

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 3, 2015

TO: S. A. Stokes, Technical Director
FROM: Timothy Hunt, Acting Pantex Plant Site Representative
SUBJECT: Pantex Plant Weekly Report for Week Ending July 3, 2015

High Pressure Fire Loop (HPFL) Breach: On July 1, 2015, the 15-34 fire water tank generated a low water level alarm. Shortly thereafter, Consolidated Nuclear Security, LLC (CNS) personnel discovered a water leak in the courtyard between Buildings 12-104 and 12-84. The water level in the tank continued to go down until an HPFL lead-in line to the north side of 12-84 West was isolated. The isolated line affected fire protection capabilities in the equipment rooms and ramp. CNS personnel implemented compensatory measures to minimize the combustible loading in the equipment rooms and ramp that share common walls with nuclear explosive (NE) bays. Also, since water was observed seeping up through cracks in the ramp floor, CNS has restricted forklift and cart access to the area until the load bearing capacity of the floor can be analyzed.

Misaligned Weapon Part: CNS suspended operations in an NE bay when production technicians (PT) discovered that a part had been installed out of alignment during a limited-life component rebuild activity. The part, a metal band, was found to be seated improperly after the potting material in which it was set had cured. PTs indicated that the special tooling used to assist in the installation of the band and associated components prevented them from visually spotting the misalignment before the potting material hardened. CNS personnel reported that a similar event occurred about a year ago. Process engineering is developing a nuclear explosive engineering procedure to remove the band and accompanying components and will observe the recovery actions to decide whether PT technique or procedure changes are needed.

Crane and Hoist Issues: CNS suspended operations in an NE bay last week when PTs found that the crane was not operating properly during a pre-operations check. The crane was leaking oil, making unexpected noises, and shuddering when the bridge contacted the stops at each end of the beam. Maintenance personnel determined the cause of the shuddering to be related to the gearbox drive mechanism, which will be replaced with functionally equivalent equipment. Maintenance personnel suspended a quarterly preventive maintenance (PM) activity on a hoist in another NE bay due to the equipment not matching what was called out in the technical procedure. The hoist chain was a few feet shorter than anticipated and the in-service inspection step to measure hoist links could not be completed as written. The quarterly PM was performed previously but the noncompliant chain was not identified by maintenance personnel at that time.

AT400-A Disassembly Operations. CNS is in the middle of a campaign to disassemble 18 AT400-A pit containers to consolidate the high dose rate pits in the same type of container used for long-term storage of other pits (i.e., AL-R8 sealed insert). CNS appears to have overcome the process challenges it has faced since beginning the campaign early this year. The acting site representative observed a significant part of the disassembly of the seventh containment vessel and subsequent packaging of the legacy pit. The PTs exhibited rigorous adherence to ALARA principles by minimizing the time spent in the higher dose rate areas. Radiation Safety personnel estimated that the collective whole body dose for the campaign would be 760 person-mrem. After completion of about one-quarter of the campaign, the collective dose for the four PTs and the radiation safety technician was 35 person-mrem.