

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 7, 2018

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Timothy L. Hunt, Acting Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for November 2018

**DNFSB Staff Activity.** Board's staff members D.J. Brown, R.G. Quirk, and S.G. Thangavelu were on site from November 5-9, 2018, to observe the Generator Site Technical Review of the Materials and Fuels Complex. Mr. Quirk also provided routine oversight of ongoing INL activities during the week. Board's staff members debriefed DOE-ID on its observations of some waste drums that generate significant quantities of methane and how this may impact multiple DOE and DOE-ID documents. The Board's staff has provided an average of 1.5 person-weeks per month of on-site oversight for the first two months of fiscal year 2019.

**Negative Trend in Use of Material Handling Equipment.** A number of forklift and heavy equipment-related events has created a negative performance trend in material handling (forklift and telehandler) and heavy equipment use across the Idaho Cleanup Project (ICP); 12 occurring in fiscal year 2018 (a DOE-ID facility representative counts 14 events). No serious injuries, equipment or load damage occurred, but the potential exists. The affected projects have responded by doing one or more of the following: (1) issued a long term order; (2) performed a documented apparent cause analysis; or (3) performed an extent-of-condition review. The Fluor Idaho, LLC (Fluor Idaho) industrial safety program also performed a management assessment, which found that weaknesses exist in material handling, and in less-than-adequate spotter and equipment operator communication. As a result, Fluor Idaho commissioned a material handling working group—which includes employees and workers experienced in material handling—to analyze all relevant/applicable events that led to this trend, and to determine causes.

**Fluor Idaho Startup Notification Report (SNR).** The staff recently received the Fluor Idaho SNR semiannual update, that was submitted to DOE-ID in September 2018. The SNR identifies four new activities that are planned for fiscal year 2019 or pending approval. The four new activities include: (1) removal, treatment and disposal of nitric acid from tank system VES-NCR-171 at the Idaho Nuclear Technologies and Engineering Center (INTEC); (2) resumption of Integrated Waste Treatment Unit operations, Phase 3/4; (3) venting pressurized cylinders in the container enclosure tent at the Advanced Mixed Waste Treatment Project (AMWTP); and (4) the calcine retrieval project at INTEC. The SNR carried forward one previously approved activity, EBR-11 fuel movement to the Materials and Fuels Complex. A DOE readiness review has been confirmed or assumed for all startups except the treatment and disposal of nitric acid at INTEC.

**Failure of Respiratory Equipment at ARP VIII.** An excavator operator in the Accelerated Retrieval Project (ARP) VIII Retrieval Area (RA) experienced a failure of his respirator hose quick disconnect, losing breathing air. The operator was able to reconnect the hose prior to exiting the vehicle. The breathing system hoses are connected and "tug-tested" by a radiological control technician, then taped prior to entry into the RA. There is no specific second check required by the operator. Fluor Idaho suspended use of these breathing systems pending inspection of the event unit—which was found to be in working order—and review of the setup and use processes. Fluor Idaho conducted training on the correct operation of the disconnect and changed the ARP policy to require operators to observe the connection.