOV99	17NOV99
MT33011	UNLOAD TFBP-2 AT CPP	1	18NOV99	18NOV99



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OPEN PLAN	Spent Nuclear Fuel Consolidation	PAGE: 1
REPORT: PAGE3C	SNF/SNM Consolidation Schedule Basis of Estimate	REPORT DATE:30JUN94
PROJECT:SNF1		TIME NOW:10JUN94

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

WBS	DESCRIPTION	START DATE	FINISH DATE	COST	
A0331	Fuel Preparations	01JUN98	19NOV99	Planning Package=	$ 1,615,744
A0332	Cask Preps	29SEP98	26NOV99	Planning Package=	$ 106,380
A0333	Load Cask	22JUN98	18NOV99	Planning Package=	$ 115,736
A0334	Transport Cask	22JUN98	19NOV99	Planning Package=	$ 1,959
A0335	Unload Cask	23JUN98	19NOV99	Planning Package=	$ 367,584
	A033			Cost:	$ 2,207,403
A03 -				Project Cost:	$ 2,207,403

OPEN PLAN				Spent Nuclear Fuel Consolidation						PAGE: 1	
REPORT: NCPR5				COST PERFORMANCE REPORT -						REPORT DATE:30JUN94	
PROJECT: SNF1				SNF/SNM Consolidation Schedule						TIME NOW:10JUN94	
	FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	Complete
A03	TRA MTR Canal SNF Characterization, Repackaging, and Transfe											
A0331	0	0	0	0	370414	1108491	136839	0	0	0	0	1615744
A0332	0	0	0	0	7092	81558	17730	0	0	0	0	106380
A0333	0	0	0	0	22018	82806	10912	0	0	0	0	115736
A0334	0	0	0	0	1959	0	0	0	0	0	0	1959
A0335	0	0	0	0	67140	258713	41731	0	0	0	0	367584
Total	0	0	0	0	468623	1531568	207212	0	0	0	0	2207403
GRAND	0	0	0	0	468623	1531568	207212	0	0	0	0	2207403

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

A0331 - Fuel Preparations

MT001090 START FUEL TRANSFER OPERATIONS (A0331) Duration: 0
PLANNED % COMP: 0 ES 02JUN98 EF 01JUN98 LS 02JUN98 LF 01JUN98 BS 02JUN98 BF 01JUN98 AS --/--/-- AF --/--/--

MT01001 CANAL OPS SEQUENCE A, B & C CYCLE 01 (A0331) Duration: 6

- E16-7M	EG&G Project Mgmt Engr Serv	64	Total hrs	Unit Cost: $73.14	$4681
- E16-7N	EG&G TRA Project Control	16	Total hrs	Unit Cost: $73.14	$1170
- U34-4M	EG&G Operator	120	Total hrs	Unit Cost: $43.62	$5234
- F06-7M	EG&G Non Reactor Operations	60	Total hrs	Unit Cost: $73.14	$4388
- T13-4M	EG&G Radiological Operations	60	Total hrs	Unit Cost: $49.59	$2975
- NLD-K	EG&G Non Labor Dollars - (x1000)	1	Non-Labor $	Unit Cost: $1000.00	$1000

TOTALS $ 19,448
PLANNED % COMP: 0 ES 02JUN98 EF 09JUN98 LS 02JUN98 LF 09JUN98 BS 02JUN98 BF 09JUN98 AS --/--/-- AF --/--/--

MT01000 CYCLE -01 (A0331) Duration: 18
PLANNED % COMP: 0 ES 02JUN98 EF 25JUN98 LS 02JUN98 LF 10NOV98 BS 02JUN98 BF 25JUN98 AS --/--/-- AF --/--/--

MT01002 WE-2 CASK SEQUENCE A, B & C CYCLE 01 (A0331) Duration: 6

- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
- U29-4M	EG&G TRA Mech Crafts	36	Total hrs	Unit Cost: $47.82	$1722
- U29-4M	EG&G TRA Mech Crafts	36	Total hrs	Unit Cost: $47.82	$1722
- F06-7M	EG&G Non Reactor Operations	36	Total hrs	Unit Cost: $73.14	$2633
- U34-4M	EG&G Operator	24	Total hrs	Unit Cost: $43.62	$1047
- T13-4M	EG&G Radiological Operations	36	Total hrs	Unit Cost: $49.59	$1785
- F06-7M	EG&G Non Reactor Operations	12	Total hrs	Unit Cost: $73.14	$878
- T06-4M	EG&G TRA Hot Cell	48	Total hrs	Unit Cost: $45.01	$2160
- F06-7M	EG&G Non Reactor Operations	24	Total hrs	Unit Cost: $73.14	$1755

TOTALS $ 13,702
PLANNED % COMP: 0 ES 03JUN98 EF 10JUN98 LS 03JUN98 LF 10JUN98 BS 03JUN98 BF 10JUN98 AS --/--/-- AF --/--/--

MT01102 CYCLE 02 THRU 33 WE CASK (A0331) Duration: 376

- U29-4M	EG&G TRA Mech Crafts	1152	Total hrs	Unit Cost: $47.82	$55089
- U29-4M	EG&G TRA Mech Crafts	1152	Total hrs	Unit Cost: $47.82	$55089
- F06-7M	EG&G Non Reactor Operations	1152	Total hrs	Unit Cost: $73.14	$84257
- U34-4M	EG&G Operator	768	Total hrs	Unit Cost: $43.62	$33500

- T13-4M	EG&G Radiological Operations	1152	Total hrs	Unit Cost: $49.59	$57128
- F06-7M	EG&G Non Reactor Operations	384	Total hrs	Unit Cost: $73.14	$28086
- T06-4M	EG&G TRA Hot Cell	1536	Total hrs	Unit Cost: $45.01	$69135
- F06-7M	EG&G Non Reactor Operations	768	Total hrs	Unit Cost: $73.14	$56172
				TOTALS $	438,456
PLANNED % COMP: 0 ES 03JUN98 EF 16NOV99 LS 23JAN15 LF 07JUL16 BS 03JUN98 BF 16NOV99 AS --/--/-- AF --/--/--					
MT01004	HOT CELL OPS SEQUENCE A, B & C CYCLE 01			(A0331) Duration: 11	
- T06-4M	EG&G TRA Hot Cell	96	Total hrs	Unit Cost: $45.01	$4321
- T13-4M	EG&G Radiological Operations	48	Total hrs	Unit Cost: $49.59	$2380
- F06-7M	EG&G Non Reactor Operations	48	Total hrs	Unit Cost: $73.14	$3511
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	15,932
PLANNED % COMP: 0 ES 05JUN98 EF 19JUN98 LS 05JUN98 LF 19JUN98 BS 05JUN98 BF 19JUN98 AS --/--/-- AF --/--/--					
MT02001	CANAL OPS SEQUENCE A, B & C CYCLE 02			(A0331) Duration: 6	
PLANNED % COMP: 0 ES 23JUN98 EF 30JUN98 LS 23JUN98 LF 30JUN98 BS 23JUN98 BF 30JUN98 AS --/--/-- AF --/--/--					
MT02000	CYCLE -02			(A0331) Duration: 18	
PLANNED % COMP: 0 ES 23JUN98 EF 16JUL98 LS 23JUN98 LF 17NOV98 BS 23JUN98 BF 16JUL98 AS --/--/-- AF --/--/--					
MT01101	CYCLE 02 THRU 33 - CANAL OPS SEQ A, B & C			(A0331) Duration: 360	
- E16-7M	EG&G Project Mgmt Engr Serv	2048	Total hrs	Unit Cost: $73.14	$149791
- E16-7N	EG&G TRA Project Control	512	Total hrs	Unit Cost: $73.14	$37448
- U34-4M	EG&G Operator	3840	Total hrs	Unit Cost: $43.62	$167501
- F06-7M	EG&G Non Reactor Operations	1920	Total hrs	Unit Cost: $73.14	$140429
- T13-4M	EG&G Radiological Operations	1920	Total hrs	Unit Cost: $49.59	$95213
- NLD-K	EG&G Non Labor Dollars - (x1000)	28	Non-Labor $	Unit Cost: $1000.00	$28000
				TOTALS $	618,382
PLANNED % COMP: 0 ES 23JUN98 EF 12NOV99 LS 16FEB15 LF 07JUL16 BS 23JUN98 BF 12NOV99 AS --/--/-- AF --/--/--					
MT02002	WE-2 CASK SEQUENCE A, B & C CYCLE 02			(A0331) Duration: 6	
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 24JUN98 EF 01JUL98 LS 24JUN98 LF 01JUL98 BS 24JUN98 BF 01JUL98 AS --/--/-- AF --/--/--					

MT02004	HOT CELL OPS SEQUENCE A, B & C CYCLE 02			(A0331) Duration: 11	
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
PLANNED % COMP: 0 ES 26JUN98 EF 10JUL98 LS 26JUN98 LF 10JUL98 BS 26JUN98 BF 10JUL98 AS --/--/-- AF --/--/--					
MT01104	CYCLE 02 THRU 33 HOT CELL OPERATIONS			(A0331) Duration: 362	
- T06-4M	EG&G TRA Hot Cell	3072	Total hrs	Unit Cost: $45.01	$138271
- T13-4M	EG&G Radiological Operations	1536	Total hrs	Unit Cost: $49.59	$76170
- F06-7M	EG&G Non Reactor Operations	1536	Total hrs	Unit Cost: $73.14	$112343
				TOTALS $	326,784
PLANNED % COMP: 0 ES 26JUN98 EF 19NOV99 LS 12FEB15 LF 07JUL16 BS 26JUN98 BF 19NOV99 AS --/--/-- AF --/--/--					
MT03001	CANAL OPS SEQUENCE A, B & C CYCLE 03			(A0331) Duration: 6	
PLANNED % COMP: 0 ES 02JUL98 EF 09JUL98 LS 09JUL98 LF 16JUL98 BS 02JUL98 BF 09JUL98 AS --/--/-- AF --/--/--					
MT03000	CYCLE -03			(A0331) Duration: 23	
PLANNED % COMP: 0 ES 02JUL98 EF 03AUG98 LS 09JUL98 LF 23NOV98 BS 02JUL98 BF 03AUG98 AS --/--/-- AF --/--/--					
MT03002	WE-2 CASK SEQUENCE A, B & C CYCLE 03			(A0331) Duration: 6	
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 03JUL98 EF 10JUL98 LS 10JUL98 LF 17JUL98 BS 03JUL98 BF 10JUL98 AS --/--/-- AF --/--/--					
MT04001	CANAL OPS SEQUENCE A, B & C CYCLE 04			(A0331) Duration: 6	
PLANNED % COMP: 0 ES 13JUL98 EF 20JUL98 LS 24JUL98 LF 31JUL98 BS 13JUL98 BF 20JUL98 AS --/--/-- AF --/--/--					
MT04000	CYCLE -04			(A0331) Duration: 27	
PLANNED % COMP: 0 ES 13JUL98 EF 18AUG98 LS 24JUL98 LF 27NOV98 BS 13JUL98 BF 18AUG98 AS --/--/-- AF --/--/--					
MT04002	WE-2 CASK SEQUENCE A, B & C CYCLE 04			(A0331) Duration: 6	
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 14JUL98 EF 21JUL98 LS 27JUL98 LF 03AUG98 BS 14JUL98 BF 21JUL98 AS --/--/-- AF --/--/--					
MT03004	HOT CELL OPS SEQUENCE A, B & C CYCLE 03			(A0331) Duration: 11	
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
PLANNED % COMP: 0 ES 14JUL98 EF 28JUL98 LS 14JUL98 LF 28JUL98 BS 14JUL98 BF 28JUL98 AS --/--/-- AF --/--/--					
MT05001	CANAL OPS SEQUENCE A, B & C CYCLE 05			(A0331) Duration: 6	
PLANNED % COMP: 0 ES 22JUL98 EF 29JUL98 LS 10AUG98 LF 17AUG98 BS 22JUL98 BF 29JUL98 AS --/--/-- AF --/--/--					
MT05000	CYCLE -05			(A0331) Duration: 31	
PLANNED % COMP: 0 ES 22JUL98 EF 02SEP98 LS 10AUG98 LF 03DEC98 BS 22JUL98 BF 02SEP98 AS --/--/-- AF --/--/--					
MT05002	WE-2 CASK SEQUENCE A, B & C CYCLE 05			(A0331) Duration: 6	
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 23JUL98 EF 30JUL98 LS 11AUG98 LF 18AUG98 BS 23JUL98 BF 30JUL98 AS --/--/-- AF --/--/--					
MT04004	HOT CELL OPS SEQUENCE A, B & C CYCLE 04			(A0331) Duration: 11	
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
PLANNED % COMP: 0 ES 29JUL98 EF 12AUG98 LS 29JUL98 LF 12AUG98 BS 29JUL98 BF 12AUG98 AS --/--/-- AF --/--/--					

MT06001	CANAL OPS SEQUENCE A, B & C CYCLE 06			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 31JUL98 EF 07AUG98 LS 25AUG98 LF 01SEP98 BS 31JUL98 BF 07AUG98 AS --/--/-- AF --/--/--				
MT06000	CYCLE -06			(A0331)	Duration: 35
	PLANNED % COMP: 0 ES 31JUL98 EF 17SEP98 LS 25AUG98 LF 09DEC98 BS 31JUL98 BF 17SEP98 AS --/--/-- AF --/--/--				
MT06002	WE-2 CASK SEQUENCE A, B & C CYCLE 06			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1 Each	Unit Cost:	$.00	$0
	PLANNED % COMP: 0 ES 03AUG98 EF 10AUG98 LS 26AUG98 LF 02SEP98 BS 03AUG98 BF 10AUG98 AS --/--/-- AF --/--/--				
MT07001	CANAL OPS SEQUENCE A, B & C CYCLE 07			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 11AUG98 EF 18AUG98 LS 09SEP98 LF 16SEP98 BS 11AUG98 BF 18AUG98 AS --/--/-- AF --/--/--				
MT07000	CYCLE -07			(A0331)	Duration: 39
	PLANNED % COMP: 0 ES 11AUG98 EF 02OCT98 LS 09SEP98 LF 15DEC98 BS 11AUG98 BF 02OCT98 AS --/--/-- AF --/--/--				
MT07002	WE-2 CASK SEQUENCE A, B & C CYCLE 07			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1 Each	Unit Cost:	$.00	$0
	PLANNED % COMP: 0 ES 12AUG98 EF 19AUG98 LS 10SEP98 LF 17SEP98 BS 12AUG98 BF 19AUG98 AS --/--/-- AF --/--/--				
MT05004	HOT CELL OPS SEQUENCE A, B & C CYCLE 05			(A0331)	Duration: 11
- 6200N	Inspection	8 hrs/day	Unit Cost:	$65.00	$5720
				TOTALS $	5,720
	PLANNED % COMP: 0 ES 13AUG98 EF 27AUG98 LS 13AUG98 LF 27AUG98 BS 13AUG98 BF 27AUG98 AS --/--/-- AF --/--/--				
MT08001	CANAL OPS SEQUENCE A, B & C CYCLE 08			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 20AUG98 EF 27AUG98 LS 24SEP98 LF 01OCT98 BS 20AUG98 BF 27AUG98 AS --/--/-- AF --/--/--				
MT08000	CYCLE -08			(A0331)	Duration: 43
	PLANNED % COMP: 0 ES 20AUG98 EF 19OCT98 LS 24SEP98 LF 21DEC98 BS 20AUG98 BF 19OCT98 AS --/--/-- AF --/--/--				
MT08002	WE-2 CASK SEQUENCE A, B & C CYCLE 08			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1 Each	Unit Cost:	$.00	$0
	PLANNED % COMP: 0 ES 21AUG98 EF 28AUG98 LS 25SEP98 LF 02OCT98 BS 21AUG98 BF 28AUG98 AS --/--/-- AF --/--/--				
MT06004	HOT CELL OPS SEQUENCE A, B & C CYCLE 06			(A0331)	Duration: 11
- 6200N	Inspection	8 hrs/day	Unit Cost:	$65.00	$5720
				TOTALS $	5,720
	PLANNED % COMP: 0 ES 28AUG98 EF 11SEP98 LS 28AUG98 LF 11SEP98 BS 28AUG98 BF 11SEP98 AS --/--/-- AF --/--/--				
MT09001	CANAL OPS SEQUENCE A, B & C CYCLE 09			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 31AUG98 EF 07SEP98 LS 09OCT98 LF 16OCT98 BS 31AUG98 BF 07SEP98 AS --/--/-- AF --/--/--				
MT09000	CYCLE -09			(A0331)	Duration: 47
	PLANNED % COMP: 0 ES 31AUG98 EF 03NOV98 LS 09OCT98 LF 28DEC98 BS 31AUG98 BF 03NOV98 AS --/--/-- AF --/--/--				
MT09002	WE-2 CASK SEQUENCE A, B & C CYCLE 09			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1 Each	Unit Cost:	$.00	$0
	PLANNED % COMP: 0 ES 01SEP98 EF 08SEP98 LS 12OCT98 LF 19OCT98 BS 01SEP98 BF 08SEP98 AS --/--/-- AF --/--/--				
MT10001	CANAL OPS SEQUENCE A, B & C CYCLE 10			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 09SEP98 EF 16SEP98 LS 26OCT98 LF 02NOV98 BS 09SEP98 BF 16SEP98 AS --/--/-- AF --/--/--				
MT10000	CYCLE -10			(A0331)	Duration: 51
	PLANNED % COMP: 0 ES 09SEP98 EF 19NOV98 LS 26OCT98 LF 04JAN99 BS 09SEP98 BF 19NOV98 AS --/--/-- AF --/--/--				

MT10002 WE-2 CASK SEQUENCE A, B & C CYCLE 10 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 10SEP98 EF 17SEP98 LS 27OCT98 LF 03NOV98 BS 10SEP98 BF 17SEP98 AS --/--/-- AF --/--/--

MT07004 HOT CELL OPS SEQUENCE A, B & C CYCLE 07 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 14SEP98 EF 28SEP98 LS 14SEP98 LF 28SEP98 BS 14SEP98 BF 28SEP98 AS --/--/-- AF --/--/--

MT11001 CANAL OPS SEQUENCE A, B & C CYCLE 11 (A0331) Duration: 6
PLANNED % COMP: 0 ES 18SEP98 EF 25SEP98 LS 10NOV98 LF 18NOV98 BS 18SEP98 BF 25SEP98 AS --/--/-- AF --/--/--

MT11000 CYCLE -11 (A0331) Duration: 55
PLANNED % COMP: 0 ES 18SEP98 EF 04DEC98 LS 10NOV98 LF 08JAN99 BS 18SEP98 BF 04DEC98 AS --/--/-- AF --/--/--

MT11002 WE-2 CASK SEQUENCE A, B & C CYCLE 11 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 21SEP98 EF 28SEP98 LS 12NOV98 LF 19NOV98 BS 21SEP98 BF 28SEP98 AS --/--/-- AF --/--/--

MT12001 CANAL OPS SEQUENCE A, B & C CYCLE 12 (A0331) Duration: 6
PLANNED % COMP: 0 ES 29SEP98 EF 06OCT98 LS 26NOV98 LF 03DEC98 BS 29SEP98 BF 06OCT98 AS --/--/-- AF --/--/--

MT08004 HOT CELL OPS SEQUENCE A, B & C CYCLE 08 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 29SEP98 EF 13OCT98 LS 29SEP98 LF 13OCT98 BS 29SEP98 BF 13OCT98 AS --/--/-- AF --/--/--

MT12000 CYCLE -12 (A0331) Duration: 59
PLANNED % COMP: 0 ES 29SEP98 EF 21DEC98 LS 26NOV98 LF 21JAN99 BS 29SEP98 BF 21DEC98 AS --/--/-- AF --/--/--

MT12002 WE-2 CASK SEQUENCE A, B & C CYCLE 12 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 06OCT98 EF 13OCT98 LS 27NOV98 LF 04DEC98 BS 06OCT98 BF 13OCT98 AS --/--/-- AF --/--/--

MT13001 CANAL OPS SEQUENCE A, B & C CYCLE 13 (A0331) Duration: 6
PLANNED % COMP: 0 ES 14OCT98 EF 21OCT98 LS 11DEC98 LF 18DEC98 BS 14OCT98 BF 21OCT98 AS --/--/-- AF --/--/--

MT09004 HOT CELL OPS SEQUENCE A, B & C CYCLE 09 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 14OCT98 EF 28OCT98 LS 14OCT98 LF 28OCT98 BS 14OCT98 BF 28OCT98 AS --/--/-- AF --/--/--

MT13000 CYCLE -13 (A0331) Duration: 59
PLANNED % COMP: 0 ES 14OCT98 EF 07JAN99 LS 11DEC98 LF 27JAN99 BS 14OCT98 BF 07JAN99 AS --/--/-- AF --/--/--

MT13002 WE-2 CASK SEQUENCE A, B & C CYCLE 13 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 15OCT98 EF 22OCT98 LS 14DEC98 LF 21DEC98 BS 15OCT98 BF 22OCT98 AS --/--/-- AF --/--/--

MT14001 CANAL OPS SEQUENCE A, B & C CYCLE 14 (A0331) Duration: 6
PLANNED % COMP: 0 ES 23OCT98 EF 30OCT98 LS 29DEC98 LF 06JAN99 BS 23OCT98 BF 30OCT98 AS --/--/-- AF --/--/--

MT14000 CYCLE -14 (A0331) Duration: 63
PLANNED % COMP: 0 ES 23OCT98 EF 22JAN99 LS 29DEC98 LF 02FEB99 BS 23OCT98 BF 22JAN99 AS --/--/-- AF --/--/--

MT14002 WE-2 CASK SEQUENCE A, B & C CYCLE 14 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 26OCT98 EF 02NOV98 LS 30DEC98 LF 07JAN99 BS 26OCT98 | BF 02NOV98 AS --/--/-- AF --/--/--

MT10004 HOT CELL OPS SEQUENCE A, B & C CYCLE 10 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 29OCT98 EF 13NOV98 LS 29OCT98 LF 13NOV98 BS 29OCT98 BF 13NOV98 AS --/--/-- AF --/--/--

MT15001 CANAL OPS SEQUENCE A, B & C CYCLE 15 (A0331) Duration: 6
PLANNED % COMP: 0 ES 03NOV98 EF 10NOV98 LS 14JAN99 LF 21JAN99 BS 03NOV98 BF 10NOV98 AS --/--/-- AF --/--/--

MT15000 CYCLE -15 (A0331) Duration: 67
PLANNED % COMP: 0 ES 03NOV98 EF 08FEB99 LS 14JAN99 LF 03AUG99 BS 03NOV98 BF 08FEB99 AS --/--/-- AF --/--/--

MT15002 WE-2 CASK SEQUENCE A, B & C CYCLE 15 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 04NOV98 EF 12NOV98 LS 15JAN99 LF 22JAN99 BS 04NOV98 | BF 12NOV98 AS --/--/-- AF --/--/--

MT16001 CANAL OPS SEQUENCE A, B & C CYCLE 16 (A0331) Duration: 6
PLANNED % COMP: 0 ES 13NOV98 EF 20NOV98 LS 01FEB99 LF 08FEB99 BS 13NOV98 BF 20NOV98 AS --/--/-- AF --/--/--

MT16000 CYCLE -16 (A0331) Duration: 72
PLANNED % COMP: 0 ES 13NOV98 EF 24FEB99 LS 01FEB99 LF 09AUG99 BS 13NOV98 BF 24FEB99 AS --/--/-- AF --/--/--

MT16002 WE-2 CASK SEQUENCE A, B & C CYCLE 16 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 16NOV98 EF 23NOV98 LS 02FEB99 LF 09FEB99 BS 16NOV98 | BF 23NOV98 AS --/--/-- AF --/--/--

MT11004 HOT CELL OPS SEQUENCE A, B & C CYCLE 11 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 16NOV98 EF 30NOV98 LS 16NOV98 LF 30NOV98 BS 16NOV98 BF 30NOV98 AS --/--/-- AF --/--/--

MT17001 CANAL OPS SEQUENCE A, B & C CYCLE 17 (A0331) Duration: 6
PLANNED % COMP: 0 ES 24NOV98 EF 01DEC98 LS 16FEB99 LF 23FEB99 BS 24NOV98 BF 01DEC98 AS --/--/-- AF --/--/--

MT17000 CYCLE -17 (A0331) Duration: 76
PLANNED % COMP: 0 ES 24NOV98 EF 11MAR99 LS 16FEB99 LF 13AUG99 BS 24NOV98 BF 11MAR99 AS --/--/-- AF --/--/--

MT17002 WE-2 CASK SEQUENCE A, B & C CYCLE 17 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0
PLANNED % COMP: 0 ES 25NOV98 EF 02DEC98 LS 17FEB99 LF 24FEB99 BS 25NOV98 | BF 02DEC98 AS --/--/-- AF --/--/--

MT12004 HOT CELL OPS SEQUENCE A, B & C CYCLE 12 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 01DEC98 EF 15DEC98 LS 01DEC98 LF 15DEC98 BS 01DEC98 BF 15DEC98 AS --/--/-- AF --/--/--

MT18001 CANAL OPS SEQUENCE A, B & C CYCLE 18 (A0331) Duration: 6
PLANNED % COMP: 0 ES 03DEC98 EF 10DEC98 LS 03MAR99 LF 10MAR99 BS 03DEC98 BF 10DEC98 AS --/--/-- AF --/--/--

MT18000 CYCLE -18 (A0331) Duration: 80
PLANNED % COMP: 0 ES 03DEC98 EF 26MAR99 LS 03MAR99 LF 19AUG99 BS 03DEC98 BF 26MAR99 AS --/--/-- AF --/--/--

MT18002	WE-2 CASK SEQUENCE A, B & C CYCLE 18			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 04DEC98 EF 11DEC98 LS 04MAR99 LF 11MAR99 BS 04DEC98 BF 11DEC98 AS --/--/-- AF --/--/--					
MT19001	CANAL OPS SEQUENCE A, B & C CYCLE 19			(A0331)	Duration: 6
PLANNED % COMP: 0 ES 14DEC98 EF 21DEC98 LS 18MAR99 LF 25MAR99 BS 14DEC98 BF 21DEC98 AS --/--/-- AF --/--/--					
MT19000	CYCLE -19			(A0331)	Duration: 84
PLANNED % COMP: 0 ES 14DEC98 EF 12APR99 LS 18MAR99 LF 25AUG99 BS 14DEC98 BF 12APR99 AS --/--/-- AF --/--/--					
MT19002	WE-2 CASK SEQUENCE A, B & C CYCLE 19			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 15DEC98 EF 22DEC98 LS 19MAR99 LF 26MAR99 BS 15DEC98 BF 22DEC98 AS --/--/-- AF --/--/--					
MT13004	HOT CELL OPS SEQUENCE A, B & C CYCLE 13			(A0331)	Duration: 11
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
PLANNED % COMP: 0 ES 16DEC98 EF 31DEC98 LS 16DEC98 LF 31DEC98 BS 16DEC98 BF 31DEC98 AS --/--/-- AF --/--/--					
MT20001	CANAL OPS SEQUENCE A, B & C CYCLE 20			(A0331)	Duration: 6
PLANNED % COMP: 0 ES 23DEC98 EF 31DEC98 LS 02APR99 LF 09APR99 BS 23DEC98 BF 31DEC98 AS --/--/-- AF --/--/--					
MT20000	CYCLE -20			(A0331)	Duration: 88
PLANNED % COMP: 0 ES 23DEC98 EF 27APR99 LS 02APR99 LF 31AUG99 BS 23DEC98 BF 27APR99 AS --/--/-- AF --/--/--					
MT20002	WE-2 CASK SEQUENCE A, B & C CYCLE 20			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 24DEC98 EF 04JAN99 LS 05APR99 LF 12APR99 BS 24DEC98 BF 04JAN99 AS --/--/-- AF --/--/--					
MT14004	HOT CELL OPS SEQUENCE A, B & C CYCLE 14			(A0331)	Duration: 11
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
PLANNED % COMP: 0 ES 04JAN99 EF 18JAN99 LS 04JAN99 LF 18JAN99 BS 04JAN99 BF 18JAN99 AS --/--/-- AF --/--/--					
MT21001	CANAL OPS SEQUENCE A, B & C CYCLE 21			(A0331)	Duration: 6
PLANNED % COMP: 0 ES 05JAN99 EF 12JAN99 LS 19APR99 LF 26APR99 BS 05JAN99 BF 12JAN99 AS --/--/-- AF --/--/--					
MT21000	CYCLE -21			(A0331)	Duration: 92
PLANNED % COMP: 0 ES 05JAN99 EF 12MAY99 LS 19APR99 LF 06SEP99 BS 05JAN99 BF 12MAY99 AS --/--/-- AF --/--/--					
MT21002	WE-2 CASK SEQUENCE A, B & C CYCLE 21			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 06JAN99 EF 13JAN99 LS 20APR99 LF 27APR99 BS 06JAN99 BF 13JAN99 AS --/--/-- AF --/--/--					
MT22001	CANAL OPS SEQUENCE A, B & C CYCLE 22			(A0331)	Duration: 6
PLANNED % COMP: 0 ES 14JAN99 EF 21JAN99 LS 04MAY99 LF 11MAY99 BS 14JAN99 BF 21JAN99 AS --/--/-- AF --/--/--					
MT22000	CYCLE -22			(A0331)	Duration: 96
PLANNED % COMP: 0 ES 14JAN99 EF 27MAY99 LS 04MAY99 LF 10SEP99 BS 14JAN99 BF 27MAY99 AS --/--/-- AF --/--/--					
MT22002	WE-2 CASK SEQUENCE A, B & C CYCLE 22			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 15JAN99 EF 22JAN99 LS 05MAY99 LF 12MAY99 BS 15JAN99 BF 22JAN99 AS --/--/-- AF --/--/--					

MT15004 HOT CELL OPS SEQUENCE A, B & C CYCLE 15 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720

PLANNED % COMP: 0 ES 19JAN99 EF 02FEB99 LS 19JAN99 LF 02FEB99 BS 19JAN99 BF 02FEB99 AS --/--/-- AF --/--/--

MT23001 CANAL OPS SEQUENCE A, B & C CYCLE 23 (A0331) Duration: 6

PLANNED % COMP: 0 ES 25JAN99 EF 01FEB99 LS 19MAY99 LF 26MAY99 BS 25JAN99 BF 01FEB99 AS --/--/-- AF --/--/--

MT23000 CYCLE -23 (A0331) Duration: 100

PLANNED % COMP: 0 ES 25JAN99 EF 11JUN99 LS 19MAY99 LF 23SEP99 BS 25JAN99 BF 11JUN99 AS --/--/-- AF --/--/--

MT23002 WE-2 CASK SEQUENCE A, B & C CYCLE 23 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0

PLANNED % COMP: 0 ES 01FEB99 EF 08FEB99 LS 20MAY99 LF 27MAY99 BS 01FEB99 BF 08FEB99 AS --/--/-- AF --/--/--

MT16004 HOT CELL OPS SEQUENCE A, B & C CYCLE 16 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720

PLANNED % COMP: 0 ES 04FEB99 EF 18FEB99 LS 04FEB99 LF 18FEB99 BS 04FEB99 BF 18FEB99 AS --/--/-- AF --/--/--

MT24001 CANAL OPS SEQUENCE A, B & C CYCLE 24 (A0331) Duration: 6

PLANNED % COMP: 0 ES 09FEB99 EF 16FEB99 LS 03JUN99 LF 10JUN99 BS 09FEB99 BF 16FEB99 AS --/--/-- AF --/--/--

MT24000 CYCLE -24 (A0331) Duration: 100

PLANNED % COMP: 0 ES 09FEB99 EF 28JUN99 LS 03JUN99 LF 29SEP99 BS 09FEB99 BF 28JUN99 AS --/--/-- AF --/--/--

MT24002 WE-2 CASK SEQUENCE A, B & C CYCLE 24 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0

PLANNED % COMP: 0 ES 10FEB99 EF 17FEB99 LS 04JUN99 LF 11JUN99 BS 10FEB99 BF 17FEB99 AS --/--/-- AF --/--/--

MT25001 CANAL OPS SEQUENCE A, B & C CYCLE 25 (A0331) Duration: 6

PLANNED % COMP: 0 ES 18FEB99 EF 25FEB99 LS 18JUN99 LF 25JUN99 BS 18FEB99 BF 25FEB99 AS --/--/-- AF --/--/--

MT25000 CYCLE -25 (A0331) Duration: 104

PLANNED % COMP: 0 ES 18FEB99 EF 13JUL99 LS 18JUN99 LF 05OCT99 BS 18FEB99 BF 13JUL99 AS --/--/-- AF --/--/--

MT25002 WE-2 CASK SEQUENCE A, B & C CYCLE 25 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0

PLANNED % COMP: 0 ES 19FEB99 EF 26FEB99 LS 21JUN99 LF 28JUN99 BS 19FEB99 BF 26FEB99 AS --/--/-- AF --/--/--

MT17004 HOT CELL OPS SEQUENCE A, B & C CYCLE 17 (A0331) Duration: 11

- 6200N | Inspection | 8 hrs/day | Unit Cost: $65.00 | $5720

TOTALS $ 5,720

PLANNED % COMP: 0 ES 19FEB99 EF 05MAR99 LS 19FEB99 LF 05MAR99 BS 19FEB99 BF 05MAR99 AS --/--/-- AF --/--/--

MT26001 CANAL OPS SEQUENCE A, B & C CYCLE 26 (A0331) Duration: 6

PLANNED % COMP: 0 ES 01MAR99 EF 08MAR99 LS 09JUL99 LF 16JUL99 BS 01MAR99 BF 08MAR99 AS --/--/-- AF --/--/--

MT26000 CYCLE -26 (A0331) Duration: 112

PLANNED % COMP: 0 ES 01MAR99 EF 03AUG99 LS 09JUL99 LF 11OCT99 BS 01MAR99 BF 03AUG99 AS --/--/-- AF --/--/--

MT26002 WE-2 CASK SEQUENCE A, B & C CYCLE 26 (A0331) Duration: 6

- WE-C | White Elephant Cask | 1 Each | Unit Cost: $.00 | $0

PLANNED % COMP: 0 ES 02MAR99 EF 09MAR99 LS 12JUL99 LF 19JUL99 BS 02MAR99 BF 09MAR99 AS --/--/-- AF --/--/--

MT18004	HOT CELL OPS SEQUENCE A, B & C CYCLE 18			(A0331)	Duration: 11
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
	PLANNED % COMP: 0 ES 08MAR99 EF 22MAR99 LS 08MAR99 LF 22MAR99 BS 08MAR99 BF 22MAR99 AS --/--/-- AF --/--/--				
MT27001	CANAL OPS SEQUENCE A, B & C CYCLE 27			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 10MAR99 EF 17MAR99 LS 26JUL99 LF 02AUG99 BS 10MAR99 BF 17MAR99 AS --/--/-- AF --/--/--				
MT27000	CYCLE -27			(A0331)	Duration: 116
	PLANNED % COMP: 0 ES 10MAR99 EF 18AUG99 LS 26JUL99 LF 15OCT99 BS 10MAR99 BF 18AUG99 AS --/--/-- AF --/--/--				
MT27002	WE-2 CASK SEQUENCE A, B & C CYCLE 27			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
	PLANNED % COMP: 0 ES 11MAR99 EF 18MAR99 LS 27JUL99 LF 03AUG99 BS 11MAR99 BF 18MAR99 AS --/--/-- AF --/--/--				
MT28001	CANAL OPS SEQUENCE A, B & C CYCLE 28			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 19MAR99 EF 26MAR99 LS 10AUG99 LF 17AUG99 BS 19MAR99 BF 26MAR99 AS --/--/-- AF --/--/--				
MT28000	CYCLE -28			(A0331)	Duration: 120
	PLANNED % COMP: 0 ES 19MAR99 EF 02SEP99 LS 10AUG99 LF 21OCT99 BS 19MAR99 BF 02SEP99 AS --/--/-- AF --/--/--				
MT28002	WE-2 CASK SEQUENCE A, B & C CYCLE 28			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
	PLANNED % COMP: 0 ES 22MAR99 EF 29MAR99 LS 11AUG99 LF 18AUG99 BS 22MAR99 BF 29MAR99 AS --/--/-- AF --/--/--				
MT19004	HOT CELL OPS SEQUENCE A, B & C CYCLE 19			(A0331)	Duration: 11
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
	PLANNED % COMP: 0 ES 23MAR99 EF 06APR99 LS 23MAR99 LF 06APR99 BS 23MAR99 BF 06APR99 AS --/--/-- AF --/--/--				
MT29001	CANAL OPS SEQUENCE A, B & C CYCLE 29			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 30MAR99 EF 06APR99 LS 25AUG99 LF 01SEP99 BS 30MAR99 BF 06APR99 AS --/--/-- AF --/--/--				
MT29000	CYCLE -29			(A0331)	Duration: 124
	PLANNED % COMP: 0 ES 30MAR99 EF 17SEP99 LS 25AUG99 LF 27OCT99 BS 30MAR99 BF 17SEP99 AS --/--/-- AF --/--/--				
MT29002	WE-2 CASK SEQUENCE A, B & C CYCLE 29			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
	PLANNED % COMP: 0 ES 31MAR99 EF 07APR99 LS 26AUG99 LF 02SEP99 BS 31MAR99 BF 07APR99 AS --/--/-- AF --/--/--				
MT20004	HOT CELL OPS SEQUENCE A, B & C CYCLE 20			(A0331)	Duration: 11
- 6200N	Inspection	8	hrs/day	Unit Cost: $65.00	$5720
				TOTALS $	5,720
	PLANNED % COMP: 0 ES 07APR99 EF 21APR99 LS 07APR99 LF 21APR99 BS 07APR99 BF 21APR99 AS --/--/-- AF --/--/--				
MT30001	CANAL OPS SEQUENCE A, B & C CYCLE 30			(A0331)	Duration: 6
	PLANNED % COMP: 0 ES 08APR99 EF 15APR99 LS 09SEP99 LF 16SEP99 BS 08APR99 BF 15APR99 AS --/--/-- AF --/--/--				
MT30000	CYCLE -30			(A0331)	Duration: 128
	PLANNED % COMP: 0 ES 08APR99 EF 04OCT99 LS 09SEP99 LF 02NOV99 BS 08APR99 BF 04OCT99 AS --/--/-- AF --/--/--				
MT30002	WE-2 CASK SEQUENCE A, B & C CYCLE 30			(A0331)	Duration: 6
- WE-C	White Elephant Cask	1	Each	Unit Cost: $.00	$0
	PLANNED % COMP: 0 ES 09APR99 EF 16APR99 LS 10SEP99 LF 17SEP99 BS 09APR99 BF 16APR99 AS --/--/-- AF --/--/--				

MT31001 CANAL OPS SEQUENCE A, B & C CYCLE 31 (A0331) Duration: 6
PLANNED % COMP: 0 ES 19APR99 EF 26APR99 LS 24SEP99 LF 01OCT99 BS 19APR99 BF 26APR99 AS --/--/-- AF --/--/--

MT31000 CYCLE -31 (A0331) Duration: 132
PLANNED % COMP: 0 ES 19APR99 EF 19OCT99 LS 24SEP99 LF 08NOV99 BS 19APR99 BF 19OCT99 AS --/--/-- AF --/--/--

MT31002 WE-2 CASK SEQUENCE A, B & C CYCLE 31 (A0331) Duration: 6

- WE-C	White Elephant Cask	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 20APR99 EF 27APR99 LS 27SEP99 LF 04OCT99 BS 20APR99 BF 27APR99 AS --/--/-- AF --/--/--

MT21004 HOT CELL OPS SEQUENCE A, B & C CYCLE 21 (A0331) Duration: 11

- 6200N	Inspection	8 hrs/day	Unit Cost:	$65.00	$5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 22APR99 EF 06MAY99 LS 22APR99 LF 06MAY99 BS 22APR99 BF 06MAY99 AS --/--/-- AF --/--/--

MT32001 CANAL OPS SEQUENCE A, B & C CYCLE 32 (A0331) Duration: 6
PLANNED % COMP: 0 ES 28APR99 EF 05MAY99 LS 11OCT99 LF 18OCT99 BS 28APR99 BF 05MAY99 AS --/--/-- AF --/--/--

MT32000 CYCLE -32 (A0331) Duration: 136
PLANNED % COMP: 0 ES 28APR99 EF 03NOV99 LS 11OCT99 LF 15NOV99 BS 28APR99 BF 03NOV99 AS --/--/-- AF --/--/--

MT32002 WE-2 CASK SEQUENCE A, B & C CYCLE 32 (A0331) Duration: 6

- WE-C	White Elephant Cask	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 29APR99 EF 06MAY99 LS 12OCT99 LF 19OCT99 BS 29APR99 BF 06MAY99 AS --/--/-- AF --/--/--

MT33001 CANAL OPS SEQUENCE A, B & C CYCLE 33 (A0331) Duration: 6
PLANNED % COMP: 0 ES 07MAY99 EF 14MAY99 LS 26OCT99 LF 02NOV99 BS 07MAY99 BF 14MAY99 AS --/--/-- AF --/--/--

MT22004 HOT CELL OPS SEQUENCE A, B & C CYCLE 22 (A0331) Duration: 11

- 6200N	Inspection	8 hrs/day	Unit Cost:	$65.00	$5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 07MAY99 EF 21MAY99 LS 07MAY99 LF 21MAY99 BS 07MAY99 BF 21MAY99 AS --/--/-- AF --/--/--

MT33000 CYCLE -33 (A0331) Duration: 140
PLANNED % COMP: 0 ES 07MAY99 EF 19NOV99 LS 26OCT99 LF 29JUN16 BS 07MAY99 BF 19NOV99 AS --/--/-- AF --/--/--

MT33002 WE-2 CASK SEQUENCE A, B & C CYCLE 33 (A0331) Duration: 6

- WE-C	White Elephant Cask	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 10MAY99 EF 17MAY99 LS 27OCT99 LF 03NOV99 BS 10MAY99 BF 17MAY99 AS --/--/-- AF --/--/--

MT23004 HOT CELL OPS SEQUENCE A, B & C CYCLE 23 (A0331) Duration: 11

- 6200N	Inspection	8 hrs/day	Unit Cost:	$65.00	$5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 24MAY99 EF 07JUN99 LS 24MAY99 LF 07JUN99 BS 24MAY99 BF 07JUN99 AS --/--/-- AF --/--/--

MT24004 HOT CELL OPS SEQUENCE A, B & C CYCLE 24 (A0331) Duration: 11

- 6200N	Inspection	8 hrs/day	Unit Cost:	$65.00	$5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 08JUN99 EF 22JUN99 LS 08JUN99 LF 22JUN99 BS 08JUN99 BF 22JUN99 AS --/--/-- AF --/--/--

MT25004 HOT CELL OPS SEQUENCE A, B & C CYCLE 25 (A0331) Duration: 11

- 6200N	Inspection	8 hrs/day	Unit Cost:	$65.00	$5720

TOTALS $ 5,720
PLANNED % COMP: 0 ES 23JUN99 EF 07JUL99 LS 23JUN99 LF 07JUL99 BS 23JUN99 BF 07JUL99 AS --/--/-- AF --/--/--

MT26004	HOT CELL OPS SEQUENCE A, B & C CYCLE 26		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 14JUL99 EF 28JUL99 LS 14JUL99 LF 28JUL99 BS 14JUL99 BF 28JUL99 AS --/--/-- AF --/--/--			
MT27004	HOT CELL OPS SEQUENCE A, B & C CYCLE 27		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 29JUL99 EF 12AUG99 LS 29JUL99 LF 12AUG99 BS 29JUL99 BF 12AUG99 AS --/--/-- AF --/--/--			
MT28004	HOT CELL OPS SEQUENCE A, B & C CYCLE 28		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 13AUG99 EF 27AUG99 LS 13AUG99 LF 27AUG99 BS 13AUG99 BF 27AUG99 AS --/--/-- AF --/--/--			
MT29004	HOT CELL OPS SEQUENCE A, B & C CYCLE 29		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 30AUG99 EF 13SEP99 LS 30AUG99 LF 13SEP99 BS 30AUG99 BF 13SEP99 AS --/--/-- AF --/--/--			
MT30004	HOT CELL OPS SEQUENCE A, B & C CYCLE 30		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 14SEP99 EF 28SEP99 LS 14SEP99 LF 28SEP99 BS 14SEP99 BF 28SEP99 AS --/--/-- AF --/--/--			
MT31004	HOT CELL OPS SEQUENCE A, B & C CYCLE 31		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 29SEP99 EF 13OCT99 LS 29SEP99 LF 13OCT99 BS 29SEP99 BF 13OCT99 AS --/--/-- AF --/--/--			
MT32004	HOT CELL OPS SEQUENCE A, B & C CYCLE 32		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 14OCT99 EF 28OCT99 LS 14OCT99 LF 28OCT99 BS 14OCT99 BF 28OCT99 AS --/--/-- AF --/--/--			
MT33004	HOT CELL OPS SEQUENCE A, B & C CYCLE 33		(A0331) Duration: 11	
- 6200N	Inspection	8 hrs/day	Unit Cost: $65.00	$5720
			TOTALS $	5,720
	PLANNED % COMP: 0 ES 29OCT99 EF 15NOV99 LS 29OCT99 LF 15NOV99 BS 29OCT99 BF 15NOV99 AS --/--/-- AF --/--/--			
MT3M10	M10 - COMPLETE FUEL SHIPMENTS TO CPP		(A0331) Duration: 0	
	PLANNED % COMP: 0 ES 19NOV99 EF 18NOV99 LS 08JUL16 LF 07JUL16 BS 19NOV99 BF 18NOV99 AS --/--/-- AF --/--/--			

<<<<<<<<< End of WBS A0331 Fuel Preparations >>>>>>>>>
WBS Total= $ 1,615,744

A0332 - Cask Preps

MT11008	Decon and PM WE-2 Cask			(A0332) Duration: 5	
- E16-7M	EG&G Project Mgmt Engr Serv	60	Total hrs	Unit Cost: $73.14	$4388
- E19-7M	EG&G Safety Analysis / SSDC	60	Total hrs	Unit Cost: $77.15	$4629
- T13-4M	EG&G Radiological Operations	60	Total hrs	Unit Cost: $49.59	$2975
- U13-4M	EG&G Equip Operator	60	Total hrs	Unit Cost: $47.82	$2869
- U29-4M	EG&G TRA Mech Crafts	60	Total hrs	Unit Cost: $47.82	$2869
				TOTALS $	17,730
PLANNED % COMP: 0 ES 29SEP98 EF 05OCT98 LS 20NOV98 LF 26NOV98 BS 29SEP98 BF 05OCT98 AS --/--/-- AF --/--/--					
MT11013	Decon and PM TFBP-2 Cask			(A0332) Duration: 5	
- E16-7M	EG&G Project Mgmt Engr Serv	60	Total hrs	Unit Cost: $73.14	$4388
- E19-7M	EG&G Safety Analysis / SSDC	60	Total hrs	Unit Cost: $77.15	$4629
- T13-4M	EG&G Radiological Operations	60	Total hrs	Unit Cost: $49.59	$2975
- U13-4M	EG&G Equip Operator	60	Total hrs	Unit Cost: $47.82	$2869
- U29-4M	EG&G TRA Mech Crafts	60	Total hrs	Unit Cost: $47.82	$2869
				TOTALS $	17,730
PLANNED % COMP: 0 ES 07DEC98 EF 11DEC98 LS 11JAN99 LF 15JAN99 BS 07DEC98 BF 11DEC98 AS --/--/-- AF --/--/--					
MT22008	Decon and PM WE-2 Cask			(A0332) Duration: 5	
- E16-7M	EG&G Project Mgmt Engr Serv	60	Total hrs	Unit Cost: $73.14	$4388
- E19-7M	EG&G Safety Analysis / SSDC	60	Total hrs	Unit Cost: $77.15	$4629
- T13-4M	EG&G Radiological Operations	60	Total hrs	Unit Cost: $49.59	$2975
- U13-4M	EG&G Equip Operator	60	Total hrs	Unit Cost: $47.82	$2869
- U29-4M	EG&G TRA Mech Crafts	60	Total hrs	Unit Cost: $47.82	$2869
				TOTALS $	17,730
PLANNED % COMP: 0 ES 25JAN99 EF 29JAN99 LS 13MAY99 LF 19MAY99 BS 25JAN99 BF 29JAN99 AS --/--/-- AF --/--/--					
MT33008	DECON WE-2 AND STORE			(A0332) Duration: 5	
- E16-7M	EG&G Project Mgmt Engr Serv	60	Total hrs	Unit Cost: $73.14	$4388
- E19-7M	EG&G Safety Analysis / SSDC	60	Total hrs	Unit Cost: $77.15	$4629
- T13-4M	EG&G Radiological Operations	60	Total hrs	Unit Cost: $49.59	$2975
- U13-4M	EG&G Equip Operator	60	Total hrs	Unit Cost: $47.82	$2869

- U29-4M	EG&G TRA Mech Crafts	60	Total hrs	Unit Cost: $47.82	$2869

TOTALS $ 17,730

PLANNED % COMP: 0 ES 18MAY99 EF 24MAY99 LS 30JUN16 LF 07JUL16 BS 18MAY99 BF 24MAY99 AS --/--/-- AF --/--/--

MT22013 Decon and PM TFBP-2 Cask (A0332) Duration: 5

- E16-7M	EG&G Project Mgmt Engr Serv	60	Total hrs	Unit Cost: $73.14	$4388
- E19-7M	EG&G Safety Analysis / SSDC	60	Total hrs	Unit Cost: $77.15	$4629
- T13-4M	EG&G Radiological Operations	60	Total hrs	Unit Cost: $49.59	$2975
- U13-4M	EG&G Equip Operator	60	Total hrs	Unit Cost: $47.82	$2869
- U29-4M	EG&G TRA Mech Crafts	60	Total hrs	Unit Cost: $47.82	$2869

TOTALS $ 17,730

PLANNED % COMP: 0 ES 28MAY99 EF 03JUN99 LS 13SEP99 LF 17SEP99 BS 28MAY99 BF 03JUN99 AS --/--/-- AF --/--/--

MT33013 Decon and PM TFPB-2 Cask (A0332) Duration: 5

- E16-7M	EG&G Project Mgmt Engr Serv	60	Total hrs	Unit Cost: $73.14	$4388
- E19-7M	EG&G Safety Analysis / SSDC	60	Total hrs	Unit Cost: $77.15	$4629
- T13-4M	EG&G Radiological Operations	60	Total hrs	Unit Cost: $49.59	$2975
- U13-4M	EG&G Equip Operator	60	Total hrs	Unit Cost: $47.82	$2869
- U29-4M	EG&G TRA Mech Crafts	60	Total hrs	Unit Cost: $47.82	$2869

TOTALS $ 17,730

PLANNED % COMP: 0 ES 22NOV99 EF 26NOV99 LS 30JUN16 LF 07JUL16 BS 22NOV99 BF 26NOV99 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0332 >>>>>>>>>

WBS Total= $ 106,380

A0333 - Load Cask

MT01007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE			(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- T06-4M	EG&G TRA Hot Cell	32	Total hrs	Unit Cost: $45.01	$1440
- T13-4M	EG&G Radiological Operations	16	Total hrs	Unit Cost: $49.59	$793
- F06-7M	EG&G Non Reactor Operations	16	Total hrs	Unit Cost: $73.14	$1170
				TOTALS $	3,403
PLANNED % COMP: 0 ES 22JUN98 EF 22JUN98 LS 05NOV98 LF 05NOV98 BS 22JUN98 BF 22JUN98 AS --/--/-- AF --/--/--					
MT02007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE			(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 13JUL98 EF 13JUL98 LS 12NOV98 LF 12NOV98 BS 13JUL98 BF 13JUL98 AS --/--/-- AF --/--/--					
MT01107	CYCLE 02 THRU 33 CASK LOADING			(A0333)	Duration: 350
- T06-4M	EG&G TRA Hot Cell	1056	Total hrs	Unit Cost: $45.01	$47531
- T13-4M	EG&G Radiological Operations	528	Total hrs	Unit Cost: $49.59	$26184
- F06-7M	EG&G Non Reactor Operations	528	Total hrs	Unit Cost: $73.14	$38618
				TOTALS $	112,333
PLANNED % COMP: 0 ES 13JUL98 EF 18NOV99 LS 02MAR15 LF 07JUL16 BS 13JUL98 BF 18NOV99 AS --/--/-- AF --/--/--					
MT03007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE			(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 29JUL98 EF 29JUL98 LS 18NOV98 LF 18NOV98 BS 29JUL98 BF 29JUL98 AS --/--/-- AF --/--/--					
MT04007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE			(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 13AUG98 EF 13AUG98 LS 24NOV98 LF 24NOV98 BS 13AUG98 BF 13AUG98 AS --/--/-- AF --/--/--					
MT05007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE			(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 28AUG98 EF 28AUG98 LS 30NOV98 LF 30NOV98 BS 28AUG98 BF 28AUG98 AS --/--/-- AF --/--/--					
MT06007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE			(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 14SEP98 EF 14SEP98 LS 04DEC98 LF 04DEC98 BS 14SEP98 BF 14SEP98 AS --/--/-- AF --/--/--					

MT07007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 29SEP98 EF 29SEP98 LS 10DEC98 LF 10DEC98 BS 29SEP98 BF 29SEP98 AS --/--/-- AF --/--/--					
MT08007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 14OCT98 EF 14OCT98 LS 16DEC98 LF 16DEC98 BS 14OCT98 BF 14OCT98 AS --/--/-- AF --/--/--					
MT09007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: .0 ES 29OCT98 EF 29OCT98 LS 22DEC98 LF 22DEC98 BS 29OCT98 BF 29OCT98 AS --/--/-- AF --/--/--					
MT10007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 16NOV98 EF 16NOV98 LS 29DEC98 LF 29DEC98 BS 16NOV98 BF 16NOV98 AS --/--/-- AF --/--/--					
MT11007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 01DEC98 EF 01DEC98 LS 05JAN99 LF 05JAN99 BS 01DEC98 BF 01DEC98 AS --/--/-- AF --/--/--					
MT12007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 16DEC98 EF 16DEC98 LS 18JAN99 LF 18JAN99 BS 16DEC98 BF 16DEC98 AS --/--/-- AF --/--/--					
MT13007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 04JAN99 EF 04JAN99 LS 22JAN99 LF 22JAN99 BS 04JAN99 BF 04JAN99 AS --/--/-- AF --/--/--					
MT14007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 19JAN99 EF 19JAN99 LS 28JAN99 LF 28JAN99 BS 19JAN99 BF 19JAN99 AS --/--/-- AF --/--/--					
MT15007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 03FEB99 EF 03FEB99 LS 03FEB99 LF 03FEB99 BS 03FEB99 BF 03FEB99 AS --/--/-- AF --/--/--					

MT16007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 19FEB99 EF 19FEB99 LS 04AUG99 LF 04AUG99 BS 19FEB99				BF 19FEB99 AS --/--/-- AF --/--/--
MT17007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 08MAR99 EF 08MAR99 LS 10AUG99 LF 10AUG99 BS 08MAR99				BF 08MAR99 AS --/--/-- AF --/--/--
MT18007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 23MAR99 EF 23MAR99 LS 16AUG99 LF 16AUG99 BS 23MAR99				BF 23MAR99 AS --/--/-- AF --/--/--
MT19007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 07APR99 EF 07APR99 LS 20AUG99 LF 20AUG99 BS 07APR99				BF 07APR99 AS --/--/-- AF --/--/--
MT20007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 22APR99 EF 22APR99 LS 26AUG99 LF 26AUG99 BS 22APR99				BF 22APR99 AS --/--/-- AF --/--/--
MT21007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 07MAY99 EF 07MAY99 LS 01SEP99 LF 01SEP99 BS 07MAY99				BF 07MAY99 AS --/--/-- AF --/--/--
MT22007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 24MAY99 EF 24MAY99 LS 07SEP99 LF 07SEP99 BS 24MAY99				BF 24MAY99 AS --/--/-- AF --/--/--
MT23007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 08JUN99 EF 08JUN99 LS 20SEP99 LF 20SEP99 BS 08JUN99				BF 08JUN99 AS --/--/-- AF --/--/--
MT24007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 23JUN99 EF 23JUN99 LS 24SEP99 LF 24SEP99 BS 23JUN99				BF 23JUN99 AS --/--/-- AF --/--/--

MT25007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 08JUL99 EF 08JUL99 LS 30SEP99 LF 30SEP99 BS 08JUL99				BF 08JUL99 AS --/--/-- AF --/--/--	
MT26007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 29JUL99 EF 29JUL99 LS 06OCT99 LF 06OCT99 BS 29JUL99				BF 29JUL99 AS --/--/-- AF --/--/--	
MT27007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: .0 ES 13AUG99 EF 13AUG99 LS 12OCT99 LF 12OCT99 BS 13AUG99				BF 13AUG99 AS --/--/-- AF --/--/--	
MT28007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 30AUG99 EF 30AUG99 LS 18OCT99 LF 18OCT99 BS 30AUG99				BF 30AUG99 AS --/--/-- AF --/--/--	
MT29007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 14SEP99 EF 14SEP99 LS 22OCT99 LF 22OCT99 BS 14SEP99				BF 14SEP99 AS --/--/-- AF --/--/--	
MT30007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 29SEP99 EF 29SEP99 LS 28OCT99 LF 28OCT99 BS 29SEP99				BF 29SEP99 AS --/--/-- AF --/--/--	
MT31007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 14OCT99 EF 14OCT99 LS 03NOV99 LF 03NOV99 BS 14OCT99				BF 14OCT99 AS --/--/-- AF --/--/--	
MT32007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 29OCT99 EF 29OCT99 LS 09NOV99 LF 09NOV99 BS 29OCT99				BF 29OCT99 AS --/--/-- AF --/--/--	
MT33007	MOUNT TFBP-2 CASK TO HC-2 PORT, LOAD & REMOVE		(A0333)	Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0	
PLANNED % COMP: 0 ES 16NOV99 EF 16NOV99 LS 16NOV99 LF 16NOV99 BS 16NOV99				BF 16NOV99 AS --/--/-- AF --/--/--	

<<<<<<<<<< End of WBS A0333 Load Cask >>>>>>>>>
WBS Total= $ 115,736

A0334 - Transport Cask

MT01009	TFBP-2 CASK LOADED			(A0334) Duration: 0	
PLANNED % COMP: 0 ES 23JUN98 EF 22JUN98 LS 06NOV98 LF 05NOV98 BS 23JUN98 BF 22JUN98 AS --/--/-- AF --/--/--					
MT01010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334) Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- U13-4M	EG&G Equip Operator	8	Total hrs	Unit Cost: $47.82	$383
- F06-7M	EG&G Non Reactor Operations	8	Total hrs	Unit Cost: $73.14	$585
- F12-38	EG&G Security - Transport	8	Total hrs	Unit Cost: $38.00	$304
				TOTALS $	1,272
PLANNED % COMP: 0 ES 23JUN98 EF 23JUN98 LS 06NOV98 LF 06NOV98 BS 23JUN98 BF 23JUN98 AS --/--/-- AF --/--/--					
MT01012	RETURN TFBP-2 TO ATR			(A0334) Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- U13-4M	EG&G Equip Operator	8	Total hrs	Unit Cost: $47.82	$383
- F12-38	EG&G Security - Transport	8	Total hrs	Unit Cost: $38.00	$304
				TOTALS $	687
PLANNED % COMP: 0 ES 25JUN98 EF 25JUN98 LS 10NOV98 LF 10NOV98 BS 25JUN98 BF 25JUN98 AS --/--/-- AF --/--/--					
MT02009	TFBP-2 CASK LOADED			(A0334) Duration: 0	
PLANNED % COMP: 0 ES 14JUL98 EF 13JUL98 LS 13NOV98 LF 12NOV98 BS 14JUL98 BF 13JUL98 AS --/--/-- AF --/--/--					
MT02010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334) Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 14JUL98 EF 14JUL98 LS 13NOV98 LF 13NOV98 BS 14JUL98 BF 14JUL98 AS --/--/-- AF --/--/--					
MT02012	RETURN TFBP-2 TO ATR			(A0334) Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 16JUL98 EF 16JUL98 LS 17NOV98 LF 17NOV98 BS 16JUL98 BF 16JUL98 AS --/--/-- AF --/--/--					
MT03009	TFBP-2 CASK LOADED			(A0334) Duration: 0	
PLANNED % COMP: 0 ES 30JUL98 EF 29JUL98 LS 19NOV98 LF 18NOV98 BS 30JUL98 BF 29JUL98 AS --/--/-- AF --/--/--					
MT03010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334) Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 30JUL98 EF 30JUL98 LS 19NOV98 LF 19NOV98 BS 30JUL98 BF 30JUL98 AS --/--/-- AF --/--/--					
MT03012	RETURN TFBP-2 TO ATR			(A0334) Duration: 1	
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 03AUG98 EF 03AUG98 LS 23NOV98 LF 23NOV98 BS 03AUG98 BF 03AUG98 AS --/--/-- AF --/--/--					

MT04009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 14AUG98 EF 13AUG98 LS 25NOV98 LF 24NOV98 BS 14AUG98 BF 13AUG98 AS --/--/-- AF --/--/--					
MT04010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 14AUG98 EF 14AUG98 LS 25NOV98 LF 25NOV98 BS 14AUG98 BF 14AUG98 AS --/--/-- AF --/--/--					
MT04012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 18AUG98 EF 18AUG98 LS 27NOV98 LF 27NOV98 BS 18AUG98 BF 18AUG98 AS --/--/-- AF --/--/--					
MT05009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 31AUG98 EF 28AUG98 LS 01DEC98 LF 30NOV98 BS 31AUG98 BF 28AUG98 AS --/--/-- AF --/--/--					
MT05010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 31AUG98 EF 31AUG98 LS 01DEC98 LF 01DEC98 BS 31AUG98 BF 31AUG98 AS --/--/-- AF --/--/--					
MT05012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 02SEP98 EF 02SEP98 LS 03DEC98 LF 03DEC98 BS 02SEP98 BF 02SEP98 AS --/--/-- AF --/--/--					
MT06009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 15SEP98 EF 14SEP98 LS 07DEC98 LF 04DEC98 BS 15SEP98 BF 14SEP98 AS --/--/-- AF --/--/--					
MT06010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 15SEP98 EF 15SEP98 LS 07DEC98 LF 07DEC98 BS 15SEP98 BF 15SEP98 AS --/--/-- AF --/--/--					
MT06012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 17SEP98 EF 17SEP98 LS 09DEC98 LF 09DEC98 BS 17SEP98 BF 17SEP98 AS --/--/-- AF --/--/--					
MT07009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 30SEP98 EF 29SEP98 LS 11DEC98 LF 10DEC98 BS 30SEP98 BF 29SEP98 AS --/--/-- AF --/--/--					
MT07010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 30SEP98 EF 30SEP98 LS 11DEC98 LF 11DEC98 BS 30SEP98 BF 30SEP98 AS --/--/-- AF --/--/--					
MT07012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 02OCT98 EF 02OCT98 LS 15DEC98 LF 15DEC98 BS 02OCT98 BF 02OCT98 AS --/--/-- AF --/--/--					
MT08009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 15OCT98 EF 14OCT98 LS 17DEC98 LF 16DEC98 BS 15OCT98 BF 14OCT98 AS --/--/-- AF --/--/--					

MT08010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 15OCT98 EF 15OCT98 LS 17DEC98 LF 17DEC98 BS 15OCT98 BF 15OCT98 AS --/--/-- AF --/--/--				
MT08012	RETURN TFBP-2 TO ATR		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 19OCT98 EF 19OCT98 LS 21DEC98 LF 21DEC98 BS 19OCT98 BF 19OCT98 AS --/--/-- AF --/--/--				
MT09009	TFBP-2 CASK LOADED		(A0334)	Duration: 0
PLANNED % COMP: 0 ES 30OCT98 EF 29OCT98 LS 23DEC98 LF 22DEC98 BS 30OCT98 BF 29OCT98 AS --/--/-- AF --/--/--				
MT09010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 30OCT98 EF 30OCT98 LS 23DEC98 LF 23DEC98 BS 30OCT98 BF 30OCT98 AS --/--/-- AF --/--/--				
MT09012	RETURN TFBP-2 TO ATR		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 03NOV98 EF 03NOV98 LS 28DEC98 LF 28DEC98 BS 03NOV98 BF 03NOV98 AS --/--/-- AF --/--/--				
MT10009	TFBP-2 CASK LOADED		(A0334)	Duration: 0
PLANNED % COMP: 0 ES 17NOV98 EF 16NOV98 LS 30DEC98 LF 29DEC98 BS 17NOV98 BF 16NOV98 AS --/--/-- AF --/--/--				
MT10010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 17NOV98 EF 17NOV98 LS 30DEC98 LF 30DEC98 BS 17NOV98 BF 17NOV98 AS --/--/-- AF --/--/--				
MT10012	RETURN TFBP-2 TO ATR		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 19NOV98 EF 19NOV98 LS 04JAN99 LF 04JAN99 BS 19NOV98 BF 19NOV98 AS --/--/-- AF --/--/--				
MT11009	TFBP-2 CASK LOADED		(A0334)	Duration: 0
PLANNED % COMP: 0 ES 02DEC98 EF 01DEC98 LS 06JAN99 LF 05JAN99 BS 02DEC98 BF 01DEC98 AS --/--/-- AF --/--/--				
MT11010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 02DEC98 EF 02DEC98 LS 06JAN99 LF 06JAN99 BS 02DEC98 BF 02DEC98 AS --/--/-- AF --/--/--				
MT11012	RETURN TFBP-2 TO ATR		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 04DEC98 EF 04DEC98 LS 08JAN99 LF 08JAN99 BS 04DEC98 BF 04DEC98 AS --/--/-- AF --/--/--				
MT12009	TFBP-2 CASK LOADED		(A0334)	Duration: 0
PLANNED % COMP: 0 ES 17DEC98 EF 16DEC98 LS 19JAN99 LF 18JAN99 BS 17DEC98 BF 16DEC98 AS --/--/-- AF --/--/--				
MT12010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost: $.00	$0
PLANNED % COMP: 0 ES 17DEC98 EF 17DEC98 LS 19JAN99 LF 19JAN99 BS 17DEC98 BF 17DEC98 AS --/--/-- AF --/--/--				

MT12012	RETURN TFBP-2 TO ATR			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 21DEC98 EF 21DEC98 LS 21JAN99 LF 21JAN99 BS 21DEC98 BF 21DEC98 AS --/--/-- AF --/--/--						
MT13009	TFBP-2 CASK LOADED			(A0334)	Duration:	0
PLANNED % COMP: 0 ES 05JAN99 EF 04JAN99 LS 25JAN99 LF 22JAN99 BS 05JAN99 BF 04JAN99 AS --/--/-- AF --/--/--						
MT13010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 05JAN99 EF 05JAN99 LS 25JAN99 LF 25JAN99 BS 05JAN99 BF 05JAN99 AS --/--/-- AF --/--/--						
MT13012	RETURN TFBP-2 TO ATR			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: .0 ES 07JAN99 EF 07JAN99 LS 27JAN99 LF 27JAN99 BS 07JAN99 BF 07JAN99 AS --/--/-- AF --/--/--						
MT14009	TFBP-2 CASK LOADED			(A0334)	Duration:	0
PLANNED % COMP: 0 ES 20JAN99 EF 19JAN99 LS 29JAN99 LF 28JAN99 BS 20JAN99 BF 19JAN99 AS --/--/-- AF --/--/--						
MT14010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 20JAN99 EF 20JAN99 LS 29JAN99 LF 29JAN99 BS 20JAN99 BF 20JAN99 AS --/--/-- AF --/--/--						
MT14012	RETURN TFBP-2 TO ATR			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 22JAN99 EF 22JAN99 LS 02FEB99 LF 02FEB99 BS 22JAN99 BF 22JAN99 AS --/--/-- AF --/--/--						
MT15009	TFBP-2 CASK LOADED			(A0334)	Duration:	0
PLANNED % COMP: 0 ES 04FEB99 EF 03FEB99 LS 30JUL99 LF 29JUL99 BS 04FEB99 BF 03FEB99 AS --/--/-- AF --/--/--						
MT15010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 04FEB99 EF 04FEB99 LS 30JUL99 LF 30JUL99 BS 04FEB99 BF 04FEB99 AS --/--/-- AF --/--/--						
MT15012	RETURN TFBP-2 TO ATR			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 08FEB99 EF 08FEB99 LS 03AUG99 LF 03AUG99 BS 08FEB99 BF 08FEB99 AS --/--/-- AF --/--/--						
MT16009	TFBP-2 CASK LOADED			(A0334)	Duration:	0
PLANNED % COMP: 0 ES 22FEB99 EF 19FEB99 LS 05AUG99 LF 04AUG99 BS 22FEB99 BF 19FEB99 AS --/--/-- AF --/--/--						
MT16010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 22FEB99 EF 22FEB99 LS 05AUG99 LF 05AUG99 BS 22FEB99 BF 22FEB99 AS --/--/-- AF --/--/--						
MT16012	RETURN TFBP-2 TO ATR			(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 24FEB99 EF 24FEB99 LS 09AUG99 LF 09AUG99 BS 24FEB99 BF 24FEB99 AS --/--/-- AF --/--/--						

MT17009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 09MAR99 EF 08MAR99 LS 11AUG99 LF 10AUG99 BS 09MAR99 BF 08MAR99 AS --/--/-- AF --/--/--					
MT17010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 09MAR99 EF 09MAR99 LS 11AUG99 LF 11AUG99 BS 09MAR99 BF 09MAR99 AS --/--/-- AF --/--/--					
MT17012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 11MAR99 EF 11MAR99 LS 13AUG99 LF 13AUG99 BS 11MAR99 BF 11MAR99 AS --/--/-- AF --/--/--					
MT18009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 24MAR99 EF 23MAR99 LS 17AUG99 LF 16AUG99 BS 24MAR99 BF 23MAR99 AS --/--/-- AF --/--/--					
MT18010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 24MAR99 EF 24MAR99 LS 17AUG99 LF 17AUG99 BS 24MAR99 BF 24MAR99 AS --/--/-- AF --/--/--					
MT18012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 26MAR99 EF 26MAR99 LS 19AUG99 LF 19AUG99 BS 26MAR99 BF 26MAR99 AS --/--/-- AF --/--/--					
MT19009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 08APR99 EF 07APR99 LS 23AUG99 LF 20AUG99 BS 08APR99 BF 07APR99 AS --/--/-- AF --/--/--					
MT19010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 08APR99 EF 08APR99 LS 23AUG99 LF 23AUG99 BS 08APR99 BF 08APR99 AS --/--/-- AF --/--/--					
MT19012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 12APR99 EF 12APR99 LS 25AUG99 LF 25AUG99 BS 12APR99 BF 12APR99 AS --/--/-- AF --/--/--					
MT20009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 23APR99 EF 22APR99 LS 27AUG99 LF 26AUG99 BS 23APR99 BF 22APR99 AS --/--/-- AF --/--/--					
MT20010	TRANSPORT TFBP-2 TO CPP AND RECEIVE			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 23APR99 EF 23APR99 LS 27AUG99 LF 27AUG99 BS 23APR99 BF 23APR99 AS --/--/-- AF --/--/--					
MT20012	RETURN TFBP-2 TO ATR			(A0334)	Duration: 1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 27APR99 EF 27APR99 LS 31AUG99 LF 31AUG99 BS 27APR99 BF 27APR99 AS --/--/-- AF --/--/--					
MT21009	TFBP-2 CASK LOADED			(A0334)	Duration: 0
PLANNED % COMP: 0 ES 10MAY99 EF 07MAY99 LS 02SEP99 LF 01SEP99 BS 10MAY99 BF 07MAY99 AS --/--/-- AF --/--/--					

MT21010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 10MAY99 EF 10MAY99 LS 02SEP99 LF 02SEP99 BS 10MAY99 BF 10MAY99 AS --/--/-- AF --/--/--					
MT21012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 12MAY99 EF 12MAY99 LS 06SEP99 LF 06SEP99 BS 12MAY99 BF 12MAY99 AS --/--/-- AF --/--/--					
MT22009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 25MAY99 EF 24MAY99 LS 08SEP99 LF 07SEP99 BS 25MAY99 BF 24MAY99 AS --/--/-- AF --/--/--					
MT22010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 25MAY99 EF 25MAY99 LS 08SEP99 LF 08SEP99 BS 25MAY99 BF 25MAY99 AS --/--/-- AF --/--/--					
MT22012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 27MAY99 EF 27MAY99 LS 10SEP99 LF 10SEP99 BS 27MAY99 BF 27MAY99 AS --/--/-- AF --/--/--					
MT23009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 09JUN99 EF 08JUN99 LS 21SEP99 LF 20SEP99 BS 09JUN99 BF 08JUN99 AS --/--/-- AF --/--/--					
MT23010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 09JUN99 EF 09JUN99 LS 21SEP99 LF 21SEP99 BS 09JUN99 BF 09JUN99 AS --/--/-- AF --/--/--					
MT23012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 11JUN99 EF 11JUN99 LS 23SEP99 LF 23SEP99 BS 11JUN99 BF 11JUN99 AS --/--/-- AF --/--/--					
MT24009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 24JUN99 EF 23JUN99 LS 27SEP99 LF 24SEP99 BS 24JUN99 BF 23JUN99 AS --/--/-- AF --/--/--					
MT24010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 24JUN99 EF 24JUN99 LS 27SEP99 LF 27SEP99 BS 24JUN99 BF 24JUN99 AS --/--/-- AF --/--/--					
MT24012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 28JUN99 EF 28JUN99 LS 29SEP99 LF 29SEP99 BS 28JUN99 BF 28JUN99 AS --/--/-- AF --/--/--					
MT25009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 09JUL99 EF 08JUL99 LS 01OCT99 LF 30SEP99 BS 09JUL99 BF 08JUL99 AS --/--/-- AF --/--/--					
MT25010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 09JUL99 EF 09JUL99 LS 01OCT99 LF 01OCT99 BS 09JUL99 BF 09JUL99 AS --/--/-- AF --/--/--					

MT25012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 13JUL99 EF 13JUL99 LS 05OCT99 LF 05OCT99 BS 13JUL99 BF 13JUL99 AS --/--/-- AF --/--/--					
MT26009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 30JUL99 EF 29JUL99 LS 07OCT99 LF 06OCT99 BS 30JUL99 BF 29JUL99 AS --/--/-- AF --/--/--					
MT26010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 30JUL99 EF 30JUL99 LS 07OCT99 LF 07OCT99 BS 30JUL99 BF 30JUL99 AS --/--/-- AF --/--/--					
MT26012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 03AUG99 EF 03AUG99 LS 11OCT99 LF 11OCT99 BS 03AUG99 BF 03AUG99 AS --/--/-- AF --/--/--					
MT27009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 16AUG99 EF 13AUG99 LS 13OCT99 LF 12OCT99 BS 16AUG99 BF 13AUG99 AS --/--/-- AF --/--/--					
MT27010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 16AUG99 EF 16AUG99 LS 13OCT99 LF 13OCT99 BS 16AUG99 BF 16AUG99 AS --/--/-- AF --/--/--					
MT27012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 18AUG99 EF 18AUG99 LS 15OCT99 LF 15OCT99 BS 18AUG99 BF 18AUG99 AS --/--/-- AF --/--/--					
MT28009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 31AUG99 EF 30AUG99 LS 19OCT99 LF 18OCT99 BS 31AUG99 BF 30AUG99 AS --/--/-- AF --/--/--					
MT28010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 31AUG99 EF 31AUG99 LS 19OCT99 LF 19OCT99 BS 31AUG99 BF 31AUG99 AS --/--/-- AF --/--/--					
MT28012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 02SEP99 EF 02SEP99 LS 21OCT99 LF 21OCT99 BS 02SEP99 BF 02SEP99 AS --/--/-- AF --/--/--					
MT29009	TFBP-2 CASK LOADED		(A0334)	Duration:	0
PLANNED % COMP: 0 ES 15SEP99 EF 14SEP99 LS 25OCT99 LF 22OCT99 BS 15SEP99 BF 14SEP99 AS --/--/-- AF --/--/--					
MT29010	TRANSPORT TFBP-2 TO CPP AND RECEIVE		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 15SEP99 EF 15SEP99 LS 25OCT99 LF 25OCT99 BS 15SEP99 BF 15SEP99 AS --/--/-- AF --/--/--					
MT29012	RETURN TFBP-2 TO ATR		(A0334)	Duration:	1
- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0
PLANNED % COMP: 0 ES 17SEP99 EF 17SEP99 LS 27OCT99 LF 27OCT99 BS 17SEP99 BF 17SEP99 AS --/--/-- AF --/--/--					

MT30009 TFBP-2 CASK LOADED (A0334) Duration: 0
PLANNED % COMP: 0 ES 30SEP99 EF 29SEP99 LS 29OCT99 LF 28OCT99 BS 30SEP99 BF 29SEP99 AS --/--/-- AF --/--/--

MT30010 TRANSPORT TFBP-2 TO CPP AND RECEIVE (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 30SEP99 EF 30SEP99 LS 29OCT99 LF 29OCT99 BS 30SEP99 BF 30SEP99 AS --/--/-- AF --/--/--

MT30012 RETURN TFBP-2 TO ATR (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 04OCT99 EF 04OCT99 LS 02NOV99 LF 02NOV99 BS 04OCT99 BF 04OCT99 AS --/--/-- AF --/--/--

MT31009 TFBP-2 CASK LOADED (A0334) Duration: 0
PLANNED % COMP: 0 ES 15OCT99 EF 14OCT99 LS 04NOV99 LF 03NOV99 BS 15OCT99 BF 14OCT99 AS --/--/-- AF --/--/--

MT31010 TRANSPORT TFBP-2 TO CPP AND RECEIVE (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 15OCT99 EF 15OCT99 LS 04NOV99 LF 04NOV99 BS 15OCT99 BF 15OCT99 AS --/--/-- AF --/--/--

MT31012 RETURN TFBP-2 TO ATR (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 19OCT99 EF 19OCT99 LS 08NOV99 LF 08NOV99 BS 19OCT99 BF 19OCT99 AS --/--/-- AF --/--/--

MT32009 TFBP-2 CASK LOADED (A0334) Duration: 0
PLANNED % COMP: 0 ES 01NOV99 EF 29OCT99 LS 10NOV99 LF 09NOV99 BS 01NOV99 BF 29OCT99 AS --/--/-- AF --/--/--

MT32010 TRANSPORT TFBP-2 TO CPP AND RECEIVE (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 01NOV99 EF 01NOV99 LS 10NOV99 LF 10NOV99 BS 01NOV99 BF 01NOV99 AS --/--/-- AF --/--/--

MT32012 RETURN TFBP-2 TO ATR (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 03NOV99 EF 03NOV99 LS 15NOV99 LF 15NOV99 BS 03NOV99 BF 03NOV99 AS --/--/-- AF --/--/--

MT33009 TFBP-2 CASK LOADED (A0334) Duration: 0
PLANNED % COMP: 0 ES 17NOV99 EF 16NOV99 LS 17NOV99 LF 16NOV99 BS 17NOV99 BF 16NOV99 AS --/--/-- AF --/--/--

MT33010 TRANSPORT TFBP-2 TO CPP AND RECEIVE (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 17NOV99 EF 17NOV99 LS 17NOV99 LF 17NOV99 BS 17NOV99 BF 17NOV99 AS --/--/-- AF --/--/--

MT33012 RETURN TFBP-2 TO ATR (A0334) Duration: 1

- TFB-2	Thermal Fuels Behavior Cask -2	1 Each	Unit Cost:	$.00	$0

PLANNED % COMP: 0 ES 19NOV99 EF 19NOV99 LS 29JUN16 LF 29JUN16 BS 19NOV99 BF 19NOV99 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0334 Transport Cask >>>>>>>>>
WBS Total= $ 1,959

A0335 - Unload Cask

MT01013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	1,495
PLANNED % COMP: 0 ES 23JUN98 EF 23JUN98 LS 08NOV98 LF 08NOV98 BS 23JUN98 BF 23JUN98 AS --/--/-- AF --/--/--						
MT01011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration:	1
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	7,745
PLANNED % COMP: 0 ES 24JUN98 EF 24JUN98 LS 09NOV98 LF 09NOV98 BS 24JUN98 BF 24JUN98 AS --/--/-- AF --/--/--						
MT02013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416

- 2810E	Past & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 14JUL98 EF 14JUL98 LS 15NOV98 LF 15NOV98 BS 14JUL98 BF 14JUL98 AS --/--/-- AF --/--/--

MT01110 CYCLE 02 THRU 33 TRANSPORT TO CPP/RETURN TO ATR (A0335) Duration: 350

- U13-4M	EG&G Equip Operator	512	Total hrs	Unit Cost: $47.82	$24484
- F06-7M	EG&G Non Reactor Operations	256	Total hrs	Unit Cost: $73.14	$18724
- F12-38	EG&G Security - Transport	512	Total hrs	Unit Cost: $38.00	$19456

TOTALS $ 62,664

PLANNED % COMP: 0 ES 14JUL98 EF 19NOV99 LS 02MAR15 LF 07JUL16 BS 14JUL98 BF 19NOV99 AS --/--/-- AF --/--/--

MT02011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 15JUL98 EF 15JUL98 LS 16NOV98 LF 16NOV98 BS 15JUL98 BF 15JUL98 AS --/--/-- AF --/--/--

MT03013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 30JUL98 EF 30JUL98 LS 19NOV98 LF 19NOV98 BS 30JUL98 BF 30JUL98 AS --/--/-- AF --/--/--

MT03011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration:	1
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	7,745
PLANNED % COMP: 0 ES 31JUL98 EF 31JUL98 LS 20NOV98 LF 20NOV98 BS 31JUL98 BF 31JUL98 AS --/--/-- AF --/--/--						
MT04013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	1,495
PLANNED % COMP: 0 ES 14AUG98 EF 14AUG98 LS 25NOV98 LF 25NOV98 BS 14AUG98 BF 14AUG98 AS --/--/-- AF --/--/--						
MT04011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration:	1
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950

- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 17AUG98 EF 17AUG98 LS 26NOV98 LF 26NOV98 BS 17AUG98 BF 17AUG98 AS --/--/-- AF --/--/--

MT05013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 31AUG98 EF 31AUG98 LS 01DEC98 LF 01DEC98 BS 31AUG98 BF 31AUG98 AS --/--/-- AF --/--/--

MT05011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 01SEP98 EF 01SEP98 LS 02DEC98 LF 02DEC98 BS 01SEP98 BF 01SEP98 AS --/--/-- AF --/--/--

MT06013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260

- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 15SEP98 EF 15SEP98 LS 07DEC98 LF 07DEC98 BS 15SEP98 BF 15SEP98 AS --/--/-- AF --/--/--

MT06011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 16SEP98 EF 16SEP98 LS 08DEC98 LF 08DEC98 BS 16SEP98 BF 16SEP98 AS --/--/-- AF --/--/--

MT07013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 30SEP98 EF 30SEP98 LS 13DEC98 LF 13DEC98 BS 30SEP98 BF 30SEP98 AS --/--/-- AF --/--/--

MT07011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300

- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 01OCT98 EF 01OCT98 LS 14DEC98 LF 14DEC98 BS 01OCT98 BF 01OCT98 AS --/--/-- AF --/--/--

MT08013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 15OCT98 EF 15OCT98 LS 17DEC98 LF 17DEC98 BS 15OCT98 BF 15OCT98 AS --/--/-- AF --/--/--

MT08011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 16OCT98 EF 16OCT98 LS 18DEC98 LF 18DEC98 BS 16OCT98 BF 16OCT98 AS --/--/-- AF --/--/--

MT09013	Swap Transfer Cart Adapters			(A0335) Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130
				TOTALS $	1,495
PLANNED % COMP: 0 ES 30OCT98 EF 30OCT98 LS 23DEC98 LF 23DEC98 BS 30OCT98 BF 30OCT98 AS --/--/-- AF --/--/--					
MT09011	UNLOAD TFBP-2 AT CPP			(A0335) Duration:	1
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130
				TOTALS $	7,745
PLANNED % COMP: 0 ES 02NOV98 EF 02NOV98 LS 24DEC98 LF 24DEC98 BS 02NOV98 BF 02NOV98 AS --/--/-- AF --/--/--					
MT10013	Swap Transfer Cart Adapters			(A0335) Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 17NOV98 EF 17NOV98 LS 30DEC98 LF 30DEC98 BS 17NOV98 BF 17NOV98 AS --/--/-- AF --/--/--

MT10011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 18NOV98 EF 18NOV98 LS 31DEC98 LF 31DEC98 BS 18NOV98 BF 18NOV98 AS --/--/-- AF --/--/--

MT11014 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 02DEC98 EF 02DEC98 LS 06JAN99 LF 06JAN99 BS 02DEC98 BF 02DEC98 AS --/--/-- AF --/--/--

MT11011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0

- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 03DEC98 EF 03DEC98 LS 07JAN99 LF 07JAN99 BS 03DEC98 BF 03DEC98 AS --/--/-- AF --/--/--

MT12013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 17DEC98 EF 17DEC98 LS 19JAN99 LF 19JAN99 BS 17DEC98 BF 17DEC98 AS --/--/-- AF --/--/--

MT12011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 18DEC98 EF 18DEC98 LS 20JAN99 LF 20JAN99 BS 18DEC98 BF 18DEC98 AS --/--/-- AF --/--/--

MT13013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325

- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 05JAN99 EF 05JAN99 LS 25JAN99 LF 25JAN99 BS 05JAN99 BF 05JAN99 AS --/--/-- AF --/--/--

MT13011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 06JAN99 EF 06JAN99 LS 26JAN99 LF 26JAN99 BS 06JAN99 BF 06JAN99 AS --/--/-- AF --/--/--

MT14013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 20JAN99 EF 20JAN99 LS 29JAN99 LF 29JAN99 BS 20JAN99 BF 20JAN99 AS --/--/-- AF --/--/--

MT14011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300

- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 21JAN99 EF 21JAN99 LS 01FEB99 LF 01FEB99 BS 21JAN99 BF 21JAN99 AS --/--/-- AF --/--/--

MT15013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 04FEB99 EF 04FEB99 LS 30JUL99 LF 30JUL99 BS 04FEB99 BF 04FEB99 AS --/--/-- AF --/--/--

MT15011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 05FEB99 EF 05FEB99 LS 02AUG99 LF 02AUG99 BS 05FEB99 BF 05FEB99 AS --/--/-- AF --/--/--

MT16013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	1,495
PLANNED % COMP: 0 ES 22FEB99 EF 22FEB99 LS 05AUG99 LF 05AUG99 BS 22FEB99 BF 22FEB99 AS --/--/-- AF --/--/--						
MT16011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration:	1
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	7,745
PLANNED % COMP: 0 ES 23FEB99 EF 23FEB99 LS 06AUG99 LF 06AUG99 BS 23FEB99 BF 23FEB99 AS --/--/-- AF --/--/--						
MT17013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 09MAR99 EF 09MAR99 LS 11AUG99 LF 11AUG99 BS 09MAR99 BF 09MAR99 AS --/--/-- AF --/--/--

MT17011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 10MAR99 EF 10MAR99 LS 12AUG99 LF 12AUG99 BS 10MAR99 BF 10MAR99 AS --/--/-- AF --/--/--

MT18013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 24MAR99 EF 24MAR99 LS 17AUG99 LF 17AUG99 BS 24MAR99 BF 24MAR99 AS --/--/-- AF --/--/--

MT18011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0

- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 25MAR99 EF 25MAR99 LS 18AUG99 LF 18AUG99 BS 25MAR99 BF 25MAR99 AS --/--/-- AF --/--/--

MT19013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 08APR99 EF 08APR99 LS 23AUG99 LF 23AUG99 BS 08APR99 BF 08APR99 AS --/--/-- AF --/--/--

MT19011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 09APR99 EF 09APR99 LS 24AUG99 LF 24AUG99 BS 09APR99 BF 09APR99 AS --/--/-- AF --/--/--

MT20013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325

- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 23APR99 EF 23APR99 LS 27AUG99 LF 27AUG99 BS 23APR99 BF 23APR99 AS --/--/-- AF --/--/--

MT20011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 26APR99 EF 26APR99 LS 30AUG99 LF 30AUG99 BS 26APR99 BF 26APR99 AS --/--/-- AF --/--/--

MT21013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 10MAY99 EF 10MAY99 LS 02SEP99 LF 02SEP99 BS 10MAY99 BF 10MAY99 AS --/--/-- AF --/--/--

MT21011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300

- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 11MAY99 EF 11MAY99 LS 03SEP99 LF 03SEP99 BS 11MAY99 BF 11MAY99 AS --/--/-- AF --/--/--

MT22014 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 25MAY99 EF 25MAY99 LS 08SEP99 LF 08SEP99 BS 25MAY99 BF 25MAY99 AS --/--/-- AF --/--/--

MT22011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 26MAY99 EF 26MAY99 LS 09SEP99 LF 09SEP99 BS 26MAY99 BF 26MAY99 AS --/--/-- AF --/--/--

MT23013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	1,495
PLANNED % COMP: 0 ES 09JUN99 EF 09JUN99 LS 21SEP99 LF 21SEP99 BS 09JUN99 BF 09JUN99 AS --/--/-- AF --/--/--						
MT23011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration:	1
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	7,745
PLANNED % COMP: 0 ES 10JUN99 EF 10JUN99 LS 22SEP99 LF 22SEP99 BS 10JUN99 BF 10JUN99 AS --/--/-- AF --/--/--						
MT24013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 24JUN99 EF 24JUN99 LS 27SEP99 LF 27SEP99 BS 24JUN99 BF 24JUN99 AS --/--/-- AF --/--/--

MT24011	UNLOAD TFBP-2 AT CPP			(A0335) Duration: 1	
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 25JUN99 EF 25JUN99 LS 28SEP99 LF 28SEP99 BS 25JUN99 BF 25JUN99 AS --/--/-- AF --/--/--

MT25013	Swap Transfer Cart Adapters			(A0335) Duration: 1	
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 09JUL99 EF 09JUL99 LS 01OCT99 LF 01OCT99 BS 09JUL99 BF 09JUL99 AS --/--/-- AF --/--/--

MT25011	UNLOAD TFBP-2 AT CPP			(A0335) Duration: 1	
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0

- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 12JUL99 EF 12JUL99 LS 04OCT99 LF 04OCT99 BS 12JUL99 BF 12JUL99 AS --/--/-- AF --/--/--

MT26013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 30JUL99 EF 30JUL99 LS 07OCT99 LF 07OCT99 BS 30JUL99 BF 30JUL99 AS --/--/-- AF --/--/--

MT26011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 02AUG99 EF 02AUG99 LS 08OCT99 LF 08OCT99 BS 02AUG99 BF 02AUG99 AS --/--/-- AF --/--/--

MT27013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325

- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 16AUG99 EF 16AUG99 LS 13OCT99 LF 13OCT99 BS 16AUG99 BF 16AUG99 AS --/--/-- AF --/--/--

MT27011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 17AUG99 EF 17AUG99 LS 14OCT99 LF 14OCT99 BS 17AUG99 BF 17AUG99 AS --/--/-- AF --/--/--

MT28013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 31AUG99 EF 31AUG99 LS 19OCT99 LF 19OCT99 BS 31AUG99 BF 31AUG99 AS --/--/-- AF --/--/--

MT28011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300

- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 01SEP99 EF 01SEP99 LS 20OCT99 LF 20OCT99 BS 01SEP99 BF 01SEP99 AS --/--/-- AF --/--/--

MT29013 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 15SEP99 EF 15SEP99 LS 25OCT99 LF 25OCT99 BS 15SEP99 BF 15SEP99 AS --/--/-- AF --/--/--

MT29011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 16SEP99 EF 16SEP99 LS 26OCT99 LF 26OCT99 BS 16SEP99 BF 16SEP99 AS --/--/-- AF --/--/--

MT30013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	1,495
PLANNED % COMP: 0 ES 30SEP99 EF 30SEP99 LS 29OCT99 LF 29OCT99 BS 30SEP99 BF 30SEP99 AS --/--/-- AF --/--/--						
MT30011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration:	1
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130
					TOTALS $	7,745
PLANNED % COMP: 0 ES 01OCT99 EF 01OCT99 LS 01NOV99 LF 01NOV99 BS 01OCT99 BF 01OCT99 AS --/--/-- AF --/--/--						
MT31013	Swap Transfer Cart Adapters			(A0335)	Duration:	1
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 15OCT99 EF 15OCT99 LS 04NOV99 LF 04NOV99 BS 15OCT99 BF 15OCT99 AS --/--/-- AF --/--/--

MT31011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration: 1	
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost:	$65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost:	$.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 18OCT99 EF 18OCT99 LS 05NOV99 LF 05NOV99 BS 18OCT99 BF 18OCT99 AS --/--/-- AF --/--/--

MT32013	Swap Transfer Cart Adapters			(A0335)	Duration: 1	
- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost:	$.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost:	$40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost:	$65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost:	$45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost:	$52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost:	$65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 01NOV99 EF 01NOV99 LS 10NOV99 LF 10NOV99 BS 01NOV99 BF 01NOV99 AS --/--/-- AF --/--/--

MT32011	UNLOAD TFBP-2 AT CPP			(A0335)	Duration: 1	
- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost:	$40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost:	$65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost:	$45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost:	$52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost:	$.00	$0

- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 02NOV99 EF 02NOV99 LS 12NOV99 LF 12NOV99 BS 02NOV99 BF 02NOV99 AS --/--/-- AF --/--/--

MT33014 Swap Transfer Cart Adapters (A0335) Duration: 1

- IFSF	Iradiated Fuel Storage Facility	4	Each	Unit Cost: $.00	$0
- 2240B	Fuel Handling & Dissolution Operators	8	Total hrs	Unit Cost: $40.64	$325
- 2240E	Fuel Handling & Dissolution Supervision	4	Total hrs	Unit Cost: $65.00	$260
- 8119B	Equipment Operators	8	Total hrs	Unit Cost: $45.53	$364
- 9840B	Radcon Techs	8	Total hrs	Unit Cost: $52.05	$416
- 2810E	Fast & Storage Staff	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 1,495

PLANNED % COMP: 0 ES 17NOV99 EF 17NOV99 LS 17NOV99 LF 17NOV99 BS 17NOV99 BF 17NOV99 AS --/--/-- AF --/--/--

MT33011 UNLOAD TFBP-2 AT CPP (A0335) Duration: 1

- 2240B	Fuel Handling & Dissolution Operators	44	Total hrs	Unit Cost: $40.64	$1788
- 2240E	Fuel Handling & Dissolution Supervision	20	Total hrs	Unit Cost: $65.00	$1300
- 8119B	Equipment Operators	20	Total hrs	Unit Cost: $45.53	$911
- 9840B	Radcon Techs	32	Total hrs	Unit Cost: $52.05	$1666
- TFB-2	Thermal Fuels Behavior Cask -2	1	Each	Unit Cost: $.00	$0
- 2810E	Fast & Storage Staff	30	Total hrs	Unit Cost: $65.00	$1950
- IFSF	Iradiated Fuel Storage Facility	16	Each	Unit Cost: $.00	$0
- 6400E	Safeguards and Security	2	Total hrs	Unit Cost: $65.00	$130

TOTALS $ 7,745

PLANNED % COMP: 0 ES 18NOV99 EF 18NOV99 LS 18NOV99 LF 18NOV99 BS 18NOV99 BF 18NOV99 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0335 >>>>>>>>>
WBS Total= $ 367,584

INEL Spent Nuclear Fuel Consolidation
Planning Package
Fiscal Year 1996 Budget Request

Cost Account Title: TRA MTR Canal SNF Characterization, Repackaging, and Transfe

CWBS Code: A03 | Cost Account Manager:

Activity Data Sheet: | Budget and Reporting Classification:

Funding Type: Operating | Date Prepared:

Objective of Cost Account:
Repackage all nuclear fuel stored in the MTR canal, transfer it to ICPP, and store it in the Irradiated Fuel Storage Facility (IFSF).

Planning Package - A033 - Fuel Transfer Operations

Driver.Code(s):
Driver Reference:
None

Scope of Work: Provide program management and administration to coordinate the transfer of MTR Canal fuel from TRA to CPP. Provide IFSF equipment maintenance during fuel transfers. Provide monitoring of MTR cans in storage at IFSF for 5 years.

Assumptions/Prequestites/Program Guidance:
MTR cans will require periodic inspection to verify dry storage condition.

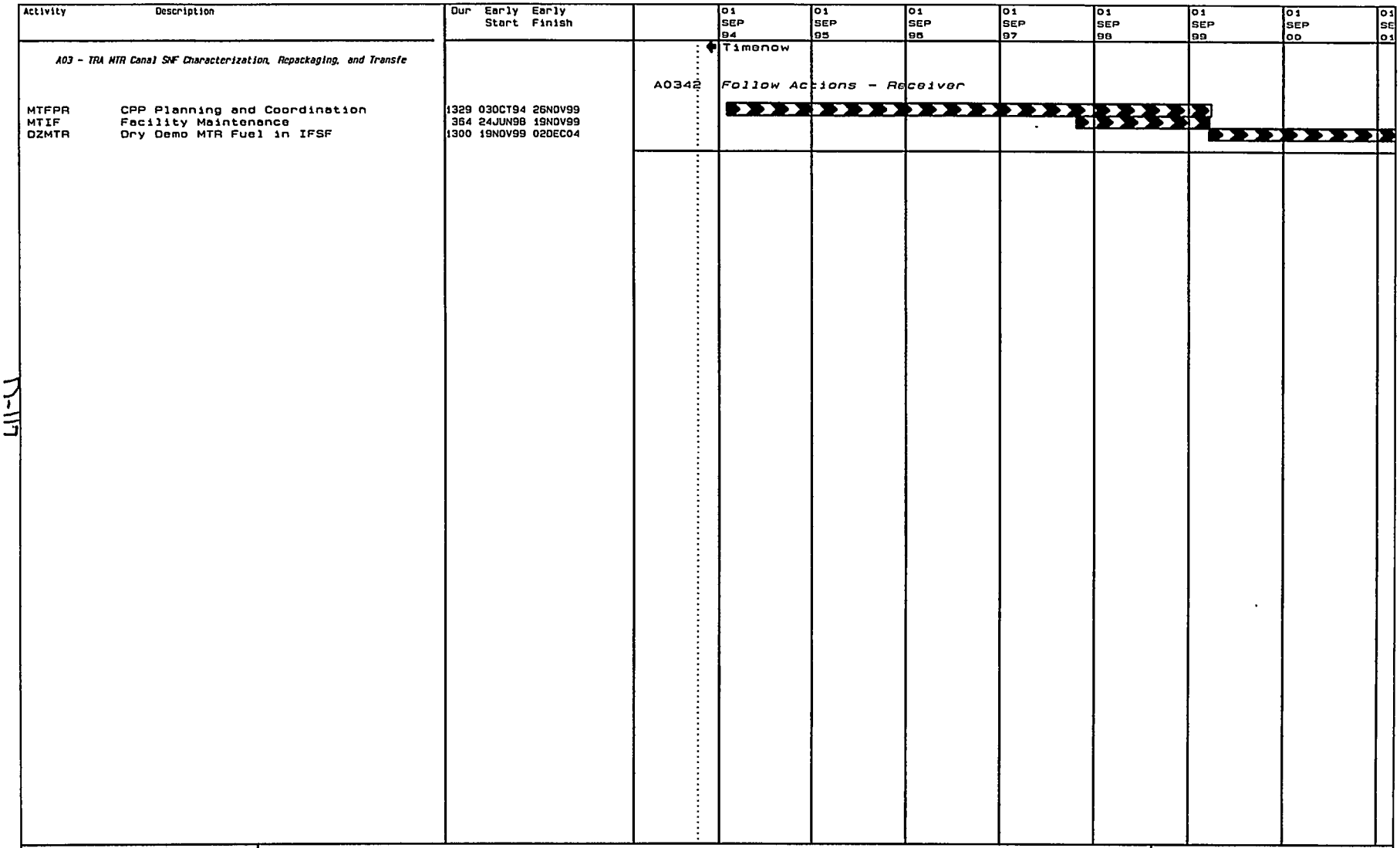
Deliverables:

Planning and coordination between the shipper and receiver.
Maintenance of IFSF equipment to support receipt of MTR cans.
Inspection and monitoring of MTR cans in IFSF for first five years of storage.

Milestones:

SNF/SNM Consolidation Schedule

Spent Nuclear Fuel
Consolidation



OPEN PLAN	Spent Nuclear Fuel Consolidation	PAGE: 1
REPORT: PAGE3C	SNF/SNM Consolidation Schedule Basis of Estimate	REPORT DATE:30JUN94
PROJECT:SNF1		TIME NOW:10JUN94

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

WBS	DESCRIPTION	START DATE	FINISH DATE	COST	
A0342	Follow Actions - Receiver	03OCT94	02DEC04	Planning Package=	$ 1,553,729
	A034			Cost:	$ 1,553,729
A03 -				Project Cost:	$ 1,553,729

OPEN PLAN				Spent Nuclear Fuel Consolidation						PAGE: 1	
REPORT: NCPR5				COST PERFORMANCE REPORT -						REPORT DATE:30JUN94	
PROJECT: SNF1				SNF/SNM Consolidation Schedule						TIME NOW:10JUN94	
	FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	Complete
A03	TRA MTR Canal SNF Characterization, Repackaging, and Transfe											
A0342	0	134160	134160	133640	229474	480512	132516	73937	74224	73936	74512	1553729
Total	0	134160	134160	133640	229474	480512	132516	73937	74224	73936	74512	1553729
GRAND	0	134160	134160	133640	229474	480512	132516	73937	74224	73936	74512	1553729

A03 - TRA MTR Canal SNF Characterization, Repackaging, and Transfe

A0342 - Follow Actions - Receiver

MTFPR	CPP Planning and Coordination			(A0342)	Duration: 1329
- 2810E	Fast & Storage Staff	4	hrs/day	Unit Cost: $65.00	$345540
- 8210E	OSS Scheduling	4	hrs/day	Unit Cost: $65.00	$345540
				TOTALS $	691,080

PLANNED % COMP: 0 ES 03OCT94 EF 26NOV99 LS 12MAY11 LF 07JUL16 BS 03OCT94 BF 26NOV99 AS --/--/-- AF --/--/--

MTIF	Facility Maintenance			(A0342)	Duration: 364
- 2810E	Fast & Storage Staff	1	hrs/day	Unit Cost: $65.00	$23660
- 2240E	Fuel Handling & Dissolution Supervision	1	hrs/day	Unit Cost: $65.00	$23660
- 2240B	Fuel Handling & Dissolution Operators	3	hrs/day	Unit Cost: $40.64	$44379
- 8114B	Mechanic	1	hrs/day	Unit Cost: $45.53	$16573
- 8112B		1	hrs/day	Unit Cost: $45.00	$16380
- NLD-K	EG&G Non Labor Dollars - (x1000)	1	Non-Labor $	Unit Cost: $1000.00	$364000
				TOTALS $	488,652

PLANNED % COMP: 0 ES 24JUN98 EF 19NOV99 LS 10FEB15 LF 07JUL16 BS 24JUN98 BF 19NOV99 AS --/--/-- AF --/--/--

DZMTR	Dry Demo MTR Fuel in IFSF			(A0342)	Duration: 1300
- 2240B	Fuel Handling & Dissolution Operators	1	hrs/day	Unit Cost: $40.64	$52832
- 2240E	Fuel Handling & Dissolution Supervision	1	hrs/day	Unit Cost: $65.00	$84500
- 8119B	Equipment Operators	0	hrs/day	Unit Cost: $45.53	$0
- 9840B	Radcon Techs	1	hrs/day	Unit Cost: $52.05	$67665
- 2810E	Fast & Storage Staff	1	hrs/day	Unit Cost: $65.00	$84500
- 4600E	Spent Fuel Cond & Mat Tech	1	hrs/day	Unit Cost: $65.00	$84500
				TOTALS $	373,997

PLANNED % COMP: 0 ES 19NOV99 EF 02DEC04 LS 19NOV99 LF 02DEC04 BS 19NOV99 BF 02DEC04 AS --/--/-- AF --/--/--

<<<<<<<<<< End of WBS A0342 >>>>>>>>>
WBS Total= $ 1,553,729

Appendix E

SNF or SNM TRANSFERS TECHNICAL TASKS

This section discusses the processes that will be used to transfer Spent Nuclear Material (SNF) or Special Nuclear Material (SNM) from various Idaho National Engineering Laboratory (INEL) facilities to (ICPP). A considerable amount of preparation is required by the shipper and receiver for each transfer. Routine and less frequent SNF transfers have been safely performed over many years at the INEL. These proven SNF and SNM transport methods will be used for the INEL SNF identified in this consolidation plan. The following subsections provide additional information for each of these transfers.

E.1 PBF Canal SNF Transfer To ICPP IFSF

The Power Burst Facility (PBF) tested nuclear fuel under severe operating conditions. Figure E-1 shows the general arrangement of the main floor of the reactor building. In the past, irradiated test assemblies were removed from the facility using the Thermal Fuel Behavior Program Number-2 (TFBP-2) cask. The TFBP-2 will be used to transfer SNF to the ICPP. (A description of the TFBP-2 cask is in section 4.2.2.2). Figure E-2 shows the cask in the north end of the facility.

PBF SNF is stored in two temporary fuel storage racks located in the south end of the PBF canal. The SNF consists of stainless steel-clad pins that are bolted into aluminum canister assemblies. Loading procedures for PBF SNF will be developed in detail as part of the transfer project. The assemblies will be placed into the existing PBF Turnover Fixture and the pins will be removed. About 75 pins will be placed into a transport/storage basket, loaded into the TFBP-2 cask, and shipped to the Irradiated Fuel Storage Facility (IFSF) at ICPP.

Major elements of loading the cask will include the following steps. The transporter with the lower cask and lid will be backed into the PBF. The cask will be removed from the transporter with the facility 15-ton crane as shown in Figure E-3. The crane will move the cask to the south end of the pool and lower it into the pool. The lower cask door will be opened, and the cask hoist cable will be lowered through a port in the lid. After the cable is attached to the transport/storage basket, the basket will be raised into the cask, and the lower door closed. The cask will be drained. The cable will then be disconnected from the basket and the port in the lid closed. The cask will then be removed from the pool, decontaminated, and returned to the transporter. With the completion of the appropriate radiological surveys and shipping documentation, the cask will be ready for transport to ICPP.

The cask will be transported to ICPP during daylight hours at 5 to 15 mph. The transfer will be timed so it does not occur during peak traffic. Escort vehicles will be located in front of and behind the truck. A similar procedure has proven safe in the past.

At the ICPP, the cask transporter will be surveyed for radiation and then accepted by the facility. Prior to transferring the cask to the transfer cart, an adapter plate configured for the TFBP-2 cask will be placed in the

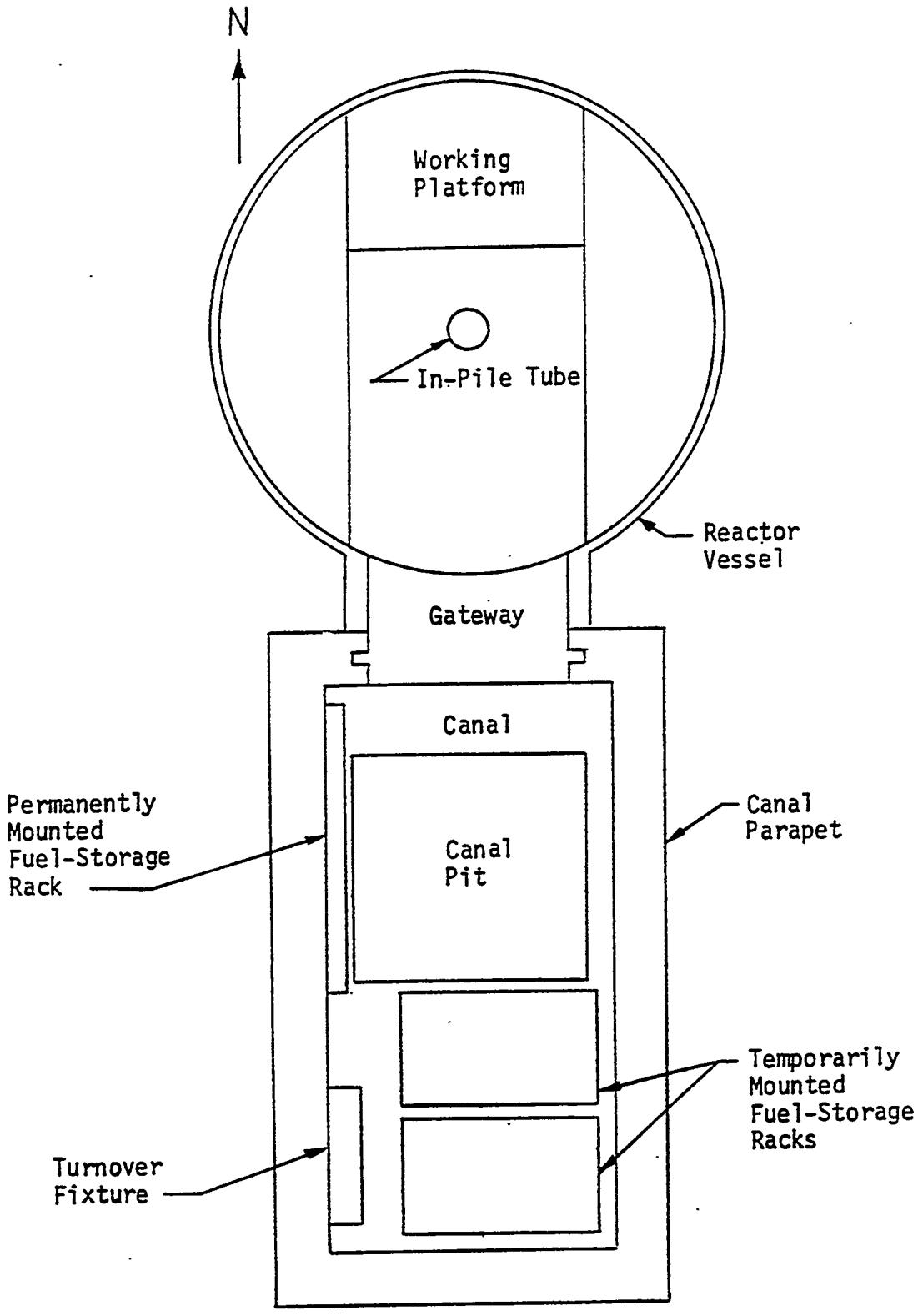


Figure E-1 Top View of PBF Reactor Vessel and Canal

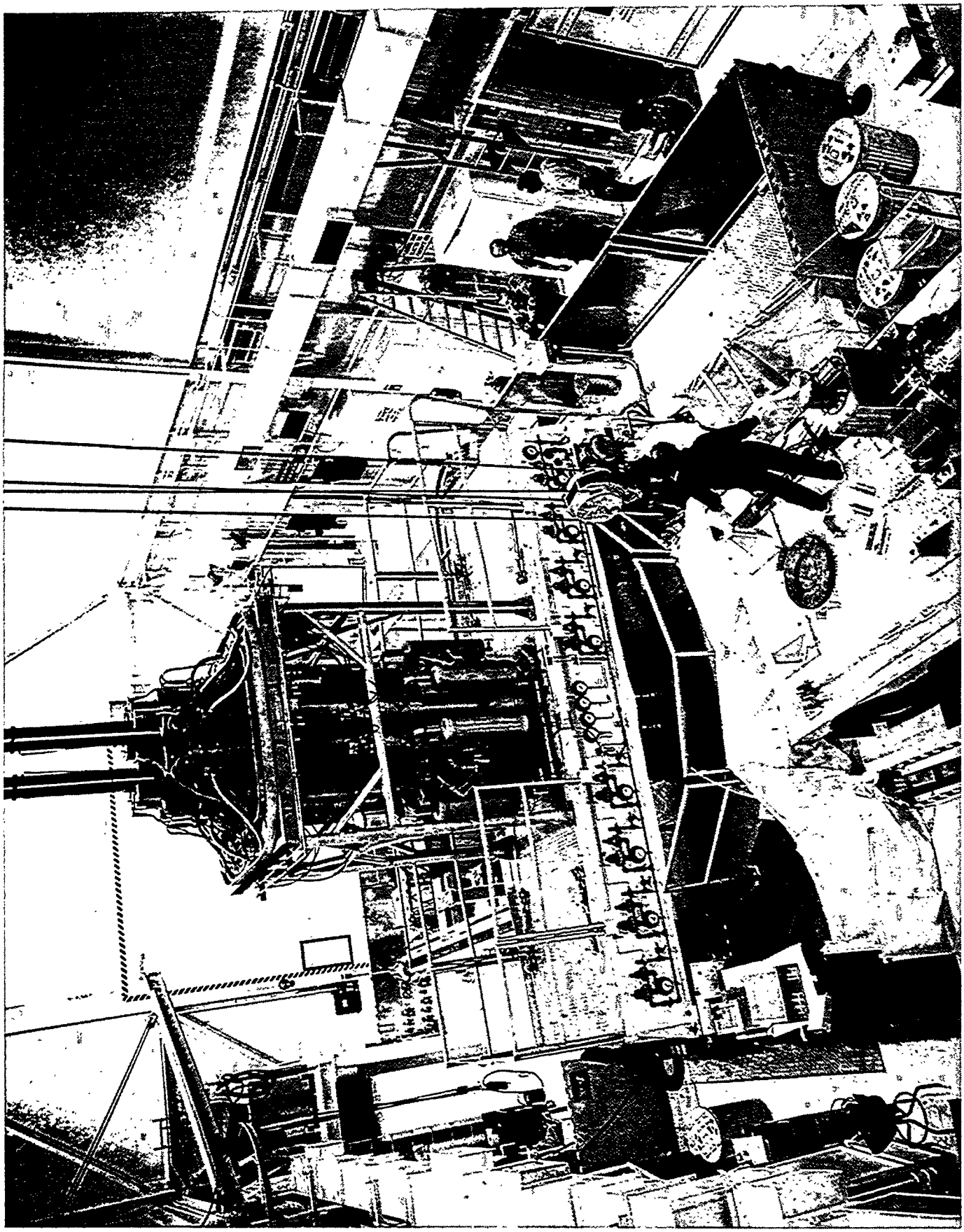


Figure E-2 TFBP-2 Cask and Transporter Ready for Transfer at PBF

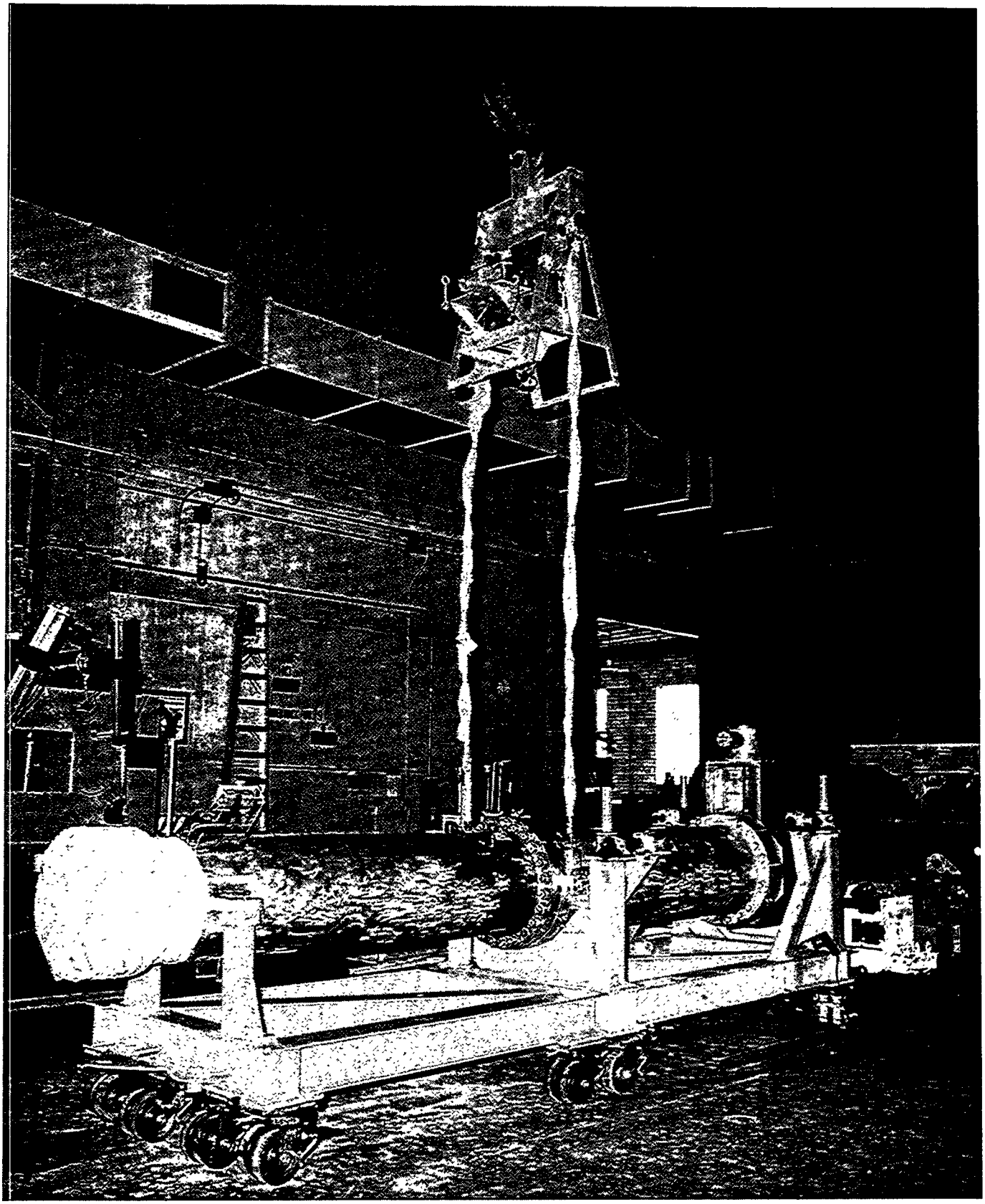


Figure E-3 A Crane Removes The Fully Assembled TFBP-2 Cask From The Transporter

IFSF cart. The cask will then be moved to the IFSF where the cask will be removed from the transporter. The cask will be loaded into the IFSF transfer cart. The lid bolts will be loosened, the majority of them removed, and the rigging will be attached to the lid.

The cask will then be moved into the IFSF shielded area where the lid will be remotely removed. Loaded PBF SNF canisters will be remotely removed from the cask and placed into IFSF storage canisters. The storage canisters will then be placed into storage inserts for storage in the IFSF. The cask lid will then be replaced and the cask removed from the IFSF. Lid bolts will be replaced, and the cask returned to the transporter. The cask will be surveyed for radioactive contamination and prepared for empty return to PBF.

E.2 TRA ARMF/CFRMF SNF Transfer To ICPP IFSF

The Advanced Reactivity Measurement Facility (ARMF) and Coupled Fast Reactivity Measurement Facility (CFRMF) reactors are located in a common pool at TRA-660. Operation of the facility began in the early 1960s and was stopped in 1991. Figures E-4 shows the layout of the building. The SNF is currently assembled into the reactor core of each reactor. Figure E-5 shows the general arrangement of the ARMF. The CFRMF is similar in design. Preparations for shipping will begin by disassembly of one reactor system and removal of any interfering equipment.

The TFBP-2 cask will be brought horizontally through the facility roll-up door on an existing dolly. The cask will be rotated to the vertical position and placed upon the floor. The cask bolts and lid will be removed and the cask lowered to the bottom of the reactor pool. Four SNF elements will be transferred to the cask and the lid will be replaced on the cask. The cask will then be lifted out of the water and drained. Once drained, the cask can then be placed on the floor. The lid bolts will be installed and the cask decontaminated for shipment. After replacing the cask in the dolly, the cask is moved outside the building and returned to the transporter.

Transport of the SNF to ICPP will be in accordance with an approved transport plan similar to the one used for PBF transfers. Unloading SNF at ICPP will also be similar to unloading PBF SNF.

After unloading the first reactor, the second reactor will be disassembled. The SNF will be transferred to ICPP using the same methods used for the first reactor.

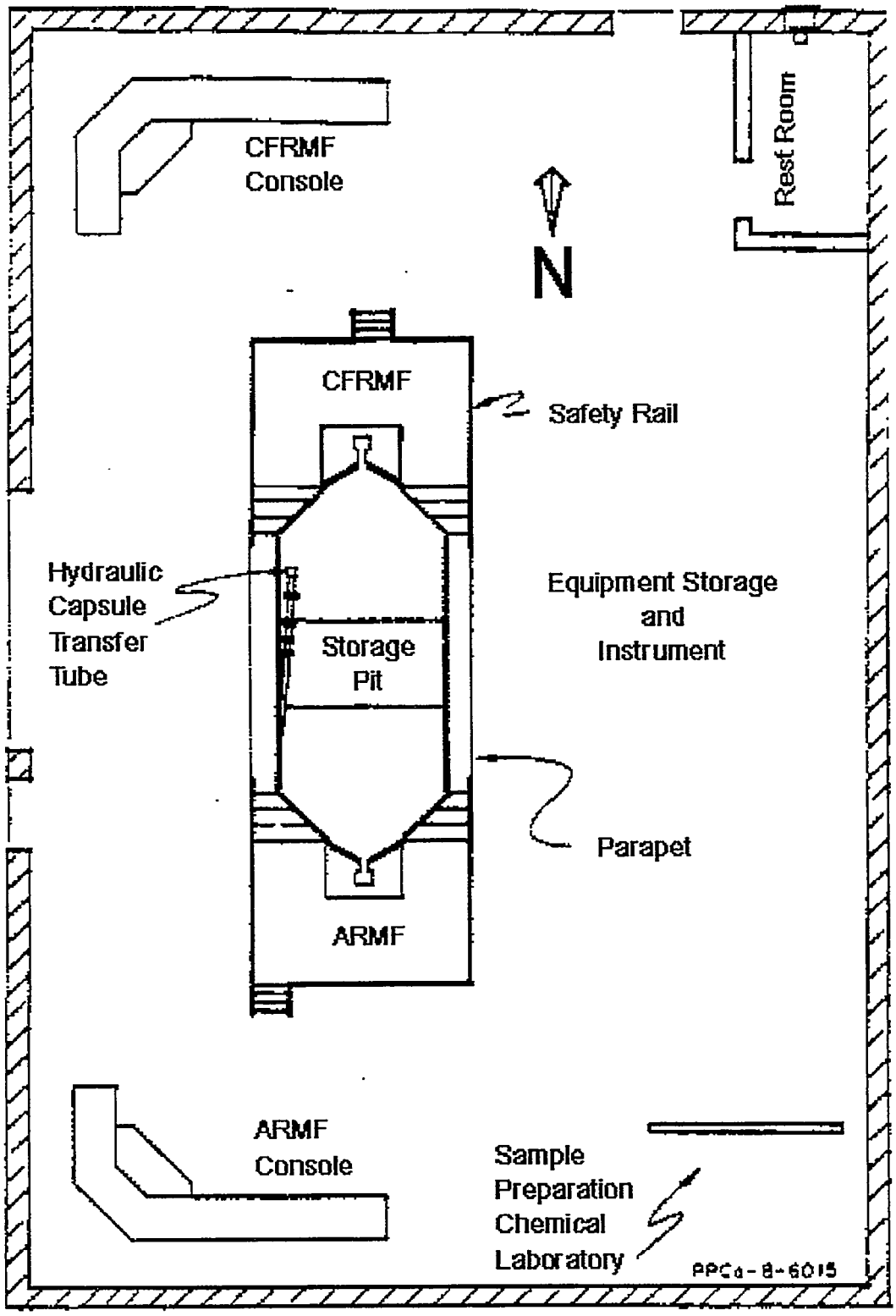


Figure E-4 Layout of ARMF and CFRMF Building

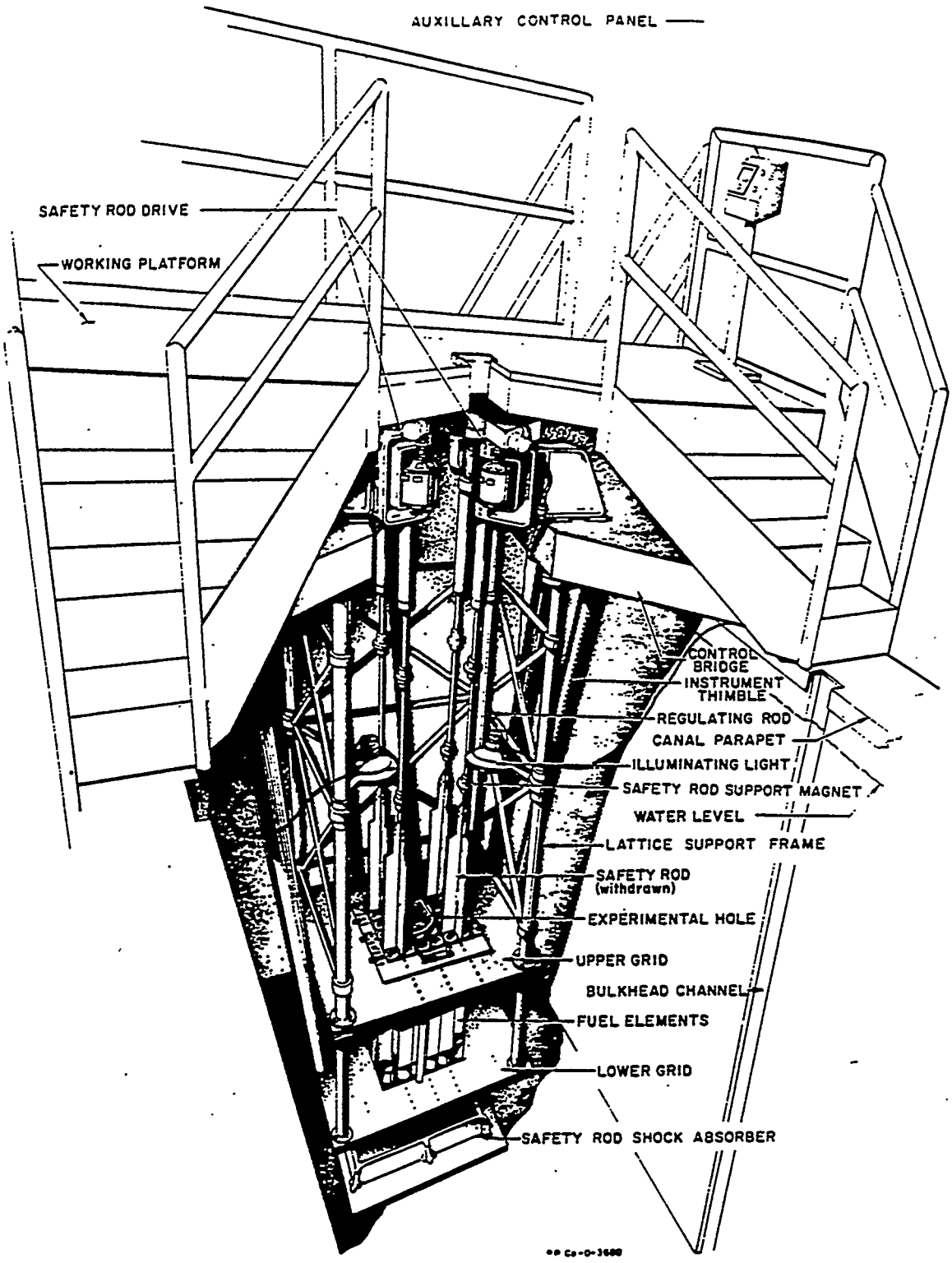


Figure E-5 General Arrangement of ARMF Reactor Structure

E.3 TRA MTR Canal SNF Characterization, Repackaging, and Transfer to IFSF

The MTR canal SNF transfer discussion is included as an example in section 1.5.

E.4 TRA NMIS SNM Transfer to CPP-651

SNM is stored in the Nuclear Material Inspection & Storage (NMIS) facility, TRA 621, shown in Figure E-6. This facility is a Material Access Area and contains the activities of non-destructive assay and quality assurance of unirradiated fuel, and storage of SNM. The Category I quantity of SNM is in the form of Advanced Test Reactor (ATR), Engineering Test Reactor (ETR), and General Electric Test Reactor (GETR) unirradiated fuel elements. Category IV quantities are also stored in the form of unirradiated fuel pellets, powders, and PBF unirradiated fuel elements. The ETR and GETR fuel elements have been accepted by the Oak Ridge Y-12 plant as scrap material, and await transfer offsite. The offsite transfer is currently unfunded; thus, consolidation of this material in CPP-651 is included in this plan.

Approximately 60 transfers of NMIS SNM are anticipated. They will be completed using existing transfer packages (ATR shipping boxes, ETR shipping boxes, and shipping drums) and transport vehicles. A Shipper/Receiver plan will be established in accordance with DOE Order 5633.3A. At no time will the SNM being transported exceed a Category II quantity. Physical security measures will be maintained and observed throughout the transfer as described in existing safeguards and security procedures.

SNM transfers between TRA and ICPP (approximately 2 miles) will be made entirely within the boundaries of the INEL on INEL roadways. Because the transfers will not use state or public roadways, non-U.S. Department of Transportation certified containers may be used. The currently uncertified ETR shipping containers, with only a minimum amount of refurbishment, may be used for transferring the ETR and GETR fuels to ICPP. The ATR shipping boxes and shipping drums are certified.

SNM will be received at the Unirradiated Fuel Storage Facility, CPP-651. Fuel will be placed in storage racks in the north vault (Room 107). The configuration will be identical to previously approved spacing and arrangement. The SNM to be stored in drums will be located in the south vault in accordance with currently approved criteria.

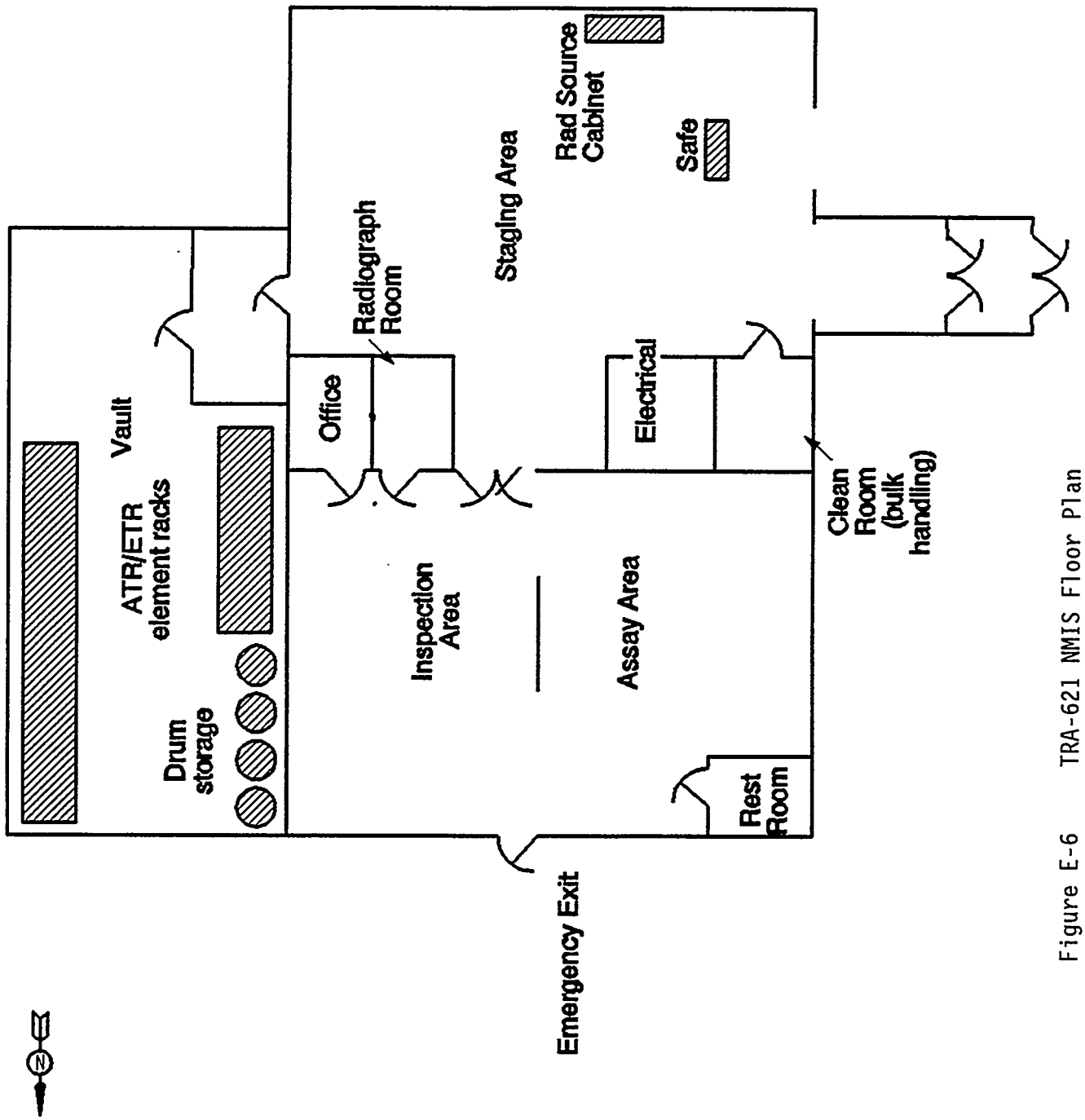


Figure E-6 TRA-621 NMIS Floor Plan

E.5 TAN TMI SNF Transfer To A New Facility at ICPP

Figure E-7 shows the TAN-607 facilities. The Three Mile Island (TMI) core debris is stored in stainless steel canisters in storage modules in the TAN Storage Pool. Six canisters are stored in each module. Each canister is currently filled with water and has a vent tube attached to remove any radiolytic gases. DOE recently funded a Line Item Construction Project (LICP) to remove the canisters from the pool and place into dry storage. The original concept of the LICP was to place the canisters into concrete storage casks at Test Area North (TAN). However, present planning is directed to transfer and storage of the canisters at ICPP in dry storage instead.

Individual storage canisters will be retrieved from the Storage Pool with the existing pool bridge crane and transfer cart. The canisters will be drained, dried, and remotely loaded into the Nuclear Packaging (NuPac) 125-B cask in the TAN Hot Shop for transport to ICPP.

The NuPac 125-B cask was designed as a rail cask to transport the canisters from TMI to the Central Facility Area (CFA). A truck trailer transport was used from CFA to TAN-607. To transport the canisters to ICPP, the cask will again be used with a truck trailer. The transporter and cask will be backed into the adjacent TAN-607 Warm Shop. Two 6-ton overpacks will be removed. The transporter will then be moved to the Hot Shop. The cask will be removed from the transporter and placed in the existing cask support stand. The transporter is then removed from the Hot Shop. The cask is opened and prepared for loading. Personnel are then evacuated from the Hot Shop in preparation for remote operations, and seven canisters are loaded into the cask. Both lids will be replaced and the cask leak checked. The transporter will then be returned to the Hot Shop, the cask reloaded, and moved to the Warm Shop for replacement of the overpacks.

The NuPac 125-B cask meets requirements for a U.S. Department of Transportation (DOT)/Nuclear Regulatory Commission (NRC) licensed package. Therefore, the cask can be shipped on the state highway without a special transport plan. However, regulations concerning oversized shipments need to be considered when developing a transport scenario. Current plans are to ship the cask without escorts at highway speeds. The new TMI SNF storage facility at ICPP has not been finalized, but see section 4.1.4 for a discussion of the current proposed structure.

After unloading, the empty cask and skid will be replaced on the transporter, the overpacks reinstalled, and the cask shipped to TAN for another load. The number of casks used for TMI shipping is dependant upon the number of transporters purchased.

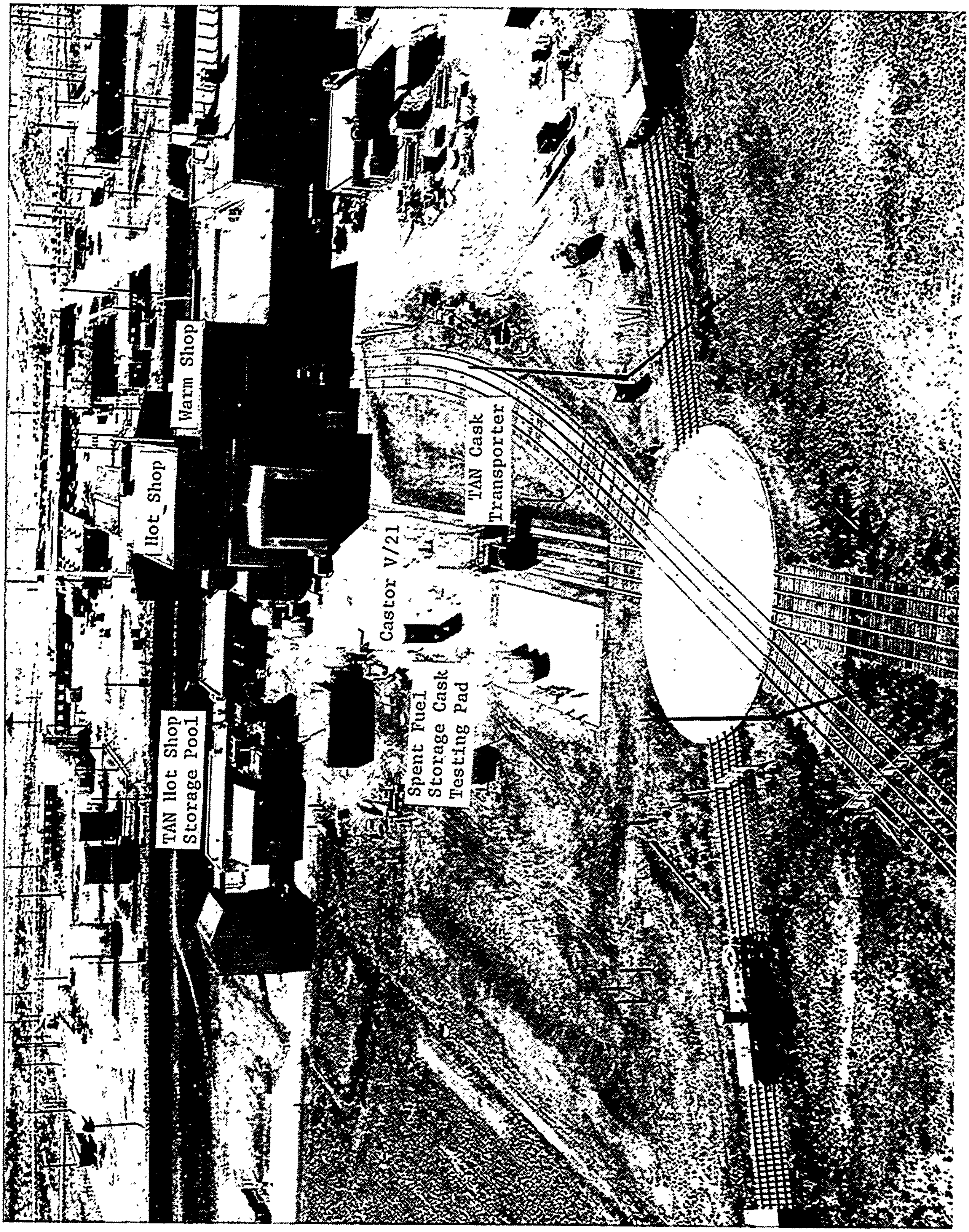


Figure E-7 TAN-607 Facilities

E.6 TAN LOFT SNF Transfer To CPP-749

SNF assemblies from the Loss-of-Fluid Test (LOFT) reactor are located in storage modules in the TAN Hot Shop Storage Pool. The modules are predominantly stainless steel and are modifications of modules used to store the TMI core debris. The modules are retrieved into the Hot Shop using the Storage Pool bridge crane and transfer cart. Individual assemblies are removed from the module and placed into equipment to remove the upper structure, any control rod assemblies, a lone neutron source assembly. The removed upper structure and nonfuel components will be used for salvage, as slightly contaminated structural material, or transferred to a proper radioactive waste repository disposal. The remaining part of the assembly will be placed into an approved storage canister. A second assembly bottom will be placed into the canister. The canister will be closed and sealed. Canisters will be stored until a cask is available for transfer.

Canisters of LOFT SNF will be transferred to ICPP in the Peach Bottom (PB-2) cask. A trailer with the empty PB-2 cask will be backed into the Hot Shop. The cask will be removed from the trailer and placed into the existing cask stand. The trailer will then be removed from the Hot Shop. The cask lid bolts will be removed. The lid will be removed and rigged for remote installation. Then, personnel will leave the Hot Shop preparatory to remote operations. The canister will be retrieved from the storage location and placed into the cask. The cask lid will be remotely replaced on the cask. Personnel can then enter the Hot Shop to install the lid bolts and check the cask for contamination. The trailer will be returned to the Hot Shop, and the cask will be installed on the trailer. The transporter will be removed from the Hot Shop and prepared for transfer to ICPP.

The road between TAN and ICPP is within the controlled area of the INEL. However, a five-mile section of the road is also a state highway. A further shipping complication is that the PB-2 cask is not licensed by the NRC for transport of radioactive materials in commerce. One method for meeting the DOT regulations is to obtain a DOT exemption. This is a procedure within the Code of Federal Regulations that uses administrative controls for equivalent safety, as approved by DOT.

Another method for shipping the PB-2 cask is to make the transfers "out-of-commerce." This is another allowable procedure using DOE equipment and personnel.

A third method is to request permission from the State of Idaho to close the highway during the time (about one-hour) required to traverse that section of highway. Road closure could be performed by State of Idaho State Police. The cask would be moved at 5 to 15 miles per hour. Escort vehicles would be provided both ahead of and behind the transporter for traffic control. Normal traffic would resume when the transporter left the state highway.

The cask and transporter will be surveyed for radioactivity when it is received at ICPP. The transporter will be delivered to CPP-749 and the cask removed. The cask will be placed over the storage well liner in CPP-749 and the bottom of the cask opened. The storage canister will be lowered into the well through the bottom of the PB-2 cask. The canister will be released and the cask returned to the transporter. The cask will be returned to TAN. A total of 7 transfers of the LOFT fuel to CPP-749 storage will be made.

E.7 TAN Commercial SNF Transfer to New Pad at ICPP

Commercial SNF is stored at TAN in two locations. Most of the SNF is stored in four dry storage casks located on the Spent Fuel Storage Cask Testing Pad (TAN-791) outside the TAN-607 Hot Shop. The casks, MC-10, TN-24P, VSC-17 and Castor V-21, are a long-term, temporary storage demonstration of SNF from Pressurized Water Reactors. The remaining commercial SNF is in the TAN Pool in aluminum storage boxes (also called coffins). Plans are to relocate this SNF to the Hot Shop silo in FY-95 to remove an existing environmental, safety, and health (ES&H) vulnerability, i.e., potential corrosion of the aluminum boxes.

Commercial SNF consolidation begins with moving the MC-10 from the storage pad into the Hot Shop using the existing TAN cask transporter. Lid bolts will be removed from the cask, the Hot Shop evacuated, and the lid remotely removed from the cask. SNF stored in the silo will then be remotely transferred to the cask, and the cask lid will be remotely returned to the cask.

Another task in consolidation of TAN Commercial SNF will require emptying the VSC-17 cask. This cask is concrete and cannot be handled at ICPP using existing facilities. The VSC-17 and the TN-24P will be moved into the Hot Shop using the existing TAN cask transporter. The lids of both casks will be opened and the SNF transferred from VSC-17 to the TN-24P cask. The lid will then be replaced on the TN-24P, and the casks will be removed from the Hot Shop. The VSC-17 can then be discarded.

Plans are to move the three casks from TAN to a new concrete pad next to CPP-749. Three alternative methods are being considered for this move. One method is to transport the casks on the transporter used for the NuPac 125-B. The casks will be moved into the TAN Hot Shop and placed horizontally on the transporter. Because none of the casks are licensed for shipment in commerce, the transporter would be escorted to ICPP similar to transport of LOFT SNF, i.e., most likely out-of-commerce transfers. The casks would then be rotated to the vertical position and removed from the transporter using a new bridge crane in the vault system being planned for TMI canisters storage. The TAN cask transporter would be moved to ICPP from TAN and used to move the casks to the new pad.

The last option considered would be to unload the casks at TAN and transfer empty storage casks to CPP-666. The SNF would then be transferred to CPP-666 in the TN-8L commercial SNF transport cask, and loaded under water into the storage cask. The storage cask would be lifted out of the water, drained, backfilled with an inert gas, and transferred to a storage pad near CPP-749. This wet unloading interface would complicate, if not negate, completion of any additional long-term dry storage demonstration program for these commercial spent fuels. This Spent Fuel Behavior Program is currently sponsored by DOE RW.