



The Institute for Responsible Management

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Dear Advisory Committee Member:

Enclosed are the following two reports:

Preliminary Risk Evaluation of Alternatives for Disposition of Calcined High-Level Waste at the Idaho Site

Preliminary Risk Evaluation of Options for Buried Waste Disposition at the Idaho Site

In its Spring 2005 report Risk and Decision, the National research Council recommended that the Department follow an organized step-by-step process, in short an algorithm, for risk-informed decision-making that would allow both technical and less technically trained people to follow a transparent process of defining the problem and then track the key elements associated with its remediation under different cleanup approaches so that the steps involved in each and the outcomes to be achieved by each would be well illuminated, the risks associated with the different steps would be highlighted, and the tradeoffs to be made among the options clearly seen. There was another fundamental premise underlying the NRC proposed-process: insistence that the things we do not know or know well enough (the gaps in the process to be followed under each alternative) be identified so that whenever the fundamental choices are being made, the decision makers and those affected by the decisions would be clearly aware of i) what are the known risks inherent in the choice for one or another alternative and ii) what is the significance (for risk evaluation and for programmatic success) of what we do not know about each alternative.

Developing a risk-informed decision that considers human health and ecological risks along with other social factors should include explicit consideration of the trade-offs between reductions in human health risk achieved through each remediation option and the additional human health risks incurred as part of achieving that option. Thus, human health risk evaluation should include consideration of risks to remediation workers and other on-site and off-site populations for current and future generations. Integrated evaluation of this range of human health risks often is not achieved as part of the remedial decision process. Rather, typically based on a myriad of regulatory

requirements originally intended for less complex problems, a piecemeal approach is taken that examines risks prior to remediation, sometimes evaluates risks to workers and others during remediation, and rarely includes structured quantification of risk reduction likely to be achieved by the proposed remedy. Evaluation of each of these types of risks has a history of different methodologies. In addition, integration of these risks along with inclusion of an understanding of the context of nearby environmental risks, future land use and long-term stewardship requirements often has been absent from evaluation of remedial options across the DOE complex. This report provides a foundation to achieve such a needed integration.

The two major cleanup tasks addressed by these two documents prepared by CRESPP pose significantly different types of remediation challenges – calcined high level wastes currently stored in bin sets, and buried wastes (including TRU wastes) in the Subsurface Disposal Area. Not only are the materials largely different (in terms of toxicity and many other characteristics) but the classification of the materials to be addressed is different under the regulatory regimes which define them and their management. The processes by which these materials were delivered to the matrices in which they are now found were very different. Our knowledge of where the specific materials are and of their conditions is dramatically different. And yet, we have sought to understand each of these problems through the prism of a very similar template because we believe that a similar structured approach to risk evaluation is important to achieving risk informed decisions, i.e., those that appropriately consider risk as one of several factors in a complex management decision.

Given this picture of the template, there are three cautionary points that need to be made. 1) Although this template self-consciously draws attention to risks of various sorts, and in particular to in-remediation risks as distinct from post-remediation risks, it does not itself seek to evaluate or “balance” those risks; 2) in using the template, CRESPP is fully aware of, and supportive of, the fact that factors other than risk factors in public policy are intended to guide choices among regulatory alternatives; and, 3) that CRESPP does not here “recommend” an alternative. Our purpose has instead been to use the template to illustrate and make understandable what those alternatives involve when risk is the focus.

These are weighty documents. We recognize the common desire on the part of all of us simply to read an executive summary and believe we then have the basis for making an informed decision. And we have prepared an executive summary for each of these two templates that we think extracts what we believe to be the essence of what we have learned. But in order to have arrived at those summaries, we have found it necessary not only to develop the full narrative but also to trudge through the very complex flow diagrams that make up the appendices to our documents. We believe that was necessary for every step so that we could be fully mindful of what each step involves. Unless you trust CRESPP more than we trust ourselves to capture in a few summary paragraphs what became clearer to us only through the extensive evaluation process, we encourage you to read the full document. We simply know how hard it was for us to comprehend the complexity – and therefore the real risks – associated with both the

remediation goals and the processes through which the implementers must go to achieve them for the several alternatives. And therefore we encourage you to you spend time with the flow diagrams and appendices of these two documents where we try to show these factors.

Thank you for the opportunity to provide input into the important process of protecting the health of the Idaho citizens and the environment of the Idaho Site and its environs. We look forward to discussing these reports with you and your feedback.



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