

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 7, 2023

TO: Christopher J. Roscetti, Technical Director
FROM: Erin A. McCullough, Cognizant Engineer
SUBJECT: Idaho National Laboratory (INL) Report for March 2023

DNFSB Staff Activity. The cognizant engineer visited INL to observe activities at the Integrated Waste Treatment Unit (IWTU) the first week of March. A subject matter expert in waste processing attended an audit of the National Transuranic Waste Program's waste handling and transportation activities at the Radioactive Waste Management Complex during the second week. A staff team of four people visited the Advanced Mixed Waste Treatment Project (AMWTP), IWTU, and Idaho Nuclear Technology and Engineering Center to observe work practices the fourth week. During this staff trip, the team also held a formal interaction with Idaho Environmental Coalition, LLC (IEC), and Department of Energy Idaho Operations Office (DOE-ID) personnel about dispositioning drums from the BN510 waste stream, from which waste in the TRUPACT-II 148 and 180 shipping issues originated.

Occurrence Reporting and Processing System (ORPS) Entry for Potential Electrical Exposure to an Uncontrolled Hazardous Energy Source at IWTU. On April 3, 2023, IEC personnel submitted an ORPS entry titled EM-ID--IEC-IWTU-2023-0003 - *Potential Electrical Exposure to an Uncontrolled Hazardous Energy Source*. This ORPS entry does not capture the entire sequence of events and omits several facts that are necessary to accurately describe the potential issues. Among the most concerning factual omissions is that an instrumentation technician wearing no personal protective equipment (PPE) was about to access an electrical panel with warning signs reading: "Arc flash and shock hazard," "Appropriate PPE required," and "For PPE see JSA [Job Safety Analyses] in applicable work documents." At that time, Board's staff observers inquired whether he was wearing the proper PPE for the job. The Board's staff discussed these underlying issues with DOE-ID and IEC management.

Improper Movement of Waste Drums at AMWTP. While at the AMWTP to observe work, the Board's staff team met with AMWTP managers to understand how waste handlers moved nine drums with active non-conformance reports (NCR) into a gas sampling array. The AMWTP director explained that waste handlers were using a "movement sheet" to transport 126 drums to the gas sampling area but accidentally moved 135 instead. According to the AMWTP director, waste handlers scanned all drums in the staging array at the same time instead of scanning each drum individually before potentially moving it. As a result, the waste handlers did not notice when the display on the scanner showed that nine drums had active NCRs, which would have indicated to the waste handler that those nine drums could not be moved. Drums with active NCRs did not have physical NCR tags on them because they were staged (and other drums were stacked around and on top of them) before attaining their NCR status. Several weeks later, AMWTP managers communicated to the cognizant engineer that their corrective actions to directly supervise drum movements and improve the movement sheets had been successful. Furthermore, a DOE-ID facility representative agreed that IEC's oversight for this issue appeared to have been effective.