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Subject: Yellow Alert: Improper Release of Drums

**TITLE: Improper Release of Drums**

IDENTIFIER: 1998-OH-FDF-0037

**LESSONS LEARNED STATEMENT:** Line management must ensure that project personnel are adequately trained on the requirements for the release of radioactive materials. If the requirements are not fully understood by an individual, work should not continue until the requirements are clarified.

**DISCUSSION OF ACTIVITIES:** The Plant 6 T-Hopper Repackaging Project initiated night shift operations on April 15, 1998. The project produced 55-gallon drums loaded with UO<sub>3</sub> that were subsequently staged in the Plant 6 annex awaiting final surveys and release authorization by the day shift Radiological Control Technician (RCT). The Plant 6 annex is an Airborne Radioactivity Area and a Contamination Area. The day shift RCT was responsible for conducting release surveys and coordinating the movement of all drums produced on the project from the Plant 6 annex Contamination Area to the Tension Support Structure #4 (TS-4) Controlled Area. Following Fluor Daniel Fernald (FDF) Radiological Compliance walk-throughs on May 6 and 13, 1998, 29 drums containing UO<sub>3</sub> in the Controlled Area staging location were found to be improperly labeled (i.e., they did not have "Radioactive Material" labels).

**ANALYSIS:** An Activity Critique held on May 14, 1998, indicated that the drums were not labeled because they had not been surveyed prior to release from the T-Hopper Project Contamination/Airborne Radioactivity Area. Additional FDF assessment/follow-up activities indicated that approximately 160 drums had been improperly released from Plant 6 to TS-4 between April 14 and May 14, 1998.

The day shift RCT assumed that documented surveys had been performed on drums staged in the Plant 6 annex by the night shift RCTs. The drums in fact had not been surveyed. The day shift RCT also failed to verify that the drums were labeled with radioactive material stickers as required prior to removal. FDF site procedure, RP-0009, "Radiological Requirements for the Release of Materials at the Fernald Environmental Management Project," requires RCTs releasing radioactive materials from a Radiological Area to a Controlled Area to perform and document release surveys prior to release.

Subsequent contamination surveys on 20 of the drums stored inside TS-4 revealed 4 drums with removable contamination levels of 1,000 - 2,000 dpm/100cm<sup>2</sup> b-g. No drums located in the Plant 6 controlled area were found to have > 1000 dpm/100cm<sup>2</sup> b-g removable contamination. The improperly released drums located in TS-4 were posted as a Contamination Area. This incident had no adverse impact on the environment nor the health and safety of workers or the public.

**RECOMMENDED ACTIONS:**

1. Ensure project personnel are adequately trained/briefed on the improper release of drums, the importance of following the requirements for accurate shift turnover and the requirements and responsibilities for labeling and monitoring radioactive material containers.

2. Line management and field personnel are responsible for ensuring that turnover communications are adequate. The RCT who releases material from a Contamination Area is responsible for ensuring that all surveys are performed and adequately documented prior to release. It is also important to note that line management and project technical support personnel must bear some responsibility in ensuring that communications are frequent and effective. This becomes particularly important on projects with multiple shift operations. Detailed shift turnover logs, debriefings and face-to-face conversations are all effective means of enhancing communications among shifts.

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