

Change Number M-34-00-01	Federal Facility Agreement and Consent Order Change Control Form <small>Do not use blue ink. Type or print using black ink.</small>	Date May 18, 2000
-----------------------------	---	----------------------

Originator P.G. Loscoe, Director, Office of Spent Nuclear Fuels	0053168	Phone (509) 376-7465
--	----------------	-------------------------

Class of Change		
<input type="checkbox"/> I - Signatories	<input checked="" type="checkbox"/> II - Executive Manager	<input type="checkbox"/> III - Project Manager

Change Title Spent Nuclear Fuel Project -- Sludge Acceleration Strategy
--

Description/Justification of Change
 The Spent Nuclear Fuel (SNF) Project has recently developed a new strategy that will accelerate removal of sludge from the K Basins and improve operational efficiency in removing spent nuclear fuel from the basins. This strategy is consistent with the goals of the U.S. Department of Energy, Richland Operations Office (RL) and the SNF Project to accelerate cleanup, to reduce risk to human health and the environment and to conduct its operations within the total project cost. The Baseline Change Request (BCR) for the Sludge Acceleration Strategy (SNF-2000-009) was approved by RL on 04/05/2000 and provides additional details on this strategy.

A total of eleven Tri-Party Agreement (TPA) milestone/target date changes are necessary to implement this strategy, as shown on the next page.

Note: ~~Struckout~~ text indicates text to be deleted, shaded text indicates text to be added.

Description/Justification of Change continued on Pages 2 and 3.

Impact of Change
 Impacts to the SNF Project cost and schedule are detailed on pages 2 through 6e of the referenced BCR. A total of eleven TPA interim milestones and target dates would be impacted (accelerated, extended, or deleted) by this change. Specifically, three TPA interim milestones would be accelerated, three TPA interim milestones would be extended, three TPA target dates would be extended, and two TPA target dates would be deleted. This change will result in cost savings of approximately \$16 million in total project cost and will provide the potential for completion of TPA milestone M-34-00 ahead of schedule.

- Affected Documents**
- Hanford Federal Facility Agreement and Consent Order, Appendix D, as amended.
 - SNF Project Baseline Schedule.

RECEIVED

JUN 19 2000

EDMC

Approvals <i>W. Wade Ballard</i>		
DOE <i>[Signature]</i>	5/17/00 <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved	
EPA <i>Douglas R. Sherwood</i>	5/23/00 <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved	
Ecology <i>Michael A. L...</i>	5/23/00 <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved	

Proposed Changes to Tri-Party Agreement Milestones and Target Dates

(by chronological due date on existing Tri-Party Agreement work schedule)

Number	Description	Date
M-34-15B-T01	Complete remaining bay(s) of the Cold Vacuum Drying Facility construction and installation. The remaining bay(s) of the Cold Vacuum Drying Facility shall be constructed, all process equipment installed, and acceptance tests completed.	Existing: 06/30/2000 New: Deleted
M-34-13B-T01	Complete construction and installation of K East Basin Spent Nuclear Fuel Retrieval System. The K East Basin spent nuclear fuel retrieval system shall be constructed, installed, and acceptance test(s) completed. <i>[Note: No proposed change to target date description.]</i>	Existing: 11/30/2000 New: 03/31/2002
M-34-14B-T01	Complete K East Cask Facility modifications. The K East Cask System Facility modifications shall be constructed, installed, and acceptance test(s) completed. <i>[Note: No proposed change to target date description.]</i>	Existing: 01/31/2001 New: 02/28/2002
M-34-12	Complete construction of K East Basin integrated water treatment system to support spent nuclear fuel removal. The K East Basin integrated water treatment system shall be constructed, installed, and acceptance test(s) completed. <i>[Note: No proposed change to milestone description.]</i>	Existing: 02/28/2001 New: 03/31/2002
M-34-17	Initiate Removal of K East Basin Spent Nuclear Fuel. The K East Basin spent nuclear fuel retrieval system shall begin retrieving, cleaning, packaging and removing spent nuclear fuel for transport to the Cold Vacuum Drying Facility. <i>[Note: No proposed change to milestone description.]</i>	Existing: 11/30/2001 New: 12/31/2002
M-34-18A	Complete Removal of all K West Basin Spent Nuclear Fuel. This interim milestone will be complete when all spent nuclear fuel has been removed. It is understood that additional fuel fragments may be discovered during removal of the sludge. <i>[Note: No proposed change to milestone description.]</i>	Existing: 04/30/2003 New: 12/31/2002
M-34-18B	Complete Removal of all K East Basin Spent Nuclear Fuel. This interim milestone will be complete when all spent nuclear fuel has been removed. It is understood that additional fuel fragments may be discovered during removal of the sludge. <i>[Note: No proposed change to milestone description.]</i>	Existing: 12/31/2003 New: 07/31/2004
M-34-07-T01	Complete final safety basis for the transfer of K Basins sludge. Provide to Ecology and EPA the DOE approved: 1) K-Basin Safety Analysis Report (SAR) update; 2) storage facility SAR or SAR modification; and, 3) Safety Analysis Report for Packaging (SARP) authorizing the transfer of K-Basins sludge.	Existing: 12/31/2003 New: Deleted
M-34-08	Initiate full scale K East Basin sludge removal. DOE shall complete and approve K East sludge removal definitive design documents, all associated construction, and readiness assessments, and initiate removal of sludge from the Basin. <i>[Note: No proposed change to milestone description.]</i>	Existing: 07/31/2004 New: 12/31/2002
M-34-09-T01	Complete K Basins rack and canister removal. All fuel storage racks and empty fuel canisters shall be removed from the K Basins.	Existing: 12/31/2004 New: 01/31/2005
M-34-10	Complete sludge removal from K Basins. Fuel processing in K Basins shall be complete, including the capture of fuel canister sludge in the integrated water treatment system and removal of visible floor and pit sludge.	Existing: 08/31/2005 New: 08/31/2004

This change would allow the SNF Project to integrate sludge and fuel removal activities in order to accelerate the completion of sludge removal from the K Basins. It would also eliminate the overlap in the schedule for fuel removal from the K East and K West basins, thus creating a stable operations work force, i.e., it would eliminate the short-term peak in operations staff that would be necessary if fuel was being removed from both basins simultaneously.

The timing of this change is linked to two recent events. First, RL approved a change request on 02/17/2000, to allow the sludge to be shipped directly to T-Plant for interim storage rather than pre-treating the sludge for transfer to the Office of River Protection's tank farms. RL recently made a decision that the sludge would be designated transuranic waste when removed from the basins (rather than high-level waste), so the sludge will ultimately be disposed at the Waste Isolation Pilot Plant along with other transuranic waste from the Hanford Site. Second, the SNF Project recently made a key design decision regarding the K East Basin Integrated Water Treatment System (IWTS). Large elements of the IWTS will be located in a separate building outside the K East Basin, thereby leaving the North Load Out Bay available for sludge removal. This will allow the sludge removal in the K East Basin to be fully integrated with the spent nuclear fuel removal.

The benefits of the Sludge Acceleration Strategy are:

- Significantly accelerates the start and completion of sludge removal at the Basins
- Stabilizes the work force over the life of the project
- Accelerates the completion of K West fuel movement
- Provides time and opportunity to make modification (if required) to K East fuel removal design, based on operational experience
- Provides an opportunity for accelerating the overall SNF Project completion through the deactivation phase
- Reduces total project cost by approximately \$16 million.

Certain activities on the current schedule would have to be delayed to implement this strategy, as noted on page 2 of this change request. Additional funds would be required for fiscal year 2004, but would still be well within the current total project cost.

In 1998, the SNF Project planned to ship the K Basins sludge to the Office of River Protection's tank farms. The target date M-34-07-T01 was established to ensure the safety basis work for completion of the sludge receiving station at the tank farms was proceeding on schedule. The strategy has now changed and the sludge will be transferred to T-Plant for storage prior to treatment. The safety analysis activities necessary for shipping the sludge to T-Plant will be identified in the SNF Project/T-Plant integrated schedule. There will be SAR revision(s) for T-Plant to address the receipt of the floor/pit sludge and the canister/fuel wash sludge. A revision to the SARP for the transport of the sludge and a SAR revision for the K Basins will also be required. The target date M-34-07-T01 is no longer required to support work at tank farms and is therefore deleted.

The readiness of T-Plant to receive the sludge is an important aspect of this strategy and the necessary interface between senior management and appropriate facility personnel has begun to ensure we are working to an integrated schedule. The RL has prepared a separate Tri-Party Agreement milestone change request for M-91-00 for additional Tri-Party Agreement target dates and milestones for T-Plant construction and readiness to receive sludge from the K Basins.