



Oregon

Kate Brown, Governor



OREGON
DEPARTMENT OF
ENERGY

625 Marion St. NE
Salem, OR 97301-3737
Phone: (503) 378-4040
Toll Free: 1-800-221-8035
FAX: (503) 373-7806
www.Oregon.gov/ENERGY

November 3, 2016

Al Farabee
U.S. Department of Energy
Richland Operations Office
PO Box 550, MSIN A5-11
Richland, WA 99352

Dear Mr. Farabee:

We recently completed review of the M-091 Engineering Alternative Study (CHPRC-02916, Rev 0) – approved for release August 31, 2016.

Plans for the retrieval, characterization, processing, certification, and shipment of Hanford's transuranic waste have been repeatedly deferred, and we are pleased to see a comprehensive analysis for dealing with Hanford's legacy and newly generated transuranic waste. We commend the authors for choosing to address needed capabilities for combined waste streams for transuranic and mixed transuranic waste, whether the waste falls within the M-091 Milestones or not. As the report notes, "this combined study will allow the integration of needed capabilities and eliminate the need for separate or parallel studies."

We understand there are regulatory differences related to transuranic waste versus mixed-transuranic waste. From the State of Oregon's perspective, all of it needs to be accounted for in terms of utilizing existing capabilities or developing new capabilities to retrieve, characterize, process, certify, and eventually ship the waste from Hanford to the Waste Isolation Pilot Plant (WIPP) – all prior to 2030, when WIPP is currently slated to close.

For purposes of our comments that follow, we are grouping all the transuranic waste together, and our comments do not address the low-level waste that is also discussed in this report.

There is a lot of useful information contained within this report. It provides us with a much better understanding of the Hanford's Site's capabilities, especially related to retrieval and processing of transuranic waste and what it would take to restore or build upon some of the site's previous capabilities. The examination of various options seems generally well-reasoned.

However, there are elements of this report which we do have concerns about, particularly related to the challenges of moving a vast quantity of waste in a relatively short period of time and suggestions to weaken existing transportation requirements. We are also concerned that one of the proposed alternatives for dealing with the German Logs and other high-curie waste sources is to leave them on site in perpetuity. The rationale seems to be that it is too hard and too expensive to do otherwise. Our

expectation has always been that if these waste streams can't get to WIPP, then disposal in a high-level waste repository should be the planning assumption – once such a facility is actually available.

The information provided on the alpha caissons is informative, it includes more detail than we've seen in the past. However, we would also like to see mention of the waste in the pipe-unit caissons in the 218-W-4A Burial Ground included in the plans for remediation and eventual off-site disposal. While decisions have not yet been made as to the final disposition of wastes in Hanford's SW-2 burial grounds, we believe the waste in these caissons would be a likely choice for eventual retrieval.

It is absolutely clear after reviewing this document that if Hanford WIPP shipments do not begin well before 2024, there is no way the Site will complete shipments to WIPP by their projected closure date of 2030. It would not be logistically or practically possible.

When the U.S. Department of Energy proposed significant delays in the M-091 Milestone series in 2015, Oregon expressed concern that too much work related to transuranic waste retrieval, packaging and shipping was being deferred until after 2020. In a letter to DOE on July 13, 2015, we wrote: "we are concerned that so much work will have been deferred to the 2020s that it will be impossible to achieve it all within the new timeframes. If the U.S. Department of Energy and the Washington Department of Ecology are assuming that all transuranic waste should be off site by 2030 in the event that the permit to operate the Waste Isolation Pilot Plant is not extended, then we have serious concerns about the ability to accomplish all the work that is being deferred until after 2020...We do not believe that a 2030 milestone could possibly be met for shipping all transuranic waste out of Hanford if the resumption of shipments is delayed until after 2020."

Not much more than one year later, this document demonstrates the validity of our concerns. However, rather than recognize this disconnect and propose an earlier start to shipments to meet these deadlines, this plan instead seems to simply ignore the math and the inability of the site to make 6,450 transuranic waste shipments from Hanford to WIPP in a period of about six years.

Even just shipping the waste that is covered under the M-091 Milestones by September 30, 2030 would be a significant challenge. With shipments from Hanford not expected to resume until 2024 or so, the plan suggests the need for nine shipments per week (seven remote-handled and two contact-handled) for about six years to remove the M-091 waste. In rough numbers, that is about 450 shipments per year or 2,700 shipments total. When you add in the remaining 3,750 shipments of waste not within the M-091 Milestones, that requires about 20 shipments a week – every week.

Hanford's peak number of shipments occurred in 2010, when 113 shipments of transuranic waste left the site – 53 to the Idaho National Laboratory, and 60 to WIPP. The most shipments that occurred in a week that year was six. In most weeks it was four or less.

Based on our experience with WIPP shipments, nine a week is certainly doable – but not year round. Bad weather and hazardous road conditions have to be anticipated, which would make it incredibly difficult to sustain a shipping rate of nine shipments every week – let alone 20 – week after week.

When Oregon began working with other Western states and DOE in the late 1980s to begin planning for shipments to WIPP, our number one identified issue for the Oregon portion of the route was bad weather and road conditions. Parts of Interstate 84 – such as Cabbage Hill and Ladd Canyon – are susceptible to severe and unpredictable weather conditions. Interstate 84 is frequently closed during the winter months due to blizzard conditions, black ice, or heavy snow.

DOE and the Western states jointly developed a comprehensive transport safety plan for WIPP shipments. Part of that agreement is that WIPP shipments will not travel when certain road or weather conditions exist. Oregon has absolutely no interest in weakening those standards and increasing the risk of a transportation accident, simply to try and support an unrealistic shipping schedule.

Six years ago, DOE attempted a much more modest winter shipping campaign from Hanford, with mixed results. During the winter of 2010-2011, DOE planned to move about 1,000 drums of waste from Hanford to Idaho for treatment at the Advanced Mixed Waste Treatment Project (AMWTP). The initial plan was to make 84 shipments from December 1 through January 17 – three per day, Monday through Friday, with two days of shipments during the weeks of Christmas and New Year's.

Bad weather and road conditions repeatedly forced delays, and DOE was able to ship only 36 trucks over a nearly two month period through January 25.

This document also suggests that to again use the AMWTP to handle any significant volume of Hanford waste, a number of changes to regulations and agreements would be necessary. Several regulatory changes that are listed would be difficult, but potentially achievable. One, in our opinion, is not achievable.

Using non-Nuclear Regulatory Commission (NRC) approved packaging for these shipments is a change which the State of Oregon – and I expect most Western states – would strongly oppose. The robustness of a Type B cask is the most fundamental safety aspect of the WIPP transportation program. Using anything less would greatly increase the risk of a breach during an accident, and would be in direct conflict with DOE's commitments for how intersite transuranic waste shipments will be conducted.

The Secretary of Energy and the Western Governors established a relationship for planning WIPP shipments in 1989. The Secretary and the Governors have renewed a 1989 Memorandum of Agreement on transport safety of transuranic waste shipments, in 1995, 2003 and 2009. The current agreement states that all intersite shipments of transuranic waste will follow the same protocols as are required for transuranic waste shipments to WIPP.

DOE's own Transportation Practices, which are being incorporated into a revised DOE Order 460.2B, also require that intersite transuranic waste shipments follow the same protocols as are required for transuranic waste shipments to WIPP.

One of those requirements is the use of NRC-approved packaging (in essence, a Type B cask). The WIPP Land Withdrawal Act (Public Law 102-578) requires the use of NRC-approved packaging for all shipments to WIPP.

Since intersite transuranic waste shipments began to occur in the 2000s, the Western states have insisted that all transuranic shipments are handled in the same manner. It never made sense to the states to have the same material on the highway with different requirements depending on its destination.

Funding pressures from more urgent Hanford cleanup priorities have caused the transuranic waste program to languish. This document is a good first step towards regaining some progress. However, we believe the information in this document validates our earlier concerns – that work to retrieve, characterize, process and ship transuranic waste cannot be deferred as long as is currently planned by the revised Tri-Party Agreement Milestones. That work must be accelerated or DOE will be faced with deadlines it will be unable to meet. In addition, we strongly encourage DOE not to waste any additional

time or money contemplating or pursuing a weakening of the transportation requirements for transuranic waste shipments.

If you have any questions or comments about our recommendations, please contact me at 503-378-4906 (or ken.niles@oregon.gov).

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 for Nuclear Safety

cc: Alex Smith, Washington Department of Ecology
Dennis Faulk, U.S. Environmental Protection Agency
Rod Skeen, Confederated Tribes of the Umatilla Indian Reservation
Russell Jim, Yakama Indian Nation
Gabriel Bohnee, Nez Perce Tribe
Oregon Hanford Cleanup Board
Hanford Advisory Board