



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 26, 2010

LICENSEE: DUKE ENERGY CAROLINAS, LLC

FACILITY: OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 (OCONEE)

SUBJECT: SUMMARY OF CLOSED JUNE 29, 2010, MEETING TO DISCUSS
EXTERNAL FLOODING AT OCONEE (TAC NOS. ME3065, ME3066, AND
ME3067)

On June 29, 2010, a closed technical meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of Duke Energy Carolinas, LLC (Duke, the licensee), at NRC Headquarters. The purpose of the meeting was to continue a dialogue with the licensee on the resolution of external flooding issues, including a flood caused by the potential failure of the Jocassee Dam, at Oconee. The meeting was closed to the public because the topic of discussion was security-related information.

The licensee presented information related to the licensee's activities since March 5, 2010: the response to the Request for Information (RAI) sent by the NRC staff on January 29, 2010 (Agencywide Documents Access and Management System (ADAMS), Accession No. ML100271591), intake and swale wall installations, and independent review of models. A copy of the licensee's slides is available at ADAMS Accession No. ML101890726. Enclosed is a list of meeting attendees.

Licensee's Activities Since March 5, 2010

After introductions, the meeting began with a discussion of recent licensee activities. This included a discussion of additional HEC-RAS and 2-D model runs, interim action review and update, self-assessment of interim actions, interim action improvements, and the diversion wall and related assessments.

Response to RAIs

This discussion came next and occupied most of the meeting time. The licensee provided status and a discussion of preliminary results for RAI questions one, four, and seven from the NRC staff's letter of January 29, 2010:

- RAI Question 1: Responses to RAI Question 1 were described as interim in that they were dependent on final results in response to Question 4. The Keowee embankment has been further analyzed by adding 6 HEC-RAS runs that vary the failure time. The same methodology was used for Jocassee and Keowee and results were conservative in that faster breaches result in lower water levels. Literature research did not yield clear and concise information related to cascading failures.

- RAI Question 4: The licensee was examining the sensitivity of the projected Oconee yard water heights due to potential faster failures of the Keowee. It also examined the potential impacts of faster failures at the Oconee intake canal and the Little River Dam.
 - A table with model run #100, Case 2, describing breach parameters and associated results was presented. For the most recent runs, the extended boundaries have been added in the geography in order to increase accuracy. Some additional storage areas were not modeled into the boundaries due to the negligible difference they have on results.
 - Six additional HEC-RAS runs for Case 2 (model run # 100) were performed. Runs 100b and 100c produced a significant discharge and the lowest failure time and the licensee focused their attention on them. 2D models were used in order to assess sensitivity.
 - The preliminary run results support the statement that faster failure times reduce the second peak at the tailwater. The licensee states that faster breach times for the Keowee main Dam do not produce higher water levels for the Oconee site for both the “first peak” and the “second peak.”
- RAI Question 7: The licensee would like additional detail on what information should be submitted to address this question.

Intake and Swale Walls

- These walls serve to reduce peak water heights, divert water from entering the Oconee site and to assure the integrity of a secured water source. These walls divert water that may enter the site from going towards certain areas. Walls are made of post-rolled galvanized steel and filled with sand.
- With the addition of the walls, model runs were presented that differentiated the levels of water at the site based on the modifications. The licensee expressed that with new modifications, the sustained flood levels would be lower.

Independent Review of the Models

- The licensee expressed that an independent review of the models, specifically focusing on a set of parameters, was performed by Dr. Chris Wilson and that his recommendations were to be included in the final results package to complement the Oconee efforts.

Closing

In closing, the licensee summarized the interim actions that have been put in place, the progress made in addressing RAI questions, and their study of long-term solutions. The licensee expressed that they were putting considerable work into addressing these issues. The HEC-RAS model typically takes approximately 7 days, with frequent user inputs, to finish a run. The licensee clarified that a discussion of the intake and swale walls would not be in the RAI response. The response would address the RAI questions as they were stated in the NRC staff's letter of January 29, 2010.

- 3 -

Please direct any inquiries to John Stang at 301-415-1345, or John.Stang@nrc.gov.

Sincerely,

A handwritten signature in black ink that reads "Jon Thompson". The signature is written in a cursive, flowing style.

Jon Thompson, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosure:
List of Attendees

~~OFFICIAL USE ONLY - SECURITY-RELATED INFORMATION~~

ATTENDEES AT THE CLOSED JUNE 29, 2010, MEETING WITH DUKE ENERGY CAROLINAS, LLC (DUKE), TO DISCUSS EXTERNAL FLOODING ISSUES AT OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

NRC

G. Wilson
J. Thompson
R. Wescott
N. Coleman
J. Uribe
F. Ferrante
J. Mittman
C. Rapp*
A. Sabisch*
J. Bartley*

DUKE

R. Freudenberger
J. Thomas
R. McCoy

HDR

C. Ey
A. McCoy

*Participated by phone

Enclosure

Please direct any inquiries to John Stang at 301-415-1345, or John.Stang@nrc.gov.

Sincerely,

/RA/

Jon Thompson, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosure:
List of Attendees

DISTRIBUTION:

NON-PUBLIC	LPL 2-1 R/F	RidsAcrsAcnw_MailCTR Resource	G. Wilson, NRR
J. Stang, NRR	J. Thompson, NRR	RidsNrrLAMO'Brien Resource	R. Wescott, NRR
RidsOgcRp Resource	RidsNrrDorLpl2-1 Resource	A. Howe, NRR	J. Mittman, NRR
J. Grobe, NRR	RidsRgn2MailCenter Resource	J. Gitter, NRR	N. Sanfilippo, EDO Rgn 2
J. Uribe, NRR	C. Steger, NRR	R. Wescott, NRR	N. Coleman, NRR
M. Khanna, NRR	F. Ferrante, NRR	A. Sabisch, RII	J. Barteley, RII
C. Rapp, RII	RidsNrrPMOconee Resource		

ADAMS Accession No. PKG ML101890811 Meeting Summary ML101890803 Handouts ML101890726 NRR-106

OFFICE	DORL/LPL2-1/PM	DORL/LPL2-1/LA	DORL/LPL2-1/BC	DORL/LPL2-1/PM
NAME	JThompson	MO'Brien	GKulesa (RMartin for)	JThompson
DATE	07/12/10	07/12/10	07/26/10	07/26/10

OFFICIAL RECORD COPY