

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: Friday, August 5, 2005
SUBJECT: Pantex Plant Weekly Report

Pit Repackaging: The pace of repackaging pits in accordance with Recommendation 99-1 has slowed considerably over the past three months. The packaging rate slipped from 272 in May to 171 in both June and July. The reduced throughput can be largely attributed to the dwindling number of remaining pits and logistics associated with moving and staging them. Less than 700 residual and 99-1 pits remain to be repackaged. BWXT recently re-evaluated the number of legacy pits which fall within the 99-1 category and reduced the previously assumed number by 200. The final 33 pits classified as 99-1 are expected to be repackaged this month.

A team of BWXT and design agency personnel performed an engineering evaluation recently to qualify the process for repackaging two Los Alamos National Laboratory pit types into sealed insert (SI) 2040 containers. There were no pre-start findings and BWXT is currently packaging pits from both design agencies into these larger containers. There have been about 70 Lawrence Livermore National Laboratory pits and several LANL pits packaged into SI 2040 cans to date.

High Pressure Fire Loop (HPFL) Leaks: On Wednesday, the latest in a series of HPFL pipe failures occurred in a line feeding a nuclear explosive facility fire suppression system. There have been 19 breaks in the HPFL over the past 10 years, 15 of which have resulted from external corrosion of iron piping servicing nuclear facilities. PXSO Engineering recently completed an assessment of the design, operation, maintenance and reliability of the current HPFL system. The conclusion was that the system is most vulnerable to failures of the lead-in piping – from the distribution system to the facility – in the Material Access Area (MAA). Key recommendations made in the report regard prioritization of projects to improve system reliability, especially lead-in piping in the suspect areas of the MAA, and establishment of a full-time BWXT System Engineer to monitor the HPFL.

Paint Bay NNSA Operational Readiness Review (ORR): NNSA completed its ORR last week of the startup of the Paint Bay as a nuclear facility and the B83 as the first nuclear explosive painting operation. Results from recent readiness reviews have indicated a trend of inadequate preparation on the part of the contractor, but the conclusion of this NNSA assessment team was that the contractor personnel were well-prepared for the review, which was reflected in the number and significance of the findings. Before operations begin, one pre-start finding needs to be closed, in addition to Nuclear Explosive Safety Study findings, and a plan-of-action needs to be submitted for the five post-start findings.

Thermal Monitoring of Zone 4 Magazines: During the recent heatwave, some Zone 4 storage magazines experienced maximum temperatures that exceeded the action level of 90°F. No immediate actions were taken as BWXT determined that it would take at least another week of high ambient temperatures to challenge the maximum allowable temperature of 94°F. As required, BWXT monitored the non-air conditioned magazine temperatures daily. BWXT has since made changes to its Pit Thermal Monitoring Operating Procedure to reflect the new, more lenient temperature limits (100°F in most magazines) recently approved by the design agency.

Procedure Inaccuracy: This week BWXT discovered that a safety requirement in a nuclear facilities operating procedure was not being met for about one year. The step disallowed certain weapon components from being collocated in nuclear material staging bays. This was not a Technical Safety Requirement violation because the control was from the approved, but not implemented Safety Analysis Report (SAR). The effective authorization basis document does not have the same control identified. It appears the control was prematurely flowed into the procedure from the unimplemented SAR without the appropriate walkdown and validation of existing conditions.