DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 16, 2018

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Resident Inspector Report for Week Ending Feb. 16, 2018

Salt Waste Processing Facility (SWPF): Messrs. Davis, Meyer, and Seprish were on site to discuss the safety basis with personnel from DOE-SR and Parson's. Messrs. Deutsch and Eul observed testing of the safety instrumented system. The resident inspector reviewed several study guides for system fundamentals courses and observed an Introduction to Technical Safety Requirements (TSR) course focused on generic TSR mechanics.

Tritium Facilities: The resident inspectors (RI) met with training and operations managers to discuss recent oral board observations (see 2/9/18 report). The observations did not meet management's expectations and they are taking actions to address them with board members.

Savannah River National Laboratory (SRNL): DOE requested a meeting with SRNL personnel and the RI to discuss recent RI observations on how a Justification for Continued Operations (JCO) Limiting Condition for Operations (LCO) was implemented during a planned sprinkler system upgrade outage (see 2/9/18 report). DOE and SRNL personnel do not believe this was a TSR violation because of several statements in the JCO discussing planned upgrades. However, all parties agreed the wording of the JCO LCO needs clarification on how the required action to immediately restore the sprinkler system was intended to apply during planned outages to install upgrades. No planned modifications will be performed until the wording is revised, although corrective and preventive maintenance will be allowed. SRNL will also examine why this issue was not self-identified earlier.

HB-Line: HB-Line personnel procured 375 filters at the wrong procurement level (see 2/9/18 report). SRNS personnel held an initial causal analysis discussion in attempt to identify the errors that led this issue. The discussion revealed that subject matter experts knowledgeable of the site procedures were able to articulate the requirements for determining the correct procurement level, however it still is unknown how the requirements are implemented through multiple interwoven site procedures. Therefore, it is still unclear what in the procurement process led to this failure. SRNS personnel are reviewing the site procedures to determine the flow of procurement requirements and are planning to continue their causal analysis at a later date. SRNS personnel are also preparing a site-wide lessons learned to alert others of this confusion. SRNS personnel are confident that all installed safety significant and safety class components have been procured at the appropriate level because of a required check prior to installation.

H-Canyon: SRNL issued their "Characterization of Concrete Exposed to the H-Canyon Exhaust" report. The report states that two concurrent chemical alteration mechanisms of the hydrated Portland cement matrix coupled with wind erosion and scouring of damaged material are responsible for the observed physical features in the concrete exposed to the canyon exhaust. Furthermore, SRNL concluded that while several depth-dependent material changes were observed, there is no firm case to conclude that these material changes were manifested in an increase or a decrease from the bulk concrete compressive strength.