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July 19, 2001

FH-0101771 R1
CONTRACT NO. DE-AC06-96RL13200

Ms. H. E. Bilson, Assistant Manager
for the River Corridor
U. S. Department of Energy
Richland Operations Office H0-12
Post Office Box 550
Richland, Washington 99352

Dear Ms. Bilson:

COMPLETION OF *HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER* INTERIM MILESTONE M-89-02 AND ASSOCIATED FISCAL YEAR 2001 RL MILESTONES

Reference: Letter, N. C. Boyter, FH, to P. M. Knollmeyer, RL, "Completion Status for *Hanford Federal Facility Agreement and Consent Order* Interim Milestone M-89-02," FH-0101771, dated March 26, 2001.

This letter provides the requisite notification that as of July 18, 2001, the shipment of non-mixed waste equipment associated with the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Interim Milestone M-89-02 work scope commitment has been accomplished. The last 3-82B Grout Container (GC-160), containing B-Cell transuranic waste, was shipped to the 200 West Burial Grounds on July 17, 2001, and was offloaded into compliant storage on July 18, 2001. The attached checklist records completion of actions specified by the M-89-02 milestone performance standard.

This accomplishment also completes these two fiscal year 2001 RL milestones:

- TRP-01-903 – Complete shipment and disposition of all excess equipment and debris from the 324 Building B-Cell TPA M-89-02 cleanout activities to compliant storage in the 200 Area. This milestone was completed on July 18, 2001.

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- TRP-01-904 – This milestone is the completion of TPA Milestone M-89-02 (and was accomplished when both TRP-99-901 and TRP-01-903 milestones were completed). Note that per the referenced letter, TRP-99-901, "Complete removal of all material from TPA M-89-02 cleanout activities from B-Cell and shipment of all resulting mixed waste to compliant storage in the 200 Area," was completed on March 22, 2001.

FH would like to thank RL and the State of Washington Department of Ecology (Ecology) staff associated with this project for their constant collaboration and support in the completion of this highly complex and difficult work scope.

Please transmit the information herein to Ecology.

If you have any questions, please call Mr. M. S. Wright on 373-5864 or me.

Sincerely,

NC Boyter

N. C. Boyter
Vice President
River Corridor Project
Fluor Hanford

ks:bjk

Attachment

RL - W. W. Ballard
C. E. Clark
D. T. Evans
J. B. Hebdon
D. C. Langstaff
S. A. Sieracki (w/o attachment)
D. W. Templeton
G. M. Villegas
G. A. Williams

324 BUILDING TRI-PARTY AGREEMENT INTERIM MILESTONE M-89-02 CHECKLIST SHOWING STATUS AS OF JULY 18, 2001

The *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Interim Milestone M-89-02 is defined in Tri-Party Agreement Change Number M-89-98-03 (Reference 1 below) as "Complete removal of 324 Building REC B-Cell MW and Equipment." The M-89-98-03 change indicates that containerized mixed-waste (MW) will be managed in compliance with Chapter 173.303 WAC (*Washington Administrative Code*, Dangerous Waste Regulations), thereby reducing risks to human health and the environment. It also indicates that any remaining residues will be managed through the final closure process.

The checklist provided consists of a list of the actions and conditions described in the U.S. Department of Energy, Richland Operations Office (RL) letter number 00-FTD-006, "*Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Interim Milestone M-89-02, Complete Removal of 324 Building REC B-Cell MW and Equipment, November 30, 2000" (Reference 2 below). The RL letter was submitted to the State of Washington Department of Ecology (Ecology) on December 08, 1999. The RL letter provided an attachment and a table to provide greater definition for the performance standards to be met by interim milestone M-89-02. Ecology concurred with RL letter 00-FTD-006 in a response letter (same subject) to RL, dated February 28, 2000 (Reference 3 below). Detailed B-Cell equipment information regarding useable deactivation equipment was provided in a one-page information handout at the May 18, 2000, Project Managers' Meeting (Reference 4 below). Ecology provided clarifications regarding the interim milestone M-89-02 in a one-page handout at the August 9, 2000, Project Managers' Meeting (Reference 5, Attachment 6, Ecology handout regarding use of 90-day MW accumulation area and clarifications regarding M-89-02 milestone performance standard). Note: The non-shaded areas in the checklist table will be used to provide status information for activities/measures.

References:

1) Tri-Party Agreement Change Number M-89-98-03, for *Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)*, regarding Milestone M-89-02, November 1998.
2) RL Letter No. 00-FTD-006, "*Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)* Interim Milestone M-89-02, Complete Removal of 324 Building REC B-Cell MW and Equipment, November 30, 2000," dated December 08, 1999.
3) Ecology letter dated February 28, 2000, same subject as Reference 2.
4) 324 REC/HLV Project Managers' Meeting, May 18, 2000, Meeting Minutes, Attachment 4, List of Usable Deactivation Equipment, 324 Building, M-89-02, Detailed B-Cell Equipment Information, May 18, 2000.
5) 324 REC/HLV Project Managers' Meeting, August 9, 2000, Meeting Minutes.
6) RL Letter 01-FTD-014, "*Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)* Interim Milestone M-89-02, Complete Removal of 324 Building Radiochemical Engineering Cells Mixed Waste (MW) and Equipment, November 30, 2000," dated February 23, 2001.
7) Ecology letter, same subject as Reference 6, dated March 13, 2001.

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
1) First Distinct Action for M-89-02 (Reference 1): Mixed waste (MW) must be containerized, removed from B-Cell and placed in a condition that is compliant with Chapter173.303 of the WAC Performance standard for First Distinct Action: • Removal of MW from the Radiochemical Engineering Cells (REC) B-Cell requires the collection and containerization of dispersible material from the B-Cell • Collection will not include destructive and/or chemical methods (i.e., spalling or decontamination washes) so that a determination of liner integrity (closure activity required post M-89-02) can be made prior to liner decontamination • The dispersible material will be containerized in a compliant (with receipt facility acceptance criteria) container system • Containerized dispersible material will be removed from REC B-Cell and may be moved to an interim storage area						
Activity(s)/Measure(s): 1a Perform collection and containerization of dispersibles through retrieval with a pneumatic clamshell from the B-Cell floor (Reference 1)	X	Clamshelling of B-Cell floor has been completed. Clamshelling was performed after clearing and scraping the floor.	100%		03/01/01	Cell diagram and videotape

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
1b Following clamshelling (1a above), collect dispersibles by performing a filtered vacuum of the B-Cell floor (Reference 1) (NOTE: Invite Ecology to observe vacuuming and documentation.)	X	The crane-deployed vacuum system was installed in the B-Cell using existing 5000-lb block for fixture/stability, and vacuuming of the main B-Cell floor area was performed. The Dispersible Removal System (DRS) vacuuming unit was also installed in B-Cell and vacuuming of difficult areas was performed using the DRS. Vacuuming activities have been completed for all grid sections of the B-Cell floor. Vacuuming status was based on systematic grid approach using cell diagrams and video taping. Ecology was invited and observed vacuuming activities as appropriate in person, and on videotape.	100%		03/01/01	Cell diagram and videotape

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
1c Transfer dispersibles collected by these methods into containers for interim storage (Reference 5, Section 5.6, directly loading MW dispersibles into rectangular grout containers.)	X	Transfer of dispersibles into rectangular grout containers (RGCs) has been completed for all seven (7) of the seven (7) expected dispersibles RGCs, which are as follows: RGC-324-00-123 (RGC-5) RGC-324-00-114 (RGC-8) RGC-324-00-117 (RGC-9) RGC-324-00-101 RGC-324-00-102 RGC-324-00-119 RGC-324-00-115 These RGCs contain some MW debris and MW equipment, but were tracked as dispersibles RGCs on this checklist.	100%		03/01/01	Videotape

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
Activity(s)/Measure(s) (continued): 1d Move containerized dispersibles to a compliant mixed waste storage area (Reference 1)						
1d.1 Remove containerized MW dispersible material from B-Cell (Reference 1). -MW containers will be staged/moved to a 324 Building 90-day MW accumulation area after packaging and radiological survey. This provides waste management controls commensurate with WAC 173-303 dangerous waste accumulation requirements. Ecology concurrence (through enforcement discretion) is applicable for this activity since the MW is not newly generated (Reference 5).	X	The seven (7) dispersibles RGCs have been removed from B-Cell, including the following: RGC-324-00-123 (RGC-5) RGC-324-00-114 (RGC-8) RGC-324-00-101 RGC-324-00-102 RGC-324-00-117 (RGC-9) RGC-324-00-119 RGC-324-00-115	100%		03/08/01	Container loadout documentation
1d.2 Complete shipment (and receipt) of containerized MW dispersible material to 200 Area Central Waste Complex compliant MW storage area by 11/30/00 (Reference 5)[1]	X	Shipping has been completed for the seven (7) dispersibles RGCs, including the following: RGC-324-00-114 (10/09/00) RGC-324-00-123 (12/01/00) RGC-324-00-101 (01/09/01) RGC-324-00-102 (01/26/01) RGC-324-00-119 (02/01/01) RGC-324-00-117 (02/06/01) RCG-324-00-115 (03/22/01)	100%		03/22/01	Shipping papers/manifests

[1] Reference 5, Attachment 6, indicates that all collected mixed waste must be removed from the 324 Building B-Cell and placed in compliant, long-term storage in the 200 Area prior to the deadline established by M-89-02 (November 30, 2000).

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
2) Second Distinct Action for M-89-02 (Reference 1):						
The second distinct action required under interim milestone M-89-02 requires the removal of excess equipment from the REC B-Cell Table attached to RL letter 00-FTD-006 provides all equipment currently within the REC B-Cell and defines "Excess" versus "Required" equipment Performance Standard for Second Distinct Action: • Removal and containerization of all equipment (excluding Spent Nuclear Fuel) from B-Cell not required for the implementation of further closure actions and/or deactivation endpoints as established in the Closure Plan and the 324/327 Buildings integrated Project Management Plan (PMP), HNF-1289 • Excess equipment is defined in the attachment (pages 4-6) to RL letter 00-FTD-006, which provides the listing of B-Cell and a determination of its disposition status per M-89-02						

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
Activity(s)/Measure(s): 2a Containerize following "Excess" equipment from B-Cell (Reference 1):						
2a.1 Rack 2A and remaining portions of previously size reduced racks	X	The last process rack, 2A, was size reduced in April 2000 and the last remnants (contained within non-MW grout containers) were relocated to A-Cell in June 2000. Containerization of remaining portions of racks was completed.	100%		02/02/01	Waste container contents and videotape
2a.2 2,265-kilogram steel block (NOTE: Per Reference 6, this item was recategorized as "required" equipment for future 324 REC closure and deactivation activities.)	See 2a.2 note	This item is also called the 5,000 lb block. This block has been incorporated as a fixture/stabilizer for the newly developed crane-deployed vacuuming system.	See 2a.2 note	See 2a.2 note	See 2a2. note	Videotape
2a.3 Sump trench cover screen (east end of B-Cell floor)	X	Screen had been removed previously.	100%		02/27/01	Videotape

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
2a.4 Waste containers (with contents requiring transfer into other containers) i.e., grout containers (GC) (non-MW), engineered containers (MW), and RGCs (MW). These include GC-88, GC-115, GC-120, RGC-0, and engineered containers in wagon wheel.	X	Disposition/repackaging of waste from all of the subject five (5) items has been completed, including: GC-115 GC-120 GC-88 Wagon wheel EC dispersible RGC-0 Repackaging of contents of RGC-0 was completed. All wagon wheel EC dispersibles have been loaded into RGCs.	100%		02/22/01	Waste containers contents
2a.5 Storage rack (wagon wheel holding engineered containers) used for Special-Case Waste and MW. (NOTE: Per References 6 and 7, this item was recategorized as "required" equipment for future 324 REC closure and deactivation activities.)	See 2a.5 note	This rack is needed to hold ECs during future 324 REC closure/deactivation activities.	See 2a.5 note	See 2a.5 note	See 2a.5 note	See 2a.5 note

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
Activity(s)/Measure(s) (continued) 2b Remove containerized excess equipment designated as MW (in RGCs) from B-Cell (Reference 1).	X	The lead shield plugs have been removed from B-Cell. All three (3) of the three (3) expected MW equipment RGCs have been removed from B-Cell, including the following: RGC-324-00-083 (RGC-4) RGC-324-00-103 (RGC-6) RGC-324-00-104	100%		01/15/01	Waste containers contents
2c Ship containerized excess equipment designated as MW (in RGCs/SWDBs) to 200 Area by 11/30/00 (Reference 5)[2].	X	Shipping has been completed for the three (3) steel waste disposal boxes (SWDBs) containing MW equipment RGCs, including the following: RGC-324-00-083 (09/28/00) RGC-324-00-103 (09/30/00) RGC-324-00-104 (01/15/01)	100%		01/15/01	Shipping papers/manifest
2d Remove containerized excess equipment designated as non-MW (in grout containers) from B-Cell (to be staged in A-Cell) by 11/30/00 (Reference 5)[3].	X	All thirty-eight (38) expected grout containers filled with non-MW excess equipment have been removed from B-Cell.	100%		05/28/01	Waste containers contents

[2] Reference 5, Attachment 6, indicates that all collected mixed waste must be removed from the 324 Building B-Cell and placed in compliant, long-term storage in the 200 Area prior to the deadline established by M-89-02 (November 30, 2000).

[3] Reference 5, Attachment 6, indicates that the non-mixed waste (grout containers) removed from B-Cell (and stored/staged in A-Cell) will be moved to compliant, long-term storage in the 200 Area. Reference 5 indicates that the deadline for this activity will appear as a DOE (RL) milestone for the next fiscal year (2001) and will occur within eight months after the completion date required by Tri-Party Agreement Milestone M-89-02 (i.e., within eight months after November 30, 2000).

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
2e Ship excess equipment designated as non-MW (in grout containers) to 200 Area storage by 7/31/01 (Reference 5)[3]	X	All thirty-eight (38) expected grout containers filled with excess equipment have been shipped to 200 Area storage. Non-MW GCs shipped during FY 2001 included the following: GC-120 03/15/01 GC-157 03/22/01 GC-152 03/26/01 GC-159 03/29/01 GC-115 04/20/01 GC-154 04/24/01 GC-146 04/27/01 GC-156 05/03/01 GC-140 05/16/01 GC-151 05/18/01 GC-153 05/23/01 GC-155 05/30/01 GC-118 06/04/01 GC-150 06/07/01 GC-158 06/14/01 GC-148 06/18/01 GC-141 06/21/01 GC-132 06/26/01 GC-139 06/28/01 GC-88 07/12/01 GC-160 07/17/01	100%		07/18/01	Shipping papers

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed

2f Following "Required" equipment to remain in B-Cell to support closure activities (Reference 1):
• Cell penetration plugs
• West window work tray
• 10-ton crane (overhead crane)
• 3-ton crane (overhead crane)
• Two temporary fuel storage racks[4]
• Fuel pin storage container (gattling gun)[4], west wall
• Fuel thimbles[4], west side of B-Cell in fuel storage racks
• Installed electrostatic precipitators and HEPA (particulate) filters, north wall
• Installed manipulators
• Empty grout containers, lids, engineered containers, RGCs
• Useable deactivation equipment including following (References 1 and 4):
  • Fire protection hoses and nozzles (needed for fire protection)
  • Installed and functioning camera systems, including pan/tilt heads, mounts, etc. (needed for size reduction of fuel storage equipment, as well as cleanout of pipe trench and D-Cell)
(Continued on next page)						

[4] SNF currently stored within B-Cell will remain in B-Cell pending availability of the 200 Area Interim Storage Area (ISA). This is a delay in the removal of the fuel out of B-Cell. The former schedule had an interim movement of this fuel out of B-Cell and into A-Cell pending availability of the ISA. The project will benefit by eliminating this interim move within the facility and result in an earlier shipment of SNF out of the 324 Building, and allow for an overall better sequencing of closure activities within the 324 Building.

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
• Useable deactivation equipment (continued) • Fixed and portable lights (needed for viewing the cell) • Jib crane (accompanies 3-ton crane) and auxiliary hooks for 10-ton and 3-ton cranes (needed for fuel pin consolidation and size reduction of fuel storage equipment) • Torches and cables (needed for size reduction of fuel storage equipment) • Clamshells (needed for removal of size reduced fuel storage equipment as well as cleanout of pipe trench and D-Cell) • Dispersibles Removal System (DRS) attachments (needed for cleanout of D-Cell particulate material) • Vacuum system and hoses (needed for cleanout of D-Cell and pipe trench material) • Extension cords and cables (needed for operating installed equipment including electrostatic precipitators, portable lights, cameras, and DRS system) • Labounty shear (needed for size reduction of fuel storage rack) (NOTE: Per discussions with Ecology and RL at the 02/08/01 visit/meeting at the 324 Building, the Labounty shear is being recategorized as "excess" equipment, and has been packaged in a grout container.) • Rinsing equipment (needed to support future deactivation packaging and loadout of low-level waste and transuranic waste materials and equipment into 3-82B grout containers) • Grouting equipment (needed for grouting future low-level; waste 3-82B grout containers)						

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
Useable deactivation equipment (continued) Per Reference 6, the following recently developed items were added to the "required" useable deactivation equipment: • RODC lifting fixture (for lifting/handling future RODCs) • Band saw (for size reduction of REC equipment) • Chop saw (for size reduction of REC equipment) • Bigelow scraper (for REC floor cleaning) • Wagon wheel (a web assembly used to keep engineered containers vertical for filling) • Crane deployed vacuum system (integral of which is the 5000 lb block).						
3) Third Distinct Action (Reference 1):						
Removal of debris from B-Cell Performance Standard for Third Distinct Action: • Miscellaneous debris (i.e., tools, metal scrap, manipulator boots) located on B-Cell floor will be removed from B-Cell and packaged for removal • Packaged debris will be removed from the REC B-Cell						
Activity(s)/Measure(s): 3a Collect debris from B-Cell (Reference 1)	X	Debris was collected using clamshelling method. Clamshelling activities have been completed.	100%		03/01/01	Cell diagram and videotape

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
3b Rinse and package debris consistent with the size-reduced equipment removed from B-Cell (Reference 1)						
Activity(s)/Measure(s) (continued): 3b.1 Containerize non-MW debris using cylindrical Grout Containers (GCs) (Reference 5):	X	Containerization of non-MW debris into cylindrical GC has been completed.	100%		02/23/01	Cell diagram and videotape
3b.2 Containerize MW debris using Rectangular Grout Containers (RGCs) (Reference 5):	X	Containerization of MW debris (by clamshelling, Section 3a) has been completed. The MW debris was containerized into the RGCs addressed in Section 1a (MW dispersibles) and Section 2b (MW excess equipment) for packaging efficiency reasons.	100%		03/01/01	Cell diagram and videotape
3c Remove containerized debris from B-Cell (Reference 1)						

Action/Requirement/Conditions	Status (Complete (X) In Progress (P)	Status Statement	% Complete	Estimated Completion Date	Actual Completion Date	Documentation Completed
Activity(s)/Measure(s) (continued): 3c.1 Remove containerized non-MW debris (GCs) from B-Cell (to be staged in A-Cell) by 11/30/00 (Reference 5)[5]	X	Non-MW debris has been containerized into the same GCs addressed in Section 2d (non-MW excess equipment) for packaging efficiency reasons. All thirty-eight (38) expected non-MW GCs have been removed from B-Cell.	100%		05/28/01	Waste containers contents
3c.2 Remove containerized MW debris (RGCs) from B-Cell by 11/30/00 (Reference 5)	X	All seven (7) of the expected seven (7) dispersibles RGCs (Section 1.d.1) have been removed from B-Cell.	100%		03/08/01	Waste loadout documentation
3d Ship containerized debris to 200 Area compliant storage (Reference 1)						
3d.1 Ship containerized non-MW debris (GCs in liner assembly/3-82 B cask) to 200 area compliant storage by 7/31/01 (Reference 5)[5]. Approximately five of the GCs will be categorized as low-level waste and are expected to therefore require grouting (in B-Cell) prior to shipment.	X	All thirty-eight (38) non-MW GCs (Section 2e) have been shipped to 200 Area storage.	100%		07/18/01	Shipping papers
3d.2 Ship containerized MW debris (RGCs in Rectangular Overpack Disposal Container / Steel Waste Disposal Box, SWDB) to 200 Area compliant storage by 11/30/00 (Reference 5)[6]	X	All seven (7) of the expected seven (7) dispersibles RGCs (Section 1.d.2) have been shipped to CWC.	100%		03/22/01	Shipping papers/manifest

[5] Reference 5, Attachment 6, indicates that the non-mixed waste (grout containers) removed from B-Cell (and stored/staged in A-Cell) will be moved to compliant, long-term storage in the 200 Area. It also indicates that the deadline for this activity will appear as a DOE milestone for the next fiscal year (2001) and will occur within eight months after the completion date required by Tri-Party Agreement Milestone M-89-02 (i.e., within eight months of November 30, 2000).

[6] Reference 5, Attachment 6, indicates that all collected mixed waste must be removed from the 324 Building B-Cell and placed in compliant, long-term storage in the 200 Area prior to the deadline established by M-89-02 (November 30, 2000).

324 BUILDING B-CELL INTERIM MILESTONE M-89-02 WASTE SUMMARY

	(1) Dispersibles		(2) Excess Equipment		(3) Debris	
Steps	MW	Non-MW	MW	Non-MW	MW	Non-MW
Collect waste	X	-	-	-	X	X
Containerize	X	-	X	X	X	X
Remove/Stage	X	-	X	X	X	X
Ship containers	X	-	X	X	X	X