

Hanford Tri-Party Agreement
**Modifications to Hanford's Plutonium Finishing Plant
Transition and Selected Disposition Milestones**

October 2002

RECEIVED
NOV 07 2002

1. Oregon Office of Energy, submitted by Ken Niles

EDMC

Comment 1: To accelerate cleanup. However, given the proposals discussed in the Cleanup Constraints and Challenges Team (C3T) process, can you do better? Proposals developed through the C3T process would accelerate your negotiated schedule by as much as eight years. In light of these discussions, we encourage you to re-consider the proposed schedule and negotiate milestones which will complete the work at the Plutonium Finishing Plant much sooner. Doing so will reduce the risks posed by this facility that much sooner and result in a substantial cost savings.

Response to Comment 1: The *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) negotiations for the Plutonium Finishing Plant (PFP) began in November 2001. The Tri-Party Agreement agencies agreed to use the existing schedule and work activities for PFP to develop the proposed milestones. The *Performance Management Plan for the Accelerated Cleanup of the Hanford Site* (DOE/RL-2002-47, Rev. D) does identify a strategy that would accelerate completion of the PFP Project by 7 years (from September 2016 to September 2009). The U.S. Department of Energy (DOE) does plan to work to an accelerated schedule; however, at this time there are no plans to commit to a new schedule given uncertainties in funding and without demonstrated progress in acceleration. We agree that accelerating the schedule has benefits and could reduce cost.

Comment 2: The proposed end point of slab-on-grade is too limited. It does not achieve closure of the tank systems associated with PFP. Instead, it allows their continued use through June 30, 2005 and possibly later. The proposed milestones also do not adequately address the piping, contaminated soil and other below-grade contaminants. Much of the waste in adjacent disposal sites clearly meets the criteria for designation as transuranic waste and must be retrieved. We recommend you negotiate milestones that complete the entire cleanup – including the characterization, exhumation and treatment of associated waste sites. The milestones should encompass all of the RCRA and MTCA cleanup requirements, including closure.

Response to Comment 2: The proposed end point of removing above-grade portions of structures to "slab-on-grade" for PFP decommissioning is considered only an interim action. The negotiations for PFP were intended to be consistent with Section 8, "Facility Decommissioning Process" of the Tri-Party Agreement. These milestones only reflect transition work and dismantlement, not final remediation work. The final cleanup action is still being planned and will be consistent with the *Performance Management Plan for the Accelerated Cleanup of the Hanford Site* (DOE/RL-2002-47, Rev. D). Further, DOE plans for the overall Central Plateau remediation to integrate tank farm, waste site, and facility closure actions. It is under the Central Plateau remediation work that piping,

contaminated soil, and other below-grade contaminants will be addressed for the final cleanup action. Additionally, the Engineering Evaluation/Cost Analysis (Tri-Party Agreement Milestone M-83-22) requires DOE to perform an evaluation of actions necessary to address below-grade portions of the facility in anticipation of a smooth transition of final remediation activities from the PFP Project to Central Plateau activities. The 241-Z Tank System, encased in a concrete vault, is a robust wastewater storage system, and will be used during the cleanout activities. At the end of these activities, the 241-Z Tank System will be closed according to applicable dangerous waste closure standards and an approved closure plan.

Comment 3: We recommend new milestones be negotiated to directly address expeditious characterization and eventual remediation of the carbon tetrachloride plume. We understand that work is restricted in the area because of security restrictions. However, once the security perimeter is reduced, aggressive actions should be taken to account for the location of the chemical, and work towards its remediation. The carbon tetrachloride contamination cannot be separated from cleanup of the Plutonium Finishing Plant. Any plan to clean up the Plutonium Finishing Plant must include the carbon tetrachloride plume.

Response to Comment 3: The carbon tetrachloride plume is addressed under the groundwater protection program as part of the Central Plateau remediation. The Remedial Investigation/Feasibility Study work plan for the 200-PW-1 Operable Unit includes characterization of the carbon tetrachloride contamination in the vadose zone. Through the *Performance Management Plan for the Accelerated Cleanup of the Hanford Site* (DOE/RL-2002-47, Rev. D), DOE plans to determine the presence of dense non-aqueous phase liquids and the vertical distribution of carbon tetrachloride in the groundwater. The results of these efforts will provide the project with the necessary information to implement the most efficient and innovative methods for cleaning up the carbon tetrachloride plume.

Comment 4: The proposed milestones allow continued use of the transfer lines to tank farms until June 30, 2005. These are non-compliant systems. The milestones should include a requirement for periodic integrity testing of these lines. Should they fail integrity testing, their use should be immediately discontinued and cleanup investigation begun.

Response to Comment 4: The lines connecting the PFP facility to the 241-Z Tank System are double contained. The proposed milestones do allow for the continued use of the transfer lines to tank farms until June 30, 2005. The compliance actions for these transfer lines are covered in Tri-Party Agreement Milestone, M-48, "Complete Tank Integrity Assessment Activities for the Hanford's Double-Shell Tank System."

2. Fluor Hanford Environment and Regulations, submitted by Ron Gurske

Comment 1: *Draft Milestone: M 83-30:* "Submit to Ecology a closure plan as a primary document for the 241-Z Waste Treatment Facility (TSD unit) and Glovebox HA-20MB."

"A closure plan certified in accordance with WAC 173-303-810(12) and (13) for the 241-Z and Glovebox HA-20MB TSD units will be submitted to Ecology to begin the review process described by Figure 9-2 in Section 9 of the HFFACO for incorporation into the Hanford Facility RCRA Permit...."

Fluor Hanford (FH) is not seeking a change to the proposed language but is seeking clarification of the intent of this requirement in the response to comment package. Specifically, FH recognizes that this milestone would require submittal of a certified interim status closure plan, while other interim status closure plans incorporated into the Hanford Facility RCRA Permit have not required certification (Reference: Hanford Facility RCRA Permit, Attachment 33, Chapter 12). FH would like DOE and Ecology to acknowledge that the certification requirement in draft milestone M-83-30 is based on the special circumstances at PFP and is not intended to change the established protocols currently used for incorporation of interim status closure plans into the Hanford Facility RCRA Permit.

Responses to Comment 1:

U.S. Environmental Protection Agency (EPA)/Washington State Department of Ecology (Ecology) Response: EPA and Ecology are clarifying that, consistent with Tri-Party Agreement Section 5.3, all treatment storage and disposal (TSD) units shall be closed pursuant to the authorized State Dangerous Waste Program in accordance with *Washington Administrative Code (WAC) 173-303-610*. Certification requirements associated with this authority are those related to permit modification procedures, specifically those at *WAC 173-303-810(12)* and *(13)*. Therefore, the intent of the Tri-Party Agreement, the site-wide permit, and the milestone language in question is to incorporate all closure plans for units not closed by decontamination or removal prior to permit issuance into the permit through the permit modification process. To the extent that previous closure plans incorporated into the site-wide permit subsequent to the permit's effective date were not required to be certified, such actions may reflect an oversight, not an alternate regulatory model for approving closure plans at permitted dangerous waste management facilities.

DOE Response: The Agreement In Principle and the scope of the Tentative Agreement between the Tri-Party Agencies was limited to the PFP. During the course of PFP negotiations, the Agencies discussed and agreed to the scope of "certification" as applied at PFP.

3. Nez Perce Tribe, submitted by Patrick Sabotta

Comment 1: In order to reflect consideration of tribal input on values in establishing the end point criteria, as stated in paragraph three of Description/Justification of change for M-83-20, consultation opportunities for the Tribes with the Tri-Party agencies must at some point occur. In addition, all other primary documents submitted to Ecology per these milestones (for example, the PFP Legacy PU Holdup Removal Plan) should be sent to ERWM for review in order to ensure an informed consultation process.

Response to Comment 1: The Tri-Party Agencies will provide you with documents as stated in the Tri-Party Agreement and the Community Relations Plan. The Agencies will consider your comments in the drafting of final documents and will continue to consult with the Tribes and incorporate your interests, as appropriate. Although the PFP Legacy Plutonium Holdup Removal Plan is not a primary document, it will be provided to you as requested.

4. Comment submitted by Judy Pigott Swenson

Comment 1: I definitely think that the additions to the clean up plans are good & wise. For them to be scheduled as soon as they can be accomplished in a thorough fashion is important too. Thanks for reading this.

Response to Comment: The Tri-Party Agencies appreciate your time and effort to review the proposed changes, and your positive feedback on what is being proposed.

5. Comment submitted by Alton Haymaker

Comment 1: I see no need to 'tear down' ex(h)isting (sic) facilities.

Response to Comment 1: The removal of those portions of the PFP facility above grade to "slab-on-grade" (the foundation slab) is the plan based on current information, but is not the final decision. The change package has a milestone that requires DOE to develop an Endpoint Criteria Document (Tri-Party Agreement Milestone M-83-20), and a milestone to evaluate various options of what to do with the facilities through an analysis called an Engineering Evaluation/Cost Analysis (Milestone M-83-22). This analysis will evaluate a number of options including removing the structures or leaving the structures in place. The findings from this analysis, and the resulting decision document, will determine what will happen to the facilities.

To take PFP to a safe and stable "slab-on-grade" state is anticipated to involve the following:

- Cleanout of plutonium left in equipment from past processing activities
- Removal of residual chemical and plutonium holdup
- Removal and disposal of process and nonprocess equipment within buildings and structures
- Decontamination
- Demolition of all above grade structures and disposal of debris.

Following demolition of the PFP structures, the PFP site would be stabilized to assure below-grade equipment and waste sites are in a safe, environmentally protective condition for low-cost surveillance and maintenance pending final remediation. Currently, contamination in the PFP structures (above grade) poses significant risks. By removing these structures, DOE will eliminate costs associated with long-term surveillance and maintenance of these facilities, and reduce risk to workers and the environment.

6. Comment submitted by Don Meyers

The comments I have on the PFP Cleanup Schedule are based on my reading the Notice for Public Comment in the Tri City Herald, and on my past several years' interest/comments on the overall Hanford Cleanup effort. The Public's input was requested "on setting schedules for

eliminating hazards and reducing risks at the PFP." My comments are relative to the three bulleted Cleanup Actions listed on that Notice, and are as follows:

Comment 1: Agree for high risk PU/TRU waste -- but for insignificant amounts of PU/TRU and any other waste, dry out and leave/dispose of in-place within secured/covered PFP.

Comment 2: Agree but not all PU/TRU - only significant amounts that are truly too hazardous for dried, in-place disposal per the following 3rd bullet comment.

Response to Comments 1 and 2: The first and second bullets in the Notice for Public Comment referenced the repackaging of residues for shipment to the Hanford Site Central Waste Complex and legacy holdup, respectively. An analysis was completed in the *Plutonium Finishing Plant Stabilization Final Environmental Impact Statement (DOE/EIS-0244-F)* and a decision was reached in the Record of Decision (*Federal Register*, Volume 61, No. 133, 36352-36359), that the residues would be repackaged as transuranic (TRU) waste and shipped to the Central Waste Complex. Ultimately, the residues will be shipped to the Waste Isolation Pilot Plant in New Mexico for disposal. The cleanout of plutonium left in equipment from past-processing activities (i.e., legacy holdup) will result in significant quantities of plutonium that need to be managed as TRU waste or special nuclear material.

Comment 3: Cleanup only truly hazardous PU/TRU waste, leave buildings intact to maximum extent possible, and fill with other dry waste like contaminated soil, equipment and materials. Seal/cover the partial PFP structure for in-place disposal of these wastes, and fence-in as a Monument site within the "Hanford Nuclear National Park". That National Park is proposed below in my "Alternate Approach for Hanford Cleanup," which would save considerable time and money with minimum risk to out water, public and the environment.

Response to Comment 3: This bullet on the Notice for Public Comment referred to the dismantlement of buildings at PFP. Removal of above-grade portions of the PFP facility to "slab-on-grade" reflects the current plan based on knowledge to date, but is not the final decision. The change package contains a milestone that requires DOE to develop an Endpoint Criteria Document (Tri-Party Agreement Milestone M-83-20), and a milestone to evaluate various options through an analysis called an Engineering Evaluation/Cost Analysis (Milestone M-83-22). This analysis will evaluate removing the structures and leaving the structures in place. The results of this analysis, and the resulting decision document, will determine the path forward for PFP.

Reaching this safe and stable "slab-on-grade" endpoint is anticipated to involve the following:

- Cleanout of plutonium left in equipment from past processing activities
- Removal of residual chemical and plutonium holdup
- Removal and disposition of process and non-process equipment within buildings and structures
- Decontamination
- Demolition of all above-grade structures and disposal of debris.

Following demolition of the PFP structures, the PFP site will be stabilized to assure below-grade equipment and waste sites are in a safe, environmentally protective condition for low-cost surveillance and maintenance pending final remediation. Currently, the contamination in the above-grade portions of the PFP structures poses significant risks. By removing these structures, DOE will reduce costs associated with long-term surveillance and maintenance of these facilities, as well as reduce risk to workers and the environment.

Comment 4: I have provided this Alternate Approach for Hanford Cleanup as part of my comments.

D Meyers' Summary of Alternate Approach Action for Hanford Cleanup

Updated 2/12/01

For about 14 Years now, ever since I worked for Tank Waste Retrieval I have expressed concern that cleanup of Hanford was expected to **return the site to its original state.** Based on my concern for:

- that approach and as being "altered along the way";
- countless delays in the Hanford Cleanup efforts over those years;
- the dependency of **timely river protection being "muddled"** by Vit Plant Development; and
- growing risks to our Columbia River and Public Water Supplies as time goes on,

I had to openly express those concerns as they have grown more intense. Over the past four years now, I have suggested in writing an ALTERNATE APPROACH FOR HANFORD CLEANUP to DOE-ROO, DOE-ORP, Wash St. Dept of Ecology, Governor Locke, Congressman Hastings, and U.S. Energy Secretary Richardson all with very little response and consideration given specifically to my Alternate Approach. Recently I received acknowledgement of my comments/suggestions by Jesse Roberson for DOE Secretary Abraham.

THE END ACTION NEEDED RIGHT NOW IS THAT DOE PREPARE SCOPE, SCHEDULE, COST AND RISK INFORMATION FOR THIS ALTERNATE APPROACH, AND FORM INTO A PROPOSAL -- THEN MAKE PUBLIC AND HAVE ALL STAKEHOLDERS READ AND STRONGLY CONSIDER THE RISK, TIME AND COST ADVANTAGES OVER THE CURRENT CLEANUP PROGRESS AND PROBLEMS!!

My Alternate Approach is summarized as follows:

- A. Concentrate cleanup effort and funding completely on the **River Protection Part of Hanford Cleanup. Do it RIGHT NOW!** -- at considerably lower total cost, elapsed time, and risk to the public and environment. Could probably complete for only **\$5 to 10 BILLION and in 5 to 10 YEARS!!** --- Let development of the Vit Plant be a parallel effort -- **Vit problems must not delay River Protection part of Hanford Cleanup!!**
- B. Ensure all Radioactive Waste is DRIED UP.
 1. Forget about total cleanout of tank waste -- remove liquid and leave solids.

2. Stir tank liquid/sludge waste into slurry in a safe manner using proven, standard, existing equipment/procedures.
 3. Pump tank slurry dryout remaining sludge/mud and leave in tank.
 4. Remove fissile components/high level radiation items from old process buildings and basins and transfer into surface fuel storage/disposal using safe, reliable and proven transfer/handling methods.
 5. Stir, transfer and process basin liquid/sludge, in proven manner similar to tank waste in (2) above.
 6. Dry out basin sludge/mud/trash items and leave in basin -- cover to confine contamination.
 7. Remove liquid waste from cribs/other holding areas in manner similar to tanks/basins.
 8. Dispose of Hanford Site contaminated structural and equipment items by placing in dried-out waste tanks, basins and old process buildings (canyons, reactors), while filling voids with contaminated soil, etc.
- C. Permanently cover/enclose the filled tanks, basins and buildings so rainwater can't contact contamination and leach to the groundwater or Columbia River.
- D. Install security fences around permanent waste area/building sites and declare each a FEDERAL MONUMENT (like B-Reactor Museum).
- E. This "Hanford Nuclear Site" Manmade National Park would contain clean public roads and mostly usable lands, with Federal Monuments/Museums scattered around -- each fenced for No Trespassing!
- F. Each fenced site would have Tourist actuated audio stations providing description and history of that particular site -- all sites combined would tell the Hanford Story!!
- G. Ensure that in (the) future, if any existing radioactive contamination gets into the groundwater and Columbia River, that it proceeds only at diminishing and acceptable rates.

Using mostly existing proven equipment, facilities and processes, this "River Protection Cleanup" could be completed expeditiously at minimal cost! The "finally developed" waste glassification facilities can be used for years to finish the remaining Hanford non-River Protection cleanup efforts. There will lots of future work and economical support for our locality as this plant also processes waste for other U.S. regional nuclear cleanup waste. Hanford will again be a leader in the Nuclear Industry, with the experience to help develop cleanup approaches at other Nuclear Waste Sites!!

Thank you for consideration of my comments, realizing they apply to PFP, as well as to the overall cleanup of Hanford.

Response Comment 4: Thank you for sharing your approach to cleanup. DOE has prepared the *Performance Management Plan for the Accelerated Cleanup of the Hanford Site* (DOE/RL-2002-47, Rev. D). This plan contains several strategic initiatives to accelerate cleanup at the Hanford Site. One initiative focuses on acceleration of cleanup on the Central Plateau. This involves developing a plan to optimize the sequence of waste site and facility cleanup, infrastructure alignment, and tank farm closures. The plan will prioritize activities to focus first on those areas that pose the highest potential threat to human health or the environment (including the groundwater) and will look for

opportunities to increase the efficiency through logically grouping cleanup sites. Additionally, this initiative will demonstrate the benefits of using “regional” cleanups.

7. Question submitted by Nancy Kroening

Question 1: I'm still trying to get a picture of how the concrete will work. First there was no mention of taking nuclear materials out of vats before putting concrete in. Then I read in the NRDC bulletin that the liquids will be pumped and then the sludge/goop at the bottom will be covered in concrete. Is this the same project you are working on?

Response to Question 1: A DOE Richland Operations Office staff member responded to Ms. Kroening by e-mail on July 8, 2002, indicating there were two draft documents – one document was the draft Change Request for the Plutonium Finishing Plant and the other was related to the tank waste program. Ms. Kroening responded saying she probably was looking at the draft change package for tank waste, and that she would call at some point. No call was received.

8. Other Changes to the Proposed TPA Change Package:

The Agencies found an error in the wording for Milestones M-83-40, M-83-41, and M-83-42. The word “dismantlement” needs to be removed from the sentence, “DOE deactivation, decontamination and dismantlement activities may proceed in advance of CERCLA decision documents in accordance with Section 8 of the HFFACO.”

The words “mixed waste” will be added to the title of Milestone M-83-13 for clarification. The title of the milestone now reads, “Complete repackaging of PFP mixed waste residues and shipment to Central Waste Complex.

In Milestone M-83-13, the reference to the “Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2000-1 dated January 19, 2001, as amended...” will be updated to reflect the current revision of July 22, 2002.