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# United States Department of the Interior

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HANFORD PROJECT OFFICE

DEC 06 1994

ENVIRONMENTAL PROTECTION  
AGENCY

December 1, 1994

Ms. Pam Innis  
U.S. Environmental Protection Agency  
712 Swift Avenue, Suite 5  
Richland WA 99352

Dear Ms. Innis:

The Hanford Natural Resource Trustees have reviewed the Remedial Investigation/Feasibility Study (RI/FS) and Tri-Party proposal for the Environmental Restoration Disposal Facility (ERDF). Several of the Trustees collaborated to produce this letter, however, due to time constraints, the Trustees were not able to produce a single comment document signed by all the Trustees. In so far as possible, each of the Trustees is submitting the same comments separately. Thus, the terms "the Trustees" and "the Natural Resource Trustee Council" are used loosely, and the statements made in this letter should not be considered to represent the consensus opinion of the Trustees. The U.S. Fish and Wildlife Service (Service) has somewhat modified these comments to emphasize the agency's perspectives. All statements made in this letter are supported by the Service.

The environmental and public health threats from the radioactive and hazardous materials in the 100 Areas are large. The Trustees strongly support early work to reduce these threats. The process used by the Tri-Parties to resolve these threats, namely development of the ERDF project, leaves much to be desired. The siting of the proposed ERDF facility was based predominately on engineering needs and expediencies. The siting process failed to consider the impacts of the disposal or support facilities, borrow material areas, or transport routes and methods on wildlife habitat and species of concern.

The ERDF facility, as proposed, would destroy 1.6 square miles of high quality mature shrub steppe habitat. Previous correspondence from the Service and the Natural Resource Trustee Council (NRTC) have clearly stated our views on the high value of this habitat type at Hanford and on a regional basis.

The Natural Resource Trustees were not formally notified and consulted in their Trustee roles for the planned activities as required by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Although the Service participated in a meeting with project managers just prior to the close of the scoping period for the project, siting decisions had already been made. When the Trustees learned of the Tri-Parties plans, we requested the Tri-Parties

present their plans to, and consult with the Trustees. The presentation by the Tri-Parties raised even more serious questions about the siting process.

When the Trustees suggested it might be necessary for the Tri-Parties to reopen the siting process, the Tri-Parties responded that reopening the siting process would delay opening of ERDF and cleanup of the 100 Areas by two years, and could possibly jeopardize funding of Hanford cleanup by Congress.

This places the Trustees in a very difficult position. If the Trustees actively object to and oppose the current site and the siting process, the Trustees will be blamed for delaying and jeopardizing the whole cleanup. If the Trustees do not object, by omission, we allow the destruction of a large area of priority habitat which supports the loggerhead shrike, the sage sparrow, and other species of concern.

In our role as Trustees, we cannot endorse the Tri-Parties ERDF plans which failed to consider impacts to priority habitat during the siting process. At the same time, we cannot reasonably oppose the ERDF facility without placing other natural resources associated with the Columbia River in further jeopardy.

It is vital the U.S. Department of Energy (USDOE), Washington State Department of Ecology and the U.S. Environmental Protection Agency not allow a repeat of this error. The Trustees must be made an active part of all planning which could result in impacts to the natural resources at Hanford.

## **DETAILED COMMENTS**

### **Siting**

The Trustees find the process used to site the ERDF unacceptable. The following are several specific issues where the RI/FS and the Siting Evaluation Report (SER) for the ERDF fall short. While it would be preferable to repeat the site selection process taking into account these issues, this option does not seem feasible at this time. Thus, the issues are discussed to register our objections to the siting process and anticipate that future site selection processes will address the issues.

The SER was based on an early design assumption of a six square mile site. Only areas of that size were evaluated in the SER. The ERDF as currently proposed would occupy an area of up to 1.6 square miles. The dramatic re-sizing of the facility did not result in a re-evaluation of potential sites. This issue is only superficially addressed in Figure 1-3. The figure is limited to the Hanford Future Site Uses Working Group (HFSUWG) "exclusive" zone and seemingly makes the assumption that large tracts of land are unusable. The figure has no accompanying explanation or references.

Habitat was only summarily considered in the SER's Site Selection section. The SER lays out seven criteria derived from USDOE orders. Habitat is discussed briefly in the Site Acceptability and Potential Consequences section and the currently proposed site is found to be the least desirable. Within the site evaluation, sites are only qualitatively compared. No attempt is made to rank or weigh the seven criteria. While habitat quality varies greatly between the sites, other criteria such as Topography and Geology do not significantly differ. In future site evaluations, habitat quality should be carefully considered, and the criteria should be addressed in proportion to their potential significance.

The SER did not allow for consideration of areas placed in reserve for other potential purposes. The Tank Waste Remediation System (TWRS) plans places three large areas "off limits" but only one of these will be needed for TWRS. The northwest corner of the 200 West area was not considered because it was placed in reserve for a potential National Low Level and Mixed Waste Repository. It appears that ERDF could have been sited in these or other areas with little or no habitat value. The Service recommends that, in the future, high priority projects such as ERDF be developed in areas resulting in lower natural resource impacts rather than "saving" these areas for potential projects, projects relating to offsite uses, or maintaining future siting options for other projects. A siting optimization plan should be conducted for the 200 Areas so that natural resource impacts can be avoided in the future.

The SER uses as one of its central assumptions the HFSUWG recommendation to "Use the Central Plateau wisely for waste management." However the SER does not address another recommendation of the HFSUWG to "Do no harm during cleanup or with new development." Included in that finding is a statement that "habitat should be protected as cleanup and future development proceeds." The Tri-Parties should not use certain HFSUWG recommendations to support selected activities while ignoring other recommendations.

#### ERDF Ecological Risk Assessment Evaluation

The RI/FS considers the human health risk assessment in much greater detail than the ecological risk assessment. This discrepancy in effort is inappropriate. Likely future scenarios suggest very little use of the site by humans, while buffer zones, mitigation banking, and other land uses are likely to retain high quality habitat around the 200 area, resulting in a much greater potential for exposure of nonhuman organisms. Ecological risk assessment should be given at least as much, if not more, consideration than human health risk assessment.

The goal of the ERDF baseline risk assessment is to evaluate the likelihood that adverse ecological effects may occur if organisms are exposed to contaminants that may be disposed in the facility. The goal of baseline risk assessment per 50 CFR 300.430(e)(2)(i)(G) is to characterize current and likely future ecological risks attributable to releases of contaminants, especially when sensitive habitats and critical habitats of species protected under the Endangered Species Act may be impacted. The ERDF ecological risk assessment was evaluated and the

following comments should be considered to improve the risk assessment:

1. In general, the ERDF risk assessment should have been conducted consistent with the Hanford Site Risk Assessment Methodology (HSRM). In the case of ERDF, it appears that portions of the Risk Assessment (RA) are not complete. Inconsistencies between the HSRM and ERDF RA should be identified and rectified.
2. Problem formulation should examine the nature of the contamination for potentially impacted habitats and/or ecosystems. The ERDF RA indicates that this assessment does not evaluate impacts to populations or the ecosystem, rather, it assesses one ecological receptor, the great basin pocket mouse. For this type of risk assessment, it may be more appropriate to assess 2 or 3 receptors at different trophic levels. Further, the RI/FS states that it does not use the pocket mouse as a surrogate for any other receptor.
3. Problem formulation should examine the stressors, not only chemical, and radionuclide, but also physical changes to natural conditions, such as habitat alteration. This risk assessment does not attempt to assess the physical conditions.
4. Problem formulation should examine indirect as well as direct effects associated with the release of contaminants. ERDF RA does not address the indirect effects associated with the contaminant release.
5. Problem formulation should identify ecosystems potentially at risk, including critical and sensitive habitats located on, adjacent to, or near the hazardous substance release site of interest. The ERDF RA should acknowledge that mature shrub steppe is a priority habitat for several candidate species that could potentially be directly or indirectly impacted.
6. Endpoint selection may not be adequate. Given that candidate species would be potentially impacted, other types of indicator species should have been assessed.
7. The Risk Summary is not clear. This section should pull the components of the assessment together into a meaningful discussion of ecological significance, including the nature and magnitude of the effects, spatial and temporal patterns of the effects, and potential recovery. It's not clear what the magnitude of effects are. There is an indication that there would be significant risk to the environment based primarily on heavy metal concentrations and a potential hazard to wildlife receptors due to ingestion. If this is the case, these risks and their magnitude should be stated clearly and specifically. Finally, the Summary should discuss potential recovery from the impacts.

### Contaminant Fate and Transport

Section 4.1.1 describes the conceptual model controlling contaminant fate and transport in the vadose zone. The site specific mechanisms are described as highly coupled, unsteady, and non-linear, and the hydrogeologic strata are heterogeneous and anisotropic. It then describes the conceptual model as assuming "the media are homogeneous and isotropic", "the flow is plug flow in both the vadose zone and saturated zone," and "constituent release from ERDF is controlled by either solubility or partitioning between the waste and pore water."

It is clear the conceptual model bears little or no relation to the actual conditions. There is no data provided to justify the model selected as being in any way representative of the actual conditions. There is no analysis or data provided to show that bounding conditions exist which would allow the use of such a simplified model. The only explanation given for the over simplification of the model is the statement "Instead, a spreadsheet model was developed based on the conceptual model of the site..."

### Mitigation

Mitigation for impacts to natural resources is addressed under several statutes. ERDF is part of a series of CERCLA hazardous substance response actions, and as such, restoration of natural resources injured by the construction and operation of ERDF is required under CERCLA Natural Resource Damage Assessment (NRDA) provisions. The National Environmental Protection Act (NEPA) requires agencies preparing Environmental Impact Statements to address appropriate mitigation measures (40 CFR 1502.14f, 1502.16h, 1505.2d, and 1508.25b). USDOE regulations also require a mitigation plan to be developed (10 CFR part 1021.331). Finally, USDOE, as a federal land manager, has stewardship responsibilities for natural resources.

Mitigation under both CERCLA and NEPA includes, in order of preference:

- a. Avoiding the impact altogether by not taking a certain action or parts of an action;
- b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
- c. Rectifying the impact by repairing, rehabilitating, or restoring the affected natural resources;
- d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- e. Compensating for the impact by replacing or providing substitute resources.

The ERDF siting process did not consider impacts to habitat, consequently impacts were not avoided or minimized. Compensatory mitigation for habitat destruction must be provided. The RI/FS identifies habitat destruction as an irreversible and irretrievable commitment of resources. The NRTC strongly recommends that any on-site natural resources which would be irreversibly and irretrievably lost should be fully mitigated for. This should include habitat losses associated with the McGee Ranch borrow site and the borrow site for basalt which has not been identified yet. The habitat impacts associated with these borrow areas need to be documented before an adequate mitigation evaluation can be developed.

The RI/FS calls for development of a mitigation evaluation (page 9-31) but contains no commitment to actually perform mitigation for habitat destroyed by the proposed project. USDOE must fully commit in both the RI/FS and in the Record of Decision (ROD) to mitigate for habitat destruction to ensure that funding will be appropriated and guaranteed for implementation of the mitigation actions. The NRTC also recommends that preparation and submission of a mitigation evaluation and implementation plan be identified as an enforceable interim Tri-Party Agreement (TPA) milestone.

The mitigation evaluation should be developed concurrently with this environmental planning process and comprise an integral part of it. The benefits of mitigation planning early in the planning process include a more efficient and cost effective cleanup. The NRTC is concerned that delaying development of the mitigation evaluation until *after* the ROD is signed may result in an ineffective plan which is not supported by adequate funding, staffing or support.

The ERDF RI/FS mentions the Hanford sitewide mitigation plan, but does not clarify whether mitigation for NRDA impacts would occur as part of the sitewide plan or as a project specific plan. The sitewide mitigation plan is in an early draft stage. The NRTC supports the sitewide mitigation plan as the most effective method to protect, preserve, and enhance habitat and other natural resource values, and supports ensuring ERDF mitigation measures are consistent with the sitewide plan. However, if the sitewide plan does not go forward, there still must be an ERDF mitigation plan to compensate for natural resource impacts.

If USDOE chooses to address ERDF mitigation under the sitewide plan before the sitewide plan has received official sanction, a legally binding commitment between USDOE and the Service to ensure ERDF mitigation will be required prior to issuance of the ROD. Even though a sitewide mitigation plan for the Hanford site is being developed, this does not remove the need to conduct site-specific analysis to determine mitigation needs and requirements for individual projects. The October 26 draft of the plan states that it is "not intended to provide specifications and procedures on conducting habitat improvements or protection for specific projects."

Mitigation for adversely impacted resources must be based not only on the amount of habitat lost, but also on habitat quality and value. For example, linear disturbances, such as the proposed rail line, would fragment blocks of habitat. Figure 9-1 shows that two substantial blocks of habitat would be fragmented by the rail line; between the north border of the proposed

ERDF site and route 3, and between the north border of the 200 West Area and route 11A. Linear fragmentation of shrub steppe habitat allows the spread of noxious weeds into relatively pristine or intact habitats. Other more subtle impacts may also occur.

Similarly, the value of McGee Ranch as a habitat corridor between Hanford and the Yakima Training Center, two large areas of relatively undisturbed shrub steppe habitat, must be assessed and mitigated for. As the borrow site for basalt barrier material has not yet been identified, it is not clear what additional habitat values may need to be considered.

Mitigation for habitat loss requires long term planning. The NRTC makes the following recommendations:

1. Native seeds and nursery stock are very limited. There will be competition for available stocks from other Hanford and non-Hanford projects. To make this volume of material available in a timely manner, planning and propagation should start as soon as possible.
2. USDOE should begin immediately to develop the needed nurseries and seed stocks to allow habitat restoration/improvement to occur as soon as possible. We suggest USDOE develop a long term contract for the construction and management of a native species nursery to provide revegetation material on a sitewide basis.
3. Ensuring revegetation success is crucial to the successful mitigation of habitat values. Monitoring of the mitigation site for a minimum of 10 years is recommended, and funding should be identified to support this effort.

#### Irreversible and Irretrievable Commitment of Resources

The RI/FS claims irreversible and irretrievable commitment of habitat and other natural resources for areas which have either not been identified (basalt borrow site), or for areas which have not been specifically identified and habitat value has not been assessed (McGee Ranch borrow site). The Service strongly objects to these actions and considers the claims to be inappropriate and unethical. This claim abrogates USDOE's duties as a Trustee and as a land and resource Steward.

It is not clear whether alternative borrow sites for fine material were considered. The Service strongly recommends that this be done. McGee Ranch may be in a critical location to provide a wildlife corridor between Hanford and the Yakima Training Center. Thus, while the habitat quality at McGee Ranch may not be particularly high, its location value to wildlife and populations of plants and animals may be very high, and the impacts created by a borrow site may be essentially unmitigatable.

Thank you for the opportunity to provide comments on the RI/FS. Please contact Liz Block at our Moses Lake Field Office (509-765-6125) if you have any questions.

Sincerely,



David C. Frederick  
State Supervisor

lb/jmc

- cc: U.S. Bureau of Land Management, Spokane (Jake Jakobosky)  
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