



Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

October 2, 2012

1217382

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Re: Yakama Nation Comments on *River Corridor Baseline Risk Assessment, Volume I:
Ecological Risk Assessment*, DOE/RL-2007-21 Rev. 0 (March 2012)

1213004

Dear Mr. McCormick, Mr. Faulk, and Ms. Hedges:

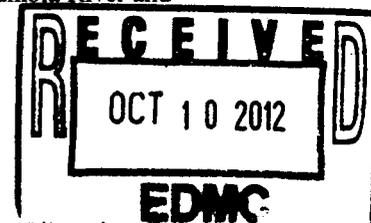
The Yakama Nation has reviewed the U.S. Department of Energy's (DOE) document DOE/RL-2007-21 Volume I Rev. 0, the River Corridor Baseline Risk Assessment (RCBRA) Ecological Risk Assessment (ERA). We found that many of the comments we have on Volume II (Human Health Risk Assessment) also apply to Volume I.

The Yakama Nation is concerned that this document is not truly a baseline risk assessment and does not provide a complete evaluation of the risks to upland, riparian, and aquatic ecological receptors at the site. Limited characterization data and unrealistic assumptions about indefinite, unending institutional controls limit the utility of the risk assessment in making cleanup decisions. Furthermore, cleanup decisions are currently being made based on this incomplete assessment. Appropriate cleanup decisions should be made based on a complete and adequate risk assessment.

Below is a summary of the Yakama Nation's major concerns with the RCBRA Volume I Rev. 0 and recommendations to accurately assess baseline risks and be fully protective of ecological receptors when making cleanup decisions:

1. **Contaminant migration from the Central Plateau to the River Corridor should be evaluated.**
Contamination in the Central Plateau is transported to groundwater via the vadose zone.
Contaminated groundwater from the Central Plateau has already reached the Columbia River and

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will continue to affect the River Corridor far into the future, as shown by DOE's own modeling. DOE should consider contaminant migration in groundwater over time from the Central Plateau to the River Corridor and Columbia River, including groundwater flow rates, plume mixing, and exposure to contaminated groundwater by various exposure pathways.

2. **Anticipated institutional controls should not be assumed when assessing baseline risk.** DOE's own guidance acknowledges the EPA directive that institutional controls cannot be factored into a baseline risk assessment, stating "EPA directed that exposures that are limited by institutional controls may not be factored into a baseline risk assessment for a CERCLA RI/FS."¹ By definition, baseline risks are risks that would exist if no remediation or institutional controls are applied at a site. This information provides a foundation for determining the most appropriate remedial options.
3. **Exposure to the Columbia River should be considered in conjunction with the River Corridor.** The scope of the RCBRA is limited to the near shore and does not include the Columbia River itself. It is very likely that an amphibian, fish, bird, or mammal would encounter the river beyond the near shore in addition to the upland and riparian habitats. DOE should incorporate scenarios that include organism exposure to the Columbia River from the River Corridor, and consider exposure to river water, sediments, and aquatic organisms.
4. **Sample data or locations should not be excluded for convenience.** The RCBRA excluded certain contaminants, waste sites, and non-operational areas without clear explanation or adequate justification. It is misleading to only assess ecological risks from remediated waste sites, when a significant number of highly contaminated waste sites remain on site and contribute to risk. Further, considering only those contaminants that were reported in at least one-third of the remediated waste sites is not protective and potentially eliminates relatively unique waste sites. DOE should not exclude any areas or contaminants without adequate evaluation of data.
5. **Reference and background sites should be selected from areas that are not impacted by Hanford contaminants.** DOE considers samples collected either onsite or proximal to Hanford as background and reference samples; yet, these locations have most likely been influenced by releases from Hanford in the form of airborne contamination and/or movement through the environment and food web. These locations should not be considered background or reference for comparison to site data. Appropriate locations should be selected that are not on the Hanford site and clearly not influenced by Hanford contaminants. This is particularly important since Contaminants of Potential Ecological Concern (COPECs) are selected based on site concentrations being statistically greater than reference concentrations.

EPA guidance (EPA 540-R-01-003, Appendix B [EPA, 2001a]) states specifically that all substances present at a site that exceed risk threshold concentrations should be included in the baseline risk assessment. A baseline risk assessment considers all site risks, including those from naturally occurring and ubiquitous contaminants. Data should *not* be selective (e.g., excluding waste sites or contaminants) but should include all data sources applicable to evaluating current and future conditions at all upland, riparian, and near shore operational and non-operational areas. Without full characterization and evaluation, it should be assumed that the nonoperational areas or areas in between the operational areas have been impacted by Hanford Site releases and therefore pose a risk. A holistic approach would ensure that protective decisions are made for the site in its

¹ DOE. 1992. *Use of Institutional Controls in a CERCLA Baseline Risk Assessment*. Office of Environmental Guidance, U.S. Department of Energy. CERCLA Information Brief. EH-231-014/1292. December.

entirety. Comparisons to reference concentrations should only be considered during the feasibility study to support risk management decisions and select appropriate cleanup actions.

6. **Considering only risks from contaminants with site concentrations greater than reference levels is not appropriate.** All contaminant exposures at the site contribute to baseline risk and should be included in the assessment. However, DOE is making risk management decisions prior to assessing risk by excluding certain "background" exposures. DOE should consider all contaminants contributing to risk at the site, including natural and "background" concentrations, as part of determining total baseline risk. For example, contaminant concentrations that fail bioassays but are not statistically greater than reference concentrations should not be dismissed. Only after such a complete, unbiased assessment is conducted can risk management decisions be made.

To protect ecological receptors, the health of which is linked directly to the health of Yakama Nation members, all contaminant sources and hazards should be identified and assessed together to support appropriate cleanup decisions. The Yakama Nation continues to support adopting a holistic approach to assessing risks at the site, which incorporates interactions between multiple stressors projected over long timescales and over large areas, and integrates wellness related to the physical, mental, social, and ecologic well-being of Native Peoples and the environment on which our livelihood depends.

I appreciate your consideration and look forward to resolution of our concerns.

Sincerely,



Russell Jim
ER/WM Projects Manager

cc: RHW Committee
Phillip Rigdon, YN
Gabe Bohnee, NPT
Stuart Harris, CTUIR
Ken Niles, OR-DOE
Administrative Record

