DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 2, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending November 2, 2007

Outside expert J. King was on-site this week observing the Integrated Safety Management System Phase II Verification and watching operations at the River Corridor Closure Project.

River Corridor Closure Project: DOE started the Integrated Safety Management System Phase II Verification this week. A team of more than 20 people was assembled that includes personnel from DOE Headquarters, Richland Operations Office, and the Office of River Protection (ORP). Activities this week focused on field observation and interviews and will continue into next week with a focus on confirming issues and preparing results.

Tank Farms: One of the proposed corrective actions in response to the Type A Investigation Report for the spill of waste at tank S-102 is to develop process hazard analysis (PHA) procedures and processes. The corrective actions direct that these procedures focus not just on TSR-level hazards but also on higher-frequency, lower consequence events. This week the contractor issued a management directive and an engineering standard for PHA and trained personnel on the specified approach for PHA. They then initiated PHAs for two significant projects that are installed but not yet operational. The site rep observed the training session for one of the PHA teams, determined that the training was adequate, and noted that the portions of the PHA observed were adequate. A significant number of contractor engineering managers and ORP engineers also observed the training.

Although the contractor instituted additional field oversight in response to the spill at tank S-102, there is still a need for improved conduct of operations. Last week a facility representative (FR) identified that work steps for removing equipment outside the high radiation area/high contamination area around the spill were not being performed in the specified order. Three-way communications problems have also been noted by FRs. This week a construction subcontractor pumped approximately 200 gallons of raw water onto the ground near tank C-104 due to an inadequate work procedure and planning. The water release in the tank farms resulted in a Washington State Department of Ecology permit violation.

Radiochemical Processing Laboratory (RPL), Building 325: The site rep attended a fact-finding meeting called to document the response to a differential pressure (DP) alarm on a glovebox used to work with actinides. Continuous air monitoring in the room did not indicate any airborne release and radiological surveys did not detect any spread of contamination. Personnel responding to the alarm assumed it was spurious or caused by an equipment malfunction and called a technician after attempts to reset the alarm failed. Over an hour after the alarm, personnel noticed that the taped seal on the plastic closure of a bag-in/bag-out port was completely gone and had been sucked into the glovebox. During the fact-finding meeting, it was unclear if the steps in the applicable alarm response procedure were followed. The site rep asked whether an applicable response procedure existed and if the steps had been accomplished, but no clear answer was available from meeting participants. The DOE FR present at the meeting committed to provide a response to the question.