

June 13, 2008

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

SUBJECT: R. E. GINNA NUCLEAR POWER PLANT - NRC POST-APPROVAL SITE
INSPECTION FOR LICENSE RENEWAL INSPECTION REPORT
05000244/2008008

Dear Mr. Carlin:

On May 2, 2008, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at the Ginna Nuclear Power Station, the enclosed report documents the inspection findings, which were discussed during an exit meeting on May 2, with Dave Holm and other members of your staff.

This inspection was an examination of activities conducted under your renewed license as they relate to the completion of commitments made during the renewed license application process and compliance with the Commission's rules and regulations and the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The NRC staff did not identify any instances of incomplete commitments with respect to timeliness or adequacy.

J. Carlin

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Sincerely,

/RA/

Richard Conte, Chief
Engineering Branch 1
Division of Reactor Safety

Docket No. 50-244
License No. DPR-18

Enclosure: Inspection Report No. 05000244/2008008
w/ Attachments

cc w/encl:

M. J. Wallace, President, Constellation Energy Nuclear Group, LLC
B. Barron, Senior Vice President and Chief Nuclear Officer
P. Eddy, Electric Division, NYS Department of Public Service
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
C. W. Fleming, Esquire, Senior Counsel, Constellation Energy Group, Inc.
B. Weaver, Director, Licensing, Constellation Energy Nuclear Group, LLC
P. Tonko, President and CEO, New York State Energy Research and Development Authority
J. Spath, Program Director, New York State Energy Research and Development Authority
G. Bastedo, Director, Wayne County Emergency Management Office
M. Meisenzahl, Administrator, Monroe County, Office of Emergency Preparedness
T. Judson, Central New York Citizens Awareness Network

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SUNSI Review Complete: RJC (Reviewer's Initials)

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-244

License No.: DPR-18

Report No.: 05000244/2008008

Licensee: R. E. Ginna Nuclear Power Plant, LLC

Facility: R. E. Ginna Nuclear Power Plant

Location: Ontario, New York

Dates: April 21 - April 25, 2008, and April 28 - May 2, 2008

Inspectors: Michael Modes, Lead
John Richmond, Senior Reactor Engineer
Suresh Chaudhary, Reactor Engineer

Accompanied By: Yeon Ki Chung, Reactor Engineer
Korea Institute of Nuclear Safety

Approved by: Richard Conte, Chief
Engineering Branch 1
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000244/2008008; 04/21/2008 - 05/02/2008; R. E. Ginna Nuclear Power Plant; License Renewal Commitments Inspection.

The report covers a two week inspection of the implementation of license renewal commitments. It was conducted by three region based engineering inspectors. No findings of significance were identified. No instances were noted of incomplete license renewal commitments with respect to timeliness or adequacy.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA5 License Renewal Commitment Implementation (IP71003)

.1 Commitment Sample Selection Process

The reviewed commitments were selected based on the several attributes including: the risk significance using insights gained from sources such as the NRC's "SDP Risk Informed Inspection Notebooks", Revision 2; the extent and results of previous license renewal audits and inspections of aging management programs; the extent of a commitment; the extent that baseline inspection programs will inspect an SSC or commodity group; the amount of time since the renewed license was granted and beginning of the period of extended operation; and the results of the one time inspection. The overall intent is to ensure that either there is no aging effect or aging effects detected were properly evaluated. The selected commitments reviewed were in section 4OA5.2.

For each commitment and on a sampling basis, the inspectors reviewed supporting documents including completed surveillances, conducted interviews, performed visual inspection of structures and components including those not accessible during power operation, and observed selected activities described below to verify the licensee completed the necessary actions to comply with the license conditions or commitments that are a part of the current licensing basis for a renewed operating license. The inspectors verified the licensee implemented the aging management programs and time-limited aging analyses included in the staff's license renewal safety evaluation report in accordance with Title 10 of the Code of Federal Regulations (CFR) Part 54, "Requirements for the Renewal of Operating Licenses for Nuclear Power Plants." The inspectors verified a selected sample of licensee corrective actions taken as a consequence of the license renewal inspection.

During this inspection the inspectors verified that changes, if any, to these commitments were identified and properly reviewed and approved. Since no changes were identified, the inspectors reviewed the procedures developed by the licensee to insure that commitment revision followed the guidance in NEI 99-04, Guidelines for Managing NRC Commitment Changes, for the license renewal commitment change process, including the elimination of commitments, and would properly evaluate, report, and approve where necessary, changes to license renewal commitments listed in the UFSAR in accordance with 10 CFR 50.59. The inspectors also reviewed the licensee's commitment tracking program to evaluate its effectiveness.

Enclosure

.2 Results of Detailed Reviews

.2.1 Inaccessible Medium Voltage Cable Aging Management Program

a. Scope of Inspection

The inspectors reviewed the licensee's activities to implement commitment item number 37, of the Ginna NRC License Renewal Safety Evaluation Report. This commitment added medium-voltage cables M0089 and M0108 into the scope of Ginna license renewal. In addition, it required the licensee to develop an aging management program consistent with NUREG-1801, Generic Aging Lessons Learned, Section XI.E3.

NUREG-1801 Section XI.E3, Inaccessible Medium-Voltage Cables Not Subject To 10 CFR 50.49 Environmental Qualification Requirements, recommended the licensee determine a specific type of test to be performed prior to the initial test [at the time just prior to or at the time of the period of extended operations], and that it should be a proven test for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, as described in EPRI TR-103834-P1-2. NUREG-1801 also recommended that the first test be completed before the period of extended operation.

The inspectors observed field testing (work order 20603780) of electrical cable M0089, 4 kV feeder cable to Bus 18 transformer PXSHSS018, and independently reviewed the test results. The test included insulation resistance, polarization index, dissipation factor, and time domain reflectometry all of which are designed to meet the intent of the test to detect deterioration of the insulation system. During the test, the cable was isolated and disconnected at both ends. The inspector reviewed supporting documents, including previous test results from 2003, 2005, and 2006, for non-environmentally qualified cables, non-environmentally qualified instrument cables, and inaccessible medium voltage cables, including previous tests of cable M0089. In addition, the inspectors interviewed plant electrical engineering and maintenance personnel.

b. Findings and Observations

No findings of significance were identified. The inspectors identified no instances of inadequate implementation of an inaccessible medium-voltage cable aging management program.

.2.2 Fatigue Monitoring Program

a. Scope of Inspection

On the basis of a projection of the number of design transients, the licensee concluded, during the license renewal application process, the existing fatigue analyses of the RCS components remain valid for the extended period of operation (See NRC Safety Evaluation Report NUREG 1728 Section 4.3). Constellation however indicated that, prior to the expiration of the current operating license, a Fatigue Monitoring Program will

be implemented as a confirmatory program as discussed in Section B.3.2 of their original license renewal application.

The licensee proposed using the Fatigue Monitoring Program to provide assurance that the number of design cycles will not be exceeded during the period of extended operation. It was on this basis that the staff found licensee's Fatigue Monitoring Program provided an acceptable basis for monitoring the fatigue usage of reactor coolant system components, in accordance with the requirements of 10 CFR 54.21(c)(1)(iii).

Subsequent to the application, the NRC staff became aware of a simplified assumption used in the EPRI program for fatigue monitoring called FatiguePro. The inspectors reviewed the current status of the fatigue monitoring program for the licensee. The inspectors also determined if the computational shortcut was present in the program and what response the licensee was planning to the NRC's concern that the simplified assumption might result in a non-conservative prognosis of fatigue. The inspectors interviewed the responsible engineer staff and reviewed the results of the fatigue program in place at the facility. The inspectors reviewed the procedures and computational methodology to determine the status of current fatigue limits on reactor coolant system components.

b. Findings and Observations

No findings of significance were identified. The inspectors identified no instances of inadequate implementation of a fatigue monitoring and aging management program.

.2.3 Steam Generator Tube Integrity Program

a. Scope of Inspection

The Ginna Station Steam Generator Tube Integrity Program is an aging management program that maintains the integrity of the steam generator tubes. The inspector verified that the program incorporated the guidance of EPRI TR-107569 and used Eddy Current Testing to manage aging effects such as cracking due to primary water stress corrosion cracking, outside diameter stress corrosion cracking, and mechanical degradation due to wear, denting and impingement. The inspector verified that the program is administered through a series of plant directives and interface procedures, as well as the plant technical specifications. The inspectors reviewed the program, witnessed the calibration of eddy current equipment for the purpose of determining the amount of wear noted in a steam generator tube, and interviewed personnel responsible for implementing the program. The inspectors reviewed selected procedures, guidance, and acceptance standards. The results of the current inspection were compared against prior steam generator operational assessments in order to determine the validity and accuracy of the program.

b. Findings and Observations

No findings of significance were identified. The inspectors identified no instances of inadequate implementation of the Steam Generator Tube Integrity Program.

Enclosure

.2.4 ASME Section XI, Subsections IWE & IWL Inservice Inspection

a. Scope of Inspection

The Code of Federal Regulations, 10 CFR 50.55a, imposes the Inservice Inspection requirements of American Society of Mechanical Engineers' Boiler and Pressure Vessel Code, Section XI, Subsection IWE for steel liners for concrete containments (Class CC).

The inspector verified that this program manages the aging of steel liners of concrete containments and their integral attachments; containment hatches and airlocks; seals, gaskets and moisture barriers; and pressure retaining bolting. The primary inspection methods employed are visual examinations with supplemental volumetric and surface examinations. The inspectors observed the results of a visual examination of the liner in an area of containment at Penetration No. 29 an enclosed small room below the point where the fuel transfer tube penetrates containment.

b. Findings and Observations

No findings of significance were identified. The inspectors identified no instances of inadequate implementation of the American Society of Mechanical Engineer's Section XI, Subsections IWE & IWL Inservice Inspection Program.

The enclosed area in containment near Penetration No. 29 had limited access during refueling outages because of the frequent high radiation areas due to fuel transfer. Because of the implementation of this aging management program during this outage, the licensee performed a visual inspection of the painted liner and associated caulking where the liner meets the floor of the area. After exfoliation of the coating and rust stains, noted where the liner meets the apparent floor, the area was further excavated. It was discovered that the floor, for a very small distance, was not made of concrete but was apparently dirt that had been painted over. The entire cavity was excavated and cleaned. The containment liner below the floor was examined for aging and the results indicated no evidence of adverse degradation. The cavity was remediated and filled with grout.

O4 MANAGEMENT MEETINGS

Exit Meeting Summary

The inspectors presented the results of the supplemental inspection to Mr. David Holm and other members of the licensee's staff on May 2, 2008. The inspectors confirmed that no proprietary material was examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

D. Holm	Plant Manager
B. Weaver	Director, Licensing
M. Fallen	Program Manager, Constellation License Renewal
J. Wells	Manager, Engineering Programs
J. Pacher	Manager, Nuclear Engineering Services
J. Yoe	Manager, Operations
L. Friant	General Supervisor – Corporate Engineering Program
A. Rezo	NDE – Corporate Engineering Program
D. Lovgren,	Electrical Engineering
M. Bauman	Electrical Maintenance
M. Ruby	Licensing
F. Klepacki	ISI Engineer

Observers

R. Leski	Nine Mile Point License Renewal
R. Saunderson	Nine Mile Point License Renewal
C. Taylor	Regulatory Assurance Oyster Creek
Y. Chung	Korea Institute of Nuclear Safety

LIST OF ACRONYMS

EPRI	Electric Power Research Institute
NDE	Non-destructive Examination
NEI	Nuclear Energy Institute
SSC	Systems, Structures, and Components
SDP	Significance Determination Process
TR	Technical Report
UFSAR	Updated Final Safety Analysis Report

LIST OF DOCUMENTS REVIEWED

Aging Management Program Documents

LR-CBL1-PROGPLAN, Non-EQ Insulated Cables and Connections Aging Management Program, Rev. 1

LR-CBL2-PROGPLAN, Electrical Cables not subject to 10CFR50.49 Environmental Qualification Requirements used in Instrumentation Circuits, Rev. 1

LR-IMVC-PROGPLAN, Inaccessible Medium Voltage Cables not subject to 10CFR50.49 Environmental Qualification Requirements, Rev. 1

LR-FATM-PROGPLAN, License Renewal Aging Management Program Basis Document Fatigue Monitoring Program

License Renewal Aging Management Inspection Checklist for Identification of Aging Effects
Corporate Action Item 2008-00001, Snapshot Self Assessment Report, Readiness of the Ginna
LRI Project for Inspection by the NRC Region I of LR-related Activities being Performed
during the 2008 Refueling Outage (RFO)

CNG-CM-6.01-1000 One-Time Inspection of Mechanical Systems Aging Management Program

Work Orders

20603780

Miscellaneous

UFSAR Chapter 18.2, Programs that Manage the Effects of Aging, Rev. 20

ECAD Electric Cable Test Report, 2003 Refueling Outage

ECAD Electric Cable Test Report, 2005 Refueling Outage

ECAD Electric Cable Test Report, 2006 Refueling Outage

RH-SAMP-SG-LEAKRATE, Primary to Secondary Leakage Sampling and Measurement Revision
01300

SG-SGDA-05-10, Ginna Station Steam Generator 05RFO Degradation Assessment Report
WO 20803238 Remediation of Area Near Containment Penetration No. 29.

Condition Reports

CR-2008-000423	License Renewal One-Time Inspection Not Performed
CR-2008-001068	Lack of Acceptance Criteria for License Renewal Aging Management Programs
CR-2008-002520	Aging Effects Exceed Acceptance Criteria for License Renewal Inspection
CR-2008-003113	Fire System LRI Containment Walk Down
CR-2008-003138	1AC Rod Control Power Cabinet Fuse Anomalies
CR-2008-003218	Damaged Cable and Improper Use of Tape
CR-2008-003225	Evidence of Corrosion During ISI of Pen 29 Bellows
CR-2008-003244	UT Exam of 2" & 2 1/2" SW Piping 'A' Reactor Compartment Cooler below Min Wall
CR-2008-003292	Heavy Rust Discovered Inside Pen 29 Liner Near Moisture Barrier
CR-2008-003293	Coating and Liner Degradation Noted Inside Penetration 29
CR-2008-003296	Degraded Concrete Floor Inside Pen 29
CR-2008-003303	License Renewal Material Environment Misidentified
CR-2008-003304	Crystalline Degradation Noted on Insulation of Page Cable in Cable Tray
CR-2008-003305	Degraded Neoprene Material of ID of Valve 9980R
CR-2008-003317	Snubber Detached from Wall Support at Support Welds
CR-2008-003315	Evidence of Leaking on Inside Surface of Nozzle Compartment Welds
CR-2008-003396	2008 Review of Fan Bar and Collector Bar Tube Engagement
CR-2008-003532	2005 S/G Inspection Detected a Foreign Object at R48C114
CR-2008-003548	Aging Effects Discovered During Maintenance LR Inspections
CR-2008-003613	Minor Aging Effects Discovered During Inspection of RCP Oil Collection Tank
CR-2008-003616	Post Sludge Lance FOSAR Eddy Current