



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 23, 2018

Mr. Brian T. Vance
Manager – Office of River Protection
Department of Energy
P.O. Box 450, MSIN H6-60
Richland, WA 99352

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF RESPONSE TO THE U.S. DEPARTMENT OF ENERGY'S REQUEST TO CLOSE THE U.S. NUCLEAR REGULATORY COMMISSION'S REVIEW OF THE TANK 241-C-106 EXCEPTION REQUEST UNDER APPENDIX H OF THE HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

Dear Mr. Vance:

This letter is in response to the U.S. Department of Energy's (DOE) request for the U.S. Nuclear Regulatory Commission (NRC) to close its review of the Tank 241-C-106 Exception Request under Appendix H of the Hanford Federal Facility Agreement and Consent Order (HFFACO), dated February 27, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18074A047).

In 1999 and 2003, DOE conducted waste retrieval campaigns for Tank 241-C-106 that resulted in an estimated 370 cubic feet of residual waste remaining in Tank 241-C-106. The HFFACO retrieval criteria for this tank provided in HFFACO Milestone M-045-00 is 360 cubic feet of residual waste, or the limits of technology, whichever is less. The remaining waste volume in Tank 241-C-106 exceeds the HFFACO volume criteria by an estimated 10 cubic feet. Therefore, the DOE developed an exception request for Tank 241-C-106 and submitted this request to the NRC in October 2004 (ADAMS Accession No. ML051380544) pursuant to Appendix H of the HFFACO, which requires consultation with the NRC when single shell tank retrievals performed under the HFFACO do not meet the milestone M-045-00 criteria after completion of retrieval. The NRC conducts the non-regulatory consultation at the request of the DOE through an interagency agreement.

On January 19, 2005, the NRC issued a Request for Additional Information (RAI) (ADAMS Accession No. ML050070154), to which the DOE responded on August 25, 2005 (ADAMS Accession No. ML052550374). Further, on April 18, 2008, the DOE submitted a revised exception request (ADAMS Accession No. ML09220297) to the NRC. In response to the revised exception request, the staff issued an RAI on January 30, 2009 (ADAMS Accession No. ML090090030), to which the DOE did not respond. A common theme within the RAI suggests that the retrieval exception for Tank 241-C-106 would be more appropriately evaluated within the context of the staff's risk evaluation of the entire Waste Management Area C (WMA-C) tank farm.

In 2010, the United States District Court, Eastern District of Washington issued a Consent Decree (*State of Washington v. Chu*, No. 08-5085-FVS (E.D. Wa. 2010)) that discussed required retrieval technologies to be used during tank waste retrieval, including the use of up to three different retrieval technologies during tank waste retrieval. Unlike HFFACO's Appendix H, the Consent Decree states that, "After such retrieval technologies have been deployed, retrieval for a tank will be complete." Since this Consent Decree, the DOE has completed several tank waste retrievals at WMA-C with post-retrieval waste volume estimates above 360 cubic feet (ADAMS Accession No. ML18099A127). It should be noted that residual waste volume in itself, without knowledge of its radioactivity content, does not necessarily correlate to risk.

As part of the NRC's upcoming formal consultative review of the Hanford WMA-C waste determination evaluation, WMA-C Performance Assessment, and final risk decision for WMA-C closure, the NRC will evaluate the post-retrieval waste volume estimates from all the tanks at WMA-C, including those like Tank 241-C-106 that were retrieved under the HFFACO retrieval requirements as well as those retrieved under the Consent Decree requirements. This consultation will be conducted at the request of the DOE through an interagency agreement. It should be noted that the technical issues identified previously by the staff related to the Tank 241-C-106 retrieval will be incorporated into the NRC's evaluation of WMA-C. As a result, the NRC is closing its review of the DOE exception request for Tank 241-C-106. The closure of this review does not constitute an NRC consultation decision on the closure of Tank 241-C-106, or an NRC consultation decision for waste incidental to reprocessing under DOE Order 435.1.

In accordance with Title 10 of the *Code of Federal Regulations* Section 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions related to this letter, please contact my staff at 301-415-5969 or by e-mail at Lloyd.Desotell@nrc.gov.

Sincerely,

/RA/

John Tappert, Division Director
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

B. Vance

- 3 -

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