

February 28, 2000

Mr. W. R. McCollum, Jr.
Vice President, Oconee Site
Duke Energy Corporation
7800 Rochester Highway
Seneca, SC 29672

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3 RE: REQUEST FOR
MEETINGS TO DISCUSS PRESSURIZED THERMAL SHOCK REANALYSIS

Dear Mr. McCollum:

The Nuclear Regulatory Commission (NRC) Office of Nuclear Regulatory Research has begun a program to re-quantify the risk due to Pressurized Thermal Shock (PTS) events at operating Pressurized Water Reactors. The program will use information about the Oconee Nuclear Station, other plants, and previous PTS analyses to re-quantify risk results to determine the possibility of showing that the current PTS rule (10CFR50.61) has considerable conservatism and can be relaxed without adversely affecting public health and safety.

During a joint industry/NRC meeting held in Washington, DC during the first week of February 2000 that was attended by Duke Energy Corporation personnel, your staff expressed an interest in participating in the NRC effort. At that time, we explained that in addition to obtaining certain documents (e.g., Oconee EOPs), it would be desirable to have a meeting at the Oconee site for closer interactions. To accomplish this, we have generated the enclosed proposed schedule and topics that are of interest. The purpose of this letter is to inform you of the topics and determine the acceptability of the schedule. We expect to have 6-8 participants from the NRC and its contractors.

We appreciate the Oconee staff's participation in this important project. With your involvement, and that of other utilities, the NRC will be able to produce well-informed, defensible analyses of PTS issues. We look forward to your response regarding our proposed visits, or alternative suggestions as may be appropriate. Comments should be directed to Mr. Hugh (Roy) Woods, of the Office of Nuclear Regulatory Research at 301-415-6622 (email: hww@nrc.gov).

Sincerely,

/RA/

David E. LaBarge, Senior Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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

Enclosure: Proposed PTS Meeting Topics and Schedule

cc w/encl: See next page

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OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

PROPOSED PTS MEETING TOPICS AND SCHEDULE

First Proposed Meeting

March 14 and 15 (with the possibility of a half-day later in the week if additional time is needed to complete all items, preferably the morning of March 16). The proposed general topics to be addressed are the following:

- Introductions/brief overview
- Initiating events relevant to PTS
- Accident sequences involving PTS
- Overview of the ATHEANA Human Reliability Analysis (HRA) approach
- More detailed working group interactions on these subjects

If possible, it would be helpful to observe an operating crew during one evening of planned simulator training sessions. Understanding a typical crew's dynamics and the way they interact helps us producing a more realistic HRA. The exercise would not have to relate to PTS, but if it did, it would be particularly worthwhile. While it would be beneficial to have such an observation during this first meeting, if schedules do not permit, doing this during the second suggested meeting (discussed below) would be acceptable.

PROPOSED AGENDA

March 14:

8:00 - 8:45am Introduction/Overview presentation
 Introduction of attendees
 Purpose/goals of meeting by NRC
 Schedule of NRC PTS program
 NRC Program status
 Views, if any, on the PTS issue by Duke

Suggested Participants: NRC, NRC contractors, Duke management and technical staff participants (PRA/HRA, thermal hydraulic specialists, and representatives from training/simulator and operations staffs)

8:45 - 9:30am Initiating Events/Sequences Overview presentation by NRC
 contractors
 Review of relevant initiators as well as those tentatively screened out
 Overview of event tree/fault tree modeling and sequences screened as unimportant.

Suggested Participants: NRC, NRC contractors, Duke technical staff participants

Enclosure

9:30 - 9:45am Break

9:45 - 10:45am Presentation on ATHEANA HRA process
Overview, including the emphasis on "context"
Inclusion of errors of commission
The step-by-step process
Integrating recovery actions

Suggested Participants: NRC, NRC contractors, Duke HRA/PRA and representatives from training/simulator and operations staffs (attendance by representatives from training and operator staffs is very important so the HRA reflects operational viewpoints)

10:45 - 11:00am Break

11:00 - 12:00 Noon Tour of Simulator Control Room by Duke staff, with focus on PTS-relevant controls/indications. If this is an inconvenient time, this could be scheduled during back shift, etc.

Lunch

Afternoon Technical working sessions (separately if desired) involving the systems and sequence analysis, thermal hydraulic, and training/operations/HRA areas. With regard to the HRA, it is desirable to have frank discussions with training and operations representatives in order to better understand both the straightforward responses as well as possible difficulties and recovery actions associated with identifying and dealing with the onset of PTS conditions. The ATHEANA process will be used and the different types of scenarios will be discussed (and variations on those scenarios) that might lead to PTS conditions and the related operator actions, potential difficulties, and recovery actions). In general, the following will be covered:

- Any remaining information needs or questions (e.g., this would be the time to discuss any recent plant changes)
- Review and discussion of the modeling and analyses to date
- Utility input and assistance on work currently in progress (especially in HRA)

Suggested Participants: NRC, NRC contractors, Duke technical staff that have an interest in these areas (for HRA training/operations input is critical)

March 15:

Morning Continue the technical working sessions involving the systems and sequence analysis, thermal hydraulic, and training/operations/HRA areas

Afternoon Continue the working sessions.
Summary of progress, problem areas, plans for going forward

Suggested Participants: NRC, NRC contractors, Duke management and technical staff participants

Additional half-day:

Later in the week, preferably on the morning of March 16, if more time or information is needed to complete any unfinished items.

Second Proposed Meeting

Following this first meeting, NRC and its contractors will continue the analyses at headquarters and obtain a preliminary set of results. However, we expect that there will be some remaining issues needing your input or clarification. Therefore, we request that a second meeting be held at the Oconee site on April 4 through 6 (possibly also April 7) for working sessions with the PRA, thermal hydraulic, and HRA (trainers/operators) personnel as needed for clarifications, investigations of any new issues since the last meeting, discussions of worthwhile sensitivity analyses, and for "sanity checks" of where the results seem to be headed. Approximately 2-4 hours with Oconee staff on each of the two days (April 4 and 5) may be needed. On April 6, the NRC analyses and preliminary results could be discussed, along with Oconee staff input and discussions. Management and interested technical staff would be encouraged to attend. April 7 would be used to continue discussions, if necessary.

Oconee Nuclear Station

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