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Ms. Susan Leckband, Chair
Hanford Advisory Board
713 Jadwin Ave., Suite 4
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Ms. Leckband:

HANFORD ADVISORY BOARD ADVICE #298, "DOUBLE SHELL TANK FAILURES"

Thank you for your September 20, 2018, advice on Hanford Advisory Board (HAB) concerns regarding the potential for double-shell tank (DST) failures. The U.S. Department of Energy (DOE), Office of River Protection (ORP) values the HAB's advice and appreciates their recommendations.

Please see ORP's responses below to each of the HAB's advice points. For convenience, the HAB advice is listed in italics with the ORP response following.

Advice Point #1: *The board advises DOE and Ecology to test its preferred scenarios for tank waste treatment for its resilience to unexpected conditions. Specifically, this evaluation should include mission impacts, system vulnerabilities, and response capabilities when the additional DST failures occur.*

Response: The System Plan milestone in the Tri-Party Agreement (M-062-40) outlines specific requirements for evaluations. In addition to these requirements, ORP regularly conducts evaluations of the tank systems outside of the System Planning process. Some examples include reviewing various funding profiles, considering the failure of key DSTs critical to the Direct Feed Low-Activity Waste (DFLAW) approach, and evaluating contingencies in the event of an extended outage at the 242-A Evaporator.

Advice Point #2: *The board advises DOE to anticipate new DST failures, and also advises DOE to perform a system engineering-based risk assessment of potential tank failures and options for addressing replacement capacity. This risk assessment could provide valuable insights that currently do not appear to exist.*

Response: ORP has conducted modeling to understand the potential impacts of additional DST failures. Past evaluations concluded that adequate DST space would be available to support Consent Decree obligations. ORP also has a robust tank integrity program that continually monitors the DSTs in order to provide early signs of potential issues. ORP has made significant improvements in the inspection processes and is developing additional tools that will increase the ability to predict and potentially extend the ability of all DSTs to safely store waste until it can be treated at the Waste Treatment and Immobilization Plant. ORP also

works to ensure adequate DST space is available in the event of a future tank leak. Storage space within the DST system is created through use of the 242-A Evaporator, which has created more than 65 million gallons of DST capacity since operations began in 1977.

***Advice Point #3**: Given that the System Plan estimates an 8-year time span between the decision to build new tank capacity and the completion of tank construction, the board also advises that DOE should immediately initiate the design, siting, permitting and any other statutory and/or regulatory approval; as well as any procurement actions necessary to obtain replacement waste tank storage capacity. This preparatory work would greatly reduce the time necessary to complete tank construction in the likely event when new tank capacity is deemed to be necessary.*

Response: ORP is focused on the startup of low-activity waste treatment as soon as 2022 as we believe this is the most efficient and cost-effective path forward to ensure the availability of adequate DST space for the remainder of the waste treatment mission.

Thank you again for your input on this important topic. ORP is committed to keeping the HAB informed on the system planning progress. If you have any questions, please contact JoLynn M. Garcia, ORP HAB liaison, at (509) 376-6244.

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HAB:ESD

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