

# Information Bulletin

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**Title:** Distractions and Increased Workloads Decrease Effectiveness of Supervisory Control

**Date:** August 24, 2006

**Identifier:** 2006-RL-HNF-0035

**Lessons Learned Summary:** When performing high risk activities, such as entry or exit into a Limiting Condition for Operation, it is vital that the individual responsible for the activity establish the proper conditions for success. These include eliminating or delegating simultaneous, multiple tasks; removing unneeded personnel from the work area; and most importantly employing self-checking techniques to ensure all required conditions and configuration has been met before authorizing the activity.

**Discussion of Activities:** In July 2005 and February 2006 Limiting Conditions for Operations (LCO) at a nuclear facility were violated resulting in Technical Safety Requirement (TSR) violations.

In one event (documented in Occurrence Report RL-PHMC-PFP-2005-0019), violating a LCO resulted in the movement of fissile material during a declared fissile outage. The LCO required all fissile material movement to be terminated when the Criticality Alarm Horns were declared inoperable. A combination of communication errors and inadequate resources led to the LCO not being adequately controlled and complied with during work activities. During another event (documented in Occurrence Report RL-PHMC-PFP-2006-0006, specific ventilation systems were required to be secured to prevent a release of unfiltered air to the environment. Again, a series of communication errors and inadequate resources led to violating the LCO.

During both of these examples, as well as other TSR violations similar in scope, the individuals responsible to establish the proper conditions for success were engaged in multiple tasks and distracted by other events.

**Analysis:** Maintaining nuclear facilities in a safe configuration which is compliant with the facility safety basis is a significant responsibility assigned to facility management personnel.

Most facilities are operated under the direction of a Facility/Shift Manager. This individual has the overall responsibility to ensure operations are conducted in a manner which is compliant with the safety basis at all times and under all conditions. This responsibility is usually performed very effectively during routine operations at facilities in an operations/production mode. However, non-routine activities introduce distractions that decrease the effectiveness of the responsible individual's ability to perform their function satisfactorily. Non routine activities include maintenance outages, emergencies, or when the mission of a facility is undergoing change (D&D activities, facility modifications, or new system start-up activities). It is during these times that maintaining positive control of the critical parameters necessary to stay within the bounds of the safety basis may be compromised.

**Recommendations:**

- Facilities should establish practices to mitigate distractions for those making decisions regarding the facility safety basis. These include a way to minimize distractions, maintain appropriate configuration control, and maintain formal communications.
- Facilities should consider providing additional resources during abnormal conditions or when the workload is above normal.

**Cost Savings/Avoidance:** NA**Work Function:** Conduct of Operations/Procedure Development, Work Control; Management**Hazards:** Environmental Release, Personnel Injury/Exposure - Radiation/Contamination**Keywords:** Communications, Contamination, Limiting Conditions, Procedures, Technical Safety Requirements**Originator:** Fluor Hanford, Inc., Submitted by Chuck Ames, Plutonium Finishing Plant**Contact:** Project Hanford Lessons Learned Coordinator; (509) 372-2166; e-mail: [PHMC Lessons Learned@rl.gov](mailto:PHMC_Lessons_Learned@rl.gov)**References:** Occurrence Reports: RL-PHMC-PFP-2005-0019 *TSR Violation - Fissile Material Moved During A Fissile Outage*, RL-PHMC-PFP-2006-0006 *TSR Violation -Filter Room 311 In Service When Declared Inoperable***Distribution:** All PHMC Programs and Projects