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

September 24, 2013

Mr. Joseph E. Pacher, Vice President
R.E. Ginna Nuclear Power Plant
R.E. Ginna Nuclear Power Plant, LLC
1503 Lake Road
Ontario, NY 14519

SUBJECT: R.E. GINNA NUCLEAR POWER PLANT - REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT TO REVISE TECHNICAL SPECIFICATION 3.6.5, "CONTAINMENT AIR TEMPERATURE" (TAC NO. MF0900)

Dear Mr. Pacher:

By letter dated February 28, 2013 (Agencywide Documents Access and Management System Accession No. ML13067A328), R.E. Ginna Nuclear Power Plant, LLC (the licensee), submitted to the U.S. Nuclear Regulatory Commission (NRC) an application for a proposed amendment for the R.E. Ginna Nuclear Power Plant. The proposed amendment would revise Technical Specification 3.6.5, "Containment Air Temperature," by changing the allowable containment air temperature from 120 °F to 125 °F.

The NRC staff is reviewing your submittal and has determined that the additional information, as requested in the enclosure, is needed to complete its review. Please provide a response to these questions within 30 days of the date of this letter.

If you have any questions regarding this request for additional information, please contact me at (301) 415-1476 or email Mohan.Thadani@nrc.gov.

Sincerely,

Mohan C. Thadani, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-244

Enclosure:
Request for Additional Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

REGARDING AMENDMENT TO TECHNICAL SPECIFICATION

REVISING THE CONTAINMENT AIR TEMPERATURE

R.E. GINNA NUCLEAR POWER PLANT, LLC

R.E. GINNA NUCLEAR POWER PLANT

DOCKET NO. 50-244

By letter dated February 28, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML13067A328), R.E. Ginna Nuclear Power Plant, LLC, the licensee for R.E. Ginna Nuclear Power Plant, submitted a License Amendment Request (LAR) to revise Technical Specifications (TS) 3.6.5, "Containment Air Temperature." The revision would increase the allowable containment air temperature from 120 °F to 125 °F.

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.46(a)(1)(i) states

> ECCS cooling performance must be calculated in accordance with an acceptable evaluation model and must be calculated for a number of postulated loss-of-coolant accidents of different sizes, locations, and other properties sufficient to provide assurance that the most severe postulated loss-of-coolant accidents are calculated.

The licensee uses the Nuclear Regulatory Commission (NRC) -approved Automated Statistical Treatment of Uncertainty Method (ASTRUM), documented in WCAP-16009-NP-A (ADAMS Accession Nos. ML050910157, ML050910159, and ML050910161), to evaluate Emergency Core Cooling System (ECCS) performance. ASTRUM relies on an approach based on order statistics, in which a set number of cases with randomly varied initial conditions are analyzed using the WCOBRA/TRAC (WC/T) reactor system analysis code. The number of cases is chosen so that the highest predicted Peak Cladding Temperature (PCT) within the case set becomes a predictor of the 95/95 upper tolerance limit for the PCT associated with a hypothetical population of loss-of-coolant accident (LOCA) scenarios. This result is used to show compliance with the 10 CFR 50.46(b)(1) acceptance criterion concerning PCT.

In order to evaluate the increase in containment air temperature from 120 °F to 125 °F, the NRC staff has determined that additional information is necessary in order to complete the review of the licensee's submittal.

Enclosure

1. To ensure that the most severe postulated loss-of-coolant accidents are calculated:

   a. Provide a table that includes the following ASTRUM run attributes for the Analysis of Record (AOR) and integrated analyses: (1) AOR Run #, (2) PCT, (3) Time of PCT, (4) Reactor Coolant System Tavg, (5) Accumulator Water Temperature, (6) Accumulator Pressure, (7) Safety Injection Temperature, (8) Safety Injection Time, (9) Containment Pressure, (10) Break Size.

   b. Explain how containment air temperature is input into the Large Break LOCA analyses and what assumptions are used.

   c. Highlight the cases in the ASTRUM run matrices provided in RAI #1a that were chosen to be re-executed as a result of this LAR and explain how these cases were chosen.

   d. Justify the selection of the number of cases that were re-executed, as opposed to a larger number of cases.

2. Based on the cases that were chosen to be re-executed and the selection of the number of cases to be re-executed, explain how ECCS cooling performance has been calculated in accordance with an acceptable evaluation model.

3. Generic Letter (GL) 96-06, "Assurance of Equipment Operability and Containment Integrity during Design-Basis Accident Conditions," requested licensees to determine;

   a. if containment air cooler cooling water systems are susceptible to either waterhammer or two-phase flow conditions during postulated accident conditions;

   b. if piping systems that penetrate the containment are susceptible to thermal expansion of fluid so that over pressurization of piping could occur.

   In addition to the individual addressee's postulated accident conditions, these items should be reviewed with respect to the scenarios referenced in the GL.

   Issue

   The licensee is proposing to revise TS 3.6.5, "Containment Air temperature," to change the allowable containment average air temperature from 120 °F to 125 °F.

   Higher initial containment temperature and corresponding higher containment heat sinks could affect GL 96-06 analysis.

   Please discuss and justify your proposed LAR to revise Section 3.6.5 of the TSs, "Containment Air Temperature," considering GL 96-06 and current license thermal power for Extended Power Uprate (EPU).

4. In the licensee's discussion of Main Steamline Break mass and energy release and containment response on page 6 of Attachment (1) of the submittal, the licensee stated:

> Therefore, additional margin was gained in the limiting case by delaying the Turbine-Driven Auxiliary Feedwater (TDAFW) pump start to coincide with the faulted SG [steam generator] reaching the low-low level setpoint. This reduces the mass available for release from the faulted SG. This change is in agreement with the assumptions in the analysis previously presented in Reference 2 and approved in Reference 1.

Please clarify:

a. Does delay start of the TDAFW pump to coincide with the low-low level setpoint occur in the new analysis that supports the LAR or in the existing analysis that supports the EPU submittal?

b. Is additional margin gained in the existing EPU analysis or in the new analysis used for their LAR?

September 24, 2013

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