DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 16, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending March 16, 2007

Waste Treatment Plant: The Office of River Protection (ORP) completed a quality assurance (QA) inspection of the company that fabricates structural steel for the Low Activity Waste and High Level Waste facilities and noted that audits of the sub-tier suppliers had not occurred. The steel fabricator receives steel from 29 suppliers, but only four had ever been audited by the fabricator to check for compliance with quality requirements. The Bechtel National, Inc. (BNI) Quality Assurance Manual requires that appropriate QA requirements be incorporated into procurement documents for steel, but the BNI purchase order to the fabricator exempted surveys/audits of sub-tier suppliers of ASTM-A36 and A-992 structural steel. Without verification of the sub-tier supplier QA program, the traceability of quality requirements from the steel mills to the fabricator is in question. BNI previously noted deficiencies with this fabricator's QA documentation in several different audits, but the corrective actions appear ineffective in resolving the problems. Restrictions were placed on the shipments from this fabricator as a result of the 2006 BNI audit and will remain in place based on the most recent ORP findings. ORP sent a letter to BNI requiring a response by March 23, 2007 that addresses the completed and planned corrective actions and an extent of condition review.

Office of River Protection: The ORP Environmental, Safety and Quality (ESQ) Manager, R. Barr, retired and has been replaced by W. Taylor. Taylor was acting manager of DOE's Ohio Field Office and was previously ORP's Assistant Manager for Project Delivery.

Solid Waste Operations Complex (SWOC): An error discovered in a Criticality Safety Evaluation Report (CSER) during the annual criticality safety assessment invalidated one of the three contingencies that prevent criticality. The CSER determination of incredibility for over-batched drums could no longer be supported because the methodology used was non-conservative. The problem is related to the assumption that the fissile material is located at the center of the drums. Sensitivity analyses were performed to demonstrate that this is acceptable for lower fissile quantities but is not appropriate for the relatively few drums with higher quantities of fissile material. The SWOC was placed in standby mode as required by the Technical Safety Requirements. In this mode there are limitations on operations, such as not being able to move nor sample containers that have fissile material.

Plutonium Finishing Plant (PFP): Normal ventilation in PFP was lost when two of the five operating exhaust fans tripped. The fans tripped when flooding actuated the moisture sensors in circuit breakers that were located in the electrical equipment room in Building 291-Z. Several inches of water collected when a backflow preventer in the sanitary water system failed. The floor drain was sized inadequately for the flow from the relief valve of the backflow preventer. The system was being modified to isolate it from Building 241-Z, which is being isolated for demolition.