

June 13, 2019

Brian Vance, Manager  
U.S. Department of Energy, Office of River Protection  
P.O. Box 450 (46-60)  
Richland, WA 99352

Re: DOE's Enhanced Waste Glass Program

Dear Mr. Vance,

The Hanford Advisory Board (HAB/Board) wishes to applaud the U.S. Department of Energy (DOE) for the work it has done over many years to continue improving glass formulation knowledge as we near the start of tank waste treatment. The Board believes this has been a wise investment in research and institutional capacity that has already served to shorten the projected Hanford mission and has the potential to lead to extraordinary further reductions in the amount of time, money, and infrastructure required to accomplish a quality cleanup.

During the Board's March 2019 Tank Waste Committee meeting, the Committee received a presentation from Dr. Albert Kruger, DOE's Chief Glass Scientist, on DOE's Enhanced Waste Glass Program. This presentation outlined DOE's plans to develop time-saving and technically defensible methods for testing its glass product; to institute processes during Waste Treatment Plant (WTP) operations that would allow timely generation of quality glass, utilizing science and technology that will reduce risk and assure the public and regulators of the durability of glass over time. Dr. Kruger also reported on DOE's successes in finding significant new efficiencies in the amount of waste that can be loaded into every canister of glass. The potential for garnering further efficiencies does not seem to be bounded. The HAB is hopeful that continuing program activity will, at some point, spare EM from the need for a Supplemental Low-Activity Waste facility if identified improvement efforts continue to be pursued.

In May, members of the Board participated in a tour of the Hanford Site. One of the stops on the tour was the Applied Process Engineering Laboratory (APEL). While there, Dr Kruger described some of capabilities of the glass development laboratory. It was noted that it is no simple feat to bring waste glass innovations out of the lab and into production. The HAB believes it is critical that glass development research continues through the operational start-up of the WTP. Lessons learned through this iterative glass making experience can be incorporated into further improvements in glass operations.

The Board understands that the role of DOE Chief Glass Scientist will soon turn over as Dr. Kruger retires within the next few years. It has come to our attention that no one is currently being trained to step into the lead of this critical program. This is a story that will be often repeated in the next several years as the torch of technical responsibility for Hanford cleanup is passed to the next generation. This kind of loss of technical expertise could potentially destabilize a robust program for Hanford,

DOE, and for public assurance of WTP Operations. We hope that succession planning will be addressed.

Please thank Dr. Kruger on behalf of the Board for all of his excellent work.

Sincerely,

Susan Leckband, Chair  
Hanford Advisory Board

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