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U. S. Nuclear Regulatory Commission
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Subject: Duke Energy Corporation
Oconee Nuclear Station units 1, 2, and 3
Docket Nos.: 50-269, 50-270, 50-287
Reporting Lake Jocassee Seismic Activity

Reference: NRC letter to Duke, dated October 29, 1979

This letter is to notify the NRC that Duke Energy Corporation (DEC) no longer intends to inform the NRC of low magnitude seismic activity in the vicinity of Lake Jocassee Dam. This earth-rock dam is located about 11 miles upriver from Oconee Nuclear Station (ONS). After the construction and during and after the filling of Lake Jocassee in the early 1970's, frequent earthquakes with local magnitudes up to 3.8 occurred in the immediate vicinity of the lake. Consequently, the NRC requested in the above reference letter that DEC notify the NRC Headquarters Project Manager and/or Branch Chief whenever any seismic activity is detected greater than a magnitude 2.0.

Northwestern South Carolina has a history of low level regional seismicity. None of the historical events occurred in the vicinity of Lake Jocassee. Earthquakes began in the vicinity of the reservoir in 1975 during filling and have continued to the present. This seismic activity is unusual in the frequency of events (none before construction and filling of the reservoir). The maximum magnitude event ($M_L \sim 3.8$) that has occurred in the vicinity of the lake is not unusual when compared to the maximum earthquake ($M_L \sim 5.5$) related to the geologic/tectonic province in which ONS and Jocassee Dam are located. Both ONS and the Lake Jocassee Dam have been designed to withstand strong ground motion from an earthquake of this size. The frequency and magnitude of events have decreased from several hundred a year after filling started in 1974 to just 26 in the first six months of 2000 (most with local magnitudes less than 2.0). Therefore, the existing reporting requirements of 10 CFR 50.72 and 50.73 are sufficient relative to informing the NRC.

Please direct any question or inquiries to Larry Nicholson at (864) 885-3292.

Sincerely,


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Oconee Nuclear Station

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