

HSS Independent Activity Report - Rev. 0**Report Number:** HIAR-HANFORD-2014-03-10**Site:** Hanford Site - Office of River Protection (ORP)**Subject:** Office of Enforcement and Oversight's Office of Safety and Emergency Management Evaluations Activity Report for the Observation of Hanford Tank Farm Operations**Dates of Activity :** March 10-12, 2014**Report Preparer:** Robert E. Farrell**Activity Description/Purpose:**

The Office of Health, Safety and Security (HSS), Office of Safety and Emergency Management Evaluations (Independent Oversight) Site Lead for ORP observed Hanford Tank Farm operations and a U.S. Department of Energy (DOE) Facility Representative (FR) training exercise.

Result:**Video Surveillance of Double Shell Tank AY-102**

Tank Farm personnel previously identified a deposit of residue in the annular space between the inner and outer shells of underground double shell tank AY-102. Recently, they identified a second location of residue in the AY-102 annular space. As a result, the annular space is now inspected weekly using a video camera suspended on a cable and lowered into the tank annular space from a tank head penetration on the surface above the tank. The pre-job briefing was well run and covered the hazards and controls identified in the job hazard analysis. Tank Farm workers were attentive to contamination control and followed radiological work procedures. The video obtained depicted, in detail, the AY-102 annular space containing residue.

A planned surveillance of the leak detection sump pit was not performed during Independent Oversight's observation. In accordance with their procedure, Tank Farm workers checked operability of monitoring equipment before inserting it into the penetration leading to the leak detection sump pit and identified an open circuit, which could not be readily corrected. Surveillance was postponed pending instrument maintenance trouble shooting and repairing or replacing the surveillance equipment with the open circuit. Checking the equipment for operability prior to inserting the equipment into a contamination area was performed in accordance with procedures.

Transfer of Tank Contents from Tank C-107 to AN-106

Independent Oversight observed tank recovery operations removing tank contents from single shell tank C-107 and transferring the material to double shell tank AN-106. Much of the material in tank C-107 has formed sludge the consistency of heavy mud. To move the material without creating additional waste volume, the liquid atop the waste in the receiving tank is pumped out and sprayed under pressure into the tank being emptied. As the liquid is repeatedly recirculated, the semi-solid waste is suspended in the liquid stream pumped out of the single shell tank being emptied and transferred to the double shell destination tank. The equipment operators and supervisors place the tank interiors and pumping equipment under video surveillance during the operation. Workers on the ground above the tanks involved in the operation are in radio communication with the equipment operators and perform manual equipment operations necessary to support waste transfer operations, such as raising and lowering video cameras suspended from cables through tank head penetrations. In addition to work supervisors, the equipment operators were supported by system engineers and safety professionals during the transfer operation. Independent Oversight noted that the transfer proceeded satisfactorily during the observation period.

DOE Facility Representative Training

Independent Oversight attended the weekly Tank Farms Operations Division Meeting, during which they observed an FR training exercise. The FRs and Safety System Oversight Engineers (SSOs) were divided into two teams with FRs and SSOs on each team. Team members were individually quizzed in turn on the requirements of DOE orders. Team members earned points for their respective teams by answering correctly. Most questions concerned Conduct of Operations, Occurrence Reporting, and Emergency Response. The exercise emphasized the importance of understanding DOE requirements and stressed cooperation between FRs and SSOs. Participants appeared enthusiastic and demonstrated good knowledge of DOE requirements.

HSS Participants

1. R.E. Farrell (lead)

ReferencesWere there any items for HSS follow up? Yes No**HSS Follow Up Items**

- None