

HANFORD ADVISORY BOARD

A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act

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US Dept of Energy
US Environmental
Protection Agency
Washington State
Dept of Ecology

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November 6, 2014

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Re: CRESP Methodology for the Hanford Site-wide Risk Review Project

Dear Mr. Whitney,

The Hanford Advisory Board (Board) has been asked to provide comments on the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) Risk Evaluation Report, "Methodology for the Hanford Site-wide Risk Review Project." Inasmuch as several affected governments have submitted detailed technical comments, this letter is limited to overarching Board concerns.

The purpose and intended use of the CRESP report are not clear. The U.S. Department of Energy (DOE) is spending around \$4 million on this project, but the Board is not sure what the project will accomplish. To quote from the charge letter, "*The Risk Review Project should take into consideration: current and future impacts ... focus[ing] on risks associated with cleanup work that is currently on-going and remaining at the Hanford Site....*"¹ The letter also states that one goal is "to inform the efficient use of Department of Energy (DOE) Environmental Management (EM) resources." The implication of these two statements is that DOE-EM may seek ways to justify reducing the amount of future cleanup, using "risk" as a rationale.

Since legally enforceable milestones in the Tri-Party Agreement already exist for much of the remainder of Hanford cleanup, as negotiated between DOE, the Environmental Protection Agency, and the Washington State Department of Ecology and implemented through a series of negotiated milestones and Consent Decrees, it is unclear to the Board as to what decisions it will support. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) based decisions, which drive Hanford cleanup, are predicated on risk reduction. CRESP does not take into consideration natural resource damage assessments (NRDAs), which are CERCLA actions that may follow remediation. NRDAs are monetary damage assessments (compensation) for injuries to natural resources caused by the release of a hazardous substance (i.e., a hazardous substance left in place following remediation). NRDA liability is real and must be compensated. Any decision process that ignores the possibility of natural resource injury, and the associated costs, from the release of a hazardous substance, is a fundamentally flawed decision process.

The draft CRESP methodologies report does not discuss any of these regulations. It is of paramount importance for DOE to continue its commitment to completing the cleanup mission at Hanford, and

1 Letter from David Klaus (DOE) to David Kosson (CRESP), January 16, 2014.

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to fund these commitments accordingly.²

It is the Board's belief that the methods used to evaluate risks and impacts posed by future cleanup actions do not conform to standard risk assessment practice. Several examples are as follows:

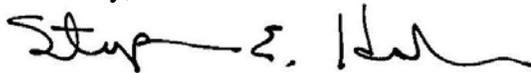
- The risk evaluation, while it appears to be systematic and consistent, is actually subjective and qualitative. Many of the conceptual assumptions are illogical and some of the technical assumptions (such as recharge rate or Kd) are controversial.
- The concept of "risk" defined by CRESM is very different than conventional CERCLA/RCRA risk assessment used in Hanford decision support. For example, CRESM assumes that if there is no exposure there is no risk, and also assumes that exposure pathways could be confidently blocked through institutional controls until contaminants reach safe levels. By this definition, Hanford does not pose a public health risk because public exposure to Hanford contaminants will be prevented for the projected 150 to 1,000 years. Risk evaluation does not rely on land use provisions, but rather on the potential or possibility of exposure.
- The CRESM method confuses 'risk' with hazards and impacts. Hanford contains facilities that are highly hazardous, but which are not currently exposing the public (such as the Plutonium Finishing Plant, K Basin sludge, and tank waste). There is also a great deal of contamination in the vadose zone that has not yet reached the groundwater and will not within the short evaluation time frame (150-1,000 years). By CRESM's definition, all of these would be rated as very low risk because the public is not exposed at present and because worker dose limits are closely monitored.
- CRESM is only evaluating the impacts to ecological and cultural/historic resources caused by remediation, and not by contamination, and assumes that there are, at worst, only minimal risks to those resources if Hanford is not cleaned up. Taken together with the previous finding, an uninformed reader would conclude that some [or much of the] Hanford cleanup is not necessary because (a) there are no present risk drivers that drive cleanup, and (b) impacts to ecological and cultural resources caused by remediation might outweigh any public health risks. This thinking is not correct and does not represent the contaminant risk that drives cleanup.
- CRESM further confuses risk assessment with risk management. CRESM employs the short-term land uses identified in the Comprehensive Land Use Plan (CLUP) as the rationale for assuming that there is little potential for long-term public access and exposure. This conclusion is flawed. Land use is a risk management decision that embeds risk-based institutional controls after risk assessments have been done and remedial actions have been completed. Resource management decisions such as conservation are not the same as risk-based land use restrictions and are not intended to be used as exposure scenarios. If remediation to residential or tribal standards is not achieved, then

² Advice #276, June 5, 2014 (Re: 2014 Lifecycle Scope, Schedule and Cost Report).

any more intensive future land use options are precluded because they would not be safe. This is unfair to future generations and creates liabilities for DOE since DOE is already seeking to release segments of Hanford for public use, and has already begun developing segments closest to Richland (the Pacific Northwest Site Office campus).

- CRESP does not consider Treaty and other legal rights for Native Americans and others to utilize currently contaminated areas and resources. In assuming that no exposures will occur based on extending the time frame in the CLUP for restricting uses, CRESP ignores legal rights to use land and resources. Treaty rights, for example, include living along shorelines of usual and accustomed fishing grounds – the Hanford Reach of the Columbia River – and utilizing food, religious and cultural resources as part of the Treaty right. Both CERCLA and Washington State law require restoration of resources such as groundwater to beneficial uses within reasonable time periods; and, require that cleanup plans be based upon public input regarding the reasonable maximum exposure scenario. This scenario should include reasonably foreseeable uses of resources and land areas regardless of formal institutional controls or plans, if it is reasonably foreseeable that those controls or plans will not be effective after a certain time period. Thus, the CRESP methodology is flawed and in conflict with generally accepted principles and legal standards for assessing risk at cleanup sites.
- The conclusion the Board finds from the directions given in the charge letter and the assumptions, the CRESP definitions, and examples used by CRESP, is that DOE-EM may try to reduce cleanup commitments by using false arguments that (a) there is no public health or ecological risk to drive cleanup, (b) that DOE expects that short-term land use will be maintained in perpetuity and therefore institutional controls will always prevent human exposure, and that (c) the combination of worker risk during remediation and the impacts to cultural and ecological resources during remediation may outweigh the benefits of cleanup. The Board suggests DOE consider that the real driver for cleanup is the risk derived from the presence of contamination and that the only path forward is the lessening of that risk through true remediation actions.

Sincerely,



Steve Hudson, Chair
Hanford Advisory Board

This letter represents Board consensus for this specific topic. It should not be taken out of context to extrapolate Board agreement on other subject matters.

cc: Doug Shoop, Acting Manger, U.S. Department of Energy, Richland Operations
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