

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 4, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending November 4, 2005

Neptunium Processing: Following the moisture issues with neptunium production in HB-Line (Site Rep. weekly 9/16/05), the contractor implemented several significant corrective actions. One of these actions involved analyzing existing product samples for moisture content. This week, three of the samples were determined to contain moisture above the established limit. One of the samples was greater than twice the limit while the other two were only slightly above. The analyzed samples were not collected or stored with the intention of measuring the oxide for moisture content—the samples were collected for material control and accountability purposes. In order to verify the validity of the samples, the contractor plans to analyze additional samples as well as reopen the packages and obtain new samples. If the additional samples indicate the product material contains moisture above the limit the entire product can will be recalined.

Tank 5: Sludge mixing was terminated earlier than anticipated because the dose rate at the high efficiency particulate air (HEPA) filter housing had risen to ~750 mrem/hr. A total of 276,000 gallons of waste was transferred from tank 5 to tank 7. Preliminary sludge mapping indicates that ~17,200 gallons of sludge remain in tank 5, primarily in a congested region of the tank. Some of the sludge peaks are about 4 times higher than the previous average sludge height. Before a second tank 5 bulk waste removal campaign can start, tank 7 will be mixed to release hydrogen gas and then allowed to settle for 8 days. The HEPA filters will also be changed out.

Modular Repackaging System (MRS): The contractor began the readiness assessment (RA) for the MRS, which will be used to remove prohibited items from transuranic waste drums and repackage the remaining compliant waste. During the RA, several potentially significant issues were identified. Due to poor communications and less than rigorous reader/worker performance, operators got ahead of the reader and skipped a step that implemented a Technical Safety Requirement (TSR) administrative control. Once the mistake was identified, operations response was not in accordance with procedure requirements. While performing a surveillance, a continuous air monitor (CAM) unexpectedly alarmed. Facility personnel later determined that the CAM received power from the wrong electrical circuit. One concern with the RA is that several operations were performed without adequate RA Team coverage and will have to be reevaluated.

Defense Waste Processing Facility: While performing maintenance during an outage, implementation of a vague and unnecessary procedure step led to an increase in the airflow in the melter vapor space. Although detected relatively quickly, continued pressurization for several minutes could have led to an inadvertent pour.

Saltstone: The fly ash flow issue (Site Rep weekly 10/28/05) appears to be limited to the initial fly ash added to empty silos that contacted condensation. The finer particles found earlier appear to be limited to some ash that may have collected at the bottom of the silo during dust collector maintenance. As a result, the Readiness Assessment may now start later in November.