DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 24, 2008

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending October 24, 2008

Waste Treatment Plant (WTP): The Office of River Protection (ORP) directed the contractor to implement a new safety classification process. The new classification process follows the DOE-STD-3009-94 and incorporates guidance from DOE-STD-1189. The process still uses the safety-class and safety-significant classifications but will implement defense-in-depth classification instead of additional protective class, which was unique to WTP.

ORP also directed the contractor to implement a process that provides additional control of contractor-initiated deviations from the approved safety basis. The new process is called the Justification for Continued Design, Procurement, and Installation (JCDPI) and will replace the Decision to Deviate approval process. The JCDPI is initiated when a required deviation is identified and, once approved by ORP, will be in effect until the formal Authorization Basis Amendment Request (ABAR) is approved, which can sometimes take many months based on the complexity of the proposed change. The JCDPI process requires the contractor to address the programmatic risk of continuing design, procurement, and installation activities, as well as the safety implications of the deviation. When the contractor submits a JCDPI, they have to identify activities that will be affected by the proposed design change. These activities are evaluated and may be restricted due to the programmatic risk. The basis for this process is from the DOE G 421.1-2, *Implementation Guide for Use in Developing Documented Safety Analysis to Meet Subpart B of 10 CFR 830.*

The first JCDPI is being prepared to cover activities associated with compliance with DOE-STD-1066 in the design of WTP ventilation systems. The JCDPI lists a significant number (~37) of design and procurement activities that will be restricted until specific actions that reduce risk can be completed. An example is the restriction on procurement of High Level Waste facility C5V exhaust fans until ember analysis is complete.

Plutonium Finishing Plant (PFP): The project concluded that the potential pressure buildup and corrosion in the DOE-STD-3013 package that had excessive moisture (see Hanford Activity Report 8/1/08) will not exceed design parameters. This conclusion is based on analysis performed by Material Identification and Surveillance (MIS) program personnel. Richland Operations Office requested permission from EM Headquarters to send the container off-site for use in the MIS program.

Tank Farms: The contractor initiated a root cause analysis for the failure to protect safety-significant components from overpressurization (see Hanford Activity Report 8/29/08). The review will focus on the engineering and safety basis activities.

The contractor is evaluating new technologies for removing the waste from single-shell tanks. It is not clear if this system will become a major modification, but consistent with the tenets of DOE-STD-1189, a nuclear safety professional participated in the brainstorming session. One of the criteria that will be used during the next stage of evaluation is nuclear safety.