DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 14, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending December 14, 2018

Worker Accidents: A maintenance mechanic was inspecting part of the Shielded Canister Transporter at the Defense Waste Processing Facility when he turned and slipped. He fell and struck his face, chipping a tooth and breaking his arm and collarbone. The cause of the fall is unknown and both the floor and his footwear appeared adequate. A lock washer was found nearby and he may have stepped and slid on that. At Tank Farms, a worker walking around a steam leak in low visibility conditions was hit by a slow moving van, causing minor injuries.

Solid Waste Management Facility: A truck driver loaded a 55-gallon drum of low-level radioactive waste from a railroad yard and transported it to the Solid Waste Management Facility without having a radiological survey performed, without having the manifest completed or in his possession, and without ensuring the transfer would comply with Onsite Safety Assessment controls beforehand. At SRS, the drivers rely heavily on the Generating Certification Official and the Radiological Protection Department to ensure requirements are met and paperwork is complete. However, due in part to a vague trucking request, an inadequate informal pre-job brief involving only the driver and his supervisor, and miscommunication, these individuals were not present when the driver arrived to pick up the drum so he proceeded on his own. The resident inspector questioned that the truck drivers responsible for transporting radioactive material are provided no training to familiarize them with the basic requirements for a transfer (e.g., need to complete/carry a manifest, conduct a radiological survey, or meet weather and route controls).

Emergency Preparedness (EP): The RI observed the annual evaluated EP exercise in the Savannah River National Laboratory (SRNL) control room and a contaminated injured person drill walkthrough at the Salt Waste Processing Facility (SWPF). The SRNL exercise scenario involved a chemical reaction which causes an explosion inside a glovebox and a contaminated, injured scientist. Critical controllers noted the slow announcement of protective actions and delays in determining that an explosion had occurred and in which laboratory. Furthermore, poor communication and coordination amongst the Radiological Protection Department and the Fire Department led to confusion and setting up the hot/warm/cold zones in two different locations and delays in getting firefighters out of the facility. Meanwhile, drill scenarios at SWPF would benefit from a coordinated effort to define the expected response by all the responders ahead of time. For example, despite this being the third contaminated injured worker drill, the Radiological Protection expectation was to leave the worker in his wet, contaminated anti-contamination clothing while the Fire Department's expectation was to remove all the anti-contamination clothing as possible. The drill walkthrough ignored many of the defined critical action steps in the scenario package. Furthermore, it did not emphasize verification of the scene conditions to ensure potential hazards were addressed nor did the scenario address potential issues from a liquid spray or cross-contamination.