



# Oregon

John A. Kitzhaber, M.D., Governor



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April 5, 2013

Stephen Korenkiewicz, Lifecycle Report Project Manager  
U.S. Department of Energy – Richland Operations Office  
P.O. Box 550, Mailstop A5-16  
Richland, WA 99352

Dear Mr. Korenkiewicz:

Thank you for the opportunity to provide comments on the 2013 Hanford Lifecycle Scope, Schedule and Cost Report (DOE/RL-2012-13 Rev. O). As with previous versions of this report, it provides useful information and remains a valuable reference tool.

However, we continue to believe that this document almost completely misses the mark in providing information that is necessary to understand the likely impacts of delaying (or accelerating) cleanup projects. Past versions of the report did not contain information comparing the projected effects of different funding scenarios on the schedule or life cycle costs of cleanup. It is also not contained in this Lifecycle Report. Tri-Party Agreement Milestone M-036-01 and this document state that one of the purposes of the Lifecycle Report is to explain “how milestone changes and adjustments will affect lifecycle scope, schedule and cost.” Given the budget constraints the site will likely be operating under for at least the next few years, a great deal of additional information is needed to fully understand implications of delaying work.

Figure ES-1 shows the remaining “estimated cleanup costs by Fiscal Year” (FY). For the period FY 2013 to approximately FY 2045, this figure shows annual funding needs much higher than current and historical levels of Hanford funding, peaking at approximately \$3.8 billion in FY 2017. Yet nowhere in this document is there an attempt to explain why this level of funding should reasonably be anticipated, or the consequences of not providing that level of funding.

Funding at levels below the defined profile will cause considerable delays and those delays have additional costs that should be clearly identified in this report, such as:

- continued “safe and compliant” or “min-safe” costs that would have to be made until a facility/structure is gone
- additional worker training costs, if workers are laid off or moved to other projects and then brought back
- keeping a treatment and/or disposal facility operational longer than planned – including possibly the Waste Isolation Pilot Plant (or ending up with orphaned waste)

- maintaining/upgrading/replacing infrastructure that might have otherwise not been necessary

As a recent example of the potential cost of maintaining infrastructure on facilities planned for eventual demolition, the Defense Nuclear Facilities Safety Board, in its Hanford Activity Report for the week ending January 18, 2013, reports that rain leakage through the degrading roof of the REDOX Plant is likely causing contamination to spread within the building. REDOX is not likely to be demolished within the next decade or more, and consequently is likely to require repairs or upgrades to maintain it in a safe condition. This report provides no way to judge those potential additional costs.

A key assumption in all versions of the Lifecycle Report to date is that the double-shell tanks will remain fully operational for the nominal 40 year duration of the waste treatment mission. The recent discovery of a leak in the inner liner of double-shell tank AY-102 undercuts this assumption and complicates contingency planning and costs for tank retrieval. This tank will not simply be unavailable to receive and store waste but under the Resource Conservation and Recovery Act, the tank must be emptied. In a letter to the Department of Energy dated April 3, 2013, the Washington Department of Ecology encourages DOE to remove the contents of tank AY-102 “as soon as practicable.”

In our November 2011 comment letter on the 2011 Lifecycle Report, Oregon encouraged DOE to add to this report the ramifications of the “inability to effectively use one or more double-shell tanks due to aging and potential leaks.” The leak in AY-102 removes one of the 28 double-shell tanks from use. It now seems more like wishful thinking than a likely outcome that the remaining 27 double-shell tanks will remain fully operational for a minimum of 40 more years. The next version of this document must include an analysis of the range of likely costs associated with leaks in double-shell tanks: pumping AY-102 and possibly additional tanks as well; contingency plans for losing one or more additional double-shell tanks; and costs associated with building and putting into service additional storage capacity.

We appreciate that many of the comments we suggested in November 2011 were incorporated into this report. Many were not. Lacking an explanation for why some comments were not incorporated, we have repeated some of our earlier recommendations.

Again, we appreciate the opportunity to provide comments on this document. We look forward to seeing future versions of the Hanford Lifecycle Scope, Schedule and Cost Report. We have a number of specific comments that follow.

If you have questions about our comments, please contact me at 503-378-4906.

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  
Nuclear Safety Division Administrator

Cc: Jane Hedges, Washington Department of Ecology  
Dennis Faulk, U.S. Environmental Protection Agency  
Max Power, Chair, Oregon Hanford Cleanup Board  
Steve Hudson, Chair, Hanford Advisory Board

## **Additional Comments from the Oregon Department of Energy on the 2013 Hanford Lifecycle Scope, Schedule and Cost Report**

### **Comments from our November 9, 2011 letter that were not adequately addressed:**

- It would be useful to include the names of the major contractors and their responsibilities. Since this document is to be updated annually, contracting changes can easily be included.
- The anticipated period of action for cleaning up the Deep Vadose Zone seems unrealistically short. Given that most complex projects at Hanford (spent fuel, K- Basin sludge, groundwater, tank waste) have taken far more than the amount of time allocated in this report, it seems that the assumptions for this work should be revisited.
- Table 4-3, "D4 Closure," states that this work element includes D4 of approximately 500 facilities. This number should be updated to reflect how many buildings have been demolished, how many are in progress, and how many remain.
- Page 4-15, section 4.4, "River Corridor Cleanup Assumptions and Uncertainties," includes an assumption that "Final RODs will confirm that cleanup levels established in the interim RODs are protective of human health and the environment." That is a significant assumption. A range of impacts should be included if this assumption proves to be incorrect.
- On page 5-37, the last assumption listed is that "WIPP will remain operational through the end of Hanford Site cleanup operations that have the potential to generate TRU waste." This is an issue that needs further exploration within this document. The topic also provides an opportunity to demonstrate the necessity to ensure that these cleanup activities at Hanford are not dramatically delayed, because one of the impacts may be the need to extend the planned operating life of WIPP (at what would be a considerable cost), and that cost should be included in the document. With continued delays in the transuranic waste retrieval program, there is the potential for a major disconnect between Hanford cleanup and WIPP availability.
- Appendix C, "Hanford Site Cleanup Decisions," should include reference to Records of Decision which designate Hanford for disposal of off-site waste. This would include the February 25, 2000 *Record of Decision for the Department of Energy's Waste Management Program: Treatment and Disposal of Low-Level Waste and Mixed Low-Level Waste; Amendment of the Record of Decision for the Nevada Test Site*, and the June 30, 2004 *Record of Decision for the Solid Waste Program, Hanford Site, Richland, WA: Storage and Treatment of Low-Level Waste and Mixed Low-Level Waste; Disposal of Low-Level Waste and Mixed Low-Level Waste, and Storage, Processing, and Certification of Transuranic Waste for Shipment to the Waste Isolation Pilot Plant*.

## Comments specific to the 2013 Hanford Lifecycle Report

- The 2011 Lifecycle Report included a figure (Figure 5.5) that provided a graphic of the major Hanford groundwater plumes. In our November 2011 comments, we suggested that in addition to this figure, it would be useful to have additional figures that show the groundwater plumes at each of the reactor areas and in each of the 200 Areas and the 300 Area. Instead, Figure 5.5 was removed and there is no groundwater map whatsoever. We repeat our request for groundwater plume maps for individual areas on the site and further request that the site-wide groundwater plume map be added back.
- Table 5-4 shows groundwater operable unit remediation. We had previously indicated that the estimated period of remediation for several of these pump-and-treat systems seems unreasonably short. The 2013 Lifecycle Report now has language that says these estimates are based on previous experience with interim ROD remedial actions and groundwater modeling. We still believe the timeframes as represented in this report are far too short and not realistic.
- Tank Waste Cleanup Assumptions listed on Page 6-15 include an assumption that “A planned offsite geologic repository will be ready to accept immobilized high-level waste (IHLW) canisters from the Hanford Site starting in April 2023 at a rate that does not require construction of additional interim storage beyond that planned for the Hanford Shipping Facility.” The text does note that ORP recognizes delays in availability of a national geologic repository by April 2023 as a key uncertainty – yet the assumption remains. In January 2013, DOE released its “Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste” in which DOE projected its plans to hopefully site and open a repository by 2048. Clearly, vitrified high-level waste will have to be stored at Hanford for likely at least a few decades. This report must include cost estimates for building and operating suitable storage facilities.
- Tank Waste Cleanup Assumptions listed on Page 6-15 also includes an assumption that “Supplemental LAW treatment capacity will be provided by a second LAW vitrification facility located adjacent to the WTP.” However, this document includes no cost estimates or schedule for building and operating such a facility.
- The funding profile for Safeguards and Security shows a big increase from 2018 to 2019 (\$76m to \$101 million), and then a drop in 2020 (to \$62 million), without an explanation. The funding profile also shows a large drop from 2037 to 2038 (\$103 million to \$54 million), again with no explanation.

- Section 1.7, “Changes From Previous Report” indicates that Section 7.4 – Long-Term Stewardship (LTS) was revised to clarify that LTS has started and how it will continue under PBS-LTS. However, the Lifecycle Report shows no funding until 2060. If the program has started at Hanford, as Section 1.7 indicates, what are current funding needs and needs through 2060?
- Table A-3 “Summary of Cleanup Actions and Plausible Alternatives – Central Plateau” includes one alternative for cesium/strontium capsules (CP-9) of storage for 300 years, then direct disposal. Is the assumption that Hanford will have operating disposal facilities for 300 years? If so, those costs are not accounted for.
- Table A-6 “Anticipated Schedule for Detailed Analysis of Cleanup Action Alternatives” includes four cleanup actions for detailed analysis in the 2014 version of the Lifecycle Report. We support an examination of “Remediate Contaminated Deep Vadose Zone” and “Restore 200 East Groundwater to Beneficial Use.” However, we do not support detailed examination at this time of “Disposition B Plant Canyon” and “Disposition PUREX Canyon.” We do not believe cleanup will move forward on either of these canyons prior to 2020. Instead, we advocate for detailed examination of “Disposition Cesium/Strontium Capsules” and “Restore 200 West Groundwater to Beneficial Use,” both projects which are currently listed for detailed analyses in 2015 or later versions of the Lifecycle Report.
- Table D-9 shows “WESF Base Operations” increased by about \$1 million annually from costs listed in the 2012 Lifecycle Report, with no explanation.
- Table D-9 shows WRAP “Min-Safe Operations” nearly doubled in cost from costs listed in the 2012 Lifecycle Report, with no explanation.
- Table D-26 shows “Maintain Safe and Compliant FFTF Complex” costs increased by about half a million dollars from costs listed in the 2012 Lifecycle Report, with no explanation.