DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 5, 1999

TO: G. W. Cunningham, Technical Director

FROM: R. Arcaro, Hanford Site Representative
M. Sautman Hanford Site Representative

SUBJ: Activity Report for the Week Ending November 5, 1999

A. Flammable Gas in Catch Tank ER-311: On November 1, the head space of catch tank ER-311 was sampled and found to contain a mixture of gases above the lower flammability limit. ER-311 collects drains from diversion boxes ER-152 and ER-151. Access on top and near the tank and the diversion boxes is restricted. Diversion box ER-152 was sampled and found to contain no flammable gas. Because of a lack of sample points, ER-151 has not been sampled. An argon purge of ER-311 was initiated the evening of November 4. After approximately 90 minutes, a vapor sample taken in the riser to ER-311 showed no flammable gas. It is still uncertain whether the purge was completely successful or if it has displaced the flammable gas mixture into ER-151 or other connected piping and tanks. As of Friday afternoon, the purge was continuing. The constituents of the gas mixture (16% hydrogen, 9% oxygen, 54% nitrogen, 19% carbon dioxide) are not indicative of flammable gases previously encountered in the tank farms. The source of the flammable gas is not known, but an insecticide and fixative applied to ER-152 and ER-151 are suspected and are being investigated. (3-A)

B. Plutonium Finishing Plant (PFP): PFP personnel have indicated that their revised Recommendation 94-1 milestone proposal will not include any start or interim milestones as requested by the technical staff. In addition, they do not plan to accelerate any of the completion dates with the possible exception of oxides. Mr. Sautman will be meeting with PFP and RL personnel next week to go through their schedules in detail to see how aggressive they are.

At the September 30 polycube workshop, PFP indicated that they intended to gather enough test data to support making a "go/no go" decision by November 30. However, testing has yet to commence. The last 5 weeks have been spent developing a test plan, approving funding, writing a statement of work, and fixing a furnace electrical problem. At this point, it is questionable how much new data will be generated over the next 13 working days to support this decision. (3-A)

C. Integrated Safety Management (ISM): DOE completed its Phase I Verification of the Project Hanford Management Contractor's (PHMC's) ISM System (ISMS). The review concluded that approval of the contractor's ISMS Description should be deferred until ongoing organization restructuring progresses. In part because of this restructuring, the flow-down of requirements from the PHMC to the activity level where the work is performed is ambiguous and inconsistently applied. Project level ISMS descriptions exist for some of the major projects, but the connection between these descriptions and the overarching PHMC ISMS description is weak. As the PHMC becomes more project-focused in its on-going restructuring, it is not yet clear how this weakness will be addressed. Fluor Daniel Hanford will be required to develop a corrective action plan addressing the weaknesses identified in the review and DOE will reverify these areas in May 2000. (1-C)

cc: Board members