

October 4, 2006

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 - APPROVAL OF EXTENSION  
REQUEST FOR COMPLETION OF CORRECTIVE ACTIONS IN RESPONSE  
TO GENERIC LETTER 2004-02 (TAC NO. MC4687)

Dear Mrs. Korsnick:

In its letter dated July 15, 2005, as supplemented on August 31, 2005 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML052020171 and ML052510414, respectively), R.E. Ginna Nuclear Power Plant, LLC (Ginna LLC) provided its 90-day response to Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors [PWRs]," for Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 (Calvert Cliffs 1 and 2). In GL 2004-02, the NRC indicated that the primary objective of its technical assessment of Generic Safety Issue (GSI) 191, "Assessment of Debris Accumulation on PWR Sump Performance," was to assess the likelihood that the emergency core cooling system and containment spray system pumps at domestic PWRs would experience a debris-induced loss of net positive suction head (NPSH) margin during sump recirculation. The NRC also discussed the need to complete corrective actions, including any plant modifications, to address the concerns in GL 2004-02. In addition, the NRC staff stated that all actions should be initiated during the first refueling outage after April 1, 2006, and completed by December 31, 2007. If all corrective actions will not be completed by December 31, 2007, the licensee was to describe how the regulatory requirements would be met until the corrective actions were completed.

In a letter dated June 29, 2006 (ADAMS No. ML061880205), Ginna LLC updated its prior response to GL 2004-02 by informing the NRC that it was suspending the activities related to an active sump strainer design and was evaluating the procurement of a replacement passive strainer technology. In addition, Ginna LLC stated that it would be providing additional information regarding planned compensatory measures and a potential scheduler exemption.

On July 27, 2006 (ADAMS No. ML062200027), Ginna LLC submitted a request for extension for completing the corrective actions discussed in GL 2004-02 beyond December 31, 2007. Ginna LLC also described its ongoing activities for resolution of the GSI-191 containment sump clogging issue at Ginna. Ginna LLC stated that the project was now changing from an active strainer design to a passive strainer design. In view of the long lead times required for design and procurement of passive strainer screens, it indicated that sufficient time does not exist to initiate implementation of final corrective actions during the fall 2006 refueling outage. In addition, Ginna LLC stated that the passive screen design still has a number of open industry and plant-specific design issues to be resolved, including downstream and chemical effects analyses.

In Attachment 1 to the July 27, 2006, letter, Ginna LLC stated that during its fall 2006 refueling outage, it would install new interim passive sump strainer modules, which would increase the available screen area by approximately 600 square feet. Ginna LLC stated that the final design solution will determine whether the interim strainers will become part of the final design or whether they will be removed and replaced by the final design during its spring 2008 refueling outage. During the fall 2006 outage, it would also install a new flow diverter wall in the basement of containment in order to reduce the direct transport path of debris into the recirculation sump from a postulated break in the 'B' reactor coolant system compartment, which is the location of highest postulated generated debris during a loss-of-coolant accident (LOCA). Ginna LLC stated that the flow diverter wall would allow for increased settling and interception as debris transport to reduce the quantity of debris that could potentially reach the sump.

In Attachment 1 to the July 27 letter, Ginna LLC also provided the following as additional justification for the extension request:

- Results of a qualitative analysis supported by NUREG/CR-6808, "Knowledge Base for the Effect of Debris on PWR Emergency Core Cooling Sump Performance," and Nuclear Energy Institute (NEI) Report NEI-04-07, "Pressurized Water Reactor Sump Performance Evaluation Methodology," concluding that only small fines of suspended fibrous insulation would be transported to the sump screen, [so that a "thin bed" of fibrous debris is not expected to form on the screen through accumulation of small fines on larger pieces of fiber];
- NRC staff approval of application of the leak-before-break principle for breaks in the reactor coolant loop piping, accumulator piping, and reactor coolant loop bypass piping, which reduces the expected frequency of breaks in the larger piping exposed to primary coolant pressure;
- High standards of containment cleanliness at Ginna;
- Maintenance throughout the extension period of NRC Bulletin 2003-01 compensatory measures, including operator training on indications of and responses to recirculation sump clogging, aggressive containment cleaning and foreign materials control, ensuring containment drain paths are unblocked, and ensuring recirculation sump screens are free of adverse gaps and breaches; and
- The fact that Ginna does not use trisodium phosphate (TSP) as a buffering agent in the containment sump, which indicates that large amounts of calcium phosphate precipitate are not to be expected at Ginna [as discussed in Information Notice (IN) 2005-26, "Results of Chemical Effects Head Loss Tests in a Simulated PWR Sump Pool Environment," and IN 2005-26 Supplement 1, "Additional Results of Chemical Effects Tests in Simulated PWR Sump Pool Environment"].

The NRC has confidence that Ginna LLC has a plan that will result in the installation of modifications at Ginna, which will provide acceptable strainer function with adequate margin for uncertainties. Further, the NRC concludes that Ginna LLC has put mitigation measures in place to adequately reduce the risk for the requested short extension period and, therefore, it is

acceptable to extend the completion date for the corrective actions for the issues discussed in GL 2004-02 until the completion of the Ginna spring 2008 refueling outage, currently scheduled to begin on April 8, 2008. Should Ginna LLC elect to begin the outage more than 30 days after April 8, 2008, Ginna LLC will need to provide the NRC additional justification for further delay in completing corrective actions for GL 2004-02.

If you have any questions, please contact me at 301-415-1457.

Sincerely,

*/RA/*

Patrick D. Milano, Senior Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-244

cc: See next page

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Sincerely,

/RA/

Patrick D. Milano, Senior Project Manager  
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Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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