Harold, please give us an opinion on the following:

The safe shutdown facility (SSF) was added to the license basis for the Oconee units in an SER dated April 28, 1983. It states that "DPC has concluded that the most likely reason for flooding of the turbine building would be from a condenser circulating water pipe break resulting from a seismic event."..."Thus, the structure meets the requirements of GDC 2 and the guidelines of Regulatory Guide 1.102 with respect to protection against flooding."

For information the SSF is the Appendix R diesel, Oconee does not have train separation.

In response to a 1978 SSF RAI, the licensee stated that "Flood studies show that Lake Keowee and Jocasse are designed with adequate margins to contain and control floods so as to pose no risk to the Oconee Nuclear Station Site."

A February 17, 1982 Jocasse-Keowee Dambreak Flood Analysis contained in OSC-632 documented that a Jocassee Dam failure would overtop the Keowee dam for 2.4 hours with flood waters 4 ft over the top of Keowee and on site flooding of 32 ft.

A January 17, 1983 licensee memorandum to file documents the results of a Jocassee Dam break study to determine the maximum height around the SSF. The study included three scenarios, with the worst case yielding 4.71 feet of flood waters within the site boundary. Based on this a 5 ft flood wall was built at the entries into the SSF.

The flood studies were not given to the NRC for review during the licensing of the SSF. The NRC was only told that flooding from Jocassee and Keowee posed no risk to the Oconee plant site. On April 28, 1983 the SER was signed/approved.

I would think that the licensee did not provide complete and accurate information regarding potntial for flooding of the Oconeee site regarding the licensing of the SSF.

Another FERC study was completed in 1992 and it concluded that the maximum probable flood (Jocassee Dam Break) failure senario would provide a maximum flood depth on site of 12.5 ft to 16.8 ft.

In 1992, the UFSAR referenced various correspondence with the NRC regarding the licensing basis of the SSF. There was very little detail in the UFSAR other than the references. The licensee decided to take all the referenced material and detail that material into the UFSAR. One of the references from 1978 RAI stated that "The safe shutdown facility is within the site boundary, southwest of the Unit 2 Reactor Building, therefore, it is not subject to flooding from lake waters." The licensee went on to make changes to the UFSAR Section 9.0. Flooding Potential. "Protection from flood at the SSF is provided by the five foot walls at the entrance to the SSF supplemented by a watertight door at the south end entrance of the SSF." and "The SSF will not be affected by the following postulated flood events...3). Jocasses Dam Failure.

A December 14, 1993 licensee memorandum to file documents the results of the latest FERC study and predicts about 12 ft on site. It stated that the 4.71 ft noted in the previous FERC study could not be duplicated. The memo went on to state that "...the Oconee PRA and UFSAR will be revised to reflect loss of SSF function resulting from a Jocassee dam failure. PIP O-93-0181 has been written to document this process."

On June 2, 1994, the licensee used the 50.59 process to remove the flooding from Jocassee out

of the UFSAR.

Documented in a September 20, 1982 RAI letter response from Duke to the NRC, question 19, asked the licensee to "Describe those features of the design that assure that design basis events do not result in consequential failures of the SSF that would lead to conditions which exceed that for which safety systems have been designed." Although Duke knew that a failure of the Jocassee dam would likely flood the SSF, this information was not provided to the NRC.

If the NRC had been made aware of the above information, would the licensing basis for the SSF have included a Jocassee dam failure and flooding of the site?

Once the information was added to the UFSAR, is it appropriate to use the 50.59 process to remove flooding from a Jocassee dam failure, ie. "Protection from flood at the SSF is provided by walls at the entrances to the SSF supplemented by a watertight door at the south end entrance of the SSF" and "The SSF will not be affected by the following postulated flood events...3. Jocassee dam failure" and "The second source of external flooding is a rapid failure of the Jocassee dam. Failure of the Jocasse dam would result in a postulated wave height of 4.71 feet in the yard at the Oconee site. The SSF protects Oconee's most secure method of safely shutting down the plant following a external flood due to a Jocassee dam failure."????