



CRESP

Consortium For Risk Evaluation with Stakeholder Participation

June 4, 2014

Dear Hanford Advisory Board, Community Members and All Others Interested in the Hanford Cleanup:

My name is David Kosson. I am a professor of Environmental and Civil Engineering at Vanderbilt University and have been engaged in risk-analysis related research for the US Department of Energy since 1995. A good deal of this research has been at the Hanford site. I am writing to you to encourage your participation in the Site-Wide Risk Review project that is underway at Hanford. In mid-January 2014, the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) was requested by the U.S. Department of Energy (DOE) Deputy Under Secretary to conduct an evaluation of human health and environmental risks and impacts at Hanford. The primary goal of the Risk Review is to identify and characterize current and future risks and impacts to the public, workers, and the environment from sources at Hanford, including from currently present environmental contamination, waste storage and processing facilities, other operating facilities, waste disposal sites and decommissioning of facilities. The results of this site-wide Risk Review are expected to help inform decisions that will be made on the sequencing of future cleanup activities at Hanford.

CRESP is developing a methodology grounded in the discipline of risk analysis and testing it on a limited set of Hanford contamination sites and facilities. A Core Team, led by CRESP scientists and which consists of senior management representatives of DOE from headquarters and the Hanford Site, the Environmental Protection Agency, and Washington State, are overseeing the development of the methodology that ultimately will be used to execute the Risk Review.

The Risk Review is expected to take about 18 months to complete. CRESP will seek input from stakeholders, tribal nations and any other person interested in the cleanup at key stages in the review: (i) components of the draft methodology revised from the pilot application (July 2014 time frame); (ii) the Interim Progress Report (October-November 2014 timeframe); and (iii) the draft Final Report (September-October 2015 timeframe). Additionally, CRESP anticipates that public meetings and webinars will provide opportunities for explaining the Risk Review process, answering questions, soliciting input, listening to concerns, and discussing the final results.

The most up-to-date information on the Risk Review will be available from CRESP's website, which is www.cresp.org/hanford. CRESP also may be contacted through the website. The attached documents should provide information as well. Please consider giving CRESP your e-mail address so that you may be notified when comments are requested and also when public meetings and webinars are scheduled.

Sincerely,

David S. Kosson, Ph.D.

CRESP Principal Investigator
Cornelius Vanderbilt Professor of Engineering
Vanderbilt University

Attachments



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Hanford Site-Wide Risk Review Project

In January 2014, the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) was requested by U.S. Department of Energy (DOE) Deputy Under Secretary Klaus to conduct a site-wide evaluation of human health and environmental risks and impacts at Hanford. The primary goal of the Risk Review Project is to identify and characterize current and future risks and impacts to the public, workers, and the environment from sources at Hanford including from prior contamination, operating facilities, waste disposal sites and demolition of facilities. The Review is expected to inform the DOE Office Environmental Management (EM)'s efforts to make more effective decisions about the sequencing of cleanup activities at Hanford. In order to help ensure potential risks and impacts are consistently evaluated, CRESP is using a scientifically sound methodology to conduct the Risk Review Project.

CRESP is a multi-disciplinary consortium of universities that advances environmental cleanup by finding ways to improve the scientific and technical basis for management decisions, and also to foster public participation in that search. For more than 15 years, CRESP has conducted various studies, reviews, and assessments at DOE-EM sites around the country. Specifically, CRESP has completed risk informed characterization projects involving complex issues at both large and small DOE-EM sites. CRESP receives funding under a cooperative agreement between DOE-EM and Vanderbilt University as the lead organization for the multi-university consortium.

CRESP's focus at Hanford is to conduct a comprehensive review using the information that exists regarding the site to develop a summary level catalogue and classification of risks and impacts to the public, workers, and the environment. The risks and impacts of specific contaminated areas and activities will be categorized from very high to none according to the magnitude of potential harm that identified contaminants from ongoing and future cleanup work may have on the public, workers, and the environment, including ecological and cultural resources. On-going and future cleanup work to be considered includes: tank wastes treatment and tanks closure; soils; vadose zone and groundwater remediation; facility decommissioning; on-site near-surface disposal of contaminants; and on-site risks from transuranic and high level radioactive waste projected for off-site disposal.

A Core Team, led by CRESP, will consist of representatives from DOE-EM, Office of River Protection (ORP), and Richland (RL), Washington State, and the Environmental Protection Agency (EPA). The Pacific Northwest National Laboratory (PNNL) will provide research and other assistance in a supporting role to CRESP during the Risk Review Project. The Core Team's function is to oversee the development and execution of the Risk Review Project.

An interim progress report that includes evaluations of a representative sample of the entire site will be prepared by mid-October, 2014. The entire Risk Review Project is expected to take about 18 months to complete. To ensure that information known to and views of all interested parties, including the public, are fully understood and taken into account, CRESP will consult with tribal nations and also will provide the public, stakeholders, and local, state, and federal entities opportunities to provide input during the risk review.

CRESP Principal Investigator: David S. Kosson, Vanderbilt University
CRESP Co-Principal Investigator: Charles W. Powers
For additional information contact Lisa Bliss (information@cresp.org)



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Hanford Site-Wide Risk Review Project Frequently Asked Questions

What is the purpose of the Hanford Site-Wide Risk Review Project?

The primary goal of the Risk Review Project is to identify and characterize potential risks and impacts to the public, workers, and the environment from current contaminant sources and potential future cleanup efforts at the Hanford Site. The information resulting from the Risk Review Project will be used as one of multiple considerations to better enable risk-informed sequencing of remedial work at Hanford.

Who is conducting the Risk Review Project?

The Risk Review Project is led by the Consortium for Risk Evaluation with Stakeholder Participation (CRESP). CRESP is a multi-disciplinary consortium of universities that include Vanderbilt University, Rutgers University, New York University School of Law, Oregon State University, the University of Arizona, Howard University, and the University of Wisconsin – Madison. CRESP's mission is to advance environmental cleanup by finding ways not only to improve the scientific and technical basis for management decisions, but also to foster public participation in that search. CRESP is being assisted in this review by a strong team of researchers from Pacific Northwest National Laboratory (PNNL). The Risk Review Project is being guided by input from a Core Team consisting of senior representatives from the Department of Energy (DOE), the State of Washington, and U.S. Environmental Protection Agency (EPA). There also will be opportunities at key points during the Risk Review Project for input from individuals, organizations, agencies, elected officials and tribal nations.

Has CRESP been involved in other risk review projects?

Yes. CRESP has completed risk informed characterization projects involving complex issues at both large and small Department of Energy (DOE) Environmental Management (EM) sites across the United States. Furthermore, senior CRESP researchers have been in risk evaluation and risk-informed decision making for a broad range of local, state and national issues.

What is the difference between this Risk Review Project and other "risk" initiatives previously conducted at Hanford?

Previous risk initiatives were less comprehensive and were not using information that is now available. Second, previous risk assessments did not systematically distinguish the evaluation of both current and future risks and impacts. A third difference is that this Risk Review Project is a collaborative effort led by an independent entity (CRESP) involving a core team from all three parties – US Department of Energy (DOE), Washington State, and US Environmental Protection Agency (EPA) – at several organizational levels. Finally, at key points during the Risk Review Project, the views of tribal nations, stakeholders, agencies, and members of the public will be solicited and considered.

Why is the review being conducted now?

There are several reasons. First, cleanup has proven to be a much more lengthy, complex, technically challenging and expensive undertaking than was envisaged in 1989 when Hanford's mission shifted from production of weapons material to waste management and cleanup.

Second, certain key cleanup activities, such as removing the threat from the radioactive waste stored in underground tanks and treating that waste, is taking much longer and proving to be much more difficult to achieve than originally anticipated. This means assessment of current and future risks associated with long term cleanup activities need updating based on strategies already implemented or being implemented and those anticipated to be implemented in the future.

Third, the very nature and sequencing of cleanup activities have been altered over time as findings about site characteristics and disposal options have changed and conclusions as to the efficacy of new or existing technologies have been adjusted.

Finally, there continues to be uncertainty surrounding the levels of funding that Congress will make available for cleanup in any specific timeframe. If funding varies, DOE and other policymakers will want to ensure that resources directed toward cleanup efforts in any particular time period are both fully protective of human health and the environment in the near-term and integrated with cleanup work sequenced to address situations posing long-term future risks. It is anticipated that the results of this Risk Review will allow DOE, its regulators and others interested in or affected by site decisions to be better informed and therefore, better able to select which areas at Hanford deserve urgent attention while also undertaking the longer-term projects that address future risks.

Will the entire site be evaluated?

Yes. The site will be divided into waste units for evaluation purposes that includes the cleanup efforts overseen by both DOE-Richland Operations Office (RL) and the Office of River Protection (ORP). An evaluation of contaminated sources will be developed for each waste unit.



Such sources include: high level waste tanks, facilities requiring decommissioning, operating facilities, near surface disposal areas/facilities, soils, and ground water plumes.

A waste unit may contain one or multiple sources. Information on each waste unit will be gathered from existing documentation, such as from diverse information sources including compliance documents (final and in draft), environmental impact statements, safety analyses, and various review, monitoring and characterization reports from many peer-reviewed and other literature.

What is the process CRESP will use to evaluate risk?

Once the waste units have been selected and information on each unit has been gathered, CRESP will develop a summary level catalogue of risks to the public and workers and impacts on the environment. Using a carefully-evolved and transparent methodology, CRESP will evaluate and group the risks and impacts of the sites' waste units into bins or levels (from very high to negligible) according to the magnitude of potential harm that these waste units now and in the future may pose to the public, workers, and the environment, including ecological and cultural resources.

Risks evaluations will consider future land uses that have been designated, potentially augmented by some from regulatory specifications. Consideration also will be given to nearby land uses and activities that have a potential to impact the public, workers, and the environment.

When will the Risk Review Project be completed?

CRESP anticipates that the Risk Review Project, which began in January 2014, will take about 18 months to complete.

What other agencies are involved with the Risk Review Project?

As noted, CRESP is leading a Core Team consisting of senior managers from DOE (EM, Richland Operations Office (RL) and the Office of River Protection (ORP)), Washington State, and EPA. The Core Team's primary function is to oversee the development and implementation of risk characterization metrics and templates for determining risk ratings and the integration of rating results. The Core Team may also develop a set of conclusions and recommendations in response to CRESP's final report.

How will the public be kept informed?

It is important that members of the public interested in the Risk Review Project be kept informed and given the opportunity to provide information or comments as the Project proceeds. In addition to conducting public meetings, CRESP intends to ask the public for written comments at various points during the Risk Review Project. Any member of the public providing CRESP with an e-mail address will be sent periodic updates on the status of the Risk Review Project and information (including links) on how to provide input. CRESP's webpage on the Risk Review Project (www.CRESP.org/hanford/) will contain the most up-to-date information on the Risk Review Project.

Will input from the public be considered?

Yes. Every written comment received will be acknowledged, reviewed and considered.

Will the results of the Risk Review Project be made public?

Yes, the results will be made public at two different or more points during the Review. First, CRESP will prepare an interim progress report, which is expected to be completed and submitted to DOE, Washington State, and EPA by October 31, 2014. This interim progress report will be made available to the public and written comments will be solicited.

Second, CRESP will prepare a final report of the Risk Review Project, which will be made available to the public. CRESP will give the public an opportunity to provide written comments on the draft of the final report. All written comments received will be considered before the final report is completed.

What will happen with the final report of the Risk Review Project?

The final report will not only be made public, but CRESP hopes it will be of specific value to the Tri-Parties, (DOE, Washington State Department of Ecology, EPA) as well as to other agencies with regulatory responsibility at Hanford such as the Washington State Department of Health, the Nuclear Regulatory Commission, and the Defense Nuclear Facility Safety Board.

What is the relationship between the Risk Review Project and cleanup commitments made in the Tri-Party Agreement and/or 2010 Consent Decree?

The Risk Review Project is concerned with risk characterization, not with risk management decisions. The Risk Review Project also is not intended to substitute for the regulatory processes found in the Hanford Federal Facility Agreement and Consent Order (known as the Tri-Party Agreement) or applicable Consent Decree.

For additional information contact Lisa Bliss (information@cresp.org)