



**U.S. Department of Energy
Hanford Site**

SEP 4 2002

02-SPO-0001

Mr. Todd Martin, Chair
Hanford Advisory Board
1933 Jadwin, Suite 135
Richland, Washington 99352

Dear Mr. Martin:

PERFORMANCE MANAGEMENT PLAN FOR THE ACCELERATED CLEANUP OF THE HANFORD SITE (PMP) – (HANFORD ADVISORY BOARD [HAB] CONSENSUS ADVICE #131)

- References:
- (1) DOE ltr. to Todd Martin, HAB from K. A. Klein, RL, and R. J. Schepens, ORP, same subject as above, dtd. July 8, 2002 (02-HAB-0005).
 - (2) HAB ltr. to RL, ORP, EPA, and Ecology from T. Martin, same subject as above, dtd. June 7, 2002.

Thank you for your advice on our May 1, 2002, version of the PMP. We provided an initial response to the Advice on July 8, 2002 (Reference 1), and are now prepared to specifically address each of the issues raised in your advice. The PMP is now available on the Internet at <http://www.hanford.gov/docs/hpmp>. We hope to provide additional budget information in the final version in the near future.

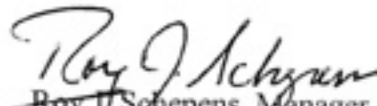
We received numerous comments on the May 1, 2002, version of the plan and carefully considered them when we updated the plan. For instance, we added a new groundwater protection initiative specifically aimed at controlling groundwater contaminant sources, improving groundwater remediation actions, reducing recharge conditions, and integrating site groundwater monitoring needs. We also added a new section to the plan where we've clearly identified our key assumptions that are critical to the success of the six strategic initiatives. These assumptions, along with greater details surrounding each initiative, should help the HAB and other stakeholders understand why we believe we can achieve this acceleration and what additional technical analyses and evaluations we think are necessary. The plan reiterates the U.S. Department of Energy's commitment to using the Hanford Federal Facility Agreement and Consent Order as the primary compliance vehicle, and to providing public involvement opportunities whenever the substance of this plan is updated. In addition, we have made it very clear that while we are working to greatly accelerate cleanup schedules and achieve major cost savings, we will not compromise the quality of the cleanup itself. We are committed to conducting our cleanup operations in full compliance with all requirements and cleanup standards to ensure protection of our workers, human health, and the environment.

SEP 04 2002

We improved several areas of the plan based on the comments provided by the HAB and other reviewers and your comments are addressed in the attachment. Again, thank you for your timely comments. If you have questions, please contact us, or contact Yvonne Sherman, DOE Public Involvement Manager, at (509) 376-6216.



Keith A. Klein, Manager
Richland Operations Office



Roy J. Schepens, Manager
Office of River Protection

SPO:MJG

Attachment

cc w/attach:

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U.S. Senators (OR)

Gordon H. Smith
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U.S. Representatives (OR)

Earl Blumenauer
Peter DeFazio
Darlene Hooley
Greg Walden

U.S. Representatives (WA)

Norm Dicks
Jennifer Dunn
Richard Hastings
George Nethercutt

State Senators (WA)

Pat Hale
Mike Hewitt

State Representatives (WA)

Jerome Delvin
Shirley Hankins

Hanford Performance Management Plan
Comment Resolution

1. **Cleanup Quality:** We have made it very clear in this version of the plan that while we are working to greatly accelerate cleanup schedules and achieve major cost savings, we do not want to compromise the quality of the cleanup itself. Section 3.0 of the plan now states:

“In developing the initiatives described in this plan, we (along with our regulators) have had to tackle Hanford’s myriad of cleanup issues in a manner that does not compromise the cleanup itself, and, at the same time, enables us to greatly accelerate cleanup schedules and achieve major lifecycle cost savings. The fact that we are open about wanting to reduce the taxpayer’s long-term investment in Hanford cleanup has raised the concern that meeting this objective will require decreasing the quality of the work we do.

Neither our regulators nor we want or intend that. Don’t mistake our commitment to cost and schedule savings for evidence that the federal government is any less committed to Hanford cleanup. In fact, it is because we want both high-quality cleanup and to reduce the long-term taxpayer liability that we have had to “break the mold” and find new ways to get the job done well. Under this plan, by 2035 we will have completed a cleanup that is both comprehensive and high quality. Each phase of the cleanup will have been accomplished in a manner fully compliant with all requirements and cleanup standards.”

“By ensuring our compliance with the Tri-Party Agreement and focusing on risk reduction and real physical progress, we can achieve by 2035 a high-quality and comprehensive cleanup that is fully protective of the environment, and of which the federal government, state, Tribes, and citizens of the Pacific Northwest can truly be proud.”

2. **Tri-Party Agreement/Regulators:** The plan reiterates DOE’s commitment to using the Tri-Party Agreement as the primary compliance vehicle and to working with regulators to achieve the accelerated cleanup objectives. Specifically, we’ve updated the executive summary and Sections 1.0 and 3.0 to state:

“While DOE must comply with many laws governing cleanup, the Tri-Party Agreement (TPA) is our primary compliance document. We are required to use the TPA process and to comply with its terms, including public involvement.”

“Fundamental to our ability to succeed will be the partnership we have built and will continue to nurture with our regulators, the U.S. Environmental Protection Agency and the Washington State Department of Ecology. The regulators played key roles in the initial development of the strategic initiatives, and following the release of DOE’s May 1, 2002 draft we have worked closely with them to address areas of concern and move toward consensus on a path forward.”

“Our plan is not intended to, in any way, detract from or impact the primacy of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement), which articulates the compliance requirements and specific agreements among the agencies.”

“Under this plan, by 2035 we will have completed a cleanup that is both comprehensive and high quality. Each phase of the cleanup will have been accomplished in a manner fully compliant with all requirements and cleanup standards.”

3. **Budget/Funding:** As part of the annual appropriations process we are working with DOE-HQ to finalize and release the budget figures that support this acceleration plan. In Section 6.0 we state the following:

“To implement this plan and realize significantly lower lifecycle costs and schedules, we will need an increase in near-term annual funding. The strategic initiatives outlined in this plan and for which we are seeking additional funding are key to successful, early completion of cleanup and a dramatic reduction in risk to human health, the environment, and our workers. Through the execution of this plan, we are committed to drive improved performance-based contracting approaches (e.g., incentive structures that drive real performance improvements); improve work plans and resource alignment to perform work (e.g., challenge existing assumptions and resource estimates); apply innovative technologies for retrieval, treatment, immobilization, disposal, groundwater protection, and closure; and work with our regulators to apply effective regulatory processes.”

The additional near-term funding is required to support tangible, broadly supported cleanup initiatives that not only result in real risk reduction, but also put us on a path for significant life-cycle savings. This funding is not contingent upon Hanford’s acceptance of off-site waste or a relaxation of the rigor or completeness of cleanup. An overall reduction in budget control points is being pursued to “provide more flexibility to efficiently manage the work.”

However, per the HAB advice, we will maintain separate budget control points between the Office of River Protection and the Richland Operations Office.

4. **Environment, Safety and Health:** We are committed to conducting our cleanup operations in full compliance with all requirements and cleanup standards to ensure protection of our workers, human health, and the environment. While we did not include specific information regarding ecological protection and risk assessment in this plan, the DOE is fully committed to its obligations under CERCLA, including the performance of ecological risk assessments. The first such assessment is currently being addressed in the 100 B/C Pilot Study and that study is being coordinated via the Natural Resource Trustee Council. We believe that by accelerating cleanup we can provide the best protection for the environment, the general public, and our workers. Specifically, we’ve updated sections 7.0, 4.0 and 4.2.6 to state:

“This plan provides a significant improvement in the way we get cleanup done at Hanford. It dramatically reduces risks to our workers, the public and the environment, substantially reduces our lifecycle costs, significantly improves our timelines for cleanup, provides real integration between the RL and ORP cleanup strategies, leverages the

excellent work we've done with our regulators into a plan for action, and maintains the quality of cleanup.”

“Concepts being incorporated into our oversight activities include: Using Integrated Safety Management (ISM) principles as part of our contracts and lifecycle project planning to help us identify what work is appropriate and desirable, and to eliminate unnecessary work activities, protect workers and remove outdated or inappropriate requirements.”

“Our focus in revising the safety management systems will be increased emphasis on Integrated Safety Management implementation. This will ensure implementation of adequate controls commensurate with the hazards of the work. Critical to balancing accelerated cleanup and risk is performance monitoring through measurement and assessment, which means improving our systems for doing so. Elements of this improvement involve better integrating safety and operational oversight, effectively and efficiently implementing the new nuclear safety rules, streamlining requirements to align to the minimum number of documents needed to perform contract work safely, and establishing integrated performance measures that reflect total contract performance.”

5. **Cleanup Priorities:** We believe our acceleration plan is consistent with HAB values and priorities and at a high level is summarized below (from the updated Section 4.0):

“At the heart of Hanford’s accelerated cleanup strategy is our commitment to accelerate risk reduction while protecting the health and safety of workers and the public, protecting the environment, and improving national security. The accelerated cleanup strategy builds on our transformation from managing risk to actually reducing risk. We will focus on providing high returns on near-term investment, developing a more closure-driven way of looking at our ongoing programs in the Central Plateau (like groundwater and waste sites) and re-engineering our business strategy.”

6. **Risk Assessments:** Risk assessment is an integral part of the cleanup decision-making process. Such assessments have been used to support the CERCLA ROD’s for the River Corridor, performance assessments for new operating facilities (such as the immobilized low activity waste disposal facility), and various NEPA analyses. In recognition of the importance of developing a common framework for performing Central Plateau risk assessments (including land use, exposure scenarios, and time frames) a portion of Section 4.0 was updated to reflect the recent C3T sub-team agreements in this area. This text from Section 4.0 now reads:

“We also recognize the need to fundamentally reform the way we look at ongoing, long-term work on the Central Plateau. Groundwater protection is one of our most daunting challenges and we need to implement true protection strategies. Similarly, we need to be logical and protective in our waste site remediation, ensuring cleanup of the contaminated soil on the Central Plateau is coordinated with tank waste remediation and closure. Finally, we must establish risk exposure scenarios considering future land uses, including Tribal use scenarios, and the values of stakeholders.

Risk Framework

Our overall Central Plateau cleanup strategy will provide the basis for arriving at a consistent and logical set of cleanup decisions to ensure effectiveness, protection of human health and the environment, and efficiency. Pursuant to the agreements reached through our C3T process, we have agreed to use a risk framework that supports our decision strategy as follows:

1. The Central Plateau core zone (200 Areas including B Pond (main pond) and S Ponds) will have an industrial use scenario for the foreseeable future.
2. The core zone will be remediated and closed, allowing for other uses consistent with an industrial use scenario (e.g., environmental industries) that will maintain active human presence in this area, which in turn will enhance the ability to maintain the institutional knowledge of the wastes left in place for future generations. Exposure scenarios used for this zone should include a reasonable maximum exposure to a worker/day user, to possible Native American users, and to intruders. An assumption of industrial land use will be used to set cleanup levels.
3. DOE will follow the required regulatory processes for groundwater remediation (including public participation) to establish the points of compliance and remedial action objectives. We anticipate that groundwater contamination under the core zone will preclude beneficial use for at least 150 years, which is the period of waste management and institutional controls. We assume the tritium and iodine-129 plumes beyond the core zone boundary will exceed the drinking water standards for the next 150 to 300 years (less for the tritium plume). At the same time, we expect other groundwater contaminants will remain below, or be restored to, drinking water levels outside the core zone.
4. No drilling for water use or otherwise will be allowed in the core zone. We will assess the risk to human health and environment based on an intruder scenario.
5. Waste Sites outside the core zone but within the Central Plateau (200 N, Gable Mountain Pond, B/C Crib Controlled Area) will be remediated and closed based on an evaluation of multiple land use scenarios to optimize land use, institutional control cost, and long-term stewardship.
6. Other land use scenarios (e.g., residential, recreational) may be used for comparison purposes to support decision-making, especially for:
 - a. The post-institutional controls period (after 150 years).
 - b. Sites near the core zone perimeter to analyze opportunities to further shrink the size of Hanford.
 - c. Early, precedent-setting closure/remediation decisions.
7. This framework does not deal with the tank waste retrieval decisions.¹

¹ Tank waste retrieval decisions will be made in compliance with existing regulatory and TPA requirements.

We are also developing a site-wide modeling strategy that will ensure all assessments performed onsite are based on consistent data and conceptual models. This will better enable us to correlate the cleanup levels we pursue today with the effectiveness of groundwater protection over many generations. It will also provide us insight for designing and implementing our long-term groundwater monitoring strategy, a key element of long-term stewardship. We will ask area Tribes and our stakeholders to participate in the development of these strategies to ensure we address their concerns and consider their ideas, especially regarding the long timeframe for which some of these systems will need to be in place.”

7. **Cleanup End States:** We have made it very clear in the update to this plan that while we are working to greatly accelerate cleanup schedules and achieve major cost savings, we do not want to compromise the quality of the cleanup itself. We are committed to conducting our cleanup operations in full compliance with all requirements and cleanup standards to ensure protection of our workers, human health, and the environment. On a site-by-site basis this is accomplished through the Record of Decision (such a process is used by the Canyons as well as the waste sites). In the case of the Central Plateau, section 3.0 of the plan now states:

“The Central Plateau’s core zone (the 200 Areas including B Pond and S Ponds) will have an “industrial use scenario” for the foreseeable future. Waste sites outside the Core Zone but within the Central Plateau (200 N, Gable Mountain Pond, B/C Crib Controlled Area) will be remediated and closed based on an evaluation of multiple land use scenarios to optimize land use, institutional control cost, and long-term stewardship. The industrial use scenario will not be used to create a national “sacrifice zone.” All sites will be in full compliance with cleanup requirements and will be fully protective of human health and the environment.

Post-2035, we could expect some level of ongoing activity in the Central Plateau – including commercial waste operations (U.S. Ecology’s disposal site is leased through 2064), the Navy’s disposal of decommissioned naval reactor compartments, stewardship, and perhaps ongoing DOE waste disposal operations. There would also be regulatory, engineering and institutional controls in place and continuation of ongoing groundwater monitoring. There will be a federal responsibility at Hanford for generations to come, but DOE’s EM cleanup work would be complete.”

8. **Tank Wastes:** A primary goal for the Office of River Protection is to start treating waste. However, the treatment plant currently planned cannot treat all of the tank waste by the Tri-Party Agreement milestone of 2028. We need supplemental technologies and efficiencies described in the Performance Management Plan to meet our cleanup commitments. Four technologies will be tested to increase the rate of cleanup. These technologies are: sulfate removal; containerized grout; bulk vitrification; and steam reforming. Ecology is working

with us to help assure that any supplemental technologies that are deployed will meet all prerequisite health, safety and environmental requirements.

The River Protection Project is multi-faceted and complex. The Office of River Protection and its contractors are addressing numerous tank waste issues besides building the waste treatment complex. The accelerated tank closure demonstrations project will collect data and provide analyses to support tank closures. The demonstrations will help us in:

- Understanding waste volume and characteristics
- Understanding the physical system and environment
- Refining engineering options for waste retrieval and in place treatment or isolation, and,
- Reducing risk to workers and the public during retrieval and closure activities and risks to post-closure future site users and environmental quality.

9. **Groundwater:** Due to regulator, tribal and public comments, we added a new groundwater protection initiative, specifically aimed at controlling groundwater contaminant sources, improving groundwater remediation actions, reducing recharge conditions, and integrating site groundwater monitoring needs. Sections 3.0 and 4.0 of the plan now state:

“... we want to underscore our commitment to give protection of the Hanford groundwater the priority it deserves. To that end, we have created a strategic initiative that will help drive a new and comprehensive site-wide groundwater remediation program that will focus both on the cleanup of contaminants that have reached or may reach Hanford aquifers, as well as all aspects of Hanford Site work that affect vadose zone contamination and groundwater protection.”

“We will protect groundwater resources by removing or isolating the highest-risk contaminant sources on the Central Plateau, remediating the contamination sources exterior to the Central Plateau core zone, dramatically reducing the conditions that have the potential to drive contaminants into the groundwater, treating the groundwater, and integrating all site monitoring requirements. We are accelerating high-risk waste site remediation by five years to better protect groundwater.”

We have added a cornerstone commitment to this plan to establish a site-wide integrated groundwater protection program in FY 2003.

10. **Waste Importation and Exportation:** Hanford disposes of low-level waste (LLW) and MLLW from various onsite and offsite generators. We also process and certify TRU for disposal at WIPP and are beginning to retrieve suspect TRU waste buried in the Central Plateau low-level burial grounds. The following updated excerpts from Section 4.1.4 of the plan deals with Hanford's acceptance of off-site waste and our plans for shipping much of our waste to other more permanent disposal facilities:

Hanford's Role

“The issue of receiving waste from other sites is very contentious, not just here but across the DOE complex. Some residents of Washington and Oregon are concerned about the

balance and timing of waste receipts, particularly considering that little waste is presently leaving the Hanford Site. They are understandably reluctant to support Hanford's acceptance of any more waste from offsite until we are doing more to deal with existing onsite wastes such as the tank wastes and the above-ground inventory of TRU and MLLW.

But Hanford is part of a complex of DOE sites, and no site can be entirely independent. Hanford has already begun to ship some wastes and material offsite (excess uranium to Ohio and its first TRU to WIPP) and expects to ship much more in the future -- our plutonium is destined for Savannah River, and our spent fuel and high-level waste will be disposed of in a national geologic repository."

"To support elements of this initiative, we have prepared and issued for public comment the draft Hanford Site Solid Waste Environmental Impact Statement (HSW EIS). We are also evaluating utilizing lined, monitored trenches for disposing of both low-level and mixed low-level waste. The HSW EIS will provide a suite of options for decision-makers that will support accelerated waste disposal and provide a basis for additional modern waste management capability at the Hanford Site."

Mixed Low-Level Waste

"The Waste Management Programmatic Environmental Impact Statement Record of Decision in 2000 designated Hanford as a disposal site for low-level and mixed low-level waste from around the complex, and we are currently accepting LLW from various DOE sites, and MLLW from the U.S. Navy. By using our existing capacity and infrastructure for low-level waste and mixed waste disposal, Hanford will provide significant support for other DOE site closures. For instance, our ability to dispose of Fernald low-level uranium waste and Rocky Flats MLLW can facilitate the closure of these sites, freeing up resources for more EM cleanup."

TRU Waste

"In parallel with the initial retrieval of TRU, we will work with our regulators to develop scoping, risk and associated environmental documentation supporting decisions regarding the extent to which remaining post- and pre-1970 TRU must be retrieved. We intend to continue to focus our retrieval activities on buried wastes that pose the highest risk.

Dealing with our own waste will also help pave the way for Hanford to assist in the packaging and shipment to WIPP of small quantities of TRU from other sites. In order to manage small quantity site transuranic waste, Hanford will be designated as one of three "hubs" nationwide that will serve as transshipment points. We expect CH TRU to be transferred to WIPP in a timely manner, but remote-handled (RH) TRU waste may stay for several years pending final waste acceptance approval at WIPP. By taking and temporarily storing TRU waste from small quantity closure sites, we allow those sites to shut down earlier and at less cost by avoiding the expensive facilities and certifications required to ship waste to WIPP. Hanford's state-of-the-art TRU processing facility and

certification from WIPP, augmented by equipment from WIPP, will enable us to easily handle the limited quantities of TRU from these small sites at no net cost to Hanford. Their successful closure will make available additional funding for other cleanup sites, including Hanford.”

Interim On-Site Waste Storage

Our acceleration plans are built around the shipment of a large fraction of our waste and nuclear material inventory to off-site disposal facilities. Once cleanup is completed less than 5% of the original inventory (in curies) of radioactivity will remain. Immobilized high-level waste, Cs/Sr capsules, plutonium, TRU, and spent nuclear fuel are all destined to leave the Hanford Site. Accelerating these shipments to the greatest degree possible will result in considerable cost savings (e.g. maintenance and repair of existing facilities) and cost avoidance (e.g. construction of new storage facilities) in terms of interim on-site waste storage. To realize these cost savings from our acceleration plans it will be essential for Hanford to develop firm agreement and shipment schedules with the receiving facilities.

11. **Key Assumptions:** We have added a new section in the plan (Section 5.0) where we’ve clearly identified our key assumptions that are critical to the success of the plan. These assumptions, along with greater details surrounding each initiative, provides for enhanced understanding of our specific acceleration initiatives.
12. **Public Involvement:** In order to establish a broad coalition of support throughout the region and across the nation for our accelerated cleanup plans, we have committed to broad areas of public involvement. This commitment is described below (from the updated executive summary and Section 1.0):

“While DOE must comply with many laws governing cleanup, the Tri-Party Agreement (TPA) is our primary compliance document. We are required to use the TPA process and to comply with its terms, including public involvement. We commit to providing a public comment period and regional public meetings whenever the substance of our accelerated plan is updated and public comment periods whenever our regulators and we agree to significant changes to Hanford’s Tri-Party Agreement milestones. In addition, we are committed to protecting the trust interests of area Tribal Nations, complying with our treaty obligations, and consulting with area Tribal Nations prior to releasing decision-making documents to the public.”

“Our plan is not intended to, in any way, detract from or impact the primacy of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement), which articulates the compliance requirements and specific agreements among the agencies. It also establishes, and we further commit to, opportunities for public involvement for all significant TPA changes. In addition to significant TPA changes, we will present this final plan at the annual fall State of the Hanford Site meetings across the region and post it on our website. At our public budget meetings in Spring 2003, we will provide information on how this plan and our new cleanup baseline are linked and obtain public

comment on both. Also, we will follow the TPA Community Relations Plan to ensure broad, inclusive public involvement as cleanup progresses.”