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HANFORD NATURAL RESOURCE TRUSTEE COUNCIL
FINDING 99-04

This finding is to approve the Hanford Natural Resource Trustee Council (Council) letter dated October __, 1999 and to authorize the Chair's signature. The letter is addressed to Mr. Keith Klein, Mr. Doug Sherwood, and Mr. Michael Wilson of the Tri-Party Agreement. The subject line is, "Recommendations for Ecological Exposure/Effects Assessment of the 200 Area."

In summary, the letter:

- expresses Council concerns that clean-up decisions based entirely on human health standards may not be protective of the environment and that final actions may be exposed to criticism for failure to perform an adequate ecological assessment.

- recommends the study of hexavalent chromium to adversely affect chinook salmon as a good example to follow and the benefits of how the results can assist the Tri-Parties.

- identifies existing Environmental Protection Agency and U.S. Department of Energy policy and/or guidance that addresses an ecological exposure/effect assessment.

- recommends 1) performing an ecological risk assessment with actual biological data being collected prior to interim remedial actions, 2) reviewing past studies to determine appropriate biological receptors and end points and identifying potential contaminants of concern to wildlife, and 3) establishing a Biological Technical Assistance Group to implement the previous points.

- encourages the above recommendations be applied to the extent possible in the remedial decision-making process for the 100 Area National Priority List including the 45 sites listed in the *100 Area Burial Ground Focused Feasibility Study.*

- invites addressees to meet and discuss an ecological exposure/effects assessment for the 200 Area National Priority List site.

CERTIFICATION

Finding 99-04 was adopted by consensus of the Hanford Natural Resource Trustee Council with ____ abstentions and ____ separate opinions.

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HANFORD NATURAL RESOURCE TRUSTEE COUNCIL

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503-373-7429

VICE-CHAIR:
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Chris Burford

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State of Oregon
Department of Energy
-Susan Coburn Hughs

State of Washington
Department of Ecology
-Doug Mosich

Department of Fish and Wildlife
-John Carleton
-Jay McConnaughey

U.S. Department of Energy
James Zeisloft, Jr.

U.S. Department of the Interior
Preston Sleeger
Bureau of Land Management
-Jake Jakabosky
U.S. Fish and Wildlife Service
-Tom O'Brien

Yakama Indian Nation
Wendell L. Hannigan
Barbara Harper

Date??

Mr. Keith Klein
Richland Operations Office
U.S. Department of Energy
P.O. Box 550, MSIN: A5-15
Richland, WA 99352

Mr. Doug Sherwood
U.S. Environmental Protection Agency
712 Swift Blvd., Suite 5
Richland, WA 99352

Mr. Michael Wilson
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504

Dear Messrs. Klein, Sherwood, and Wilson:

Subject: Recommendations for Ecological Exposure/Effects Assessment of the 200 Area

Recently, several members of the Hanford Natural Resource Trustee Council (Council) commented on the *200 Areas Remedial Investigation/Feasibility Study Implementation Plan* (Plan). Following the public comment period, U.S. Environmental Protection Agency (EPA) staff met with the Council to discuss the Plan and issues raised by the Trustees. Some of the issues included a request to perform a biological assessment and concern about sufficient sampling to meet characterization needs. During the discussion, EPA staff encouraged us to develop biological monitoring recommendations for the 200 Area.

The Council is concerned that clean-up decisions based entirely on human health standards may not be protective of the environment, i.e. natural resources as defined in 43 CFR Part 11. To date, little has been done to characterize exposure and effects to biota from hazardous substances at waste sites. We are concerned that the failure to perform an adequate ecological assessment will leave final remedy decisions and actions exposed to criticism with regard to being "protective of the environment" and may require a second remedial response to correct residual injury to natural resources.

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Implementation of an ecological exposure/effects assessment can eliminate criticism and potential for additional remedial response to correct residual injury because it aids decision-makers in establishing clean-up levels that are protective of biota. At the Hanford Site, a good example of this is the study of hexavalent chromium to adversely affect chinook salmon. This study will provide valuable data to assist the Tri-Parties in determining whether ground water clean-up standards are indeed protective of sensitive end points for salmonids. The next step is to implement this type of biotic characterization to the terrestrial component and related wildlife.

Both EPA and U.S. Department of Energy (USDOE) have policy and/or guidance documents which support conducting an ecological exposure/effect assessment. This approach is highlighted in EPA's *Eco Update* bulletins and *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final.* In addition, the objectives of USDOE's "*Policy on Integration of Natural Resources Concerns into Response Actions*" promote adequately characterizing exposure and effects to natural resources including biota.

The benefits of sampling biota during the characterization process and considering these data in the decision-making process outweigh remedial decisions based solely on abiotic data. Obtaining relevant biological data can assist the remedial project manager (RPM) in determining whether to remediate or not, and to what level. The data also provide the RPM with observed exposure levels to plug into fate and transport models to determine risk and as a baseline reference that can be used later in post remedial closure activities, such as five-year reviews.

Therefore, the Council recommends:

- Performing an ecological risk assessment for the 200 Area that includes selection of appropriate indicator species with actual biological data being collected prior to interim remedial actions. These data would assist in verifying and validating ecological models.

  - Developing screening criteria to identify contaminants of concern to wildlife.

  - Developing dose-response assessments for selected contaminants to establish clean-up levels protective of biota, if an exposure assessment raises a concern.

- Reviewing past studies conducted in the 200 Area to determine appropriate biological receptors and end points and potential contaminants of concern to wildlife. We are aware of one document worth referencing titled *Ecological Sampling at Four Waste Sites in the 200 Area.*

- Establishing a Biological Technical Assistant Group (BTAG) to follow through with implementation of the previous points. The BTAG would act in an advisory role in identifying contaminants of concern, biological receptors and

assisting in the development of an ecological risk assessment/dose-response assessment.

A BTAG can provide valuable advice, comments and technical support during the remedial process and help the RPM ensure that projects remain on schedule and within budget. BTAGs have been used successfully at other federal facilities including U.S. Department of Energy facilities.

Implementing these recommendations will help determine the effectiveness of the selected remedy in reducing ecological risks associated with hazardous substances of concern. The information that we ask be collected is to assist in protecting natural resources and ultimately achieve adequate clean-up to protect the environment. This is a common goal we share with the Tri-Parties and the Comprehensive Environmental Response, Compensation and Liability Act Remedial Investigations and Feasibility Studies process.

To the extent possible, we encourage these recommendations also be applied in the remedial decision-making process for the 100 Area National Priority List sites and for the 45 sites listed in the *100 Area Burial Ground Focused Feasibility Study*.

The Council would like to discuss these recommendations and the establishment of a BTAG with you or your appropriate staff. I will be contacting you soon to schedule a meeting to discuss the points mentioned.

Sincerely,

Susan Coburn Hughs, Chair
Hanford Natural Resource Trustee Council

This letter represents Council consensus for this specific topic.

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HANFORD NATURAL RESOURCE TRUSTEE COUNCIL

SIGNATURE PAGE

Finding 99-04: Approval of letter, "Recommendations for Ecological Exposure/Effects Assessment of the 200 Area".

_____ Support

_____ Object

X Abstain

_____ Support with separate opinion (below)

Signature: _____

Name: James Zeisler

Trustee Organization: DOE

Date: 10/24/99

HANFORD NATURAL RESOURCE TRUSTEE COUNCIL

SIGNATURE PAGE

Finding 99-04: Approval of letter, "Recommendations for Ecological Exposure/Effects Assessment of the 200 Area".

✓ Support

_____ Object

_____ Abstain

_____ Support with separate opinion (below)

Signature: Dan Landeen

Name: Dan Landeen

Trustee Organization: Nez Perce Tribe ERWM

Date: 10/25/99

HANFORD NATURAL RESOURCE TRUSTEE COUNCIL

SIGNATURE PAGE

Finding 99-04: Approval of letter, "Recommendations for Ecological Exposure/Effects Assessment of the 200 Area".

X Support

_____ Object

_____ Abstain

_____ Support with separate opinion (below)

Signature: [signature]

Name: DOUG MOSICH

Trustee Organization: WASH STATE DEPT OF ECY

Date: 11/8/99

HANFORD NATURAL RESOURCE TRUSTEE COUNCIL

SIGNATURE PAGE

Finding 99-04: Approval of letter, "Recommendations for Ecological Exposure/Effects Assessment of the 200 Area".

✓ Support

_____ Object

_____ Abstain

_____ Support with separate opinion (below)

Signature: Susan C Hughs

Name: Susan C Hughs

Trustee Organization: STATE of OREGON

Date: Nov 4, 1999

HANFORD NATURAL RESOURCE TRUSTEE COUNCIL

SIGNATURE PAGE

Finding 99-04: Approval of letter, "Recommendations for Ecological Exposure/Effects Assessment of the 200 Area".

✓ Support

_____ Object

_____ Abstain

_____ Support with separate opinion (below)

Signature: Preston Sleeger

Name: PRESTON SLEEGER

Trustee Organization: U.S. DEPARTMENT OF THE INTERIOR

Date: 11/9/99