



Department of Energy
Richland Operations Office
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MAR 19 2002

02-RCA-0243

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336

RECEIVED
APR 30 2002

EDMC

Dear Mr. Wilson:

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) CHANGE REQUEST M-81-01-01, FAST FLUX TEST FACILITY (FFTF) TRANSITION AND CHANGE REQUEST M-92-01-01, SODIUM FACILITIES ACQUISITION AND DISPOSITION

Please find enclosed the draft Tri-Party Agreement Change Requests M-81-01-01, FFTF Transition, and M-92-01-01, Sodium Facilities Acquisition and Disposition. Draft Change Request M-81-01-01 proposes a detailed set of milestones and target dates for FFTF transition activities. Draft Change Request M-92-01-01 proposes revised milestones for the Hanford sodium disposition. Ecology and the U.S. Department of Energy, Richland Operations Office (RL) agreed in Change Requests M-81-98-01 and M-92-98-01, that within 90 and 120 days respectively, after a final Secretarial decision to permanently deactivate the FFTF, RL shall issue draft Tri-Party Agreement Change Requests. This submission fulfills the agreement and initiates the 120-day period established for negotiation of the FFTF transition milestones.

After you have had an opportunity to review this submittal, we are ready to meet at your convenience to discuss the proposed Change Requests. If you have any questions, please contact me on (509) 372-2400 or your staff may contact Ellen M. Mattlin, Regulatory Compliance and Analysis Division, on (509) 376-2385.

Sincerely,

Joel Hebdon, Director
Regulatory Compliance and Analysis Division

RCA:EMM

Enclosures

cc: See page 2

Mr. Michael A. Wilson
02-RCA-0243

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MAR 19 2002

cc w/encls:

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Administrative Record

Enclosure 1

Hanford Federal Facility Agreement and Consent Order

Draft Change Control Form M-81-01-01
“Agreements in regard to DOE’s Fast Flux Test Facility (FFTF) for transition activities. Placement of Agreement FFTF transition milestones and targets (M-81-00 series). Modification of Agreement milestone M-20-29A”

March 2002

Description/Justification of Change (Continued)

The FFTF was previously proceeding with transition in conjunction with Agreement Change number M-81-94-01. The major FFTF transition activities completed are 1) defueling the reactor vessel to the fuel storage and interim decay storage vessels, 2) design, procurement and receipt of 30 Interim Storage Casks (ISCs), 3) washing residual sodium and storing in above ground dry storage (ISCs) all the spent fuel with no potential future use (126 assemblies), 4) design and construction of the Sodium Storage Facility (SSF), and 5) lay up of 23 of the approximately 100 plant operating systems.

In January 1997 the Secretary of Energy issued a Departmental decision to maintain FFTF in a standby condition while an evaluation was conducted of any future missions for the facility. On August 18, 1999, the Secretary decided to initiate the preparation of a National Environmental Policy Act (NEPA) Programmatic Environmental Impact Statement (PEIS) which included an evaluation of the potential impacts associated with restarting the FFTF as a nuclear science research and irradiation services user facility. In December 2000 the "Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility" was published (DOE/EIS-0310, December 2000). The corresponding Record of Decision (ROD) was issued in the Federal Register on January 26, 2001, stating the FFTF will be permanently deactivated. On April 25, 2001, the Secretary of Energy suspended the decision to permanently deactivate the FFTF as indicated in the ROD while alternate uses of the facility were further evaluated. On December 19, 2001, the Secretary of Energy announced in a DOE News Release that the Department will proceed with the deactivation of the facility.

As a result of the FFTF being placed in standby the uncompleted activities associated with Agreement M-81-94-01 were placed in abeyance by Agreement Change M-81-98-01. As a result of the December 19, 2001 deactivation announcement, noted above, this Agreement Change establishes revised FFTF transition milestones and targets.

Throughout the FFTF transition project, opportunities to implement waste minimization activities will continue to be assessed and implemented to the extent possible. Waste minimization activities during the project include the recycle, reuse or return to the original vendor of process fluids from the plant systems and auxiliary equipment (i.e., sodium, ethylene glycol, fuel oil, mobiltherm oil, and cooling tower chemicals). Only minor amounts of chemicals such as polychlorinated biphenyl transformer oils will require disposal as hazardous waste.

The milestones and targets identified below reflect the actions necessary to achieve FFTF transition.

Agreement Appendix D, Table D is hereby modified as follows:

The following Agreement M-81-00 series milestones and target dates (reproduced below) have been placed in abeyance established in accordance with the terms of this ~~M-81-98-01~~ M-81-01-01 change request.

Milestone	Description	Due Date
M-81-00	Complete FFTF Facility Transition and initiate the surveillance and maintenance phase.	(in abeyance) <u>02/11</u>
	This major milestone will be achieved by completion of all activities necessary to achieve the end point criteria for placing the facility in a safe and stable surveillance and maintenance mode.	
M-81-00-T01	Complete Reactor Defueling.	9/30/95 Completed 4/19/95
	At the completion of defueling, there will be 236 non-fueled components in the reactor vessel, 113 fueled components in the interim decay storage and 258 fueled components in the fuel storage facility.	
M-81-00-T02	Complete transfer of Irradiated Fuel to Dry Cask Storage.	(in abeyance)
	The Irradiated Fuel assemblies and pin containers will be transferred from the interim decay storage vessel and the fuel storage facility to the IEM cell for residual sodium removal, loaded into a core component container, transferred to the reactor service building cask loading station for placement into an interim storage cask for dry storage, and transferred to the interim storage area located in the northeast corner of the FFTF complex.	
M-81-00-T02 ³	Complete transfer of unirradiated fuel to <u>an appropriate protected storage area</u> . the Plutonium Finishing Plant.	(in abeyance) <u>1/10</u>
	Thirty two unirradiated fuel assemblies presently stored in the interim decay storage vessel will be transferred to the IEM cell for washing and drying, loaded into existing approved shipping containers, and transferred to an appropriate storage area in the Plutonium Finishing Plant.	

Milestone	Description	Due Date
M-81-00- T034	<p>Complete transfer of special fuel to <u>an appropriate storage area</u> the Idaho National Engineering Laboratory for consolidated storage.</p> <p>Sodium-bonded irradiated metal and carbide fuel pins from assemblies cleaned and disassembled in the IEM Cell will be loaded into existing, approved shipping casks, and transported to the Idaho National Engineering Laboratory in Idaho Falls, Idaho, for consolidated storage <u>or will be transferred to an appropriate storage location on the Hanford Site (e.g., 400 Area Interim Storage Area, 200 Area Interim Storage Area)</u>. One unirradiated metal fuel assembly will also be dispositioned in a similar manner.</p>	(in abeyance) 1/10
M-81-00- T045	<p>Complete auxiliary systems deactivation.</p> <p>A major portion of the plant auxiliary systems are required to support hot sodium circulation prior to draining the sodium. As these systems, and the balance of plant systems, become available for shutdown, they will be deactivated to a safe, stable condition.</p>	(in abeyance) 2/11
M-81-01	<p>Initiate sodium storage facility construction.</p> <p>This milestone will be achieved when the construction contractor is issued the notice to proceed with construction by the contracting officer.</p>	2/28/97 completed 10/09/95
M-81-02	<p>Complete sodium storage facility startup.</p> <p>This milestone will be achieved by completion of the sodium storage facility startup activities which include final testing of the mechanical and electrical systems and confirmation that the facility is ready to receive sodium from FFTF. Construction of the new facility closely coupled to the FFTF complex is required to support sodium drain operations. This new facility will be designed and constructed in compliance with RCRA and WAC 173-303 storage requirements. The facility will provide storage capacity for the 260,000 gallons of FFTF metallic sodium coolant.</p>	7/31/98 completed 01/97

Milestone	Description	Due Date
M-81-02-T01	<p>Submit final sodium disposition evaluation report/decision point.</p> <p>Under this target DOE will submit its final report following evaluation of the acceptable sodium product form for the TWRS Tank Sludge Pretreatment Process (i.e., caustic washing). This evaluation will be conducted in concert with TWRS TPA Milestone M-50-03 (due date March 31, 1998). This Hanford Site Radioactive (FFTF, Hallam, and Sodium reaction experiment) sodium evaluation will address other conversion options for disposal of the sodium if the product use for TWRS is not viable. Regardless of which option is selected, a new sodium reaction facility will be constructed adjacent to the sodium storage facility to convert the bulk metallic sodium to the appropriate chemical form. This report will include a decision on the final disposition of the Hanford Site Radioactive Sodium (e.g., disposal or reuse). Appropriate milestones and target dates will be established for construction and operation of the sodium reaction facility based on the option selected.</p> <p><u>Submit final sodium disposition evaluation report</u></p> <p><u>The Office of River Protection will use the Hanford Site radioactive sodium inventory (i.e., FFTF, Hallam and SRE) converted to sodium hydroxide in the Waste Treatment Plant (WTP) for tank sludge pretreatment (i.e., caustic washing). A report will be prepared in concert with M-92-10 to evaluate where the sodium will be converted, i.e., an existing facility operated by Argonne National Laboratory - West (ANL-W) located within the INEEL site or a newly constructed facility adjacent to the Sodium Storage Facility and to establish need dates for delivery of the caustic to WTP. Following submittal of this report, appropriate milestones and/or target dates will be established for the final disposition of the sodium.</u></p>	<p>(in abeyance) <u>09/05</u></p>
M-81-03	<p>Submit FFTF End Point Criteria Document.</p> <p>A document identifying the end point criteria necessary to place the FFTF in a safe and stable configuration will be developed. This document will be provided to EPA and Ecology for review, and approval for the hazardous substances proposed to remain at the facility.</p>	<p>(in abeyance) <u>9/08</u></p>

Milestone	Description	Due Date
M-81-04-T01	<u>Initiate Complete FFTF Sodium Drain.</u>	(in abeyance) 6/03
	<p>This milestone will be complete when <u>the drain of the first secondary loop is begun.</u> all of the sodium coolant has been drained from the plant to the new sodium storage facility to the maximum practical extent. The sodium residuals that remain are integral to the system, are solid in form, and adhere to the surfaces of the system components. The residuals will be maintained under an inert gas blanket to minimize potential reactions during the long term surveillance and maintenance phase. During final disposition of the facility, any regulated wastes generated from the cleaning or dismantlement of these systems will be appropriately managed.</p>	
M-81-04-T01	Complete reactor and heat transport system sodium drain.	(in abeyance) 12/08
	<p>The reactor and primary and secondary heat transport system sodium coolant and supporting sodium systems will be maintained in a safe configuration, molten and circulating until the fuel is removed from the FFTF Reactor vessel and the sodium storage facility is operational. The sodium will then be drained to the tanks located in the sodium storage facility and allowed to freeze.</p>	
M-81-04-T02	Complete interim decay storage vessel and fuel storage facility sodium drain.	(in abeyance)
	<p>The interim decay storage vessel and fuel storage facility sodium will be maintained in a molten state until the fuel is removed from these storage locations. The sodium will then be drained to the tanks located in the sodium storage facility and allowed to freeze.</p>	

Milestone	Description	Due Date
M-81-05	Submit FFTF Surveillance and Maintenance Plan.	(in abeyance) 06/10
	<p>A plan describing the S&M activities to occur at FFTF during the S&M phase will be developed. This plan will be provided to EPA and Ecology for review, and approval for the hazardous substances proposed to remain at the facility. This plan will include documentation of lists of hazardous substances<u>waste</u>, including, dangerous waste that <u>will</u> remain in the FFTF Facility upon completion of Phase I activities because the hazardous substance<u>waste</u>: (1) contains non-dangerous waste components that are highly radioactive, (2) is part of the plant structure and/or (3) is an intact piece(s) of equipment.</p>	
M-81-06	Complete PCB Transformer disposal.	(in abeyance)
	<p>The nineteen Polychlorinated Biphenyl (PCB) electrical transformers at the FFTF will be disposed of after the transformers are removed from service. Twelve of the nineteen transformers, will be drained, flushed and removed from FFTF within thirty days after being removed from service as specified in 40 CFR 761. Seven of the transformers, which are in areas that are difficult to obtain access, will be drained, flushed and removed from FFTF within nine months of cessation of service to ensure their disposal within one year from the start of storage. Cessation of service constitutes the start of the storage, and 40 CFR 761 limits this storage and subsequent disposal to a one-year period.</p>	

The following M-20-29A interim milestone due date is modified by this action. The parties agree to revisit and reestablish a due date as appropriate should FFTF transition resume:

Milestone	Description	Due Date
M-20-29A	<p>Submit sodium storage facility and sodium reaction facility closure plan or request for procedural closure as defined in section 6.3.3 of this Tri-Party Agreement to EPA and Ecology.</p> <p>A potential use for the sodium as feedstock in the TWRS Program has been identified and will be evaluated as discussed pursuant to M-81-02-T01. The sodium will be stored as product material in the sodium storage facility until the final disposition of the material is determined. FFTF is proceeding on the basis of providing RCRA and WAC 173-303 compliant storage for the sodium. The sodium reaction facility is included in the permit request, even though the sodium reaction facility availability and regulatory status will be determined by the 1998 evaluation/decision point. If the sodium use for the TWRS is confirmed, a request for procedural closure as defined in section 6.3.3 of the Tri-Party Agreement will be submitted for the sodium storage facility and sodium reaction facility units. If the sodium is determined to be a waste, a closure plan will be submitted for the two units.</p> <p><u>FFTF constructed the SSF on the basis of providing RCRA and WAC 173-303 compliant storage for the sodium in the event it was determined not to be product material. The sodium reaction facility (SRF) was also included in the permit request, even though construction of the SRF was not planned at that time. The FFTF, Hallam and SRE sodium will be used as a product feedstock in the pretreatment at the Waste Treatment Plant (WTP). Therefore, a request for procedural closure as defined in section 6.3.3 of the Tri-Party Agreement will be submitted for the SSF and SRF units.</u></p>	<p>TBD 06/03</p>

Enclosure 2

Hanford Federal Facility Agreement and Consent Order

Draft Change Control Form Change Number M-92-01-01

March 2002

"Draft"

Change Number M-92-01-01 (draft)	Federal Facility Agreement and Consent Order Change Control Form <small>Do not use blue ink. Type or print using black ink.</small>	Date 3/19/02
Originator O. A. Farabee, Director of FFTF Project Office Phone 376-8089		
Class of Change <input type="checkbox"/> I - Signatories <input checked="" type="checkbox"/> II - Executive Manager <input type="checkbox"/> III - Project Manager		
Change Title Reestablish Agreement M-92-09 and M-92-10 interim milestones associated with DOE's sodium facilities acquisition and disposition activities.		
Description/Justification of Change In December 1996 M-92-00 milestones were created governing the acquisition of new facilities, modification of new facilities, and /or modification of planned facilities necessary for the storage, treatment/processing, and disposal of Hanford site sodium. In January 1997 the Secretary of the U.S. Department of Energy (DOE) issued DOE's decision to maintain Hanford's Fast Flux Test Facility (FFTF) in a standby mode pending further evaluation of potential future uses. As a consequence FFTF deactivation activities associated with sodium drain from the plant and fuel storage vessels were suspended, resulting in a major effect to the Agreements M-92-09 and M-92-10 interim milestones. The majority (approximately 86%) of Hanford's radioactive sodium is associated with the FFTF. The remaining radioactive sodium, Hallam and Sodium Reactor Experiment (SRE), continues to be safely stored in the 200 West area of the Hanford Site. (Continued on page 2)		
Impact of Change This change request establishes revised M-92-09 and M-92-10 interim milestones. (1) These milestones do not adversely impact other existing or contemplated Tri-Party Agreement milestones. However, there are links between these milestones and other Tri-Party Agreement milestones (e.g., M-81-02-T01 and M-20-29A and the Office of River Protection's use of FFTF sodium converted to a caustic).		
Affected Documents The <u>Hanford Federal Facility Agreement and Consent Order</u> , as amended, and Hanford Site internal planning, work authorization, and budget documents (e.g., Project Management Plans, Baseline Change Control documents).		
Approvals _____ Date ___ Approved ___ Disapproved DOE _____ Date ___ Approved ___ Disapproved EPA _____ Date ___ Approved ___ Disapproved Ecology		

Description/Justification of Change (Continued)

On August 18, 1999, the Secretary of Energy decided to initiate the preparation of a National Environmental Policy Act (NEPA) Programmatic Environmental Impact Statement (PEIS) which includes an evaluation of the potential impacts associated with restarting the FFTF as a nuclear science research and irradiation services user facility.

Based on the status of the FFTF at the time the parties agreed to place the Agreements M-92-09 and M-92-10 interim milestones in abeyance (temporary suspension) until the Secretary of Energy issued a final decision on whether or not to restart FFTF. The Parties agreed should the Secretary of Energy decide that FFTF has no future missions, and that FFTF transition should occur, DOE shall issue a draft Agreement change control request for proposed revised dates to the subject interim milestones.

In December 2000 the "Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility" was published (DOE/EIS-0310, December 2000). The corresponding Record of Decision (ROD) was issued in the Federal Register on January 26, 2001, stating the FFTF will be permanently deactivated (Volume 66 FR 7878, January 26, 2001). On April 25, 2001, the Secretary suspended the decision to permanently deactivate the FFTF as indicated in the ROD while alternate uses of the facility were further evaluated. On December 19, 2001, the Secretary announced in a DOE News Release that the Department will proceed with the deactivation of the facility.

This Agreement change establishes the revised dates for the M-92-09 and M-92-10 interim milestones.

Agreement Appendix D, Table D is hereby modified as follows:

The following Agreement M-92 interim milestones (reproduced below) are established in accordance with the terms of this M-92-01-01 change request.

Milestone	Description	Due Date
M-92-09	Establish milestones and/or target dates for acquisition of new facilities, modifications of existing facilities, and/or modification of planned facilities necessary for storage, treatment/processing, and disposal of Hanford site sodium.	TBD (by 7/09)
M-92-10	<p>Submit Hanford Site Sodium Project Management Plan (PMP) to Ecology pursuant to Agreement Action Plan section 11.5.</p> <p>The Hanford Site Sodium PMP will include all plan elements required by Agreement Action Plan section 11.5.</p> <p>The PMP shall include the Waste Treatment Plant as addressed in M-81-02-T01 for use of the Hanford Site radioactive sodium (FFTF, Hallam SRE) converted to a caustic and the associated need dates. It shall also address where the sodium will be converted, i.e., at an existing facility operated by Argonne National Laboratory - West (ANL-W) located within the INEEL site or a new facility constructed at Hanford.</p>	9/05