DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman
SUBJ: Activity Report for the Week Ending April 9, 2004

Transuranic Waste Retrieval: Venting of transuranic waste drums from one waste generator has resulted in five contamination releases. The contamination has been limited to the venting equipment. However, the recovery from these events has had significant operational impact. As a result Fluor Hanford (FH) decided to stop venting these drums until an improved method can be developed to deal with the remaining unvented drums. However, there is a Technical Safety Requirement Administrative Control (TSR-AC) Program time limit to vent these drums. This time limit was exceeded for a first batch of drums on April 3, with additional batches expiring over the next two weeks. The FH recovery plan calls for the subject drums to be moved to a barricaded, outdoor storage area until the root cause and corrective actions for the contamination problem is developed. Venting of the drums would be done subsequent to this. Retrieval and venting of waste drums not associated with this specific waste generator will continue. (II)

Software Quality Assurance (SQA): The DOE assessment of Safety SQA identified several potential areas for improvement. The most significant finding appears to involve software used for the fire hazard analyses at the Central Waste Complex (CWC) and Plutonium Finishing Plant. The assessment identified that the subcontractor for the CWC analysis was not on the evaluated supplier list, the contract did not specify SQA requirements, and the subcontractor did not perform installation validation and verification. At PFP the analysis was not evaluated when software errors were fixed. These findings resulted in the declaration of Potential Inadequacy in the Safety Analysis (PISA) for FH facilities. (IV)

Deactivation and Demolition (D&D): There were two recent contamination events at facilities operated by the FH D&D organization. At 233-S workers cutting process piping that interfered with demolition activities had a small quantity of plutonium nitrate release from the pipe contaminating the workers' protective clothing and causing a small burn from the nitric acid reaction with the protective gloves. The scope of work evaluated for the Job Hazard Analysis (JHA) involved saw cutting of the concrete walls. Cutting piping involves different equipment and practices, it would be expected to be a different scope of work and the subject for separate hazard analysis. Because this did not occur, it is not clear whether the hazards associated with cutting the sections of former process piping were ever considered.

At 224-T a worker dismantling a wooden enclosure had contamination fall on his head when a beam was disconnected from an overhead partition. An anti-contamination hood was not required protective clothing. While the scope of work here was appropriate, the JHA did not adequately consider that overhead work may result in the release of radioactive dust even though the work called for radiological surveying of the work area as wood is removed and the potential for falling objects. (II)