

REQUEST FOR SUPPLEMENTAL INFORMATION
Pacific Gas & Electric Company
License Renewal Application
Docket No. 72-27
License No. SNM-2514

This request for supplemental information (RSI) identifies information needed by the U.S. Nuclear Regulatory Commission (NRC) staff in connection with its review of the renewal application. NUREG-1927, Revision 1, "Standard Review Plan for Renewal of Specific Licenses and Certificates of Compliance for Dry Storage of Spent Nuclear Fuel" was used by the staff in its review of the application. Each RSI describes information needed by the staff for it to begin its technical review of the application to determine whether the applicant has demonstrated compliance with the regulatory requirements.

In responding to the following RSIs, the staff notes that activities a licensee is performing during the current licensing period may be credited towards aging management in the renewed period, provided that the applicant demonstrates that the activities can effectively manage the effects of aging.

Humboldt Bay (HB) ISFSI Renewal

RSI HB1: Provide a justification (e.g., analysis, test, inspection, etc.) for treating the external environment of the HI-STAR Humboldt Bay (HB) greater than Class C (GTCC) Waste Container (GWC) as "embedded" (i.e., with no potential ingress of moisture or contaminants).

The application states that the external HI-STAR HB GWC subcomponents are exposed to the internal HI-STAR GTCC overpack environment (i.e., enclosed air environment), which is ambient air. The application also states that no overpack drying was implemented during the closure of the bolted overpack, thus, the enclosed air environment, while isolated during the long-term storage period, is considered saline air (Table 3.1-2). The application also states the bolted overpack does not allow for the opportunity to introduce additional water or oxygen to the environment after initial overpack bolting and is thus similar to an embedded environment.

Table 3.7-1 of the application includes localized corrosion (crevice corrosion and pitting corrosion) as a possible aging mechanism in the Aging Management Review of GWC. The applicant excluded the potential for localized corrosion and chloride-induced stress corrosion cracking (CISCC) because the GWC was assumed to be maintained in an embedded environment, consistent with guidance provided in NUREG-2214. However, there is no justification to support the assumption that the enclosed air environment performs similar to an embedded environment in the bolted overpack without seals.

The staff requests that the applicant provide a justification (e.g., analysis, test, inspection, etc.) for treating the external environment of the GWC as "embedded," such that localized corrosion and CISCC can be excluded during the renewal period.

This information is needed for evaluating the HI-STAR Humboldt Bay (HB) ISFSI Renewal, in compliance with 10 CFR 72.42 (a)(1).

Enclosure

RSI HB2: Provide an aging management review and aging management activities for the “cask transportation system” and “lid retention device” or, alternatively, provide justification that these components will not be used after they reach 20 years of service.

Table 2-1 of the license renewal application (LRA) states that the important-to-safety cask transportation system and lid retention device are not in scope of renewal. The LRA supports this position for the transportation system by citing the shared use of the system with Diablo Canyon, the potential re-certification of the system after it reaches 20 years of service, and current maintenance requirements. For the lid retention device, the table states that this component does not support a long-term storage function.

The guidance in NUREG-1927, Section 2.4.2 states that all important-to-safety components should be included within the scope of the renewal. The shared use of the transportation system and its maintenance or re-certification activities do not preclude the need to provide an aging management program to manage the effects of aging. However, the staff notes that maintenance or re-certification activities may be credited in an aging management program, provided that these activities are demonstrated to adequately manage any aging effects identified in an aging management review.

Regarding the lid retention device, the staff notes that the use of this component is described in the safety analysis report, Section 4.4.1.2.5, “Unloading Operations,” and Section 5.1.1.4, “Off-Normal Event Recovery Operations.” Thus, it appears that this component supports a long-term function.

This information is required to determine compliance with 10 CFR 72.42(a).