

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 5, 2016

TO: Steven Stokes, Technical Director
FROM: Bradford Sharpless, Idaho Cleanup Project Cognizant Engineer
SUBJECT: Idaho National Laboratory (INL) Report for January 2016

DNFSB Staff Activity: The Board's staff provided an average of 1.25 man-weeks of on-site oversight per month for the first four months of fiscal year 2016.

Integrated Waste Treatment Unit: The Integrated Waste Treatment Unit (IWTU) remains in a maintenance outage. Following the suspension of waste simulant testing in December 2015, IWTU's engineers inspected the interior of the facility's Denitration Mineralization Reformer (DMR). They identified points of erosion on the DMR's fluidizing ringheader that will require its replacement before radiological operations commence. Analysis of the "tree bark" mineral scale found on the DMR's walls and in its bed material continues. IWTU's managers have planned a "Chemistry Summit" for mid-February 2016 to review data from the most recent simulant run and to develop recommendations for continued testing.

Advanced Mixed Waste Treatment Project: On January 24, 2016, the Advanced Mixed Waste Treatment Project's (AMWTP) Plant Shift Manager (PSM) notified the Department of Energy's Facility Representative that a facility operator's 3M Powered Air Purifying Respirator (PAPR) supply hose disconnected while egressing from a High Contamination Area to a Contamination Area (CA). When entering the CA, the operator was required to remove a fall protection harness and the PAPR belt in order to remove a layer of anti-contamination clothing. Upon taking off the PAPR belt, the unit slipped in the operator's hand and the connection from the PAPR unit to the supply hose decoupled. The Radiological Control Technician (RCT) assisting the operator immediately identified the disconnection and reconnected the hose to the unit. Upon exiting the CA, RCTs surveyed the operator and found no contamination. The PSM subsequently implemented a "Stop Work" so that a full extent of condition review could be performed.

Idaho Nuclear Technology and Engineering Center: On January 25, 2016, operators at the Idaho Nuclear Technology and Engineering Center's Flourinel Dissolution Process Area were remotely hoisting a wooden box containing two clean high efficiency particulate air (HEPA) filters weighing approximately 150-pounds. While conducting this activity, the HEPA filters dropped approximately three feet. The radiologically-clean filter box came to rest inside the metal outer container from which it had just been removed. Operators stepped back and placed the area in a safe configuration. The box drop did not result in personnel injuries or facility damage. A fact finding team concluded that the clamps used to secure the wire cable lifting bail to the wooden filter box had failed. The lifting bail assembly was constructed correctly using an approved design, and the assembly was load-tested and approved for use. Operators discontinued the use of all wooden filter boxes equipped with the failed lifting bail design (9 remaining containers were approved for use) pending the implementation of corrective actions.