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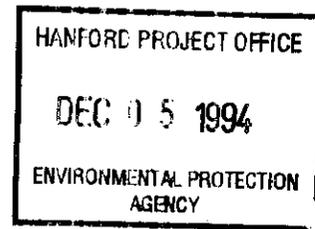
CONFEDERATED TRIBES  
of the

*Umatilla Indian Reservation*

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December 1, 1994

U.S. Environmental Protection Agency  
Attn: Pamela Innis  
712 Swift Blvd., Suite 5  
Richland, WA 99352



RE: COMMENTS ON THE RI/FS FOR THE ERDF PROJECT

Dear Ms. Innis:

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) is pleased to comment on the final Regulatory Package for the Environmental Restoration Disposal Facility (ERDF). We first addressed the ERDF in our December 1993 comments on the fourth amendment to the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement, or TPA). We also participated in the scoping for the ERDF RI/FS, consulting with DOE representatives in March of 1994.

CTUIR representatives have also participated in discussions of the ERDF in meetings of the Hanford Natural Resource Trustee Council (NRTC). In September, I and other natural resource trustee representatives signed a letter to the signatories of the Tri-Party Agreement. Among other issues, this letter expressed concerns about the way the siting decision for the ERDF had been made. CTUIR staff also participated in a meeting between the trustees and the ERDF project staff, a site tour of the ERDF, and a meeting between the NRTC and representatives of the TPA signatories.

The CTUIR's comments today come in two parts. In this first section we express particular concerns of the CTUIR regarding the ERDF project and its Regulatory Package. In the second section we provide comments that have been cooperatively assembled by several of the Hanford natural resource trustees. While this latter section largely represents the shared views of several trustees, it cannot be presented as the view of the NRTC, as we simply had too little time in which to coordinate, assemble, and approve a document co-authored by so

Comments on the ERDF RI/FS

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many agencies. This lack of time is also the reason for variations in the text of this section between trustees.

Finally, for your convenience, we are listing our paragraphs in a numerical outline form. This should make it easier for you to respond to our comments by citing particular paragraphs. For the most part, each paragraph of this document is crafted to elicit a *specific* response to the points raised *within that paragraph*. We will be looking for such a response.

*CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION***SECTION ONE: COMMENTS OF THE CTUIR STAFF****I. INTRODUCTION**

The ERDF project has always been more than just a plan for a disposal facility. Difficult as it is to site a low-level nuclear and hazardous waste landfill, the Tri-Parties also chose to make the ERDF project a "pilot project" for "streamlining" of the facility planning, consultation and public involvement decision making process.<sup>1</sup> As a result, our comments encompass a broad range of issues. Where we omit an issue, the Tri-Parties should not take our omission as an indication that we are not concerned about that issue. More likely we have simply missed that topic in the multitude of issues surrounding the ERDF project.

**II. CONSULTATION WITH THE CTUIR**

1) The ERDF staff are to be commended for promptly consulting with the CTUIR early in the scoping process for the ERDF. Moreover, the ERDF staff provided us with all drafts of ERDF-related documents at the same time they were sent to the regulators. Despite the CTUIR's committed involvement in Hanford matters, DOE still fails to send us many documents -- particularly documents concerning the 100 Areas -- in anything approaching a timely manner. The ERDF staff have shown that timely consultation with tribes is not some sort of indecipherable mystery. We appreciate their professionalism.

2) Nevertheless, we are aware that many natural resource trustees were not consulted in a timely manner. We assume that the ERDF staff's consultation with the CTUIR was based more on DOE's duty to consult with affected Indian tribes (under the federal trust responsibility to tribes) than on the CTUIR's status as a natural resource trustee. Of course, this does not explain the fact that the Nez Perce were not consulted at the same time the CTUIR was. Nevertheless, in the wake of various trustees' (valid) criticism of DOE's failure to involve them in a timely manner, we did not want to lose sight of the fact that the ERDF staff did at least meet with CTUIR staff early in the process and get documents to us at the appropriate time.

3) As for consultation over the siting of the ERDF, we agree with the other trustees that we all should have been consulted about alternative sites, and that alternative sites should have been analyzed in the RI/FS.

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<sup>1</sup>See Enclosure 2, Issue 5 of the Tentative Agreement on Changes to the Tri-Party Agreement, September 30, 1993.

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**III. ADEQUACY OF THE RI/FS PLANNING PROCESS**

**A. INTEGRATION OF NEPA EIS COMPONENTS INTO THE ERDF CERCLA RI/FS**

1) Generally speaking, DOE has done a good job of integrating all of the components of an EIS into the ERDF RI/FS. Unfortunately, the *content* of those components is sometimes sorely lacking. We address the key failings of the planning process for ERDF later in this letter. Nevertheless, as far as fulfilling the Tri-Parties' goal of producing an RI/FS that was embellished to include most EIS *components*, DOE has succeeded in doing that.

**B. "NEPA ROADMAP"**

1) The NEPA Roadmap is a remarkable document. It contains a generally forthright and comprehensible discussion of the EIS and RI/FS processes, their similarities and differences, and an index for finding EIS components within the RI/FS. DOE has attempted the index idea before, most notably in the RI/FS for the 1100-EM-1 Operable Unit (OU) and the LFI/FFS for the other three 1100 OUs. The NEPA index to these documents was a dismal failure, precisely because those CERCLA documents had not been enhanced to contain NEPA elements. By comparison, the ERDF Roadmap is very well done. DOE deserves credit for this accomplishment.

**C. JUDICIAL REVIEW**

CTUIR staff have some extremely serious concerns, nonetheless, about DOE's (and EPA's) intention to completely discard formal compliance with NEPA on CERCLA projects.

1) As we said, DOE has done a fine job on the ERDF "NEPA Roadmap," and on integrating most NEPA components into the RI/FS. Nevertheless, the ERDF is a high profile project. As this is the "pilot project" for the concept of subsuming the NEPA process into CERCLA, DOE could be expected to do a good job on the integration of NEPA and CERCLA this time. We are concerned, however, that in future, less high-profile projects, DOE will not integrate EIS components into RI/FSs with as much attention to detail as DOE has shown this time. In the past, when DOE/RL has written run-of-the-mill NEPA documents (such as the EA for the 240 Road Access Extension), the CTUIR has often found them to be poorly crafted and legally inadequate. Considering DOE/RL's general poor track record on NEPA documents, CTUIR staff are concerned that in future projects the standard for the "integrated" NEPA/CERCLA process will be much lower.

2) Moreover, since DOE has done a generally good job, this time, of integrating NEPA and CERCLA elements in one document, we are left wondering why DOE has parted from its prior policy of producing a single document and calling it an "EIS - RI/FS" (See DOE Order 5400.4 § 7(d)). It appears that the only thing DOE gains from not calling the ERDF planning document an "EIS - RI/FS" is that DOE avoids any threat of judicial review under NEPA. This is an improper motivation for DOE. Judicial review is an extremely valuable

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process that protects those who would otherwise be improperly ignored. It protects entities with less power and forces discipline upon agencies that might otherwise show contempt for the law or for tribes and the public. Does DOE believe that accountability for its actions is a bad thing? If not, then why is DOE trying to avoid accountability?

3) The usual complaint (raised by DOE and DOJ in recent litigation) about judicial review is that it can cause delay. Delay is, sometimes, the price of justice. Yet we can see in the example of ERDF that entities do not always seek judicial review even when they have cause to. Any citizen of the U.S. could file suit against DOE under NEPA for DOE's failure to perform and EIS for the ERDF. Citizens may also be able to sue claiming that DOE has not complied with legal requirements concerning the siting and licensing of a low level nuclear waste disposal facility. Tribes could sue DOE under the federal trust responsibility to Indian tribes for DOE's failure to consult with them about siting. The natural resource trustees could file suit against DOE for its failure to consult with them before making the siting decision. Yet no one has filed any suits to delay the ERDF on any of these grounds, precisely because everybody recognizes that in this case, delay is unacceptable. Does DOE have so little respect for tribes, states, and the public that it expects them to file reckless suits?

4) Moreover, judicial review is not a process that is outside of reasonable control. Every decision in a judicial review case is made by a federal judge. Judges have enormous discretion to dismiss cases that they feel are frivolous or unjustified. Indeed, the usual response to a complaint calling for judicial review, is for the defending agency to seek dismissal of the claim. This process is designed to filter out the merely delaying or "political" lawsuit very early in the process, before the suit can cause significant delays. Defendants can even file their own motions, seeking to impose *financial penalties* against those who file frivolous lawsuits. Judicial review is not a process that takes place irrationally or on "autopilot." So why does DOE fear this process? Does DOE distrust the judgment of federal judges? Or does DOE itself believe that its actions are often illegal or inadequate? Isn't DOE seeking to avoid judicial review precisely because it knows its actions often fail to live up to the minimum standards of the law, and because it wants to avoid being accountable when it breaks the law?

5) Another concern that is sometimes raised about performing both NEPA and CERCLA is that doing so creates redundant paperwork and process. Yet the ERDF project shows this need not be the case. Moreover, DOE has produced EIS -- RI/FSs in the past under its former policy, with apparently little difficulty. DOE even has a headquarters-based NEPA office that provided guidance for the production of these documents. We cannot see how DOE achieves any significant reduction in paperwork or process by discarding NEPA.

6) The history of DOE's interaction with the people it is supposed to serve is a history of DOE erecting walls to accountability. One by one, those walls have been pulled down by the

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states, tribes and the public, only to have DOE erect new ones in their place. CTUIR staff are concerned that DOE's attempt to escape from judicial review is simply a repeat of this familiar theme. There may be some compelling procedural reasons for preferring the CERCLA RI/FS process over the NEPA EIS process. The NEPA Roadmap describes some of these. But as long as the CERCLA process leaves DOE essentially unaccountable for its actions, we cannot support a wholesale abandonment of NEPA.<sup>2</sup>

**D. FAILURE TO DISCLOSE ECOLOGICAL IMPACTS OF CONNECTED ACTIONS AT QUARRY SITES**

1) The RI/FS places no limit on where basalt quarry sites might be. Use of existing quarries or development of new quarries are connected actions to the ERDF project. Yet the RI/FS makes no attempt to describe the ecological impacts of those quarries. Further, the RI/FS makes no attempt to describe the transportation corridors or the ecological impacts of that transportation. From a NEPA standpoint, this is inadequate as a disclosure of affected environment and as a description of impacts to that environment. DOE should fully evaluate these issues in the RI/FS, and the CTUIR should be consulted about these decisions.

**E. FAILURE TO PROVIDE SITING ALTERNATIVES**

1) The siting of the ERDF was a decision that DOE made internally, without consulting with affected Indian tribes or natural resource trustees, and without public involvement. This was simply improper. Virtually all ERDF impact decisions derive from the choice of site. DOE has made the most important decision behind closed doors and then allows everybody else to argue about how it will be implemented. This is a sham of tribal consultation or public involvement.

2) Under typical NEPA analysis, the scope of alternatives is based upon the purpose and need for the proposed action. In the case of ERDF, the purpose and need statement is found at section 1.2 of the RI/FS and is reprinted in the NEPA Roadmap. The purpose of the ERDF is "to support the . . . removal of contaminants from portions of the Hanford Site in a timely manner . . . ." The need is "to support the disposition of contaminants during restoration activities on the Hanford Site." This is a well-drafted purpose and need statement, reflecting the true priorities for the ERDF. Nothing in this purpose and need statement, however, places any practical limit on the location of the ERDF site. This purpose and this need cannot be used as a basis for limiting the proposed action and alternatives to only one site.

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<sup>2</sup>Judicial review under the citizen suit provision of CERCLA is essentially a chimera, since § 113(h) bars review until after the remedial action is complete -- far too late for a plaintiff to have any meaningful impact on the remediation.

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3) Indeed, DOE has no excuse for excluding tribes, trustees and the public from the siting decision. If the RI/FS were an EIS, it would have to include alternative sites.

4) We agree that for practical reasons it is pointless for DOE to try to go back and undo the harm this time. They have forced the tribes, trustees and public into the position that if we protest this violation of our rights, we force delay in the remediation of the Columbia River area. That result is even more intolerable than being barred from the ERDF siting decision. Nevertheless, DOE should not conclude that it is acceptable practice to play these sorts of political games with consulting governments. DOE failed to perform proper process and to consult with the CTUIR regarding siting. We ask that DOE admit as much in its response to comments.

5) We also ask that DOE commit in writing to work closely with the CTUIR and other tribes and trustees to plan the location and impact of future projects in the Central Plateau before making effectively irreversible decisions. This need is particularly critical in the 200 Areas, where siting decisions about a variety of facilities are essentially being made in an uncoordinated manner within DOE, and without consultation with tribes and other trustees.

6) We urge DOE to begin, with the full participation of tribes and trustees, a comprehensive planning process for the location of future DOE facilities at Hanford. These decisions directly affect the CTUIR's treaty rights and the potential liability of DOE to the natural resource trustees. As the ERDF and the 240 Road Access Extension decisions demonstrate, DOE is currently making these decisions with essentially no consideration of the impacts of these decisions to natural resources or treaty rights. This is an unacceptable practice, and should be reformed immediately.

7) We also could find no analysis in the RI/FS that identifies why the rail spur is being constructed where it is. The map at 9F-1 indicates that there are much shorter routes that might well avoid destroying as many natural resources as the proposed route does. Why is not the rail line going to be attached to one of the nearby spurs in the 200 West Area?

**F. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

1) Because the tribes and trustees were not allowed to participate in the single most important decision concerning the site -- its location -- we can hardly be bound by DOE's decision to commit the resources at the ERDF site, "borrow" sites, and transportation corridors. This is the most glaringly obvious in the case of the basalt quarry site, the location of which, if a quarry is even required, is nevertheless undisclosed.

2) CERCLA § 107(f) exempts a PRP from natural resource damages if the damages are identified as an irreversible and irretrievable commitment of resources in an EIS or comparable planning document and if various other conditions are met. This provision assumes that the EIS (or comparable environmental analysis) was performed properly. As the

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single most important decision concerning the ERDF was made without our participation, we must conclude that the commitment of resources was performed improperly. If it is true that the RI/FS process typically handles such decisions less rigorously than the EIS does, that only indicates that the RI/FS is not a comparable environmental analysis to an EIS.

**G. THE NEED FOR CONCRETE COMMITMENTS TO MITIGATION**

1) We discuss this issue in greater depth in our NRTC comments contained in section 2 of this letter. Here, we simply wish to emphasize that, for decisions to be made in a cooperative and trusting environment, DOE must be willing to disclose information, consult fully, and make real commitments -- even, sometimes, commitments that go beyond the bare minimum that the law requires. Is DOE willing to make such commitments? In the case of mitigation for impacts from the construction of ERDF, DOE has made no commitments, only promises to examine the issue further. The CTUIR can put little faith in such nice-sounding but non-binding words.

2) As the steward of Hanford's natural resources, as the agency which manages the CTUIR's trust resources at Hanford, and as a natural resource trustee for Hanford, DOE has a duty to manage Hanford's natural resources wisely and to conserve those resources. If DOE is going to irreversibly commit natural resources at Hanford, it should also commit to fully mitigate those impacts. That commitment should be made in concrete terms by which DOE's performance of its commitment can be measured. That commitment should also be made in good faith consultation with the tribes and the other natural resource trustees. We request that DOE, in compliance with its own NEPA mitigation policy, begin discussion with the tribes and other trustees of concrete mitigation plans for impacts associated with the ERDF project. We further urge that DOE commit to fully mitigate for ERDF impacts, and that the goal of these discussions be concrete, measurable, enforceable commitments by DOE that are designed to fully mitigate these impacts.

**IV. MINES, BASALT, AND GABLE MOUNTAIN**

**A. DECEPTIVE USE OF EUPHEMISM**

1) We sincerely request that the Tri-Parties refrain from referring to mines and quarries as "borrow" sites. Does DOE have any intention to return this material to these sites some day? Of course not. This material is not being borrowed, it is being taken -- taken with often extreme ecological impacts. Stone, once quarried, cannot be made whole again.

2) Also, please do not respond that this euphemism is somehow "customary" in the mining industry. The fact that others lie does not change the lie. Calling these mines "borrow" sites is deceptive and dishonest. Such jargon and euphemism needlessly defeats the tribes' and the public's need for clear, frank, honest discussion of issues and impacts.

*CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION***B. USE OF BASALT**

1) In our scoping meeting with ERDF project staff, we repeatedly emphasized the importance of protecting Gable Mountain and other basalt outcrops (such as Gable Butte) on the Hanford site. Gable Mountain is of great religious importance to CTUIR members. The CTUIR can be expected to zealously oppose any impact to Gable Mountain. Other basalt outcrops are also of religious importance.

2) In addition, rock outcrops are a habitat feature that provides unique services to a variety of species. Once these geomorphic features are destroyed, they cannot be restored artificially.

3) For these reasons, we urge that the protective cap for the ERDF be constructed without basalt. Either the modified Hanford barrier should be used, or stone should be derived from the process described below.

4) The Hanford site is composed mostly of stone. The ERDF area is no exception. It is underlaid by many feet of Pleistocene flood deposits. Much of the material removed in the construction of the trench will be stone. If a crushed stone layer is needed for a biotic intrusion barrier in the ERDF cap, then this stone should be used. Simply sieve the appropriate-sized stone from the soil, crush it, and use it in place of the "crushed basalt" layer. Properly processed, this local stone should perform well as a biotic barrier.

5) This process should be less expensive than quarrying, involve no transportation costs and quarrying costs, and wholly avoid ecological impacts at yet-to-be-proposed quarry sites and along transportation routes. It should also render a crushed stone material that is adequate for the engineering needs of the cap. Please respond specifically to this proposal.

**C. DOE PROMISES TO THE CTUIR CONCERNING GABLE MOUNTAIN**

1) On at least two separate occasions, at the July NRTC meeting with ERDF staff (on the day of the NRTC tour of ERDF sites), and at the September ERDF meeting between the NRTC and the Tri-Parties, ERDF project staff made oral promises to CTUIR staff that Gable Mountain would not be used as a quarry site for ERDF basalt. We took a good measure of relief from these promises, and publicly stated our gratitude and pleasure at this result. As this is an issue of great importance to the CTUIR, we expected this oral promise to be reflected in writing in the RI/FS. Unfortunately, no such promise is made in the RI/FS. Indeed, the RI/FS leaves open any possibility concerning quarry sites for basalt. So now we must ask, is DOE going to keep its commitment to the CTUIR, that Gable Mountain will not be used as a quarry site for basalt? Please respond in writing.

2) DOE often says to tribes and the public "Trust us." Consider the discussion, above, concerning judicial review. Of course, based on past actions, tribes and the public have little reason to trust DOE. Yet, that does not stop DOE from coming back time and time again

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demanding our trust. This Gable Mountain basalt issue is but the smallest of examples of why DOE cannot be trusted. Despite our repeated statements to DOE about the importance of Gable Mountain, and despite promises by DOE that it would protect Gable, DOE has failed to put the least assurance about the future of Gable Mountain in this document.

**V. CONCLUSION**

The CTUIR now concludes its individual comments concerning the ERDF RI/FS and the process that produced that document. We now enclose comments which the CTUIR drafted with other natural resource trustees for Hanford. We fully support all provisions of those comments that are reprinted below. Also, please note that, although the following comments occasionally present themselves as the views of "the Trustees" or the "NRTC," these are actually only the views of those trustees that have submitted these or similar comments.

*CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION***SECTION TWO: COMMENTS OF THE CTUIR AND OTHER HANFORD NATURAL RESOURCE TRUSTEES****Introduction**

The ERDF facility is proposed to be sited in the middle of the last of the high quality shrub steppe habitat at Hanford. This habitat is home to at least eleven species of special concern. Washington State identified this habitat of particular importance for preservation.

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. 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 placed the Trustees in a completely unacceptable position. If the Trustees actively object to and oppose 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 rare habitat needed by the Loggerhead Shrike, the Sage Sparrow, the Whiptail Snake and eight other species of concern.

In our role as Trustees, we cannot endorse the Tri-Parties plans. At the same time, we cannot reasonably oppose the ERDF facility without placing other habitat and human health in further jeopardy.

It is absolutely vital that the U.S. Department of Energy, 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 ecosystems and species at Hanford.

*CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION***Detailed Comments:*****Siting***

The Trustees find the process used to site the ERDF unacceptable. The following are several specific areas where the RI/FS and the Siting Evaluation Report (SER) for the Environmental Restoration Disposal Facility fall short.

The SER is based on an early design assumption of a six square mile site. Only areas with a contiguous six square miles were evaluated in the SER. The ERDF as currently proposed will occupy an area of up to 1.6 square miles. The dramatic de-sizing of the facility has not resulted in a re-evaluation of potential sites. This issue is only superficially addressed in the RI/FS's Fig. 1-3. The figure is limited to the Hanford Future Site Uses Working Group (HFSUWG) "exclusive" zone and assumes large tracts of land are unusable. The figure has no accompanying explanation or references.

The SER does not allow for consideration of areas placed in reserve for other purposes. The Tank Waste Remediation System (TWRS) plans place off-limits three large areas. Only one of these will be needed for TWRS. The siting of facilities must be coordinated, but should not be limited in this way.

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. This is completely unacceptable. Hanford uses must be given first priority over uses from off site. It is particularly unacceptable that ERDF be sited in an area of such important habitat when another similar disposal facility is reserving space in an area of lower habitat value which is entirely within the fence line of the 200 West area.

The HFSUWG placed a high priority on limiting waste management activities to within the fence line of the 200 areas, and only expanding into the area between the 200 areas if there was not enough room inside the fence line. In the opinion of the Trustees, siting of a national repository on the Hanford site should not be considered until siting for all Hanford needs is done.

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."

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

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Acceptability and Potential Consequences section and Site 3 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 order to properly compare the criteria, and in order to integrate and follow NEPA, the criteria should be addressed in proportion to their potential significance.

*ERDF Ecological Risk Assessment Evaluation*

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 40 CFR 300.43 (e) (2) (i) (G) is to characterize current and likely future ecological risk attributable to releases of contaminants, especially when sensitive habitats and critical habitats of species protected under ESA may be impacted. The Hanford Site Natural Resource Trustees have evaluated the ERDF ecological risk assessment and, as such, have the following comments:

- 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.
- 2) Problem formulation should examine the nature of the contamination for potentially impacted habitats and/or ecosystems. ERDF RA indicated 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 the trophic level. 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, which would examine 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 attempt to 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. ERDF RA does not acknowledge that mature shrub is a priority

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habitat for several candidate species that could potentially be impacted either directly or indirectly.

- 6) Endpoint selection may not be adequate. Given there are candidate species to be considered, a second type of indicator species should have been assessed.
- 7) The Risk Summary is not clear. This 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, but there is an indication that there would be significant risk to the environment (should be more clear) based primarily on heavy metal concentrations and a potential hazard to wildlife receptors (should be more specific) due to ingestion. It does not discuss potential recovery due to the impacts.

*Contaminant Fate and Transport*

Section 4.1.1 describes the conceptual model used. The description notes that the mechanisms:

controlling contaminant fate and transport in the vadose zone are highly coupled, unsteady, and non-linear. Furthermore, 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 following is an additional comment by CTUIR staff concerning the RI/FS's modeling of contaminant fate and transport:**

By DOE's own admission, quoted above, the design of the model bears little relation to the reality of the site. As a result, CTUIR technical staff view the extensive results and additional assumptions outlined in Appendix A to be a house of cards.

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Simplistic and unrealistic assumptions about homogeneous hydrogeologic conditions, vertical-only flow paths, and the physical and chemical behavior of only single contaminants make it highly doubtful that:

- 1) a complete range of contaminants of concern has been identified,
- 2) identified infiltration characterization and subsurface behavior are representative,
- 3) interactive effects of contaminants or critical conditions such as pH, discontinuous caliche layers, or bedding have been adequately accommodated,
- 4) contaminant mixing or transport processes are as simplistic as portrayed, and
- 5) calculated travel times are anything but meaningless when they are assumed to vary only in proportion to vadose zone thickness.

We find additional reason to doubt the accuracy of the model and assumptions when we review the summary tabulation of potential groundwater contaminants identified through this modeling (Table 4-11). This table indicates *identical* travel times for such physically and chemically diverse constituents as radionuclides, heavy metals, and selected anions. Such an implausible result is highly suspect, and would, by itself, call the model into question.

These deficiencies indicate to CTUIR staff that the adopted modeling approach, combined, as it is, with too many unrealistic assumptions, fails to serve its stated goal of "identify[ing] groundwater contaminants, perform[ing] contaminant screening, and evaluat[ing] alternative ERDF designs" (Section 4.1).

Moreover, despite the foregoing quote, Section 4.1 does not apply the results of the modeling to "evaluat[ion of] alternative ERDF designs."

Given these deficiencies, CTUIR technical staff conclude that the model used for evaluating the ERDF proposal -- and the data generated by that model -- is of little value.

The CTUIR staff request that before further steps on the design of the ERDF are completed, a more representative model should be developed that represents field conditions more realistically and that is designed specifically to evaluate barrier and subsurface characteristics and develop appropriate engineering design criteria. The results of the new modeling will be essential for informed decision making concerning engineering and design of the ERDF, including but not limited to the Remedial Design portion of the project.

*CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION****Mitigation***

Mitigation for impacts to natural resources is required 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 NRDA provisions. NEPA requires agencies preparing EISs 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 implementations;
- 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 action; and
- e) Compensating for the impact by replacing or providing substitute resources.

The ERDF siting process did not consider impacts to habitat, and those impacts were not avoided or minimized. Compensatory mitigation for habitat destruction must be provided.

The RI/FS identifies 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 to mitigating for habitat destruction in both the RI/FS and in the Record of Decision (ROD) to ensure funding will be appropriate and guaranteed for implementation of the mitigation actions. The NRTC also recommends preparation and submission of a mitigation evaluation and implementation plan be identified as an enforceable interim Tri-Party Agreement (TPA) milestone.

The RI/FS identifies habitat removal as an irreversible and irretrievable commitment of resources. The NRTC strongly recommends that any on-site natural resources which are identified as irreversible and irretrievable commitments should be fully mitigated for. The habitat impacts associated with the McGee Ranch "borrow" site are not well documented in the RI/FS. Because a "borrow" site for basalt has not yet been identified, these habitat impacts cannot be documented. This lack of information will be an impediment to creating an adequate mitigation evaluation.

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

*CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION*

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 natural resources impacts will 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, the ERDF mitigation plan must compensate for natural resource impacts as an independent plan.

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 Trustees will be required prior to issuance of the ROD to ensure ERDF mitigation. 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 will fragment blocks of habitat. Figure 9-1 shows that two substantial blocks of habitat will 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

*CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION*

2. USDOE should begin immediately to develop the needed nurseries and seed stocks to allow this 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.

*Waste Acceptance*

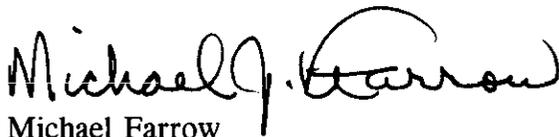
The radioactive and hazardous wastes from the 100 Area cleanup will continue to pose a threat to people and the ecosystem for so long as they remain dangerous. Many of the radioactive materials released in the 100 Areas have extremely long half-lives. Many of the hazardous materials are extremely persistent.

Closure of ERDF must protect the Tribal Treaty rights of the Confederated Tribes and Bands of the Yakama Indian Nation, the Confederated Tribes of the Umatilla Indian Reservation and the Nez Perce Tribe.

*This concludes the comments which the CTUIR developed cooperatively with various Natural Resource Trustees for Hanford.*

If you have any questions about this letter or wish to contact the CTUIR for follow up action based upon our comments, please contact J.R. Wilkinson, CTUIR Hanford Program Manager or Chris Burford, CTUIR Hanford Program Policy Analyst, at (503) 276 - 0105.

Sincerely,



Michael Farrow  
Director  
Department of Natural Resources

cc: Staff and Policy Makers of the CTUIR  
Hanford Natural Resource Trustees