

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 18, 2005

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending February 18, 2005

Tank Farms: Previous attempts to unplug the tank S-102 pump suction screen by purging with nitrogen supplied from gas cylinders (~13 cfm) were unsuccessful. CH2M Hill Hanford Group was finally able to unplug the screen and start retrieving waste after purging 1 to 1.5 hours with nitrogen supplied by a trailer with flow rates up to 200 cfm. The nitrogen purge is causing some issues with sludge aerosols depositing on the demister as well as freezing equipment (since the nitrogen comes from liquid nitrogen). While an alternate pump will still be delivered, it will not be installed as long as the current pump continues to work. Nitrogen sparging will also be used for tank S-112, which has been experiencing some plugging recently. Caustic was also added to tank SY-101 because out-of-specification waste from SY-102 (which receives waste from S-102 and S-112) will be transferred into it later this month.

In light of Recommendation 2004-2, a safety significant (SS) active ventilation system may be credited for mitigating dry radioactive material releases (as well as preventing flammable gas concentrations) at the Contact-Handled Transuranic Mixed Waste Facility. This would augment nine other SS controls and 2 design features that provide primary and secondary confinement.

Waste Treatment Plant: The Office of River Protection provided Bechtel revised design seismic ground motion spectra and directed Bechtel to develop bounding interim design criteria to allow structures and components to be released for installation. ORP will approve these criteria. ORP also directed Bechtel to reduce excess conservatism and use work arounds to minimize impacts.

K Basin Closure Project (KBC): Fluor Hanford (FH) initiated an independent assessment of the KBC project this week. The assessment is to determine if the project is being effectively managed to avoid previously experienced management issues, and to determine if the corrective actions identified in the broader scope issues summary report, developed in response to the failed operational readiness review for the sludge water system, have been effective in preventing reoccurrence of the identified issues. The assessment is scheduled to last approximately three weeks. The KBC project has also terminated the engineering compensatory measure of having all facility modification packages and engineering design calculations reviewed by the FH central engineering organization. This decision was based on metrics compiled by the reviewers over the past year showing that the engineering quality is on level similar to other FH projects.

Installation of the weasel pit sludge containers continues to be delayed due to difficulties in final cleanout of the pit. This includes removal of grout which spilled over into the areas that a container is to be placed when the basin drain valve was sealed as well as continuing visibility problems hindering operations and videotaping of the pit floor to verify the structural adequacy.