



Oregon

Theodore R. Kulongoski, Governor



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Mary Beth Burandt, Document Manager
Office of River Protection
U.S. Department of Energy
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Dear Ms. Burandt:

The State of Oregon appreciates the opportunity to comment on the Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) for the Hanford Site. Oregon has long-standing interests and concerns related to the decisions on waste treatment, disposition and disposal at Hanford, which is just up-river from Oregon. We are pleased that the U.S. Department of Energy (DOE) has agreed to revisit some of the work previously done as part of the Hanford Solid Waste EIS (HSW-EIS) and expand the planned Tank Closure EIS to encompass a more integrated analysis of Hanford's wastes and waste cleanup plans.

Oregon commented repeatedly on the HSW-EIS – through scoping, two drafts, the final EIS, and the Record of Decision. We continue to have concerns about fundamental assumptions and methods used in that EIS that we hope can be corrected in the new, expanded EIS.

Our major concerns that remain:

- DOE has so far failed to conduct a truly comprehensive assessment of the total inventory of wastes buried at the Hanford Site, and the present and future impacts posed by these wastes. DOE fails to provide the comprehensive analysis of past and future Hanford impacts on the Columbia Basin that we and others have repeatedly suggested.
- It is clear that water and waste movement through Hanford's subsurface and groundwater is vastly more complex than is indicated by the overly simplified conceptual models used by DOE. Moreover, it is clear that the models predict behavior different from the observed movement of water and waste. The sub-surface of Hanford – formed by massive ice-age floods – is extremely complex. A combination of layered soils and clastic dikes causes complex flow paths that in some places favor lateral flow and in others restrict lateral flow – leading to vertical flow in a confined area adjacent to the dikes. Simple models do not address this complexity and therefore cannot accurately predict water and contaminant movement. We have strong concerns about basing decisions on such uncertain data and that doing so may have impacts far into the future.

- Data in the HSW-EIS does not support the argument that groundwater will be irreversibly and irretrievably committed due to selection of the preferred alternative. We recommend the TC & WM EIS reflect the high value of groundwater as a state resource and evaluate impacts to natural resources, including groundwater. Groundwater at Hanford cannot be declared to be irreversibly and irretrievably impacted since it was contaminated before any actions presented and discussed in this EIS were taken. DOE should therefore not attempt to overcome their Comprehensive Environmental Response Compensation and Liability Act (CERCLA) liability.
- DOE has yet to validate the decision in the national Waste Management Programmatic Environmental Impact Statement (PEIS) in which Hanford was selected in 1999 as a receiving site for waste from other DOE sites. Instead, the HSW-EIS began with the assumption that this decision was valid – rather than validating it through a comprehensive analysis. That comprehensive analysis and a comparative analyses between Hanford and other potential disposal sites is still needed.

The final disposition of Hanford’s tank wastes, along with related piping, contaminated soil from leaks, and the tanks themselves, is also of great interest to Oregon. We are greatly concerned about delays in construction of treatment facilities for Hanford’s tank waste and likely delays in retrieval of waste from the single-shell tanks. We are also concerned about the delays in demonstrating whether bulk vitrification is a viable technology for use in immobilizing a large percentage of Hanford tank waste. Uncertainties related to the tank waste treatment program will make it difficult to fully assess the impacts of proposed actions.

Given the magnitude of the decisions that will be made in this EIS, Oregon recommends the formation of an independent Expert Panel to comprehensively review the TC &WM EIS.

We also have the following specific scoping comments:

Tank Closure

- While it is useful to evaluate a complete “no action” alternative that leaves the tanks and waste sites just as they are today in order to clarify the extent of the disaster this would ultimately cause, it does not provide useful information to help decide between realistic options. Therefore, we suggest evaluating both a “no action” alternative and a “stay the course” alternative that would have DOE meet the current requirements of the Tri-Party Agreement, including the closure and post-closure requirements of the Resource Conservation and Recovery Act (RCRA) and the Model Toxics Control Act (MTCA). This would provide a reasonable basis for comparison among the various alternatives.
- The scope should consider that each tank farm may require a different form of closure. For example, some single-shell tank farms, in which most of the tanks have leaked waste into the soil column, may need extensive remediation, including removal of contaminated soils and removal of the tanks themselves. Other tank farms, which have experienced few or no leaks, may not require as much remediation. The EIS should not assume that one form of closure will be appropriate for every tank farm.

- For each alternative evaluated, the EIS should estimate the Natural Resource injury and include that evaluation for purposes of comparison between the alternatives. CERCLA contains provisions for evaluating the injury to natural resources that come about from the release of regulated wastes, for placing a financial value on those injuries and for replacing, repairing or otherwise restoring those injuries. This EIS acts as an umbrella over many of those CERCLA actions. Previous releases and the actions under this EIS that lead to Natural Resource injuries require evaluation and restoration.
- The scope should include estimated costs and impacts for constructing new double-shell tanks, as existing tanks will have far exceeded their usable lives before vitrification can be completed on all of the tank waste.
- The disposition of the cribs, trenches and other adjacent structures must be evaluated separately from the tank closure alternatives – not be considered as a part of only some of the alternatives. This may necessitate a series of sub-alternatives.
- Cleanup of the cribs, trenches and related adjacent structures should evaluate:
 - ❑ complete clean closure
 - ❑ land fill closure meeting RCRA and MTCA risk limits, where those regulations apply
 - ❑ CERCLA closure limits that also apply to substances not regulated under RCRA/MTCA for the “tank systems”
- Tank closure alternatives should include:
 - ❑ complete clean closure
 - ❑ land fill closure meeting RCRA and MTCA risk limits, where those regulations apply
 - ❑ CERCLA closure limits that also apply to substances not regulated under RCRA/MTCA for the “tank systems”
- We are concerned that numerical estimates of past tank leak volumes into the Hanford soil column and groundwater will not accurately reflect actual contaminant loss. It is incumbent on DOE to institute an open and transparent process for determining tank leak loss and the scope of the EIS must address past tank leaks.

Waste Management

- The proposed scope indicates the intention to revise, update and re-analyze groundwater impacts previously addressed in the HSW-EIS. The scope should be expanded to do the same for the vadose zone impacts. This should be done by developing true and accurate representations of water and waste flow through Hanford’s soils, rather than relying on the models developed by the Systems Assessment Capability. The models should be validated to determine the relative level of uncertainty of their results as compared to the actual movement seen in the real soil.

- The scope should present and discuss any disparity between measured conditions and model outputs. This is necessary to inform the public and decision makers of the ability (or inability) to predict the movement of these materials through Hanford's soil. It also informs us of the limitations in determining the risk that these wastes present.
- The scope should clearly define the contaminant inventory in the tanks, in the vadose zone, and in the saturated zone.
- The scope should clearly define the risk estimation process. The EIS should clearly articulate how risk will be estimated for future users of the Hanford Site, including human health and ecological concerns.
- The EIS must clearly define assumptions used throughout the analysis process. DOE has indicated that it will assume a certain end state for project sites such as the Plutonium Finishing Plant and the PUREX tunnels. The EIS must clearly present the risks associated with these sites and how they can be scaled for analysis if the proposed assumptions are not met.
- The scope should include a detailed analysis of both active and passive institutional controls.
- The scope should include a detailed analysis of system performance and system failure if surface water infiltration and lateral transport in the subsurface cause surface barriers (caps) to be bypassed. Cap performance and expected impacts upon cap failure should also be included as part of the risk estimation process.
- The scope should include a true "No Action" alternative that includes a combination of treatment and disposal methods at the originating sites that eliminate the need for shipping low-level (LLW) and mixed low-level waste (MLLW) to Hanford for burial.
- The scope should include impacts to groundwater and human health at the point of compliance for waste management units.
- The scope should include a strategy for addressing the potential for emerging new plumes to adversely impact project baselines
- The scope should include a clear statement of the relationships between this EIS, the previous Tank Waste Remediation System EIS and the DOE Waste Management Programmatic EIS.
- The scope must include a detailed solid waste inventory – both the types and volumes of waste that have been previously disposed at Hanford, and the types and volumes of waste anticipated to be disposed at Hanford. Failure to include this comprehensive inventory will present an incomplete analysis of only the incremental risk increase of the proposed actions. Instead, the EIS should present a comprehensive analysis of the Hanford Site's risks that includes and identifies the increased risks caused by the proposed actions.

- In order to validate the Waste Management PEIS selection of Hanford as a regional disposal site for LLW and MLLW, the scope of the EIS should include a comparison of impacts at Hanford from disposal actions of off-site waste, with potential impacts at each of the other candidate sites. This will provide an understanding of tradeoffs involved in selecting specific sites to receive off-site wastes.
- The scope should include the cumulative and route-specific effects of transporting wastes from multiple sites to Hanford. For example, the HSW EIS estimated impacts in Oregon and Washington using generic transportation parameters. The analysis should instead identify and consider the specific geographic and weather-related conditions for the portions of the transportation routes through Oregon and Washington to the Hanford Site.
- For each action evaluated, the EIS should estimate the Natural Resource injury and include that evaluation for purposes of comparison between the alternatives. Previous releases and the actions under this EIS that lead to Natural Resource injuries require evaluation and restoration.

Additional Scope of the EIS

The scoping notice says that closure of the Fast Flux Test Facility (FFTF) is included in this EIS “for the reason of providing an integrated presentation of currently foreseeable activities related to waste management and cleanup at Hanford.” However, closure of FFTF is not related to most of the other activities proposed to be covered in this EIS. We strongly encourage that it not be included as part of this EIS.

If, indeed, the intent of this EIS is to truly integrate upcoming cleanup actions, then it would be far more appropriate to include in this EIS the pre-1970 burial grounds, the specific retention trenches, the 618-10/11 burial grounds, and the PUREX tunnels – as well as other potential sources with significant inventories of hazardous or radioactive materials, such as the canyon exhaust filter systems. The EIS should examine a reasonable range of alternatives for these sites, including clean closure. If these sites are not included as a primary part of the EIS, then the scope of the EIS should include the risk range for each of these sites to help place the analyses of alternatives into context.

If you have questions or require clarification of these comments, please contact Dirk Dunning of my staff at (503) 378-3187, or myself at (503) 378-4906.

Sincerely,



Ken Niles
Assistant Director

cc: Shirley Olinger, U.S. Department of Energy, Office of River Protection
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