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Thomas W. Ferns  
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U.S. Department of Energy  
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COMMENTS ON REVISED DRAFT REPORT: "HANFORD REMEDIAL ACTION ENVIRONMENTAL IMPACT STATEMENT AND COMPREHENSIVE LAND USE PLAN"

Dear Mr. Ferns:

The following comments are provided to the U.S. Department of Energy (DOE) in response to the Revised Draft report "Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan" (DOE/EIS-0222D). These comments focus on Research and Development (R&D) land-use designations. R&D is one of nine designations used in the Environmental Impact Statement (EIS) for comparing potential impacts from six proposed alternative land-use plans.

As used, the definition of R&D appears overly restrictive and could, under some land-use alternatives, preclude conducting critical onsite research activities consistent with the Hanford Science and Technology Mission, the Hanford waste management and cleanup mission, as well as future non-DOE research activities. R&D activities are presented only as a major "disruptive" activity requiring large facilities and employing tens to hundreds of staff. The EIS does not discern between large-scale, multi-decade R&D facilities such as the Environmental Molecular Sciences Laboratory (EMSL), the Laser Interferometer Gravitational Wave Observatory (LIGO), or the Fast Flux Test Facility (FFTF) (see Table 5-1) compared to smaller-scale and time-limited research conducted in the field or within facilities that consume limited resources. Examples include environmental characterization or monitoring studies, site-specific testing of waste management or cleanup technologies, or environmental research in unique areas such as the Columbia River or the Fitzner/Eberhardt Arid Lands Ecology Reserve (ALE).

In Section 3.2.3 (Identification of Land-Use Suitability) the Research and Development Land-Use Designation is defined as, "*An area designated for conducting basic or applied research that requires the use of a large-scale or isolated facility. Includes scientific, engineering, technology development, technology transfer, and technology deployment activities to meet regional and national needs. Includes related activities consistent with Research and Development*". This designation is elaborated upon in Section 5.1.6.4 (Research and Development)... "*The Research and Development (R&D) land-use designation involves the siting of large-scale facilities in clusters or campus-like developments. Other R&D are similar to industrial development, such as the facilities located in the 300 Area... Because R&D facilities often require large capital investments and provide relatively high salaries compared to other industries, the economic impacts could be significant.*"

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Both high-intensity and low-intensity R&D land-use categories should be included in the EIS. High-intensity uses would possess the general characteristics presently assigned to R&D---large scale facilities, large land disturbances, and numerous workers located in an industrial type setting. Such activities would be reserved to those areas where negative impacts would be avoided to sensitive environmental, cultural, or historical sites. Smaller-scale, low-intensity R&D would cover all other R&D and would be compatible with most other land uses.

Not distinguishing between such R&D activities significantly influenced the impact analyses contained in Section 5.1 (Analysis Approach). In several land-use alternatives, all R&D activities appear excluded because of potential negative consequences from building only large-scale industrial type areas supporting R&D.

It would be prudent to develop and maintain an overriding and flexible R&D policy for Hanford tailored to specific land-use designations (preservation through industrial). For example, the already heavily disrupted parts of Hanford (in and around the 100, 200, 300, and 400 Areas) could sustain a variety of large-scale R&D activities while smaller-scale research could be (as has been) conducted in biologically sensitive areas such as ALE or along the Columbia River corridor.

The proposed Natural and Accelerated Bioremediation Research (NABIR) Field Research Center and vadose zone test beds are just two examples of short-term (less than 10 years), small-scale R&D activities that provide critical onsite research opportunities for understanding how to protect and cleanup Hanford's soil and groundwater. The land-use plan should acknowledge and accommodate such future research activities. In fact, small-scale research is essential to preserving the unique habitats and resources found at Hanford for which low impact Preservation, Conservation, and Recreational land-uses are intended to protect.

I encourage the siting of new R&D projects onsite and conducting innovative R&D activities in a manner compatible with preserving Hanford's unique environmental, historical, archaeological, and cultural heritage. I also encourage DOE to adopt a policy of promoting research and technology development in future land uses. Perhaps such flexibility was intended under the *Allowable Use* (land-use consistent with land-use designation) and *Special Use* (land-use activity requiring further review and approval) provisions of land-use planning noted in Section ES6.2. If so, it is not apparent from the text.

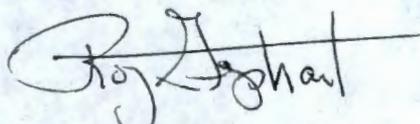
The EIS should also recognize two ongoing research and education projects underway on ALE: gravity experiments in the underground Nike bunkers located in the southern portion of ALE and on-line science education, teacher training, and astronomy research in the observatory atop Rattlesnake Mountain. Both are long-term projects using existing facilities. These uses have been and remain consistent with the nearly fifty year history of using ALE for environmental research and education.

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Please contact me (509-375-6754) if there are any questions or if the Pacific Northwest National Laboratory may be of assistance in developing a R&D policy for future Hanford land-uses and alternatives.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "Roy E. Gephart". The signature is stylized with a large, sweeping initial "R" and a long horizontal line extending to the right.

Roy E. Gephart  
Program Manager  
Environmental and Health Sciences Division

REG:tpq

cc:

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