



11-HAB-0048

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 07 2011

Ms. S. L. Leckband, Chair
Hanford Advisory Board
Enviroissues Hanford Project Office
713 Jadwin, Suite 4
Richland, Washington 99352

Dear Ms. Leckband:

HANFORD ADVISORY BOARD (HAB) JUNE 3, 2011, CONSENSUS ADVICE #246,
"RIVER CORRIDOR BASELINE RISK ASSESSMENT"

Thank you for HAB advice #246 letter (enclosed) on the River Corridor Baseline Risk Assessment (RCBRA). Over the past months the U.S. Department of Energy (DOE) has met several times with members of the River and Plateau and Public Involvement and Communication committees to discuss and obtain feedback on RCBRA. We appreciate the significant amount of time HAB members have committed to reviewing and providing advice on this complicated document. DOE will consider this policy advice in remedial investigation/feasibility study (RI/FS) documents and future risk assessments. Below are responses to your advice on the RCBRA.

Advice Point #1: The Board advises DOE to employ a different risk assessment sampling methodology, per Environmental Protection Agency (EPA) guidelines. This methodology should capture the full range of future impacts of soil disturbance or natural soil mixing. It should address the impacts to risk coming from unremediated waste areas between waste sites and adjacent and upland areas, as well as from the waste site surfaces. The current use of clean-up verification sample data taken from the bottom of excavations 15 feet deep as the "estimated" contamination level for remediated waste sites, or using samples from the surfaces of the remediated waste sites that have now been filled with clean dirt, do not represent true exposure conditions.

Response: The RCBRA sampling methodology followed the Work Plan (DOE/RL-2004-37) and the Sampling and Analysis Plan (DOE-/RL-2005-42) approved by DOE, U.S. Environmental Protection Agency (EPA), and the State of Washington Department of Ecology (Ecology). The cleanup verification data were used to provide a protective assessment of one of the main study questions: Are cleanup levels established under the Interim Action Record of Decision (ROD) protective of human health?

The RCBRA findings reaffirm that unremediated waste sites pose an unacceptable risk and have a basis of action (i.e., they require remediation). Non operational areas (areas between waste sites, adjacent and upland areas) will be addressed in the River Corridor remedial investigations for each operable unit (OU).

Advice Point #2: The Board believes the RCBRA should have included the risk derived from contaminated groundwater flowing from upland sites (i.e. Central Plateau) into the Columbia River, as described in the draft Tank Closure and Waste Management Environmental Impact Statement.

Response: Groundwater plumes currently in the River Corridor, whether they originated from the Central Plateau or the River Corridor, are evaluated in the RCBRA. This includes evaluation of groundwater and the evaluation of groundwater upwelling into the river.

Advice Point #3: The Board advises that the risk assessment, the final RI/FS documents and future risk assessments should consider the probability that future river-side residents will be obtaining their drinking and irrigation water from groundwater, rather than from the Columbia River. The RCBRA should discuss what restrictions exist, and are projected over extended time intervals, for the use of Columbia River water and groundwater.

Response: The RCBRA does evaluate risk associated with the use of groundwater for drinking water and irrigation. A more detailed discussion on this topic can be found in section 3.3.2.3 of the document along with land use in section 2.7.5.

Advice Point #4: The Board reminds DOE of the applicable or relevant and appropriate requirements (ARAR) policy to use no less stringent standards than the Washington State Model Toxic Control Act (2007 as amended) for a final cleanup level of unrestricted use. At the same time, the Board does not support adopting a less stringent cleanup level for the final records of decision (RODs) than was employed in the Interim RODs. As a matter of future policy, the most recent scientific consensus on radiation exposure cancer risk from the National Academies of Science (BEIR VII) should be utilized for calculating risk to adults of both sexes and for children.

Response: Applicable or relevant and appropriate requirements (ARARs) are selected in the RI/FS reports, which are primary documents under the Tri-Party Agreement. With regard to BEIR VII, the EPA has yet to modify its risk assessment guidance in response to BEIR VII. Until such modifications are adopted, DOE will continue to follow current EPA guidance when preparing its risk assessments.

Advice Point #5: The Board advises that the RCBRA calculations of residual risk should be the risk basis from which the final cleanup determination for waste sites along the River Corridor should be made, even though the initial cleanup met the requirements of the Interim ROD.

Response: One of the outputs of the RCBRA to the RI/FS reports is the preliminary remediation goals (PRGs) (soil cleanup levels) for protection of human health. The RI/FS refines the PRGs and the Proposed Plan recommends which PRGs to select. After a formal public review and comment process on the Proposed Plan, the ROD selects the remediation goals protective of human health and the environment.

Advice Point #6: The Board advises DOE to determine the amount of arsenic resulting from Hanford operations, and address the risk arising from both this source and arsenic from pre-Hanford agricultural practices. Both arsenic sources should be considered in the River Corridor cleanup plan.

Response: River Corridor RI/FS reports and Proposed Plans will address orchard lands in each OU. As discussed above, each Proposed Plan will go through formal public comment prior to the issuance of a ROD.

Advice Point #7: The Board advises the Tri-Party agencies to use the RCBRA as an opportunity to build public understanding of risk calculation and measures taken to reduce risk. The Tri-Party agencies should share risk-related information and the risk-evaluation process with the broader public to promote a global understanding of risk, instead of using individual proposed unit decisions. The Board further advises the Tri-Party agencies to work with the Board prior to communicating risk information with the public. The concept of risk should be made as understandable as possible and should include an explanation of what risk represents. The Board offers its assistance in developing an acceptable, understandable approach.

Response: The RCBRA will be incorporated into each River Corridor RI/FS process. Each remedial alternative will be protective of human health and the environment and meet ARARs. The Tri-Parties are discussing communication and public involvement needs for the upcoming River Corridor decision processes. In doing so, we will consider your advice along with the need to balance public interest with available resources. We will continue to engage the HAB Committees in discussions on the public involvement processes ahead.

Advice Point #8: The Board requests that the Tri-Party agencies provide workshops for the public and the Board where the completed risk evaluations (Human Health Risk Assessment, Ecological Risk Assessment, ARARs, Groundwater Baseline Risk Assessment, and Groundwater Pathway Risk Assessment) are discussed and presented in an integrated manner. These workshops should occur prior to the completion of the RI/FS proposed plan and final ROD process. This will give the Board and the public an opportunity to revisit this topic, garnering a more complete understanding of the total risk from River Corridor sites.

Response: When the draft RCBRA Ecological Risk Assessment is available, DOE plans to follow the process used in working with the HAB on the Human Health River Corridor Baseline Risk Assessment. We will engage the HAB in an iterative dialogue that will include briefing and discussing findings with issue managers, the River and Plateau Committee (RAP), and the full Board if requested by the RAP. We plan to use a similar model for the RI/FS and Proposed Plan for each decision unit, again, balancing public interest with available resources.

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Thank you again for providing this advice. We look forward to working with you in the future on the River Corridor risk assessments and RI/FS reports as DOE progresses toward completing the six River Corridor ROD and meeting the 2015 vision.

If you have any questions, please contact Paula Call at (509) 376-2048.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt McCormick", with a long horizontal flourish extending to the right.

Matt McCormick
Manager

HAB:PKC

Enclosure

cc: See page 5

Ms. S. L. Leckband
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cc w/encl:

C. Brennan, EM-42
S. L. Charboneau, ORP-DDFO
D. A. Faulk, EPA
T. Gilley, Enviroissues
S. Hayman, Enviroissues
J. Hedges, Ecology
S. S. Patel, EM-51
S. L. Samuelson, ORP
T. L. Sturdevant, Ecology
S. G. Van Camp, EM-51
C. D. West, EM-51
M. Zhu, EM-51
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