

HSS Independent Activity Report - Rev. 0**Report Number:** HIAR-RL-2011-08-25**Site:** DOE-Richland
Operations Office**Subject:** Office of Enforcement and Oversight's Office of Safety and Emergency
Management Evaluations Activity Report for the Sludge Treatment Project**Dates of Activity :** 08/22/2011 – 08/25/2011**Report Preparer:** Jake Wechselberger**Activity Description/Purpose:**

The U.S. Department of Energy's (DOE) Office of Enforcement and Oversight, within the Office of Health, Safety and Security (HSS), performed operational awareness reviews of the Sludge Treatment Project (STP), Engineered Container Retrieval and Transfer System (ECRTS) during site visits.

Result:

During the period August 22-25, 2011, an HSS representative attended the STP ECRTS Design Review, Value Engineering. The design review was attended by virtually all STP designated personnel, including managers and experts, representing project management, design engineering, nuclear safety, operations, construction, startup and testing, radiological control, system engineering, process control, electrical and mechanical engineering, instrumentation and control, and heating ventilation and air conditioning, as well as DOE. CH2M HILL Plateau Remediation Company (CHPRC), Value Management facilitated the 3-day design review process. The review examined the preliminary design, using an information gathering and brainstorming methodology. The design review generated a number of recommendations to be considered in the final design. This process appeared to be beneficial and worthwhile. CHPRC plans to prepare a final report of the value engineering review for consideration in the final design phase of the project.

DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, implements Office of Management and Budget (OMB) Circular A-131, Value Engineering, which requires that all Federal agencies use Value Engineering (VE) as a management tool, where appropriate, to reduce program and acquisition costs. DOE Order 413.3B defines Value Engineering as a structured technique commonly used in project management to optimize the overall value of the project. Often, creative strategies will be employed in an attempt to achieve the lowest life-cycle cost available for the project. The VE effort is a planned, detailed review/evaluation of a project to identify alternative approaches to providing the needed assets.

In addition to the 3-day design review, HSS was briefed by Quality Assurance with respect to the fabrication of the cooper inserts for the Multi-Canister Overpack (MCO). As part of the STP, to remove sludge from the K-West Basin, the radioactive sludge material will be loaded into MCOs. To facilitate the required heat transfer, the small fuel pieces (scrap) or sludge will be loaded into dense copper inserts, first, and then placed within baskets in the MCOs. A thermal analysis indicates that the MCO copper inserts will be sufficient to remove the heat generated by the scrap.

The copper inserts will be formed by Copper Alloys Ltd., located in the United Kingdom (UK), using a continuous casting process. Linac Services, also located in the UK, will perform radiography of the copper inserts. The Engineered Products Division in Carlsbad, NM, a division of URS Washington Government Environmental Services, will perform final fabrication of the inserts.

The HSS representative also attended the STP field execution schedule, weekly meeting. During the meeting, a detailed review of the STP field execution schedule, including the status of significant activities, was conducted. The meeting appeared to be comprehensive and effective. HSS also observed DOE Richland Operations Office meetings about STP.

HSS Participants

1 (lead). Jake Wechselberger

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

1. Continue operational awareness reviews of STP.
2. Continue to review fabrication and inspection of the MCO copper inserts.