Information Bulletin

Safety Basis and Fire Safety Documents Must Be Consistent

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Summary: When Nuclear Safety requirements or any requirements change, facilities must ensure that all applicable documents are in compliance with the new requirements.

Discussion of Activities: During the annual revision of the Canister Storage Building (CSB) Safety Analysis Report (SAR), Nuclear Safety personnel identified differences between the Fire Hazards Analysis (FHA) and the SAR. A Positive Unreviewed Safety Question was identified.

The discrepancies were caused by an issue related to how the safety basis for CSB was developed and maintained. In 1998, during startup of the CSB facility, Fluor Hanford (FH) obtained agreement from RL that all fire hazards would be analyzed in the FHA. This was determined to be a prudent use of resources. The FSAR referenced the FHA for all fire accidents. In 2003, when other FH safety bases were revised to meet DOE-STD-3009-94, "Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Safety Analysis," the CSB SAR and FHA were accepted as is, and were not revised to the new DOE requirements. The basis for not performing a revision was that the documents were less than five years old and had been written to draft DOE-STD-3009-94 criteria.

In 2006, CSB transferred to the Waste Stabilization and Disposition Project. The newly assigned Fire Protection Engineer subcontractor questioned the methods being used to maintain the FHA. This triggered a review of the SAR and FHA which identified the discrepancies.

Analysis: The CSB SAR hazards analysis identified specific CSB fire hazards but provides no evaluation, assessment, or analysis. The SAR hazards analysis referred to the CSB FHA for all fire associated limits. This condition negatively impacted several of the controls which would normally identify discrepancies.

Because the USQ process examines the SAR, and the SAR referenced the FHA for all fire-related scenarios, a check and balance to identify discrepancies between the two documents was impacted. While the approach met the intent of the process, it was narrow and did not provide a thorough check and balance. Additionally, this process effectively made the FHA part of the safety basis; however, the FHA was never formally reviewed and approved by RL as part of the safety basis documentation. Because changes to the FHA were managed by fire permit, the opportunities to review the document against the safety basis were reduced. This in turn reduced the opportunities to identify discrepancies. Assessments and evaluations of the CSB processes accepted the previous assumption that the FHA contained all appropriate controls. Consequently, these processes did not actively compare the FSAR and FHA scenarios.

Recommended Actions: None

Cost Savings/Avoidance: Not determined

Work Function: Authorization Basis, Safety Design

Hazards: Other

ISM Core Functions: Define Work

Keywords: Container Storage Building, Fire Hazards Analysis, Safety Analysis Report

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References: EM-RL--PHMC-CSB-2006-0004