DUKE TO NRC:
DAM FAILURE NOT CREDIBLE RISK

40" The amount of rain a storm would have to drop within 72 hours for water to overtop the Jocassee Dam, a rain event not seen since the dam was built 40 years ago, Duke officials say.



Company discusses its post-Fukushima Jocassee study with nuclear agency

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Duke Energy's newest Jocassee Dam flooding hazard study, ordered by regulators after Japan's nuclear disaster two years ago, shows that the company doesn't consider a failure of the massive structure upstream from the Oconee Nuclear Station a credible risk.

Duke discussed details of its post-Fukushima study on Monday in a public meeting with the Nuclear Regulatory Commission in Maryland, though the study, submitted to the NRC earlier this month, itself isn't public.

While not impossible, Duke officials said, neither earthquake nor lake levels overtopping the massive, 385-foot structure threaten public safety.

NRC regulators said they will take the findings under advisement before determining whether the agency agrees with Duke's assessment.

The potential for a dam failure has come into sharp focus lately, as NRC whistle-blowers and nuclear watchdogs point to documents released under the

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OUR NATURAL BEAUTY

Duke officials say neither earthquakes nor lake levels overtopping the Jocassee Pumped Storage Hydroelectric Station threaten safety.
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NRC

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Freedom of Information Act that show nuclear regulators have been concerned for decades about the possibility of a flood overwhelming the nuclear station.

The study is among the first of U.S. nuclear plants following the tsunami-spawned Fukushima meltdown. What comes of the response will prove to be a crucial point in how regulators pursue flooding and seismic safety concerns across the country, nuclear watchdogs say.

Previous estimates, according to public documents, determined that floodwaters of 9 to 16 feet could overcome the flood wall that is meant to protect Oconee's backup control system.

Last fall, NRC risk analysis engineers Richard Perkins and Larry Criscione said that the agency heavily edited one flood report for fear of embarrassment over how long they have let the issue linger without resolution. A number of newly released documents show varying degrees of interest over the years in regulating the risk, both by the NRC and Duke.

Following Monday's meeting, Duke representatives wouldn't say whether their latest assessment predicted possible flood levels lower than the 7 ½-foot wall in place now.

In the presentation, Duke engineers said that they re-evaluated earlier estimates to compare to similar size and type dams and to include new regulatory guidance.

In each calculation, they said, the scenarios that would result in the most-severe consequences were used.

For water to overtop the Jocassee Dam, a storm would have to drop about 40 inches of rain within 72 hours, a rain event not seen since the dam was built 40 years ago, Duke officials said.

By comparison, they said, a recent storm notorious for the flooding it created, Hurricane Irene in August 2011, dropped less than half that amount in the hardest hit area of North Carolina.

Weekly rain forecasts, Duke officials said, give operators time to plan for a major rain event and draw the lake down.

The potential for seismic activity to cause a sudden dam break is similarly unlikely given how the dam is constructed with an impervious inner core and different forms of rock fill, along with regular inspections and monitoring of potential slow-developing problems, they said. The most-conservative estimates in the study use scenarios that assume both the Keowee and Hartwell dams would fail following a Jocassee failure, they said.

Following the new study, Duke officials said the company is reviewing potential modifications, including relocation of backup power lines and transformers, diversion walls and canals, and new protection of embankments.