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Regarding the aircraft crash RAI, the staff asked several clarification questions. These questions dealt primarily with aspects of the flight of the F-16 aircraft. Unfortunately, Col. Ronald Fly (USAF, Ret.), the PFS consultant most familiar with the F-16, was not available to participate in the meeting. Therefore, it was decided that a telephone conference call would be scheduled to discuss these points of clarification.

Attachments: 1. Attendance List  
2. Information Needed for the Completion of the LA Amendment

Docket No. 72-22

cc: Service List



## **DATA NEEDED FOR THE COMPLETION OF THE PFS LA AMENDMENT**

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### **Seismic Hazard Analysis:**

The following data is needed to complete a review of the new seismic hazard attenuation results submitted in the PFS LA Amendment:

1. Deaggregated hazard curves (mean and fractiles) for horizontal and vertical ground motion for each attenuation and site response model at all 16 frequencies.
2. Site velocity measurements, the 30 random property models (all parameters - shear wave velocity, damping, modulus reduction ratio as a function of shear strain, results of simulations, and input spectra (earthquake magnitude and distance matrix of inputs).
3. Results of the soil structure interaction calculations - spectral ratio or free field vs. building structural foundation (top) motion.
4. Confirmation from the Bay Geophysical experts that the new shear wave velocities will not alter conclusions of the shallow seismic reflection profiles.
5. Complete description of the site soil characterization update including:
  - a. site data,
  - b. discussion of the site investigation timeline,
  - c. complete description of the evolution of the site model, noting parameters that have remained constant as well as those that have changes,
  - d. suite of sensitivity results that show the ramifications of changing from a "soil" model to a "rock" model,
  - e. sensitivity results to demonstrate the sensitivity (or insensitivity) of the weighting factor (empirical vs model).
6. Complete revised hazard analysis report (or at least a complete section 6).
7. Well data for soil below 30 ft.
8. More site specific data (i.e., beyond the one existing deep well) for the soil between 30 ft and the Tertiary strata or provide an analysis that shows that the applicant has captured the uncertainty of the soil properties sufficiently such that any new information will not again significantly change the ground motions (i.e., sensitivity study of the site response model that would incorporate the variability of the soil parameters expected for this site).

### **Soil Engineering:**

1. A site plan showing location of any new borings and test pits used to support PFS analyses.

2. Logs for any new borings or test pits used to support PFS analyses.
3. Revised analyses of the stability of the storage pads to include a clear identification of the potential failure modes and failure surfaces and the material strengths required to satisfy the regulatory requirement, considering the critical failure modes and failure surfaces.

### **Design of Facility:**

#### **Storage Pads**

1. Assessment of the edge effects on the stability of the Storage Pads under new seismic loads.

#### **Cask Transfer Building**

1. General description of the major structural elements of the CTB. This should include the reinforced concrete walls, columns, roof, and slab and the structural steel elements including the roof support beams
2. New calculation package (SC) for Design of Tornado Doors on cells in canister transfer building (CTB).
3. New SC for Design of roof steel members.
4. Updated letter from Ederer, Incorporated on impact of new seismic levels.
5. Updated G(B)-11 Dynamic Settlements of the soils underlying the site.
6. Updated SC-4 Impedance Functions for CTB.
7. Assessment of the design changes to the slab in terms of load transfer from the walls to the slab and resulting loads on soils. Emphasis should be on the pad areas extending beyond the building walls.
8. Assessment of fire impact on the new design of the CTB.
9. Assessment of the drop of a cask onto the slab of the CTB.