

July 31, 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 - AMENDMENT RE: CONTAINMENT
SPRAY NOZZLE TESTING FREQUENCY (TAC NO. MC9004)

Dear Mrs. Korsnick:

The Commission has issued the enclosed Amendment No. 99 to Renewed Facility Operating License No. DPR-18 for the R.E. Ginna Nuclear Power Plant. This amendment is in response to your application dated November 18, 2005.

The amendment revises the frequency in Technical Specification Surveillance Requirement 3.6.6.15, which verifies that each containment spray nozzle is unobstructed. The frequency is changed from "10 years" to "following maintenance which could result in nozzle blockage."

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

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

Docket No. 50-244

Enclosures:

1. Amendment No. 99 to Renewed License No. DPR-18
2. Safety Evaluation

cc w/encls: See next page

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Accession Number: ML061980055

OFFICE	LPLI-1\PM	LPLI-1\LA	ACVB\BC	OGC	LPLI-1\BC
NAME	PMilano	SLittle	RDennig		RLaufer
DATE	07/19/06	07/19/06	07/12/06	07/25/06	07/27/06

Official Record Copy

R.E. Ginna Nuclear Power Plant

cc:

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DATED: July 31, 2006

AMENDMENT NO. TO RENEWED FACILITY OPERATING LICENSE NO. DPR-18
R.E. GINNA NUCLEAR POWER PLANT

PUBLIC

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R.E. GINNA NUCLEAR POWER PLANT, LLC

DOCKET NO. 50-244

R.E. GINNA NUCLEAR POWER PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 99
Renewed License No. DPR-18

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the R.E. Ginna Nuclear Power Plant, LLC (the licensee) dated November 18, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-18 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 99, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard J. Laufer, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and
Technical Specifications

Date of Issuance: July 31, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 99

RENEWED FACILITY OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove

3

Insert

3

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

3.6.6-1
3.6.6-2
3.6.6-3

Insert

3.6.6-1
3.6.6-2
3.6.6-3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 99 TO RENEWED FACILITY

OPERATING LICENSE NO. DPR-18

R.E. GINNA NUCLEAR POWER PLANT, INC.

R.E. GINNA NUCLEAR POWER PLANT

DOCKET NO. 50-244

1.0 INTRODUCTION

By letter dated November 18, 2005 (Agencywide Documents Access and Management System Accession No. ML053290102), R.E. Ginna Nuclear Power Plant, LLC (the licensee), submitted a request for changes to the R.E. Ginna Nuclear Power Plant (Ginna) Technical Specifications (TSs). The requested changes would revise the testing frequency for the containment spray (CS) nozzles specified in TS Surveillance Requirement (SR) 3.6.6.15 from "10 years" to "following maintenance that could result in nozzle blockage."

2.0 REGULATORY EVALUATION

The CS system consists of two redundant subsystems. Each subsystem contains a spray header, pump, associated piping and valves, and instrumentation. These pumps are designed to provide sufficient flow into containment during accident conditions to both cool the containment atmosphere to maintain pressure and temperature within design limits and remove radioactive iodine. There are a total of 179 spray nozzles, with 90 nozzles in the upper ring and 89 in the lower ring. The licensee indicated that all portions of the CS system in contact with borated water are fabricated of stainless steel or other corrosion resistant materials. The CS system nozzles are made of corrosion resistant stainless steel and are of a hollow cone, ramp bottom design, which is not subject to clogging by particles less than 0.25 inch in diameter. The containment sump screens prevents particles greater than this size from entering the spray nozzles. The CS header and nozzles are normally maintained dry and isolated during normal operation to provide containment isolation.

The licensee indicated that the nozzle blockage is considered unlikely, except as a consequence of maintenance or repair. The spray nozzles are located high in the containment. Access to the nozzles, to verify the required air or smoke flow, is difficult and presents substantial personnel safety hazards. The risks and costs associated with performance of this test are unwarranted given the very low risk of nozzle obstruction.

As stated in Section 1.3 of the Ginna Updated Final Safety Analysis Report (UFSAR), the discussion of general design criteria (GDC) is divided into two parts. UFSAR Section 3.1.1 discusses the GDC used during the original licensing of Ginna. The criteria used at that time comprised the proposed Atomic Industrial Form (AIF) versions of the criteria (AIF-GDC) issued for comment by the Atomic Energy Commission on July 10, 1967, and defined or described the safety objectives and approaches incorporated in the design of this plant. UFSAR Section 3.1.2 discusses the adequacy of the Ginna design relative to the 1972 version of the GDC in Appendix A to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 50) and describes the conformance at Ginna to the 1972 version of the GDC. The criteria discussed in Section 3.1.2 as they apply to the CS system include GDC 38, 39, and 40.

The periodic testing attributes of GDC 40, "Testing of containment heat removal system," for the CS system are contained in AIF-GDC 60, "Testing of containment spray systems," which requires that a capability shall be provided to the extent practical to test periodically the delivery capability of the CS system at a position as close to the spray nozzles as is practical.

The proposed revision of the SRs does not impact conformance with the provisions of the above GDCs. The licensee cited precedent for similar license amendments issued for Perry, Palisades, Calvert Cliffs, and Crystal River Power Stations.

3.0 TECHNICAL EVALUATION

3.1 Background

TS SR 3.6.6.15 currently requires a test every 10 years to ensure that the CS system nozzles are not obstructed. The flow test is performed using low pressure air or smoke. The two potential modes of blockage are by corrosion products or by debris (foreign material). This evaluation will address these modes after a discussion of industry and plant-specific testing experience.

3.2 Testing Experience

NRC Report NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," May 1992, reported on a Nuclear Regulatory Commission (NRC) staff review of industry experience and found that, in general, once tested after construction, CS systems have not been subject to blockage. The problems that were discovered were related to construction, and not the result of normal operation.

The licensee indicated that the CS system nozzles at Ginna have been tested satisfactorily in initial plant pre-operational tests and five subsequent tests. Those tests have shown that all nozzles have unobstructed flow demonstrating that the construction problems identified in NUREG-1366 do not exist at Ginna.

3.3 Materials and Corrosion

The CS system piping and nozzles are made of stainless steel, which is highly resistant to corrosion. The piping at the containment spray headers elevation and the nozzles are kept dry, due to the height difference with the refueling water storage tank (initial suction source for the CS pumps). Therefore, degradation of the spray nozzles is not expected due to corrosion.

3.4 Foreign Materials Exclusion

The licensee indicated that at Ginna, the Foreign Material Exclusion (FME) program is implemented by procedure IP-HSC-1, "Foreign Material Exclusion," to prevent the introduction of foreign material into the CS system. This procedure describes the measures to be taken to ensure foreign material is not introduced into a component or system and the measures to be taken if material or tool accountability is lost. The FME controls require post-maintenance verification of system cleanliness and freedom from foreign materials. If any material is unaccounted for in an FME area or a general FME concern is observed, a condition report is initiated in the corrective action program, requiring assessment of the circumstances and implementation of appropriate corrective actions to ensure the spray system continue to be operable and to prevent recurrence.

The NRC staff finds that the proposed SR change is supported by the existing requirement to verify system operability after system maintenance or repair. Foreign material introduced as a result of maintenance would most likely be the cause of CS nozzle obstruction. Therefore, the verification testing to confirm that the nozzles are free of blockage following maintenance activities that could result in nozzle blockage, as proposed by the licensee, is sufficient to confirm the nozzles are free of blocking substance. The current post-maintenance testing procedure provides this verification, which requires testing of the system and components following maintenance activities as necessary to demonstrate operability. Consequently, the potential for unidentified nozzle obstruction or introduction of foreign material following maintenance is low. Also, due to the location and orientation of the spray headers and nozzles, introduction of foreign materials into the system through the nozzles is unlikely.

3.5 Summary

As a result of reviewing the licensee's request to revise the testing frequency for the CS nozzles from "10 years" to "following maintenance which could result in nozzle blockage," and reviewing and assessing the information provided by the licensee, the NRC staff concludes that the design of the Ginna CS system and the FME controls provide reasonable assurance that the potential for nozzle obstruction is acceptably low. The FME controls provide protection from introduction of foreign materials into open piping during maintenance, and require post-maintenance verification of system cleanliness and freedom. Therefore, the NRC staff finds the proposed change to SR 3.6.6.15 acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding

that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (71 FR 154). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: R. Goel

Date: July 31, 2006