

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 23, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover, W. Linzau, and R. Quirk, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending September 23, 2005

Tank Farm Personnel Contamination: Six individuals were contaminated while disconnecting an air hose used for the retrieval of waste from tank C-202. The measured radiation level on the anti-contamination clothing for one person was 40 R/hr beta/gamma. Another individual had low levels of contamination in one nostril; it is believed that this resulted from cross contamination while doffing respiratory protection equipment. The contaminated personnel were transferred to a decontamination trailer where poor maintenance of the equipment hampered personnel decontamination and improper switch position resulted in a minor spread of contamination.

The work was classified as low risk because it was believed that the air hose would not be contaminated. Operational problems with the system, including a plugged air line, were not communicated to personnel planning or performing the work. As a result of this communications failure, the hose was not fully depressurized as required by the procedure. Additionally, the hose was not monitored for contamination after disconnecting it from the system, although a general note in the procedure required this action.

Waste Treatment and Immobilization Plant (WTP): The project experienced three hazardous energy control events this week. These near-miss events indicated a negative trend in construction safety and prompted the construction manager to stop all work. The latest event involved a worker inadvertently cutting into a two-inch temporary propane line. Three temporary service lines (argon, propane, and water) had been partially excavated for rerouting. The argon line had been vented and purged, but prior to installing the lock-out the worker cut the carbon steel line. After cutting the first section of the argon line, the worker moved to cut it at another excavated location and mistakenly cut into the propane line. The propane line had been isolated and vented but not purged nor had the lock-out been installed. Upon smelling the gas, the worker stopped cutting, left the excavation, and informed his foreman.

Earlier this week, a lock-out violation occurred at the concrete batch plant. A worker was taking routine aggregate samples from three conveyor belts. The worker de-energized and locked-out two of the three belts but couldn't do the third because it was in operation. After sampling the first two, he placed the sampling device on the third conveyor when it unexpectedly started.

The third event involved an electrical shock caused by a temporary metal fence post (T-post) driven into a buried electrical cable. The post was located near an electrical panel that was connected to the buried cable. An electrician was performing a grounding inspection and touched both the panel and post, and received a shock.

While these events were near misses, it is yet to be seen what corrective actions will be taken to prevent such occurrences before an accident results in a serious injury or fatality.