



Oregon

Theodore R. Kulongoski, Governor



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Mr. Matt McCormick
Richland Operations Office
U.S. Department of Energy
PO Box 550, MSIN A5-11
Richland, WA 99352

Dear Mr. McCormick,

Oregon appreciates this opportunity to comment on the proposed plan for cleaning up the groundwater in the ZP-1 operable unit (DOE/RL-2007-33, Rev. 0, hereafter “the plan.”).

Oregon continues to agree that the ongoing active treatment (Alternative 2) is the correct choice for addressing the ZP-1 contamination and DOE should move forward with the planned expansion of this system. That said, we do have concerns about the plan.

Our first concern is that, except for the eventual target endpoint, the plan stops with remedy selection. The plan does not mention the legally required five year reviews or give interim contamination levels that DOE expects to find when those reviews occur, which are necessary to determine if (a) the conceptual site model is accurate and (b) the remedy works as intended.

Thus, the plan needs an additional section describing how progress will be monitored and assessed. This section should describe the five-year review requirement and the sampling that will be done to monitor progress. It should also estimate the interim contamination level projections that will be used to assess whether the remedy is succeeding (or whether a new or modified conceptual model or cleanup approach is required).

We are also concerned that the only mention of future monitoring in the plan is in the context of introducing the idea of a possible technical impracticability waiver:

“If Alternative 2 is implemented and monitoring of the aquifer and/or the effluent from the pump-and-treat system indicates that the cleanup levels for the [contaminants of concern] cannot be achieved either in the aquifer or by the treatment train, a future technical impracticability waiver may be sought and approved through an amendment to the [record of decision].”

Given that the plan calls for more than two dozen extraction and injection wells to be operated for a quarter century, DOE must expect and plan to incorporate advances in cleanup and monitoring technology through time, not plan to seek a waiver if the proposed remedy provides disappointing

results. The alternative to success with the proposed plan is finding more effective approaches, not declaring that cleanup is technically impractical.

Further, we still have many of the concerns that we noted in our comments on the previous draft of this plan, which we provided by letter on November 13, 2007. We particularly stress the need for close monitoring of the cleanup progress with this plan and the need to use the monitoring results to refine and improve it, including the underlying conceptual site model and risk assessment. As we noted in our prior letter:

- The behavior of the technetium 99 sources and plumes are not well understood, and the plan may have to be revised to address these.
- There is a strong chance that a significant mass of the carbon tetrachloride is present as a dense, non-aqueous phase liquid, or DNAPL. The plan supposes that little or no carbon tetrachloride is present as DNAPL. The key sign will be the response of the carbon tetrachloride levels in groundwater through time as the treatment progresses. As we suggested in our prior letter, DOE should pilot the use of additional treatments (electrical resistance heating and anaerobic bioremediation) to develop the ability to respond if the selected remedy is not performing as well as expected.
- The relationship of this groundwater unit to the source units and the vadose zone above, particularly the 200-PW-1 unit, is critical. The plan notes that the Tri-Parties agreed to perform the risk assessment and feasibility studies for ZP-1 and PW-1 in parallel; however, the projects are no longer proceeding in parallel. DOE is submitting a proposed plan for ZP-1 before the plan for PW-1, which is turning out to be a complex and difficult challenge. Thus, even if approved, this plan must be considered conditional. DOE must expect and plan to reopen the conceptual site model and the risk assessment for ZP-1 as new information is gained about contaminant fate and transport through the vadose zone.

Editorially, the plan is fairly well-written. We appreciate that the plan used an active writing style with a reduced amount of jargon, as well as several thoughtful editorial choices. These included the use of bolded text to refer readers to a glossary of technical terms in an appendix (rather than defining terms in text) and placement of appendices (such as the glossary and the table of abbreviations and acronyms) at the end of the plan rather than the beginning. These small elements make the plan more readable. We hope that these practices will be adopted more widely and not limited to documents issued for public comment.

One editorial choice not made that would have helped readers and reviewers very much is the use of pinpoint citations (telling the reader which sections or pages of other documents that the writer is specifically referring to, rather than simply listing entire documents). An appendix of references consisting entirely of an alphabetical list of thirty-three documents—many of book length—does nothing to help a reviewer understand the plan or its technical basis. Pinpoint citations let reviewers follow the logic of the analyses presented and, therefore, offer more useful comments and questions. Along those lines, the plan should explain what “supporting documents” are and their relationship to the references.

I would be happy to discuss these concerns with you further. Please contact me at 503-378-4906 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Niles". The signature is fluid and cursive, with the first name "Ken" being more prominent than the last name "Niles".

Ken Niles
Assistant Director

Cc:

Dennis Faulk, U.S. EPA
John Price, Washington Department of Ecology
Sandra Lilligren, Nez Perce Tribe
Wade Rigsbee, Yakama Nation
Ted Repasky, Confederated Tribes of the Umatilla Indian Reservation
Hanford Natural Resources Trustee Council
Susan Leckband, Hanford Advisory Board Chair