

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending June 26, 2015

R. Tontodonato was at Y-12 to observe site rep oversight activities.

Highly Enriched Uranium Materials Facility (HEUMF): Last week, a temporary loss of electrical power caused an abnormal condition that required the Shift Manager (SM) to make an unplanned entry into a Limiting Condition of Operation (LCO). The loss of power was for a very short period of time (approximately one second), which caused partial activation of the Secondary Confinement System (SCS). Per the SCS design, a partial activation of the system forces the facility's exhaust ventilation fans to remain shut down after power is restored anticipating startup and load transfer to the emergency diesel generator. When power is restored quickly, this transfer does not occur. The SM entered the appropriate LCO for this condition and the SCS was restored to a normal configuration later that day. This occurrence is the second instance since HEUMF startup in 2010 in which a short power loss caused this condition. CNS is evaluating alternate settings for the automated activation systems to address losing power for greater than one second but less than ten seconds, which triggers this partial SCS activation.

Oak Ridge National Laboratory (ORNL): UCOR, the contractor for the Melton Valley Closure Project, declared a potential inadequacy in the safety analysis after an OREM facility representative discovered a condition not analyzed in the documented safety analysis. The OREM facility representative inquired about the use of a diesel-powered aerial lift (manlift) that UCOR personnel were using to replace overhead lights in a waste storage building. The rented manlift has a 40-gallon fuel tank and the applicable hazard and accident analysis for the safety basis analyzed a fuel pool fire event from a breach of a 30-gallon tank.

At a separate UCOR waste storage facility, a work crew failed to execute the requirements of a newly implemented specific administrative control (SAC), which resulted in the Facility Manager declaring a Technical Safety Requirement violation. The SAC requires that vehicles involved with transuranic (TRU) waste drum staging must be 25 feet from the TRU waste drums unless the drums are stored in a closed cargo (Sealand-type) container. During the first delivery of contact-handled TRU waste drums following the implementation of this new SAC, the work crew opened the cargo container and unloaded the drums prior to disconnecting the tractor-trailer truck and moving it 25 feet away. UCOR had trained the work crews on this SAC and conducted an implementation verification review prior to implementation of the new safety basis controls, but these actions failed to prevent this human performance error.

Building 9212/Nuclear Criticality Safety (NCS): Last week, during an activity to replace a series of HEPA filters for the exhaust ventilation system supporting the Building 9212 head house area, approximately one gallon of water poured from a filter housing after personnel removed its access door. The presence of liquid in this ventilation system is a moderation parameter upset condition, per the NCS analysis. Per the site procedure for abnormal conditions involving fissile material, personnel established administrative control of the area and notified the SM. NCS engineers obtained the results of the latest uranium holdup surveys for the affected area and non-destructive assay counts for some of the removed filters and found the values to be well below established assumptions for material holdup in the area. This week, NCS engineers gave direction for personnel to perform additional holdup surveys and recommence the filter replacement activity if the survey results are below specified values and no moisture is discovered during additional inspections of filter housings in the area. Engineers have not yet identified the source of the moisture found in the filter housing.