



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

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June 17, 1999

Reply To
Attn Of: ECO-088

~~DEFERRED~~

JUN 21 1999

DOE-RL/DIS

Mr. Thomas W. Ferns
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, MSIN HO-12
Richland, Washington 99352-0550

Dear Mr. Ferns:

The Environmental Protection Agency has reviewed the *Revised Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land-Use Plan* (HRA-DEIS). We are submitting comments on the HRA-DEIS in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. We hope that you will accept these comments, and that they will be useful in preparing the Final EIS and Record of Decision (ROD).

The focus of the Revised DEIS is to evaluate a comprehensive land use plan, which would be in effect for at least the next 50 years, for the 586 square mile Hanford Site. This is a reduction in scope from the 1996 Draft HRA-DEIS, which attempted to address all aspects of the Hanford Environmental Restoration Project, and we support this reduction. Consequently, we also support your proposed document name change to the *Hanford Comprehensive Land Use EIS*.

The HRA-DEIS presents 6 alternatives: the **No Action** alternative, **DOE's preferred alternative** (a multiple use alternative supporting site clean-up, economic development, and natural resource protection), **Alternative 1** (Natural Resource Trustee alternative prepared by the U.S. Fish and Wildlife Service [USFWS]), **Alternative 2** (prepared by the Nez Perce Tribe, Dept. of Environmental Restoration and Waste Management and emphasizing natural and cultural preservation), **Alternative 3** (prepared by the local cities and counties and emphasizing economic development in the form of industry, agriculture, grazing, mining, and high intensity recreation), and **Alternative 4** (prepared by the Confederated Tribes of the Umatilla Indian Reservation [CTUIR], which emphasizes preservation of natural resources, religious areas, and traditional Tribal uses).

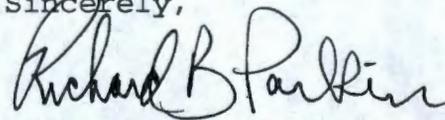
Based on our review of the HRA-DEIS and the DOE Preferred Alternative, we are assigning this document a rating of

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EC-2, Environmental Concerns, Insufficient Information. (An explanation of this rating is enclosed.) Our primary concerns with the preferred alternative are the direct impacts to the last remaining intact shrub-steppe habitat in Washington State and the cumulative impacts of the project to the Columbia Plateau, which already experiences widespread and comparatively high levels of human health and ecological risk associated with the conversion and use of land for agricultural activities. Unless a more conservative alternative is selected, such as Alternative 1 or Alternative 2, we believe that additional protections are needed to preserve the high value ecological areas on the Hanford Reservation. Further, there is additional information from The Nature Conservancy regarding the ecological value of lands in the Central Hanford area that needs to be included in the EIS and factored into the final decision. More specific comments are enclosed following this letter.

Thank you for developing a thorough EIS that includes a good range of alternatives. We understand the context of this planning effort and the multiple demands and requests for use of the Hanford lands. If you would like to discuss these comments, please contact Elaine Somers of my staff at (206) 553-2966.

Sincerely,



Richard B. Parkin, Manager
Geographic Implementation Unit

Enclosures

U.S. Environmental Protection Agency
Specific Comments on
Revised Draft Hanford Remedial Action EIS
and Comprehensive Land Use Plan

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Main Comments

We appreciate the difficulty of this task and the efforts of Department of Energy (DOE) to derive a land use plan that is responsive to diverse needs and interests. The HRA-DEIS attempts to address the DOE clean up mission, economic development, and the natural resource trustee responsibility of the federal government. We believe that it is essential to address these three goals in the context of the shrub-steppe ecosystem. Our comments, therefore, address the importance of the ecosystem, DOE's clean up mission, economic development, and the natural resources trustee responsibility.

Shrub-steppe ecosystem. The Hanford Reservation includes one of the few remaining significant tracts of native shrub-steppe habitat. In Washington State, prior to European settlement, approximately 10.4 million acres of shrub-steppe habitat covered much of what is today central and southeastern Washington. This area is now greatly modified by human activities--primarily by dryland farming, irrigated agriculture, and grazing. About 60% of the original shrub-steppe habitat of the Columbia Plateau has been converted to agricultural uses and, it is estimated, **only about 5% of the remaining shrub-steppe maintains any appreciable degree of integrity.**

As a result of this habitat conversion and alteration, many shrub-steppe dependent species have declined precipitously. For the maintenance of natural heritage and biological diversity, it is important that remaining blocks of intact habitat be protected, and that connections/corridors among them be identified and designated. The HRA-DEIS should more thoroughly address the importance of the Hanford Reservation to the integrity of the remaining shrub steppe ecosystem. It should clearly lay out the impacts to that ecosystem and the plants and animals that rely on it.

Hanford Clean up. It is important to provide adequately for the clean up process at Hanford and, thus, to ensure that adequate resources, i.e., mining sites, are available for capping waste sites. As per the HRA-DEIS (p. 3-21), DOE proposes to use mining sites only for clean up purposes. We support this; no commercial mining should be allocated. In addition, due to the high ecological value of these lands, we urge DOE to set aside only what is truly necessary for clean up purposes, and that land use designations for Conservation (Mining) not be over-appropriated. Further, it is critical that DOE avoid mining or otherwise impacting intact habitat, or habitat elements that are sensitive, rare, unique, or generally of high ecological or cultural value.

It is unclear what the DOE is suggesting (p. 3-21) in terms of using mining to "further the biological function of wetlands." Specifically, which wetlands are being referred to here, and what type of alteration to their physical and/or biological characteristics are being considered?

Economic development. The vast majority (approximately 95%) of lands on the Columbia Plateau have already been dedicated to agricultural uses. Many of the activities associated with agriculture have resulted in widespread human health and ecological concerns now on the Plateau. These problems include terrestrial and aquatic habitat loss, fragmentation and alteration; loss of biodiversity; surface and ground water contamination from application of agricultural fertilizers and pesticides; air pollution from blowing dust creating significant amounts of airborne particulates; and the human health risks associated with these forms of water and air pollution.

The HRA-DEIS should make it clear that the use of these lands for economic development will, in effect, dedicate scarce natural habitat needed to support declining species to uses that may further exacerbate the identified environmental problems. We support the fact that the DOE preferred alternative does not allocate land for agriculture. However, the allocation of 30% of the Hanford lands (108,371 acres) for grazing appears to be quite large in light of the huge impacts already accrued to the Columbia Plateau and the shrub-steppe ecosystem. The HRA-DEIS should clearly delineate how much of that land represents fairly intact shrub-steppe and how much is already disturbed. The HRA-DEIS should discuss the necessary sizes of blocks of land that should be dedicated to protection of the shrub-steppe ecosystem and the size and extent of corridors between those blocks needed in order to preserve the natural functions of the ecosystem and provide adequate habitat for the plants and animals indigenous to it. The dedication of land to economic development should then be done in accordance with that analysis.

It is very difficult to maintain shrub-steppe habitat in conjunction with grazing. In relatively undisturbed areas, the soils of the Columbia Basin steppe are covered by a "microbiotic crust" of algae, mosses, and lichens. The crust's integrity is important to maintaining the native plant community, which in turn supports dependent wildlife, because it prevents the establishment of weeds. Disturbance, e.g., the trampling of livestock, destroys this protective soil layer, thereby permitting the invasion of weeds. In addition, the growing points of the bunch grasses are located higher on the plant than they would be left as a result of selection by grazing animals; thus, the bunch grasses are susceptible to injury by livestock grazing.

As stated on pages 4-63 and 5-23, "Cheatgrass and Russian

thistle, annuals introduced from Eurasia in the late 1800s, invade areas where the ground surface has been disturbed. Grazing ... could alter terrestrial vegetation communities by eliminating or reducing the cover of some species, encouraging the growth of grazing-tolerant species, and providing opportunities for weed species to become established. These changes could adversely affect associated wildlife species." In addition, "wetland and riparian plant communities could be damaged where livestock congregate near water sources."

With weed invasions and changes in land use practices such as grazing, the fire regime is also altered from frequent, low intensity fires to infrequent high intensity fires. "Less frequent and more severe fires have reduced the ability of the native habitat to recover from fire, as well as [reducing] the development of late successional shrub-steppe habitat." (page 4-62)

Since Section 4 of the HRA-DEIS was written, fire has burned a large section of land north of Rattlesnake Spring (Figure 1-2) on ALE and on to Umtanum Ridge (Figure 4-22), which was dominated by big sagebrush and by big sagebrush/spiny hop-sage vegetation types. The dominant shrub type there, big sagebrush, does not re-sprout from the roots after a fire. The area of ALE (perhaps 50% of its total extent) where sagebrush was killed by the 1984 fire still has not been re-populated by sagebrush. These losses of habitat are critical for the shrub-nesting species such as the sage sparrow, Brewer's sparrow and the sage thrasher. These species and the sage grouse, also dependent on sagebrush for food and cover, are listed by Washington State as either threatened or as species of concern.

The Washington Department of Fish and Wildlife has canceled the only grazing lease currently held on the state-managed portion of the Wahluke Slope (Dell Peterson, personal communication). Considering this, the above facts, and the rarity and vulnerability of shrub-steppe habitat, we feel the need to prevent further risks to sagebrush habitats and steppe outweighs the need for additional rangelands.

The Preferred Alternative would allow conversion of the B reactor to a museum and construction of supporting visitor facilities; construction of a new boat ramp and visitor facilities south of Vernita Bridge; and two Tribal fishing villages and supporting facilities on the Wahluke Slope. Again, given the risks to the shrub-steppe ecosystem we think these proposals should be carefully weighed against the amount of land necessary for ecosystem integrity.

Pursuant to our federal tribal trust responsibilities, we support the Tribes' treaty fishing rights; however, we believe other alternatives should be evaluated for returning to the tribes their treaty fishing rights. Other alternatives should include village sites outside the Hanford Reservation or on land that

doesn't support shrub-steppe habitat. Further, we believe that any new fishing support facilities would best be located outside Hanford lands, or that existing facilities off-site be used as we presume they have been in the past.

Increased boating activity resulting from the boat facilities near Vernita Bridge and the two fishing villages "could adversely affect salmonid spawning areas, aquatic plant communities and other BRMaP III and IV resources." (p. 5-27) These adverse impacts should be better defined and alternatives or mitigation designed to avoid or minimize them. Such steps could include restrictions on the type and timing of boating/motorized recreation.

As stated in the HRA-DEIS, "Missoula Floods [geologic] features could be impacted by sand and gravel operations. Mining could result in soil compaction and increased erosion around quarry sites. ... Industrial development in the southeast portion of the Hanford Site could also destroy dune stabilizing vegetation that could result in activation of the sand dunes." (page 5-13) Future industrial development and research and development activities could degrade water quality as a result of increased waste water discharges to the Columbia River, a 'Class A' water body, and non-point source pollution from runoff (page 5-15). Groundwater flow and quality could also be altered as a result of consumptive uses by industry, mobilization of contaminants in the vadose zone resulting from industrial water discharges, and increased contamination from industrial site chemical spills. (page 5-19) In addition, industrial development effectively obliterates the biological features associated with these lands prior to intensive development.

Consequently, with respect to Industrial Exclusive, Industrial, and Research and Development areas, we recommend that the boundaries depicted in Alternatives 1 and 2 (combined) be selected. These lands would provide adequate area for industrial expansion for the City of Richland, provide for continued research and development activities, and enable clean up operations to proceed while protecting the greater portion of Hanford from the risks associated with industrial activities.

Natural Resource Trustee. The biological resources of the Hanford Site merit protection for a variety of reasons:

- As a unique example, and a major proportion of the remaining sagebrush-blue bunch wheatgrass community type in the world, with its particular suite of animal and plant species;
- As an ecological study area with a rich history of prior studies, and specifically as one of seven National Environmental Research Parks administered by DOE where ecological research is carried out by visiting and resident scientists;

- As critical habitat for a number of rare, threatened, or endangered species of plant and animals; and
- As an increasingly rare example of what this part of our nation used to look like, for the inspiration and enjoyment of the public.

It is commendable that the DOE has engaged The Nature Conservancy (TNC) to conduct inventories of Hanford lands. While the information is incomplete, it serves as an adequate basis for making the following decisions, at a minimum, regarding Hanford lands:

- Protect the full crescent of uncontaminated high value ecological lands, without interruption, by designating them as preservation. These include: the ALE Reserve in its entirety; the McGee Ranch, the Wahluke Slope, the Riverlands, the Hanford Reach, and the Columbia River islands. This would provide a measure of connectivity between the ALE Reserve and the Wahluke Slope, and between the Hanford lands and the Yakima Training Center.
- Protect additional ecologically important lands in Central Hanford with preservation status. While the HRA-DEIS provides good information, it does not include the most recent studies performed by TNC that focus on Central Hanford. It is critical that the information from these studies be used to specify additional areas for preservation including, but not limited to, the vernal pools and other special habitats; Gable Butte and Gable Mountain and their associated rare plant populations; West Lake; sand dune fields from the ALE Reserve to the Hanford Reach, and other occurrences of plant community elements.
- Conserve most of the remaining lands in Central Hanford with Conservation status, where no exploitive uses such as mining are allowed until additional study and application of the principles of conservation biology can be incorporated to best determine if and/or how these lands might be used.

Additional Comments: Hanford Remedial Actions

- Page 1-1, Line 10. The text indicates that RODs will be issued for CERCLA and RCRA decisions. This statement is incorrect. Although CERCLA decisions are made using RODs, RCRA decisions are made through the permitting process. The text should be changed to reflect this.
- Page 1-11, Lines 14 and 15. This sentence is misleading. As written, the text indicates that EPA and Ecology will use the EIS to develop remediation decisions. This is not the case. CERCLA and RCRA processes will be used to make remediation decisions. We recommend changing the text to read "...EPA and Ecology would not be able to use the EIS in terms of factoring in potential future land use into the cleanup decisions process."
- Page 2-1, Line 30, Bullet II. We recommend this statement say, "Support U.S. Environmental Protection Agency, Washington State Department of Ecology and U.S. Department of Energy remediation decision making process."
- Page 3-13, Table IX-2. EPA disagrees with the assumption that 100 Area burial ground lands will remain dedicated waste management units. It is EPA's intent to require DOE to remove 100 Area burial ground waste to the central plateau. The table should be revised to reflect this.
- Page 3-19, Line 22, Bullet 7. EPA does not agree with the assumption that groundwater will remain unremediated at Hanford. The bullet should be changed to reflect that groundwater contamination will be remediated through the CERCLA decision process.
- Page 6-1, Line 28. The HRA-DEIS implementing procedures should include a section on how DOE will institute procedural controls including mechanisms to be used to document the status of contaminated buildings, soils and groundwater.
- Appendix D, Line 19. This section identifies the McGee Ranch as a possible barrow site for clean-up/burial material. The McGee Ranch provides a key wildlife corridor between ALE and the Columbia River. It is EPA's understanding that under the preferred alternative the McGee Ranch would not be available for barrow material. However, the 100 Area burial grounds document, which EPA is currently reviewing, lists the McGee Ranch as the preferred barrow site. EPA recommends that Appendix D be strengthened to indicate that all sensitive areas will be protected from mining activities including the McGee Ranch.

U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections

The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.