August 24, 2005

Mrs. Mary G. Korsnick
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 - EXTENDED POWER UPRATE ACCEPTANCE REVIEW RESULTS (TAC NO. MC7382)

Dear Mrs. Korsnick:

By letter to the Nuclear Regulatory Commission (NRC) dated July 7, 2005, as supplemented on August 15, 2005, R.E. Ginna Nuclear Power Plant, LLC (the licensee) submitted an application requesting authorization to increase the maximum steady-state thermal power level at the R.E. Ginna Nuclear Power Plant (Ginna) from 1520 megawatts thermal (MWt) to 1775 MWt, which is a 16.8 percent increase. This requested change is commonly referred to as an extended power uprate (EPU).

The purpose of this letter is to provide the results of the NRC staff's acceptance review of the Ginna EPU application, which is based on the determination that sufficient information was provided to allow the NRC staff to proceed with its detailed technical review. The review also ensures that the application adequately characterizes the regulatory requirements and licensing basis of the plant. The NRC staff used the guidance contained in Review Standard (RS)-001, Revision 0, "Review Standard for Extended Power Uprates," December 2003, for the acceptance review. On the basis of its review of the information provided in the application, the NRC staff has determined that the licensee has provided the necessary and sufficient information for the staff to begin a detailed technical review.

However, during the acceptance review process, the NRC staff found that additional information was needed concerning certain aspects of the small-break loss-of-coolant accident and long-term cooling analyses. Enclosed are specific requests for additional information concerning these items. The need for this supporting information had been identified by the NRC staff during a pre-application meeting on February 3, 2005. Please provide the requested information to the NRC as soon as possible to prevent any delay in the completion of the detailed EPU review.

In addition, the NRC staff expects to issue a letter requesting additional information in November 2005, and will request that you respond within 60 days of that letter in order to support your requested approval date.

Sincerely,

/RA/

Cornelius F. Holden, Director
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-244

Enclosure: As stated

cc w/encl: See next page

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Sincerely,

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Cornelius F. Holden, Director
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Docket No. 50-244

Enclosure: As stated

cc w/encl: See next page

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R.E. Ginna Nuclear Power Plant

cc:

Mr. Michael J. Wallace
President
R.E. Ginna Nuclear Power Plant, LLC
c/o Constellation Energy
750 East Pratt Street
Baltimore, MD 21202

Mr. John M. Heffley
Senior Vice President and
Chief Nuclear Officer
Constellation Generation Group
1997 Annapolis Exchange Parkway
Suite 500
Annapolis, MD 21401

Kenneth Kolaczyk, Sr. Resident Inspector
R.E. Ginna Nuclear Power Plant
U.S. Nuclear Regulatory Commission
1503 Lake Road
Ontario, NY 14519

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Peter R. Smith, President
New York State Energy, Research,
and Development Authority
17 Columbia Circle
Albany, NY 12203-6399

Mr. Carey W. Fleming
Sr. Counsel - Nuclear Generation
Constellation Generation Group, LLC
750 E. Pratt Street, 17th Floor
Baltimore, MD 21202

Charles Donaldson, Esquire
Assistant Attorney General
New York Department of Law
120 Broadway
New York, NY 10271

Ms. Thelma Wideman, Director
Wayne County Emergency Management
Office
Wayne County Emergency Operations
Center
7336 Route 31
Lyons, NY 14489

Ms. Mary Louise Meisenzahl
Administrator, Monroe County
Office of Emergency Preparedness
1190 Scottsville Road, Suite 200
Rochester, NY 14624

Mr. Paul Eddy
New York State Department of
Public Service
3 Empire State Plaza, 10th Floor
Albany, NY 12223

REQUEST FOR ADDITIONAL INFORMATION

REGARDING EXTENDED POWER UPRATE REVIEW

R.E. GINNA NUCLEAR POWER PLANT

The following information is required in order for the Nuclear Regulatory Commission staff to complete its review concerning loss-of-coolant accident (LOCA) and long-term cooling analyses.

1. Regarding the small-break LOCA analysis, the licensee evaluated only the 1.5, 2, and 3-inch diameter line breaks, with only limited plots provided for the 2-inch break, in its application. In its August 15, 2005, supplemental letter, the licensee stated that no core uncovery occurred for 4-inch and 6-inch break sizes. However, the licensee did not provide documentation to support its statement. Further, the integer break spectrum approach is too coarse to identify the worse case peak clad temperature (PCT). Also, the analysis of a severed cold-leg injection line was not provided.

   Provide: (1) an analysis of break sizes up to and including 1.0 ft^2 in area, including break sizes other than integer break sizes to demonstrate that the worst break has been identified, (2) the major response parameters for the break spectrum, and (3) the NOTRUMP nodalization diagram.

2. There were no quantitative analysis results supplied justifying the operator action time to reinitiate cold-side injection to control boric acid precipitation following a LOCA. No boron concentration vs. time curves were provided for the limiting breaks. No analyses of breaks where the reactor coolant system pressure remains above the residual heat removal pump shut off head were provided nor was the effect of the timing for reinitiating cold-side injection identified to show sufficient time exists to control boric acid concentration for small breaks. The margin in flushing flow was not identified nor was the time needed to turn around the boric acid concentration once flushing begins. The details of how the boron concentration was calculated was also not provided.

   Provide the following information concerning the boron concentration calculation:

   a. Does the mixing volume vary with time?

   b. Was the loop resistance taken into account in calculating the mixing volume?

   c. What constitutes the mixing volume?

   The minimum injection temperature and maximum boron concentration in the core was not identified to demonstrate that precipitation is precluded at the time to activate cold-side injection. The 1975 methods cited in the submittal for calculating boric acid concentration contain many unsubstantiated assumptions. See the Westinghouse-CE Topical Report CENPD-254 as an example of the analysis methods and results needed in order to complete the review of long-term cooling performance.

Enclosure

3. Additional analysis results are also required for the best-estimate large-break LOCA analysis. Only the PCT plot for the hot rod and hot bundle were provided for the limiting break.

   Provide the complete analysis results including all of the key major response parameters. Also, did the analysis include downcomer boiling effects and what was the worst single failure if downcomer boiling occurs? What containment pressure was assumed?