



**U.S. Department of Energy
Hanford Site**

April 8, 2020

20-TF-0012

Ms. Alexandra K. Smith, Program Manager
Nuclear Waste Program
Washington State
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

Dear Ms. Smith:

**U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION RESPONSE TO
LETTER 20-NWP-057, TANK AX-102 SAMPLING OBJECTIVES FOR RETRIEVAL
DECISIONS**

The U.S. Department of Energy (DOE) acknowledges receipt of your March 18, 2020, letter 20-NWP-057. DOE values open and transparent communications with the Washington State Department of Ecology (Ecology), and have involved your staff in the decision making process for retrieving single-shell tank 241-AX-102 (AX-102) in accordance with the requirements of the Tri-Party Agreement and the Consent Decree. At this time, DOE has not determined whether a request to forego a third retrieval technology will be needed. Although such a request is possible, depending on sampling results and other factors, discussions on the topic with Ecology on the sampling plan have been in the spirit of continued transparency during the decision making process.

DOE is preparing to sample AX-102. Sampling and analysis of solids is being conducted to characterize the residual tank waste after completing first and second technology waste retrieval operations as prescribed in the approved AX-102 Tank Waste Retrieval Work Plan (RPP-RPT-58933, Rev. 1, with Modification 2019-01). DOE will continue to collaborate with Ecology on the Tank Sampling and Analysis Plan being developed with two primary objectives: 1) obtain samples and sample data to support identification of a possible third retrieval technology; and 2) support WMA A/AX closure planning if continued retrieval of AX-102 is deemed not practicable. DOE also plans to obtain residual volume measurement using the Ecology approved Camera/Computer Aided Design Measurement System, and Residual Volume Measurement System (pending Ecology review) processes at Tank AX-102.

The practicability of implementing a third retrieval technology in AX-102 is dependent on several factors, including the character of the waste as well as the physical condition of the tank, including obstructions. The waste in tank AX-102 dissolved easier than expected during hot water sluicing and a hard heel was not present as expected. However, during retrieval operations it was discovered that the tank bottom was rippled and the ripples were acting as dams preventing uniform movement of waste to the slurry pump. The tank bottom was also elevated under the slurry pump inlet causing further waste removal challenges.

DOE plans to follow the Practicability Evaluation for requests to forego process that was previously negotiated with Ecology. The format and content of the Practicability Evaluation was developed collaboratively by Ecology and DOE, in a series of meetings between December 19, 2011, and March 6, 2012, as documented in RPP-52290. The process for evaluating the practicability of a third technology and evaluating risk to human health and the environment will follow the methodology established with Ecology and used in the previously approved Practicability Evaluation requests to forego a third technology for tanks 241-C-101 (RPP-55489), 241-C-102 (RPP-58676), 241-C-108 (RPP-52290), and 241-C-112 (RPP-56935).

DOE will continue to work collaboratively with Ecology in accordance with the established decision making processes for retrieving single-shell tanks.

If you have any questions, please contact me, or your staff may contact Brian Harkins, Deputy Assistant Manager, Tank Farms Project, Office of River Protection, on (509) 376-3567.

Sincerely,

**Robert G.
Hastings**

Robert G. Hastings, Assistant Manager
Tank Farms Project
Office of River Protection

Digitally signed by Robert
G. Hastings
Date: 2020.04.08 16:46:13
-07'00'

TF:JJR

cc: See page 3

cc: J. Alzheimer, Ecology
M. Barnes, Ecology
J. Bell, NPT
A. Buck, Wanapum
L. Contreras, YN
D. R. Einan, EPA
R. G. Greenwell, WRPS
P. M. Hamilton, WRPS
S. Leckband, HAB
J. J. Lyon, Ecology
P. Mills, CTUIR
M. Murphy, CTUIR
K. Niles, ODOE
J. K. Perry, MSA
M. B. Skorska, Ecology
Administrative Record
Environmental Portal
WRPS Correspondence