Department of Energy
Washington, DC 20585

July 15, 1999

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

Consistent with your letter of May 27, 1999 to the Secretary closing Recommendation 94-3, enclosed is the Department's final quarterly progress report on implementation of the recommendation. Recommendation 94-3 addresses seismic and safety upgrades to Rocky Flats Building 371. The Department has completed nine successful months of operation of building 371 in accordance with its updated Authorization Basis, the Building 371/374 Complex Basis for Interim Operation (BIO). Facility management continues to report a high degree of satisfaction with operations in accordance with the BIO.

All of the twenty-one upgrades required for full compliance with the Basis of Interim Operation for Building 371 have now been completed. During this quarter, plans to accelerate startup of the plutonium stabilization and packaging system to December 1999 were approved. Modifications to Room 3701 and transport of the system from the Bloomfield warehouse were completed in April 1999.

Sincerely,

James M. Owendoff

James M. Owendoff
Principal Deputy Assistant Secretary for
Environmental Management

Enclosure
cc: Mark Whitaker, S-3.1

U. S. DEPARTMENT OF ENERGY

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
RECOMMENDATION 94-3
INTEGRATED PROGRAM PLAN

TENTH QUARTERLY REPORT

Reviewed for Classification/UCNI By

Date: 4/12/99

April 1999

EXECUTIVE SUMMARY

This periodic report provides an update on the progress of implementation of Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-3. Recommendation 94-3 involves seismic and safety upgrades to the Rocky Flats plutonium storage facility. The Department of Energy formally submitted in June a revised Integrated Program Plan (IPP, designated "Revision 1, April 28, 1998") which made commitments for actions and decisions. Progress on those actions and results of decisions are reported in this tenth quarterly report.

Building 371 has completed nine successful months of operation in accordance with its updated Authorization Basis, the Building 371/374 Complex Basis for Interim Operation (BIO). A single Technical Safety Requirements (TSR) violation occurred during the past quarter due to a failure to implement Required Actions for areas determined not to meet LS/DW audibility criteria within the completion times specified in LCO 3.4. Facility management continues to report a high degree of satisfaction with operations in accordance with the BIO, citing significantly improved facility availability for risk reduction work.

Although progress continues to be made toward closure of BIO implementation issues that are open in the Justification for Continued Operations (JCO), the JCO was not fully closed on March 1, 1999 as planned. Completed activities include construction of all remaining BIO-driven upgrades, and the repair of fire damper deficiencies in credited firewalls. A BIO change that requested long term acceptance of combustible control program deficiencies in four highly contaminated areas was not approved by DOE-RFFO. The combustible control and fire barrier issues contained in the JCO were extended until April 30, 1999 to allow for submittal and implementation of an alternate change requiring the correction of the deficiencies in two areas by September 30, 1999. The remaining two areas of concern will be accepted as allowable conditions based on the expected completion of actinide solution draining in the areas by April 30, 1999. Overall, the facility continues to realize a substantial safety benefit from the authorization basis update and considers it a strong foundation for important new missions to be started this year including salts, fluorides, and the Plutonium Stabilization and Packaging System (PuSPS).

As previously reported, construction of all Building 371 priority safety upgrades specified in Table 3-1 of the IPP was completed in August 1998. During this quarter, construction of the last six BIO-required upgrades presented in Table 3-1 of this report was finished, completing all of the planned Phase 1 and Phase 2 safety upgrades. Additionally, design of validated interim storage upgrades in vaults 1101 and 1208 has progressed as planned in support of completion by September 1999. Progress has also been made on completing corrective actions to resolve the observations and issues contained in the DOE-RFFO assessment of the upgrade design and construction program. Completion of all tasks is expected by April 1999.

The Site is continuing to evaluate alternatives to accelerate successful completion of integrated Pu consolidation and management scheduled for 2002. Best options are being incorporated into 2006 closure baseline plans that are expected to be finalized in May 1999. During this quarter, plans to accelerate the startup of the plutonium stabilization and packaging system (PuSPS) to December 1999 were approved and incorporated into the Site's baseline plans. Modifications to Room 3701 are complete and transport of the system from the Broomfield warehouse was initiated and is expected to be complete in April 1999. Repackaging of materials for "pipe-and-go" is underway for selected residue types and WIPP has opened for non-RCRA materials. Numerous decisions regarding residue programs remain pending,

dependent upon the ongoing environmental review of the Residue Environmental Impact Statement (EIS) for shipments to the Waste Isolation Pilot Plant (WIPP). These activities are more fully reported in the DNFSB Recommendation 94-1 Monthly Report.

Progress continues to be made across the DOE complex in preparing for timely off-Site shipment of RFETS SNM and emerging issues are being addressed, including:

- Progress continues to be made on preparing the K-area at the Savannah River Site (SRS) as the Department's preferred alternative to the Actinide Processing and Storage Facility (APSF) for receipt and storage of Rocky Flats SNM. Phase I modifications are now underway for storage in the Process Room and for NDA installation in the Crane Wash Room. Overall design and construction efforts are on schedule to support initial shipments and material receipt in January of 2000. A new strategy for storage of the IAEA material is being developed and expected to be complete in September 1999.

- Shipment of all War Reserve (WR) pits to Pantex has been completed. All of the remaining non-WR pits are expected to be shipped to the Los Alamos and Lawrence Livermore National Laboratories in the coming quarter.

- The residue EIS Record of Decision was issued in December and commercial shipments of repackaged sand, slag and crucible (SS&C) residues to Savannah River are continuing. This shipping campaign will continue until the SS&C inventory transfer is complete. An initial SS&C shipment in a 9975 with restricted content is forecast for the coming quarter. Future use of SSTs for some shipments is anticipated, dependent upon shipment plutonium content.

Overall, the Department believes progress is being made to support timely off-site shipment of RFETS SNM.

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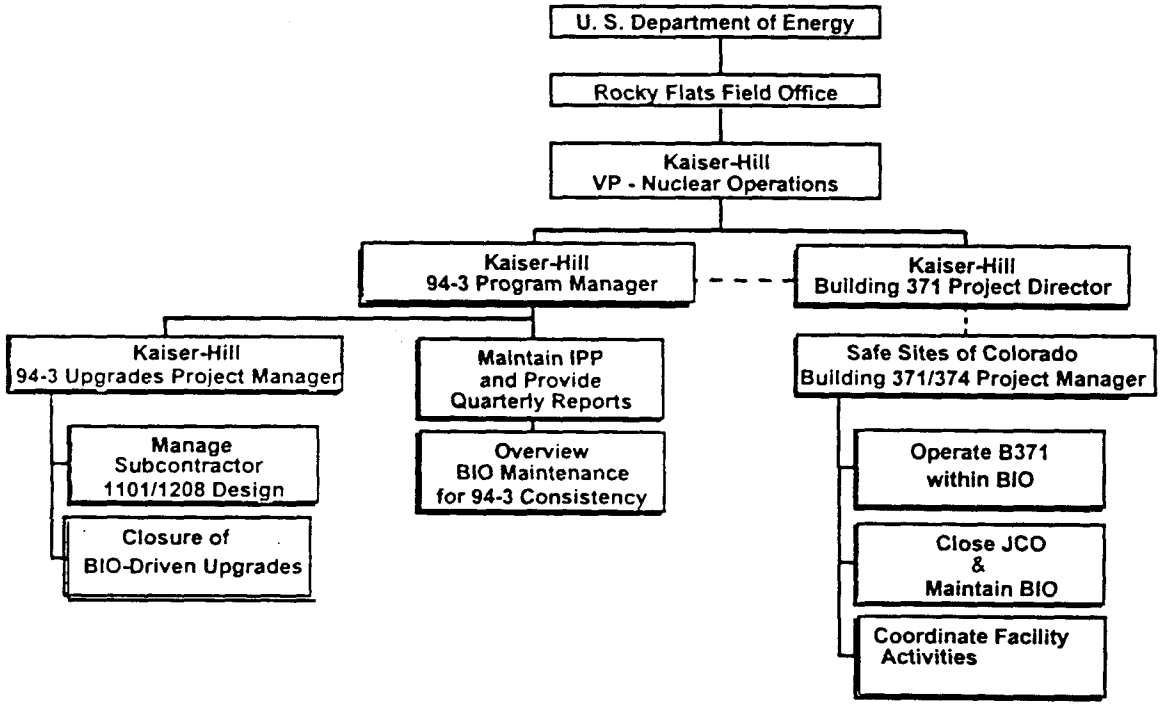
1.0 PROGRAM ORGANIZATION

This section corresponds to section one of the IPP. It addresses key changes to the organization identified in that section. With the completion of the BIO-driven upgrades, organizational changes have been made that reflect the lower level of resources needed to support the Site 94-3 Program. Figure 1 streamlines the organization chart contained in Revision 1 of the IPP to reflect completion of the BIO-required upgrades. The Kaiser-Hill 94-3 Program and Upgrades Project Managers are now serving part time and have assumed other Building 371 Closure Project functions in addition to 94-3 Program responsibilities. Upon future completion of the validated interim storage upgrades design and closure of all upgrade construction packages and contracts, the organization will be further consolidated, with the 94-3 Program function reporting to the Kaiser-Hill Building 371 Closure Project Director.

Figure 1: Organization for DNFSB 94-3 Program Completion



2.0 COMPLETION OF DNFSB 94-3 SUB-RECOMMENDATIONS

The corresponding section of the IPP contains the following commitments:

- development of a Final Safety Analysis Report should the interim storage mission revert to Building 371 (Sub-Recommendation 2)
- supplemental actions addressing those risk-dominant accident scenarios which exceed the public Evaluation Guideline of 5 rem (Sub-Recommendation 6)
- validation of interim storage upgrades to complete final definition of required upgrades (Sub-Recommendation 8).

During the last quarter, an extensive planning effort was begun to accelerate Site closure from 2010 to 2006. Accelerated closure of Building 371 is based upon two strategic objectives that are supportive of the safety objective of DNFSB Recommendation 94-3. First, the plan focuses on completing the stabilization, safe packaging, and shipment of plutonium metal, oxide and dispersible residues by 2002. Secondly, the 2006 closure plans begin deactivation of the facility in parallel with the completion of the plutonium risk reduction mission, and sequences deactivation activities to achieve early removal of significant holdup. The execution of the 2006 baseline plan results in the elimination of the interim plutonium storage mission, and reduces lifecycle risk to both the worker and the public. Accordingly, the development and implementation of a Final Safety Analysis Report is not anticipated. The authorization basis strategy of the baseline plan is to complete all nuclear work under the existing BIO, utilizing the Site Unreviewed Safety Question Determination, page change and annual update processes to analyze, authorize, and control work. The 2006 baseline plan will include a decision point to either start or cancel the construction of validated upgrades (see Section 6) and the development of a Final Safety Analysis Report based upon closure plan progress and full satisfaction of the Go/No Go criteria. The decision milestone will be scheduled to assure that upgrades and an interim storage Final Safety Analysis Report are complete by 2002 should there be a need for interim plutonium storage in Building 371.

Supplemental actions to address risk-dominant accident scenarios are in progress for partial completion in conjunction with the annual update to the BIO. Preferred and fallback actions are being pursued for each of the three scenarios involving calculated public doses above 5 Rem, but actions requiring coordination with other Site programs and new facility missions will extend beyond the annual update.

- To reduce dock fire risks, a BIO change requiring that drums with more than 200 g of Pu be continuously attended has been issued. This change reduces the risk-dominant scenario frequency to *extremely unlikely*, thereby reducing the Risk Class from I to II. Further a new calculation of potential fires on the dock (either Rooms 3187A and 3187B or the new dock 21T) has been completed showing that actual suppression system response will limit the number of impacted drums to a maximum of three. This is sufficient to reduce the potential public dose below the 5 Rem guideline value for all but the highest content drums on Site, even when the higher dose consequence from soluble salts is modeled. This change has not been submitted, however, pending approval to startup Dock 21T and resolution of the applicability of new respirable fraction for residues based on the characterization data. If the new respirable fraction is applicable as expected, the public dose will drop well below 5 Rem without any change in analysis methodology.

- A second BIO change to reduce the risk of hydrogen explosion occurring in a drum staged on the dock is being prepared. This change will eliminate the prior risk dominant drum explosion scenarios provided that the appropriate vent inspection program elements are included to ensure that the generic implications of found plugged vents are addressed. Technical evaluation of the results of the first year of experience with the pre-stabilization residue drum vent surveillance program is available. When Site decisions are made regarding the scope of TRU drum vent inspection program, and the post-stabilization residue drum vent inspection program, the page change closing this issue will be completed.

- Seismic walkdowns were performed to identify areas where the potential releases within the facility might practically be reduced (e.g., by preventing drum failure caused by impact from unqualified, ceiling-mounted equipment) and the identified issues ("capable sources") are being evaluated for practical mitigation. Seismic risk reduction is being focussed on the Support Facility which contributes 3.4 of the 8.6 Rem public dose in the NPH-2 (EBE) BIO scenario. Efforts to determine the as-built seismic capacity of the Room 3189 storage racks and effective strategies for upgrading them are nearing completion. The racks were discovered to have a lower seismic capacity than had been assumed in the BIO, but the discovery condition was not a positive Unreviewed Safety Question. As-built weld data for the racks has been collected, but the evaluation has not yet been completed. When the rack structural evaluation is completed, a letter summarizing the overall contractor recommendations will be submitted to RFFO for their consideration. The letter will address the feasibility of reducing the support facility dose, the impact of lower residue respirable fractions, the results of ongoing new leak path factor analyses, and the possible adverse impacts of new facility missions (salts, fluorides and PuSPS).

3.0 BUILDING 371

The corresponding section of the IPP focuses on "Goal 1: Establish safe operation of Building 371 in conformance with an updated Authorization Basis (AB)." The following Goal 1 Objectives are specifically addressed: "Provide an updated Building 371 AB, complete definition and implementation of necessary upgrades in Building 371, and establish building operations in conformance with the updated AB."

3.1 Accomplishments and Status Summary

3.1.1 Building 371 Authorization Basis (AB)

Building 371 has completed nine successful months of operation in accordance with its updated Authorization Basis, the Building 371/374 Complex Basis for Interim Operation (BIO). A single Technical Safety Requirements (TSR) violation occurred during the past quarter due to a failure to implement Required Actions for areas determined not to meet LS/DW audibility criteria within the completion times specified in LCO 3.4. Facility management continues to report a high degree of satisfaction with operations in accordance with the BIO, citing significantly improved facility availability for risk reduction work.

Although progress continues to be made toward closure of the BIO implementation issues, the JCO was not fully closed on March 1, 1999 as planned. A BIO change that requested long term acceptance of combustible control program deficiencies in five highly contaminated areas was not approved by DOE-RFFO. The combustible control and fire barrier issues contained in the JCO were extended to allow for submittal and implementation of an alternate change requiring the correction of the deficiencies in two areas by September 30, 1999. A new JCO will be submitted to permit the noncompliant conditions in Room 2327 and the Central Storage Vault Repair Bay until combustible loads are remediated. The remaining three areas of concern (Rooms 3559 and 3563, and the Central Storage Vault) will be accepted as allowable conditions in a BIO page change. The current status of each JCO issue is as follows:

- Issue 2.1, Non-Compliant Storage of Combustible Materials – The proposed change to the BIO and TSRs was not approved by RFFO. The page change is being revised in accordance with RFFO technical direction and is being resubmitted for approval and implementation in May 1999.

- Issue 2.2, Fire Barrier Deficiencies – All of the identified deficiencies have been closed, and installation of fire curtains on the Central Storage Vault widows and fire door replacements and modifications were completed in March 1999.

- Issue 2.3, HVAC Supply Fan Interlock – This issue has been closed with the implementation of the RFFO approved LCO revision. The hardware upgrades had previously been completed.

- Issue 2.4, Rooms 3189/3187 and 3187/18T Roll-up Door Interlock – This issue has been closed with the implementation of the RFFO-approved AC revision.

- Issue 2.5, SNM Storage Racks Seismic Capacity – Work in the last of the three vault rooms was completed in February 1999 to close this issue.

- Issue 2.6, Tertiary Boundary Confinement Deficiencies – Repairs to correct all six of the identified deficiencies have been completed and this issue is closed.

- Issue 2.7, HVAC Supply Isolation Valves and Backdraft Dampers – This issue has been closed with the implementation of the RFFO approved revision to the BIO and TSRs incorporating the recently installed inlet HEPA filters.

- Issue 2.8, Active Design Features to Prevent Unsafe Failures – The installation of the seismic isolation valve for the nitrogen supply is complete and it was placed into service in February 1999 closing this issue.

All remaining tasks required to close Issues 2.1 and 2.2 have been identified, and will be completed in April 1999.

Overall, the facility continues to realize a substantial and steadily increasing fraction of the intended safety benefit from the authorization basis update

3.1.2 Building 371 Safety Upgrades

1. The last of the Building 371 priority safety upgrades specified in Table 3-1 of the IPP was completed in August 1998. In this quarter, the remaining BIO-driven upgrades were completed.

2. Progress has been made on completing corrective actions to resolve the observations and issues contained in the DOE-RFFO assessment of the upgrade design and construction program. . Completion of all tasks is expected by April 1999.

3.2 Deliverables

IPP Milestone 3-2 Report completion of priority safety upgrades specified in Table 3-1 [IPP] by the end of 1997. **11 of 15 COMPLETED ON SCHEDULE**; remaining four will be completed by July 1998.

This milestone was completed in August 1998.

IPP Milestone 3-3 Establish and document operation of Building 371 in conformance with an updated Authorization Basis by August 1, 1998.

This milestone was completed on schedule.

IPP Milestone 3-4 Issue schedule (implementation plan) for further Building 371 upgrades identified during the initial AB development by November 1996. **COMPLETED AUGUST 1997**; upgrade completion no later than October 1998 being managed to a schedule coordinated with the BIO-IP.

This milestone was met for 14 of the 21 upgrades. All but one of the remaining upgrades was completed by the end of February as shown in Table 3-1. Fire barrier upgrades did not complete until mid-March due to safety and work planning issues that resulted in an issuance of work suspension to the construction subcontractor.

3.3 Schedule of Activities

3.3.1 Building 371 Authorization Basis

The BIO implementation JCO will be closed by May 1999 with the approval and implementation of the BIO combustible control change package (see Section 3.1.1).

3.3.2 Building 371 Safety Upgrades

All upgrades were completed in March 1999.

Table 3-1: BIO-Driven Upgrades and Schedule

	[illegible]	[illegible]	[illegible]
1	Install Emergency Lights	Provide seismically qualified egress emergency lighting (SC-3 function in Administrative Control [AC] 5.9)	Complete
2	Evaluate/Reinforce HVAC Ducting	Ensure ducts credited for tertiary confinement have adequate pressure capacity for tornado atmospheric pressure transient or abnormal ventilation lineups	Complete
3	Ensure Lightning Protection	Ensure that security systems to prevent helicopter intrusion do not compromise lightning protection for Building 371	Complete
4	Inspect/Repair SC-3 Fire Barriers	Apply lessons learned from Room 3206 evaluation as necessary to ensure one-hour capability of fire barriers that are SC-3 in AC 5.9	Complete
5	SNM Storage Rack Repairs	Ensure adequate seismic capacity for storage racks used in vault-type material storage rooms (SC-1/2 SNM Storage Racks in AC 5.9)	Complete
6	HVAC Interlock Modifications	Ensure safe failure mode (credited as Passive Design Feature in BIO) in EBE for the supply fan trip function and upgrade interlock to trip return fans as well as supply	Complete
7	Extend Roof Drains	Improve runoff during extreme weather conditions	Canceled[1]
8	N2 Failure Prevention Mods	Ensure nitrogen shutoff credited as Passive Design Feature in BIO to prevent Central Storage Vault pressurization after earthquake	Complete
9	Counterfeit Bolt Inspection	Review usage of counterfeit bolts and replace any whose capacity will not meet BIO requirements for SC-1/2 systems (94-3 low cost issue)	Complete
10	Redundant Zone 3 HVAC Controllers	Provide redundant ΔP controllers in Zone 3/Zone 4 areas for reliable implementation of LCO 3.1, item 6	Complete
11	Drain Chemical Storage Tanks	Reduce inventories of KOH and HNO 3 in outdoor storage tanks to meet requirements of AC 5.2.2, items e and f	Complete
12	Upgrade Vault Penetrations for Fire where Practical	Upgrade central storage vault boundaries to SC-1/2 (2-hour) fire barrier requirements where practical (BIO-IP will otherwise ensure that appropriate combustible control limits are established per AC 5.4.2, item 4c)	Complete
13	Repair Attic Beam	Compensate for omitted negative reinforcement at the junction of beams	Complete

[1] Existing foundation drains suffice to assure safety; the drain extensions were intended as a good practice to decrease water penetration near the foundation, but the proposed cost was judged to be too high for the low marginal benefit.

	[illegible]	[illegible]	[illegible]
		B55 and B56	
14	Install Attic Leak Detection	Provide capability to detect and alarm if significant attic flooding occurs	Complete
15	Miscellaneous BIO Upgrades	a) Install Dock 18T Roll-up Door Interlock b) Verify Seismic Capacity of SC-1/2 HVAC ΔP Sensor Lines c) Provide Lab Propane Tank Seismic Supports d) Complete Any Additional SQUG Walkdowns e) Determine HVAC Scrubber Disposition f) Provide Seismic Restraint for Flammable Liquid Cabinets	Complete Complete Canceled[1] Complete[2] Complete Complete
16	Life safety Code Upgrades	Correct Deficiencies in B371 (Material Access Area) per Updated Facility Fire Hazards Analysis	Complete

1 Building 371 has determined that propane will not be used in the laboratory so restraints will not be required.

2 SQUG walkdowns supporting BIO implementation are complete; additional Room 3189 rack inspections are being performed to identify additional cost-effective measures to reduce the EBE public dose below 5 rem (see Section 2 of this report).

4.0 INTEGRATED Pu CONSOLIDATION AND MANAGEMENT

The corresponding section of the IPP states that, "The insights gained from the Recommendation 94-3 studies in Phases I and II needed to be integrated with the actions committed to the Board under Recommendation 94-1 to an integrated Site plan for safe plutonium and uranium management and storage. These insights included the contribution to overall Site risk from residues, the improved safety of Building 371 with Priority upgrades and a new BIO, and the commitment to provide an assured facility (on- or off-site) for interim storage of Site SNM. Systems engineering principles were applied to develop and select a strategic approach for residue storage and shipment that incorporates timely consideration of contingencies, such as possible delays in Waste Isolation Pilot Plant (WIPP) opening. The approach that was selected is being implemented through the Site's 94-1 Program. The 94-1 Program is also reducing the risk of SNM storage by stabilizing and repackaging the material; the DOE-STD-3013 compliant packages and the POCs [pipe overpack containers] afford defense-in-depth for current storage and enable the longer term storage plans to be realized."

4.1 Accomplishments and Status Summary

The Site is actively investigating options with varying reliance on support from other sites in the DOE complex to accelerate 94-1 commitments in a manner that would support Rocky Flats Site closure by 2006. Some of these options are noted as contingencies in the revised IPP. Best options are being incorporated into 2006 closure baseline plans that are expected to be finalized in May 1999.

During this quarter, plans to accelerate the startup of the plutonium stabilization and packaging system (PuSPS) to December 1999 were approved and incorporated into the Site's baseline plans. Modifications to Room 3701 are complete and transport of the system from the Broomfield warehouse is expected to be complete in April 1999.
Options to improve reliability, accelerate startup of oxide packaging, and ensure timely container delivery are being pursued.

4.2 Deliverables

All current activities related to this task are governed by DNFSB Recommendation 94-1. There are no near-term milestones for the 94-3 program.

5.0 INTEGRATION OF SITE PLANS WITH DOE COMPLEX PLANS

The corresponding section of the revised IPP provides the Department's baseline plan to prepare for and complete the shipment of the Site's uranium and plutonium metal and oxide beginning no later than 2002. The baseline plan is a commitment that will be executed as planned unless sufficient impediments to off-site shipment emerge to cause the Department to abandon this strategy. The Department would then rely on Building 371 for safe onsite interim storage (Section 6). Significant Departmental plans, which have the potential to impact Rocky Flats' implementation of this IPP, continue to evolve. They include the completed plan *Accelerating Cleanup: Path to Closure*, and the Surplus Plutonium Disposition EIS that remains in draft. The uncertainties associated with these interrelated plans are acknowledged, and are the subject of management actions by several managers outside the organization structure described in Section 1. This section of the IPP describes a mechanism for integrating and coordinating Departmental actions contributing to resolution of programmatic uncertainties, and shows the dependence of Site plans on the rest of the complex.

5.1 Accomplishments and Status Summary

Progress was made across the DOE complex in preparing for timely off-Site shipment of RFETS SNM and emerging issues are being addressed, including:

- Progress continues to be made on preparing the K-area at the Savannah River Site (SRS) as the Department's preferred alternative to the Actinide Processing and Storage Facility (APSF) for receipt and storage of Rocky Flats SNM. Phase I modifications are now underway for storage in the Process Room and for NDA installation in the Crane Wash Room. Overall design and construction efforts are on schedule to support initial shipments and material receipt in January of 2000. A new strategy for storage of the IAEA material is being developed and expected to be complete in September 1999.

- Shipment of all War Reserve (WR) pits to Pantex has been completed. All of the remaining non-WR pits are expected to be shipped to the Los Alamos and Lawrence Livermore National Laboratories in the coming quarter.

- The residue EIS Record of Decision was issued in December and commercial shipments of repackaged sand, slag and crucible (SS&C) residues to Savannah River were initiated. This shipping campaign will continue until the SS&C inventory transfer is complete. Use of the 9975 package for these shipments has been approved for containers containing less than 20 Curies of plutonium. Full certification for the 9975 is still being pursued and is expected in August 1999. Future use of SSTs for some shipments is anticipated, dependent upon the shipment plutonium content.

Overall, the Department believes progress is being made to support timely off-Site shipment of RFETS SNM.

5.2 Deliverables

IPP Milestone 5-1 Issue ROD selecting the plutonium immobilization site by February 1999.

The Surplus Plutonium Disposition EIS is now scheduled to support issuance of a Record of Decision (ROD) by August 1999. Public comments on the draft conclusions have been received, evaluated and issued. Even with the recent three-month delay in the final ROD (from June to August), the decision is scheduled well before PuSPS

startup and is not expected to delay satisfaction of the criteria for off-Site shipment in Section 6.

IPP Milestone 5-2 Prepare APSF, or alternate facility, at SRS for Rocky Flats SNM.

a. Complete APSF design by August 1998.

   APSF design has been completed, meeting this milestone.

b. Initiate APSF construction in October 1998 with sufficient capacity to accommodate both SRS and Rocky Flats material, or begin modification of alternate facility to receive the RFETS plutonium.

   Modification of the K-area as the preferred alternate facility at SRS to receive RFETS plutonium is continuing. With the delay of APSF, a new strategy for RFETS IAEA material is being developed to complete this milestone.

IPP Milestone 5-3 Prepare for and transport SNM off-site.

a. Complete off-site shipment of pits to Pantex by FY99.

   100% of RFETS War Reserve pits have been shipped to Pantex. Shipments of the non-WR pits are on schedule for completion in FY-99.

b. Ship plutonium-bearing materials (sand, slag and crucible) from Rocky Flats to SRS in SSTs in June 1998.

   The residue EIS Record of Decision was issued in December and commercial shipments of repackaged sand, slag and crucible (SS&C) residues to Savannah River were initiated. This shipping campaign will continue until the SS&C inventory transfer is complete. The use of SSTs, for future shipments, will depend upon plutonium content. Completing a shipment of plutonium bearing materials in a SST is still anticipated in FY99.

c. Procure approved shipping containers (9975s) for metal and oxide shipment.

   The Request for Proposal was issued in March 1999, and procurement of 9975's for transport of RFETS oxides to SRS for storage in K-area will begin in FY99. Responsibility for funding the procurement has been reassigned by the Department to RFETS, but the FY99 delivery schedule is expected to be maintained.

5.3 Schedule of Activities

Kaiser-Hill is installing PuSPS in Building 371 to permit initial metal and oxide packaging no later than December 1999.

6.0 INTERIM STORAGE MISSION CONTINGENCY – BUILDING 371

This section corresponds with Section 6 of the revised IPP and addresses the following mission need for the Building 371 contingency option: "provide safe and secure interim storage of the Site's non-pit plutonium metal and oxide inventory, including any oxide generated due to residue and solution stabilization activities, if off-site shipment is not realized in a timely manner. The interim storage mission is to begin in 2002 and continue until the inventory is finally shipped off-site (no later than 2015)." Chapter 6 focuses on plans to validate and define specific scopes for upgrades in FY-98 to prepare Building 371 for the interim storage mission, to design validated upgrades in FY-99, and to implement them in the facility no later than 2002.

6.1 Accomplishments and Status Summary

The Validation Study, completed in FY-98, recommended four additional upgrades to prepare Building 371 for storage of the Rocky Flats Environmental Technology Site's non-pit Pu metals and oxides from 2002 to 2015. The current status of each is as follows:

- The 90% complete design of vault rooms 1101 and 1208 upgrades for relocating dispersible material (plutonium oxide) storage to the sub-basement is in review. The design and a construction schedule to assure readiness by 2002 are expected to be complete in May 1999. DOE-RFFO concurrence is expected by September 1999. IAEA acceptance of the design criteria will be pursued in the same time frame.

- Replacement of credited HEPA filter stages that have experienced uncertain loss of tensile strength from wetting during prior deluge system testing was completed in March 1999.

- Development of a Work Package for removal of combustible pall rings from inactive scrubber tanks in the Building 371 exhaust systems is underway and expected to be complete in September 1999. Removal of the pall rings is being integrated into the 2006 closure baseline plans for the facility, and is expected to occur early in 2001.

- The evaluation of early holdup removal is being integrated into the development of 2006 baseline plans for the facility. Deactivation is being accelerated, with holdup removal scheduled to begin in FY00. The planning effort is expected to be complete in May 1999.

6.2 Deliverables

Milestone 6-1 Complete validation assessments for the Interim Storage upgrades (those that are not "Priority" in Appendix C), including a schedule for design engineering to be performed in FY99, documented, and reported by August 1998. Provide the plan for the validation effort to the Board by March 1998.

This milestone was completed in August 1998.

Milestone 6-2 Complete design of validated upgrades by September 1999, including a construction/implementation schedule which ensures completion by 2002.

Completion of the design and construction schedule is targeted for May 1999, with DOE-RFFO concurrence by September 1999.

Milestone 6-5 Assess the following "Go/No Go" criteria for assured success of off-site shipment in Section 5 and report when they are satisfied:

1. APSF construction is funded and underway with sufficient storage capacity committed to RFETS material or alternate acceptable storage off-site is authorized, funded, committed for storing RFETS material, and construction is underway.
2. The ROD for a plutonium disposition site is issued and identifies SRS as a disposition site or the MD PEIS ROD is amended to delete this condition as a requirement for receipt of RFETS material and any alternative NEPA requirements are fulfilled.

3. The PuSPS at Rocky Flats is operational and authorized to begin material stabilization and packaging or the Department has established firm plans for packaging to be performed off-site.
4. A shipment of plutonium-bearing materials from RFETS to SRS in SSTs has been successfully completed; specific plans are in place to provide for future shipments.
5. Adequate assurance is provided that off-site pit shipments are on schedule for completion by the end of FY99.

When the Go/No Go criteria are satisfied, all remaining work (including design, construction, or other implementation) on the validated upgrades and the SAR to establish the Building 371 interim storage option may be discontinued by the Department. The Department will formally notify the Board before the upgrades are discontinued.

Section 5.0 of this report addresses the status of complex-wide activities supporting fulfillment of these criteria. Based on the progress reported in Section 5, the Department concludes that criterion 5 has been nearly satisfied and will soon be met resulting in a "Go" conclusion. Criterion 1 has nearly been satisfied for the K-Area option, with the impact of APSF delay on IAEA material to be resolved by September 1999. Criterion 4 (demonstration shipment) was effectively met when commercial shipments began in December; a SST shipment may be made in FY99. Criterion 2 (material disposition site ROD) is expected to be met in August. Thus, criterion 3 (PuSPS operational) is forecast to control the schedule for a final decision. Efforts are currently judged to be on track to support a favorable, "Go", judgment in calendar year 1999.

6.3 Schedule of Activities

There are no intermediate milestones due in the coming quarter supporting the completion of Interim Storage Mission deliverables for FY99.