

JUSTIFICATION FOR CONTINUED OPERATION OF OCONEE NUCLEAR STATION

- Issue: The Standby Shutdown Facility (SSF) at Oconee Nuclear Station may be flooded and rendered inoperable due to a breach of the Jocassee dam located upstream of the site.
- Assessment: A review of the current condition of the Jocassee Dam indicates that it is structurally sound and unlikely to suffer a catastrophic failure during the required period of the next two years for the following reasons:
 - Construction and Monitoring
 - No seepage of water in the main dam and only minor seepage at the east and west abutments were identified in the FERC Inspection Report, "Potential Failure Modes Analysis (PFMA)". Duke is performing biweekly inspection and monitoring of the condition of the dam, as required by FERC.
 - The present level of the Jocassee Lake is about 23 feet below the lake's full pond level of 1110 ft due to the drought conditions. This reduces the loading that is imposed on the dam. Furthermore, a review of data showed that failure of the dam resulting from failure of spillways and gates is not likely.
 - Seismic
 - Due to robustness of its construction in 1973, the probability of an earthquake causing the catastrophic failure of the dam is considered to be low. Data on the potential for soil liquefaction is still being evaluated by NRC staff.
 - Accident Mitigation
 - Accident sequence progression timelines are on the order of days to containment breach and/or fuel pool boil-off which would allow time to implement mitigating actions. It is assumed that recovery of flooded roadways after floodwater recession will allow for providing a source of water for containment and spent fuel pool cooling.
 - Duke has initiated a diverse program of constant surveillance of the performance of the dam by means of on-site cameras and also offsite monitoring of the observed data from its headquarters office. Duke has committed to augmenting their Severe Accident Mitigation Guidance (SAMG) procedures to include potential loss of the SSF due to external flood.
 - Near Term Enhancements: Duke had proposed to increase the height of the entrance walls from 5.0 ft to 7.5 ft. Duke has also discussed the procurement of water-tight doors for these entrances with NRC staff which, along with associated engineering, provides the best defense against external flooding at the SSF.