

April 7, 2003

LICENSEE: DUKE ENERGY COMPANY
FACILITY: OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3
SUBJECT: SUMMARY OF MARCH 20, 2003, MEETING TO DISCUSS TORNADO
MITIGATION

On March 20, 2003, the Nuclear Regulatory Commission (NRC) met with Duke Energy Company (the licensee) to discuss the June 7, 2002, submittal that dealt with tornado mitigation. (A meeting had already been held on December 10, 2002, to discuss this submittal.) Enclosure 1 is a list of the meeting attendees. Enclosure 2 is an electronic message that was sent by the licensee to the NRC prior to the meeting. The June 7, 2002, submittal, minutes of the December 10, 2002, meeting, and the handouts provided by the licensee for the March 20, 2003, meeting are accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams/html>. The accession number for the June 7, 2002, submittal is ML021710770; the accession number for the minutes of the December 10, 2002, meeting is ML030020017; and the accession number for the handouts provided during the March 20, 2003, meeting is ML030830443.

Prior to the meeting, the NRC had sent questions to the licensee concerning the June 7, 2002, submittal. Draft answers to these questions were provided in the licensee's handout entitled "Duke Responses to RAI Concerning Proposed License Amendment Request to Fully Credit the Standby Shutdown Facility and to Eliminate Crediting the Spent Fuel Pool to High Pressure Injection System Flow Path for Tornado Mitigation, Oconee Nuclear Station, Units 1, 2 and 3." The contents of this handout, which had been provided to the NRC the day before the meeting, were discussed during the meeting.

Following are the some of the action items that resulted from the meeting:

1. The NRC agreed to relook at the response to Question 1 to determine whether any additional information is required.
2. The licensee agreed to expand its response to Question 2 to provide more details regarding the risk benefit that could be achieved by eliminating certain tornado vulnerabilities.
3. The licensee agreed to expand its response to Question 5b to provide additional justification for the use of 0.1 as the probability of the failure of the pressurizer safety valves to reseal following liquid relief.
4. The licensee agreed to expand its response to Question 15 to include some historic data on lake level and the methods that can be used to control lake level.

5. The licensee agreed to expand its response to Question 19 to provide further discussion of the secondary side heat removal "run failure."

In addition, the NRC noted it had not had time to thoroughly review the draft responses, since the NRC had received them the day before the meeting. After NRC completes its review of the draft responses, there may be additional comments and questions.

Docket Nos. 50-269, 50-270 and 50-287

Enclosures: As stated

cc w/encls: See next page

- 5. The licensee agreed to expand its response to Question 19 to provide further discussion of the secondary side heat removal "run failure."

In addition, the NRC noted it had not had time to thoroughly review the draft responses, since the NRC had received them the day before the meeting. After NRC completes its review of the draft responses, there may be additional comments and questions.

Docket Nos. 50-269, 50-270 and 50-287

Enclosures: As stated

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LIST OF ATTENDEES
MEETING TO DISCUSS TORNADO MITIGATION
MARCH 20, 2003

NRC

C. Douth
J. Lazevnick
L. Lois
L. Olshan
J. Nakoski
M. Pohida
R. Schin*
T. Specht
J. Tatum

DUKE

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D. Coyle
E. Burchfield
R. Gambrell
L. Kanipe
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*Participated by telephone

From: "Larry E Nicholson" <lenicholson@duke-energy.com>
To: <lno@nrc.gov>
Date: 3/17/03 2:22PM
Subject: Tornado Meeting

Lenny,

We intend on getting you written responses to the staff's questions tomorrow in time for your folks to read before the meeting. I plan on leading us thru by summarizing the question then opening up for questions. We are not preparing a separate presentation, etc.

Also, I thought it might be useful to share beforehand some broad philosophical perspectives the we used to influence our direction:

Oconee was originally licensed with the single Station ASW pump as the means of post-tornado secondary cooling. Primary makeup was not discussed. Post-TMI interactions still focused on secondary makeup. The staff acknowledged EFW and Station ASW limitations, and offered an option to either fully protect the SSF or analyze the Station ASW. The staff ultimately accepted the current strategy primarily based on the SSF. At this time the SSF was included in our licensing basis for Tornadoes. The HPI-SFP flowpath was added to the UFSAR by Duke around 1990 since it was available and could be used for an outside design basis seal LOCA. This option was not added to meet any regulatory requirement or as a result of any staff interactions. We have since realized that the complications and uncertainties associated with this alignment do not justify retaining this flowpath as a viable mitigation option. A decision was made in 2000 to upgrade the RCP seals, with a risk benefit far off setting the benefit from this flowpath option.

Duke felt it important to launch a significant Tornado Project in large part due to the contribution of Tornadoes to our overall CDF. However, it is important to note that from an overall CDF perspective, Oconee is around the middle of the fleet.

Since our existing tornado licensing basis was already essentially risk-based, the initial phase of our current project was to update our Tornado PRA to state-of-the art. We have had this model validated by independent experts and it has been heavily inspected by the region. Our previous model generally considered the tornado a Unit 3 event only w/LOOP on the other 2 units. Our new model integrates the risk from a total site impact following the full range of tornadoes.

Duke has and will continue to evaluate insights revealed by the PRA work and explore potential avenues to reduce risk. We implemented a mod to resolve an aux power vulnerability for Keowee.

The bottom line, however, is that there are no additional, reasonable modifications that would produce an appreciable risk benefit. The RCP seal mod was the only option, which has been done. Otherwise, a major redesign of the plant is not an option. Hardening the SSF, while not producing substantial risk benefit, does provide a deterministically assured means of tornado mitigation for all 3 units. We will know we have a system, complete with power, that will survive the tornado.

Hope this helps.
Larry

Oconee Nuclear Station

cc:

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