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02-RF-00869

APR 19 2002

Ron Bostic
 Director, Nuclear Regulatory Division
 DOE, RFFO

TRANSMITTAL OF THE AQUEOUS WASTE TRANSFER PROJECT FACILITY SAFETY ANALYSIS FOR INFORMATION - DPS-010-02

- Refs (a) *Facility Safety Analysis, Process Waste Transfer System, Revision 3, Kaiser-Hill LLC, December 18, 2001*
 (b) *Site Safety Analysis Report (Site SAR), Volume II, Facility Safety Analyses, Revision 2, Kaiser-Hill LLC, June 1999*
 (c) *Tuor Letter to Hartmann (NRT-036-01) Submittal of the Preliminary Hazard Categorization for the Aqueous Waste Treatment System, August 23, 2001*
 (d) *Sargent Letter to Tuor (SP NR DEF 01-01714) Approval of the Preliminary Hazard Categorization of "Radiological" for the Aqueous Waste Treatment System, September 17, 2001*
 (e) *Hazard Baseline Documentation, DOE-EM-STD-5502-94, U S Department of Energy, Washington, D C , August 1994*
 (f) *Hazard Categorization and Accident Analysis Techniques for Compliance With DOE Order 5480 23, Nuclear Safety Analysis Reports, DOE-STD-1027-92, U S Department of Energy, Washington, D C , December 1992*

This letter transmits the enclosed Aqueous Waste Transfer Project (AWTP) Facility Safety Analysis (FSA), Revision 4, for information This FSA revises the Process Waste Transfer System (PWTS) FSA, Revision 3 (Reference [a]) to fully integrate the PWTS and the Aqueous Waste Treatment System (AWTS) into a single project known as the AWTP The AWTP, as a consolidation of these two major systems, comprises a major part of the current Kaiser-Hill LLC (K-H) Site Water Treatment Strategy The AWTS element, a significant component of this strategy, reflects K-H cost-beneficial planning to transport Site low level/low level mixed liquid (LL/LLM) waste to an offsite treatment facility in support of Site closure

The enclosed AWTP FSA, Revision 4, replaces the previous PWTS FSA, Revision 3, in its entirety as part of the *Site SAR, Volume II, Facility Safety Analyses* (Reference [b]) The FSA retains and provides the final *radiological* facility categorization initially presented in the *Submittal of the Preliminary Hazard Categorization for the Aqueous Waste Treatment System* (Reference [c]) as approved by the DOE Nuclear Safety Department (Reference [d]) The AWTP FSA, Revision 4 also maintains the PWTS's *radiological* hazard categorization and

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meets the requirements for an auditable safety analysis as referenced in DOE Environmental Management limited standard, DOE-EM-STD-5502-94, *Hazard Baseline Documentation* (Reference [e])

The AWTP's final hazard classification, including its PWTS and AWTS elements, is derived in accordance with DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480 23, Nuclear Safety Analysis Reports* (Reference [f]) The amount of plutonium (Pu) in any given AWTP system segment will be less than the Hazard Category 3 threshold value of 8.4×10^0 Pu grams equivalent listed in Reference (f)

Background and technical details of the AWTP and its PWTS and AWTS elements are discussed in greater detail below

Background

The previous mission of the PWTS involved transporting process liquid LL/LLM waste from waste-generating facilities to Building 374 for treatment. The current K-H Site Wastewater Treatment Strategy excluded the Building 374 Liquid Waste Treatment Facility (LWTF) from receiving Site LL/LLM wastewater in March 2002. To support Site closure and timely decommissioning of Buildings 371/374, the PWTS' mission was changed to that of providing liquid waste transport to the 231 Tanks for storage. That liquid LL/LLM waste will be transported offsite for treatment and disposal by the AWTS Subcontractor.

Building 374 treatment processes will continue to operate and treat the Building 374 inventory until it is eliminated. It is anticipated that the Building 374 process equipment will be operational for several months to process that inventory. Once the Building 374 inventory is eliminated, the process equipment will be taken out of service and decontamination and decommissioning (D&D) activities will commence.

Synopsis of AWTP FSA Revision 4 Changes

The AWTP FSA, Revision 4 maintains the final hazard classification of *radiological* for the PWTS and AWTS and each system's segments, as previously documented in the PWTS FSA, Revision 3. The *radiological* hazard categorization is based on current radiological material inventories and the hazards associated with PWTS and AWTS facilities and each system's present mission.

Major changes found in the AWTP FSA, Revision 4 are as follows:

- 1 Re-titled the PWTS FSA to the "Aqueous Waste Transfer Project (PWTS and AWTS)",
- 2 Documented the Authorization Basis (AB) document's history in a new Change Summary reflective of the FSA from Revision 0 through Revision 4,
- 3 Described the integration of the PWTS and AWTS into the AWTP in Section 1 "Introduction," Section 2 "Facility Description and Activity Characterization," and their respective subsections,
- 4 Added the AWTS offsite tanker transport vehicle to Section 2.2.5 "Facility Inventory and Source Term Development" and identified PWTS and AWTS segments,

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- 5 Added a new Figure 1 depicting the PWTS and AWTS-to-Site interfaces,
- 6 Updated Section 3 1 2 "SMPs Important to Hazards Analysis" to include a Criticality Safety Program pertinent to AWTP segments,
- 7 Updated Table 1 "Hazard Identification Checklist" and Table 2 "System Hazard Descriptions" to include the AWTS offsite tanker truck,
- 8 Updated Table 4 "PWTS and AWTS Hazards and Hazard Categories" to reflect each system's individual segments,
- 9 Added a transportation safety evaluation and provided synopses of pertinent FHAs and Emergency Preparedness Hazards Assessments (EPHAs) to Section 4 "Hazards Analysis",
- 10 Added the AWTS offsite tanker transport truck to Section 4 5 "Final Hazard Classification",
- 11 Added Transportation Controls to Section 5, "Scope of Approved Activities and Operational Controls", and
- 12 Identified throughout the FSA that Section 5 presents the AWTP Waste Acceptance Criteria (WAC) for the AWTP and its systems and segments

If you have any questions, please contact Al Hohl at extension 3767 or Tim Humiston at extension 2700



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ARH wjd

Enclosure
As Stated

Orig and 1 cc - Ron Bostic

cc
Dave Faulkner



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