

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 12, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Z. C. McCabe, Resident Inspector
SUBJECT: Savannah River Site Activity Report for Week Ending April 12, 2019

Savannah River National Laboratory (SRNL): As a result of recent events, last Thursday the SRNL Manager suspended laboratory operations except regulatory and mission essential activities. This work pause is planned to last for two weeks and includes both the Research Operations Division and Research and Development (R&D). During the pause, any proposed work must be approved by SRNL senior management and requires a task preview and a formal pre-job brief.

The most recent event that led to the pause involved a principle investigator (PI) inadvertently cutting the fingertip on a glovebox glove they were wearing. The work scope included cutting open bags containing tritiated metal samples in a glovebox, re-bagging them, and transporting them out of the glovebox and into a hood a few feet away for non-destructive analysis. Prior to the event, the personnel involved began a pre-job brief, but shortly into the pre-job brief (PJB), the radiological protection department (RPD) first line manager (FLM) stopped and insisted on doing a task preview as required (for all radiological work) as a compensatory measure put in place in February. The SRNL personnel at the PJB transitioned into a task preview, which involved a walkdown of the laboratory. However, not all of those involved in the evolution participated in the entire task preview. The responsible manager then scheduled the PJB for the following day. Prior to the PJB, the PI entered the lab to prepare for the evolution and began cutting open the bagged samples without protective gloves. The PI (uninjured) noticed the cut glove and called for RPD personnel. The response was appropriate. The PI was also not immediately certain which hazards analysis they were working under when cutting the bags.

Prior to the pause, the resident inspector (RI) observed multiple pre-job briefs, task previews, and evolutions performed by R&D personnel. During these observations, the RI did not observe any unsafe behavior; however, the resident inspector has concluded that R&D personnel lack sufficient understanding of the purpose and the appropriate content of task previews and pre-job briefs. For instance, as a corrective action from the April 2018 pause, SRNL personnel revised the Conduct of R&D procedure to require a task preview for future R&D work (revision completed and applicable personnel trained in June 2018). Contrarily, the RI has noted several times this calendar year when he was informed that a task preview was unnecessary, including tasks performed under the compensatory measure mentioned above. Additionally, the revised Conduct of R&D procedure requires personnel to review the applicable work control documents in the task preview guidance; however, the RI has noted multiple instances where the appropriate radiological work permit had not been determined (or written) at the time of the task preview. Further, the RI observed a task preview this week (i.e., during the pause) that did not include a walk-down, which is also required per the revised procedure. The RI has also observed many PJBs where significant portions of the discussion have focused on planning the evolution. SRNL personnel have also noted where PJBs were not conducted as required. While these shortcomings were not the direct causes of recent events, SRNL has identified them as issues and contributing causes for some events.