

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 21, 2015

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending August 21, 2015

Emergency Response: A security event in H-Area led to the declaration of an operational alert and the activation of the SRS Emergency Operations Center. The event caused workers to evacuate some support buildings near H-Canyon and to remain indoors throughout H-Area. SRNS shut down operations in H-Canyon and HB-Line and there were lesser operational impacts to H-Tank Farms and the tritium facilities. DOE and the contractors are reviewing the performance of communications and protective actions to identify lessons learned that may be applicable to non-security emergencies. Facility operations personnel identified some improvements to their emergency procedures and announcements made over the public address system. Facility personnel reported good communications between the Area Emergency Coordinator in H-Canyon and the Facility Emergency Coordinators in other H-Area facilities, including the shutdown of ventilation systems in certain facilities. During the security event, fire department vehicles would have been unable to enter the limited area to respond to a fire or other emergency.

K-Area: SRNS declared a Potential Inadequacy in the Safety Analysis after identifying that some 9975 shipping packages contain a polyvinyl chloride (PVC) bag for contamination control within the primary containment vessel (PCV). SRNS was unable to determine whether the Interim Safety Storage Control (ISSC) program and the Documented Safety Analysis (DSA) addressed PVC bags and tape as well as small quantities of other non-polyethylene plastics inside PCVs. Part of the problem is how the term “plastic” and different plastic types were discussed in the ISSC program, DSA, and Safety Analysis Report for Packaging. Furthermore, roles and responsibilities for approving discrepancies between the shipper’s packaging and K-Area packaging requirements, and communicating these discrepancies, needed improvement.

H-Canyon: Dissolver operations resumed after SRNS performed a calculation showing that the dissolvers would experience minimal movement during a seismic event (see 7/31/15 report).

Tritium: In H-Area New Manufacturing, SRNS personnel use an open sash hood to perform operations and maintenance in only one room. During a recent maintenance activity, SRNS personnel were replacing a compressor in that room. While they expected no tritium contamination to escape the hood, they posted half of this relatively small room as an airborne radioactivity area requiring the use of respiratory protection while the other half of the room required no personal protective equipment. Two people responsible for the hands-on work wore appropriate respiratory protection, while two others providing oversight of the work wore no respiratory protection. The room had permanent Kanne tritium air monitors installed and the mechanics had portable air monitors covering the job as well as the radiological boundary. The portable tritium monitor at the boundary alarmed. The workers exited the area as expected and radiological control detected no external contamination on the workers. Bioassays of the unprotected workers were negative. Confirmatory radiological surveys revealed that material was released to the room. SRNS found no source of the contamination.