



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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April 30, 2010

Ms. Mary Beth Burandt, Document Manager
Office of River Protection
U.S. Department of Energy
P.O. Box 1178
Richland, Washington 99352

Re: Washington State Department of Ecology's Review of *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site*, Richland, Washington, DOE/EIS-0391, dated October 2009

The Washington State Department of Ecology (Ecology) reviewed the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site* (Draft EIS). This Draft EIS is important in defining options for the cleanup of Hanford's tank waste and disposal of waste at Hanford. This letter provides Ecology's general comments about the content of the Draft EIS. The enclosure provides more specific comments.

We are requesting changes in the Final EIS. These changes will provide more specific analyses to support upcoming permitting decisions we must make. Without the analyses, we will lack information important to us in framing permits and making decisions about cleanup.

Cooperating Agency

As a cooperating agency in the development of this Draft EIS, Ecology provided our perspectives in a Foreword that appears in the *Readers Guide* and the *Summary*. Those perspectives were based on our reviews of a pre-decisional draft in November 2008. After reviewing this draft Tank Closure & Waste Management (TC&WM) EIS, we have developed further perspectives and specific comments.

We think the data gathering, modeling, and quality assurance were conducted in an adequate manner and the Draft EIS objectively analyzes and predicts the impacts of the reasonable alternatives and the cumulative inventory. Overall, we note that the quality of the Draft TC&WM EIS analyses improved from those we reviewed in the Hanford Solid Waste EIS. In particular:

- The United States Department of Energy (USDOE) improved the quality assurance and quality control of the data that the EIS contractor used to analyze impacts to the groundwater.

- USDOE improved the integration of analyses of all waste types that may be disposed in Hanford landfills. This change will address ongoing and proposed waste management activities in the Hanford Solid Waste Environmental Impact Statement.
- USDOE improved the quality of the cumulative impact analyses to include wastes already adversely affecting the environment from past releases and disposal practices.

Mitigation Measures Required

We note that certain combinations of alternatives in the Draft EIS are more protective of human health and the environment than other alternatives appearing in this document. It is significant that none of the Draft EIS alternatives bring impacts to acceptable cancer risk levels or meet the safe drinking water standards. However, the Draft EIS is helpful in pointing out the important fact that more effective cleanup is needed across the Central Plateau.

It is our intent to be able to adopt all or part of the Final EIS to meet our State Environmental Policy Act (SEPA). We would use the adopted portions as our basis to take permit actions necessary to advance Hanford cleanup. However, we could not adopt the EIS “as is” because it lacks an analysis that determines how much USDOE must reduce the total Hanford mobile inventory to be protective of the State’s groundwater resources.

We request that you develop an analysis that establishes inventory reduction goals and discusses achievable mitigation measures to reach those goals. We request that you include this analysis in the Final EIS and include your methods to achieve the goals in the Record of Decision. The inventory reduction goals would then be the basis for specific mitigation measures discussed and committed to in the USDOE Mitigation Action Plan.

SEPA authorizes Washington State to require mitigation measures in its permitting actions. We intend to establish enforceable conditions in permits to ensure that the USDOE completes mitigation measures. Ecology requests the following items to support mitigation:

- To better inform all of the Tri-Parties Agreement (TPA) agencies, we propose adding enforceable milestones to the TPA for USDOE to develop and maintain a cumulative impact assessment (risk budget) tool. Before any waste disposal plans or cleanup decisions become final, USDOE would evaluate each action to determine its contribution to cumulative impacts. Ecology will also propose milestones for all land disposal facilities that require performance assessments using a process similar to that used for Waste Management Area C.
- Any Mitigation Action Plan must identify distinct approaches for near-term impacts (50-100 years), mid-term impacts (1000 – 5000 years), and long-term impacts (7000 -10,000 years). USDOE should submit the Mitigation Action Plan to Ecology for review and comments.

Ecology will take the following actions to support mitigation:

- Ecology will put specific conditions in dangerous waste permits to mitigate past releases to the soils and to inhibit releases in the future.
- When we issue a SEPA Determination of Significance and a Notice of Adoption, we will list the sections of the Final EIS we are adopting. The adoption will be contingent upon our review of the USDOE Mitigation Action Plan.

Areas of Concern for Ecology

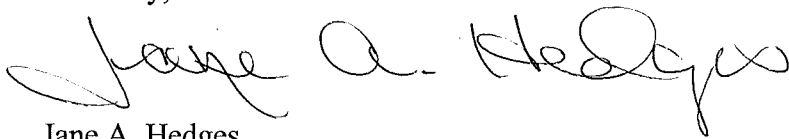
- Offsite waste disposal, as proposed in the Draft EIS, results in significant groundwater impacts. The Final EIS alternatives that consider disposal of offsite waste at Hanford should be eliminated.
- The preferred alternative for Supplemental Treatment should be a second low activity waste (LAW) vitrification facility. The other alternative waste forms are not protective of groundwater and not as “good as LAW glass.”
- Disposal of secondary waste derived from treatment of tank waste must be mitigated to avoid unacceptable adverse impact to the groundwater.
- Future landfill disposal was analyzed in the Draft EIS. For the scenarios selected for analysis, disposal in the 200 East Area appears to be more protective of human health and the environment than disposal in the 200 West Area, because the contaminants concentration disperse more quickly in 200 East.
- Because the residual tank waste contributes significantly to future groundwater impacts, mitigation must include retrieval of tank waste to the maximum extent possible. Tanks should be retrieved to the limits of technology or at least 99 percent removal, whichever results in greater retrieval.
- If Landfill Closure is to be used, it will need to be augmented with significant corrective actions to the vadose zone, including the deep vadose zone, to avoid unacceptable future impacts.
- To avoid recontamination of the groundwater and unacceptable future impacts, some past practice units in the Central Plateau will need more extensive remediation than was assumed in the Draft EIS.

Ecology, the USDOE, and the United States Environmental Protection Agency are discussing a sensitivity scenario in the Final EIS. That scenario will illustrate reduction of inventory through mitigation for inclusion in the Final EIS. Ecology is encouraged by USDOE’s willingness to develop this scenario.

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Ecology regards this Draft EIS as a useful resource, but we will continue to require additional modeling and evaluation for specific tasks before we make permitting decisions. We would like to discuss our comments and concerns with you. Please call Suzanne Dahl at 509-372-7892 to begin discussions.

Sincerely,

A handwritten signature in black ink that reads "Jane A. Hedges". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

Jane A. Hedges
Program Manager
Nuclear Waste Program

Enclosure

cc w/enclosure:

Dennis Faulk, EPA
Shirley Olinger, USDOE
Bill Taylor, USDOE
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Susan Leckband, HAB
Ken Niles, ODOE
Administrative Record: TC&WM EIS
Environmental Portal
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