

July 2, 2009

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  
05000244/2009007

Dear Mr. Carlin:

On May 21, 2009, the U. S. Nuclear Regulatory Commission (NRC) completed a Region I team inspection of your post-approval license renewal activities at the R. E. Ginna Nuclear Power Station. The enclosed report documents the results of the inspection, which were discussed during an exit meeting on May 21, with Dave Holm and other members of your staff.

The purpose of this inspection was to examine the activities under your renewed operating license related to the completion of commitments made during the renewed license application process and compliance with the conditions of your license. Under the renewed operating license, entry into the period of extended operations is planned for September 19, 2009. 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 samples selected for review, the inspection team determined that the licensee was meeting the commitments.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web-site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**  
Richard Conte, Chief  
Engineering Branch 1  
Division of Reactor Safety

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

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Sincerely,  
**/RA/**  
Richard Conte, Chief  
Engineering Branch 1  
Division of Reactor Safety

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

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\* See Previous Concurrence Page

J. Carlin

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Enclosure: Inspection Report No. 05000244/2009007  
w/Attachments

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-244

License No.: DPR-18

Report No.: 05000244/2009007

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

Facility: R. E. Ginna Nuclear Power Plant

Location: Ontario, New York

Dates: May 4 - 8 and 18 - 21, 2009

Inspectors: Glenn Meyer, Team Leader  
Michael Modes, Senior Reactor Inspector  
Joseph Schoppy, Senior Reactor Inspector  
Suresh Chaudhary, Reactor Inspector

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000244/2009007; 05/04/2009 - 05/21/2009; R. E. Ginna Nuclear Power Plant; License Renewal Commitments Inspection.

The report covers a two-week team inspection of the implementation of license renewal commitments, which was performed in accordance with NRC Manual Chapter 2516 and NRC Inspection Procedure 71003 by four region-based engineering inspectors. The inspection team concluded that commitments, license conditions, and regulatory requirements associated with the issuance of the renewed operating license were being met at the R. E. Ginna Nuclear Power Plant. The team identified a few areas that resulted in changes to existing programs and noted that the remaining uncompleted areas of the One-Time Inspection Program merited further NRC followup during the period of extended operation.

A. NRC-identified and Self-Revealing Findings

None

B. Licensee-Identified Violations

None

## REPORT DETAILS

### **4. OTHER ACTIVITIES (OA)**

#### **4OA5 Post-Approval Site Inspection for License Renewal**

On May 19, 2004, NRC issued a renewed operating license for the facility, based on review of the Ginna License Renewal Application (LRA) submitted on August 1, 2002. The "Safety Evaluation Report (SER) Related to the License Renewal of R. E. Ginna Nuclear Power Plant," (NUREG-1786), issued in May 2004, contained Appendix A, Commitment Listing, which listed 40 commitments. The applicant made the commitments to provide aging management programs to manage aging effects on structures, systems, and components (SSCs) prior to and during the period of extended operation, as well as other information. The period of extended operation begins on September 19, 2009, upon expiration of the plant's original license term.

In Inspection Report 05000244/2008008, dated June 13, 2008, inspectors documented the review of license renewal activities and commitments available for inspection during the reactor refueling outage including: (sections of the report are provided after each item)

- Commitment 23: Perform visual inspections and ultrasonic testing thickness measurements of the containment lines during 2005 RFO [Refueling Outage] – reviewed in Section 4OA5.2.4.
- Commitment 28: Re-examine liner [containment liner where there was previous degradation] and restore thickness if below acceptance criteria – reviewed in Section 4OA5.2.4.
- Commitment 37: Add medium voltage cables M0039 and M108 into the scope of license renewal and develop aging management program consistent with NUREG 1801, Section X1.E.3 – reviewed in Section 4OA5.2.1.
- Other programs reviewed were Fatigue Monitoring Program, Section 4OA5.2.2, and Steam Generator Tube Integrity Program, Section 4OA5.2.3.

The inspectors did not identify any instances of incomplete commitments with respect to timeliness or adequacy.

#### **a. Inspection Scope (IP 71003)**

The inspectors selected license renewal programs and activities for review to address three inspection objectives:

- Whether the license renewal commitments were being met and associated aging management programs were being properly implemented, as applicable,

Enclosure

- Whether structures, systems, and components (SSCs) identified as being within the scope of license renewal after the issuance of the renewed operating license, i.e., newly identified SSCs, have been properly added to license renewal programs, and
- Whether the Updated Final Safety Analysis Report (UFSAR) properly addresses the aging management programs, including actions of the licensee's post-approval commitment change process.

In accordance with Inspection Procedure (IP) 71003, to meet the above objectives, the inspectors selected commitments on a sampling basis, reviewed supporting documents including completed tests and inspections, performed interviews, performed visual inspections of structures and components, and observed selected plant activities. The inspectors verified a selected sample of licensee corrective actions taken as a consequence of prior license renewal inspections.

#### b.1 Review of Commitments

Commitments 1, 26, and 38

Commitments 1, 26, and 38 relate to pressure-temperature limit curves for the reactor coolant system (RCS), withdrawal schedules for reactor vessel surveillance capsules, and reporting test results. In the letter dated July 30, 2003, the licensee committed to submit the new pressure-temperature curves by December 2004. The commitment was subsequently revised in an April 8, 2005, letter, which clarified that the licensee was going to use its current limits (curves) and associated calculation method as enumerated in WCAP-14684, and submit a license amendment to revise the limits using a different calculation method. The WCAP-14684 method had resulted in a prediction of acceptable vessel toughness for 32 effective-full-power-years, but the reactor vessel was approaching 28 effective-full-power-years.

On February 8, 2008, the licensee submitted a license amendment request to change the limits and method of determining pressure and temperature, and low temperature over pressure (LTOP) limits. An April 25, 2008, submittal revision contained a Draft Reactor Coolant System Pressure and Temperature Limits Report (PTLR) and WCAP-15885, R. E. Ginna Heatup and Cooldown Limit Curves for Normal Operation. In a letter dated February 23, 2009, the NRC issued Amendment No. 106 to Technical Specification 5.6.6 to approve the revised RCS pressure and temperature, and LTOP limits.

The NRC-approved heat-up curve, which included the results of the surveillance capsule removed in Spring 2005, was acceptable for use through 47.3 effective-full-power-years. The licensee has estimated that the period of extended operation of the renewed operating license will involve approximately 52 effective-full-power-years. The licensee was planning to recalculate the heat-up curves after retrieval of surveillance Capsule N.

Following the inspection, by letter dated May 29, 2009, the licensee transmitted the calculated results of the Capsule N (5th surveillance capsule) in WCAP-17036-NP, Analysis of Capsule N from the R. E. Ginna Reactor Vessel Radiation Surveillance Program, Revision 0. This report presented the analysis of test results from Capsule N and determined that the vessel will remain above the toughness thresholds for more the 52 effective-full power years. The remaining Capsule P had been placed in a location of higher fluence, and was planned to be removed shortly after accumulating a fluence equivalent to approximately 80 years of operation.

When the licensee recalculated the brittle failure curve using the surveillance capsule removed during the 2008 refueling outage, the curve was acceptable beyond 52 effective-full-power-years.

Based on the on-going NRC review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee was meeting Commitments 1, 26, and 38.

#### Commitment 2

Commitment 2 specified that the licensee “[i]mplement a Fatigue Monitoring Program to confirm that the number of operating cycles (causing fatigue) are fewer than the plant design cycles” by June 2004.

In the LRA, the licensee committed to implement a new fatigue monitoring program to confirm components do not exceed their cycle count limit prior to the end of the period of extended operation. The new program accounted for the effects of environment using the guidance contained in NUREG/CR-6260, 6583, and 5704. On May 25, 2007, Action NL-2007-000055-002, "New - Incorporate Fatigue Program into Procedure as Outlined in LR-FATM-PROGPLAN," was closed with the issuance of the new fatigue monitoring program, engineering procedure, EP-2-P-0178, Transient and Fatigue Monitoring Program, Revision 0. This program was consistent with the commitments made in the application and subsequent correspondence with the NRC.

Based on review of the timeliness and adequacy of the licensee's actions, the inspectors determined that the licensee met Commitment 2.

#### Commitment 3

Commitment 3 specified that the licensee “[p]rovide an assessment of fatigue usage for nuclear sampling system B31.1 piping, for the period of extended operation” and noted that this was completed.

On June 10, 2003, the licensee reported to the NRC that an engineering evaluation of the affected portions of the nuclear steam supply system sampling system had been that the maximum calculated thermal stress range in the piping was 4,660 pounds per square inch, which is less than the ANSI B31.1 stress limit for 100K cycles or more.

Because the critical component cycles were less than 7000, this calculation was bounding and no reduction factor needed to be applied.

When the SER was issued in May 2004, Commitment 3 was listed as completed. The inspectors did not note any circumstances which affected this status.

#### Commitment 4

Commitment 4 specified that the licensee “[p]rovide a baseline nondestructive examination for the pressurizer surge line by inspecting all circumferential welds, and develop a methodology to employ NRC approved augmented inservice inspection for pressurizer surge line, or recalculate to determine acceptable cumulative usage factor (CUF), or repair/replace surge line or subcomponents, as necessary.” The SER listed the status as “completed reanalysis.”

On June 10, 2003, the licensee reported the results of the refined reanalysis of the pressurizer surge line. Using EPRI FatiguePro to calculate the fatigue accumulation of the hot leg surge nozzle, pressurizer surge nozzle, and pressurizer heater penetration, it was determined that the cumulative usage factor for fatigue life of the pressurizer surge nozzle, projected to 60 years, was 6.28 E-07 without environmental effects, and conservatively applying the maximum environmental effects, the projected end cumulative usage factor was 9.63 E-06. These results obviated the need for the other actions listed in Commitment 4. The pressurizer surge line nozzle was chosen as the limiting case for the surge line, based on the results WCAP-12928, Structural Evaluation of R. E. Ginna Pressurizer Surge Line. Considering the Effects of Thermal Stratification, May 1991, this report described the stress and cumulative usage factor analyses performed on the surge line in accordance with NRC Bulletin 88-11. The highest CUF was calculated to be at the surge line nozzle connection to the RCS hot leg.

When the SER was issued in May 2004, Commitment 4 was listed as completed. The inspectors did not note any circumstances which affected this status.

#### Commitment 6

Commitment 6 specified that the licensee “[r]e-tension 23 containment tendons as part of the 2005 tendon testing tendon program” by May 2005.

The inspectors reviewed LRA Section 4.4 and the supporting testing documentation to verify that the commitment to test the tendons and that the testing established acceptability of the containment pre-stressing system. The inspectors reviewed the LR Tendon Program to determine the scope and basis of sample selection. Additionally, TLAA Procedure Concrete Containment Tendon Pre-stress (CS-02), Tendon Surveillance Program (Sec. 5.4), Procedure DA-CE-2002-016-01, Procedure PT-27-22, and Work Order (WO) 20404506 were reviewed to determine scope, process, and results of the program.

Based on the review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment 6.

#### Commitments 7

Commitment 7 specified that the licensee “[p]erform one-time inspections of selected plant equipment to verify that current plant aging management programs are effective in managing the effects of aging” prior to September 2009.

The Ginna One-Time Inspection Program addressed the inspections to verify current aging management programs were effective regarding corrosion and selective leaching of materials. The inspectors reviewed SER Sections 3.0.3.7 and 3.0.3.9, the licensee program basis documents for the one-time inspection and selective leaching programs, corporate program procedures related to one-time inspections and inspection methodology, and interviewed the cognizant personnel.

The program involved 30 groups of materials and environments, and for each group involved an Inspection Scope Report (ISR) for inspection sample determinations and a Final One-Time Inspection Report (FOTR) for summarizing inspection results. The program also administratively included the inspections being performed under the selective leaching and buried piping aging management programs. The program involved 235 inspections in the first round, composed of a combination of ultrasonic inspections of pipe wall thickness and visual inspections of other components; 227 of these inspections had been completed. In 19 of the material/environment groups, there were 12 components or less in the group, and the vast majority of these components were inspected under the 90%/90% confidence interval of the sampling plan.

In eight of the material/environment groups, some inspections had not met the acceptance criteria, which necessitated further evaluation, and in some cases, expansion of the inspection samples. In three material/environment groups, corrosion was found that merited periodic inspection. The licensee planned to perform these inspections within the Periodic Surveillance and Preventive Maintenance Program and monitoring had begun within this program to accomplish these inspections.

The inspectors reviewed the program results summary, the ISRs, FOTRs, all inspection reports, and eleven related corrective action program condition reports (CRs) for nine material/environment groups. The inspectors noted that the licensee had completed the vast majority of inspections, had planned the remaining inspections, and had generally taken appropriate evaluation and followup actions.

As also noted in Section b.3 of this report, the inspectors noted that the outcome of the “stainless steel in lubricating oil group” had been technically acceptable but had not met commitment change expectations. Specifically, inspections were performed acceptably but program evaluations were not completed when the licensee determined that NRC and industry guidance did not specify testing of this group. The inspectors noted that

the testing had been discussed in the LRA and should have been addressed in the commitment change process. The licensee planned to complete program evaluations for this group to resolve the discrepancy.

Further, the inspectors noted that despite the substantial program progress and the conservative actions planned, there was considerable effort remaining in the months prior to the period of extended operations. Specifically, many of the FOTRs summarizing material/environment group conclusions had either not been completed or not approved. Also, some evaluations and followup actions had not been determined. The inspectors determined that NRC review of these areas was appropriate following entry into the period of extended operations.

The inspectors determined that the licensee had performed a substantial portion of the inspections, and the remaining inspections, required by this commitment, were scheduled to be completed prior to the period of extended operation.

#### Commitment 8

Commitment 8 specified that the licensee would “[e]nhance the Boric Acid Corrosion Surveillance Program to include all susceptible components (e.g., carbon/low alloy steel, cooper) potentially exposed to boric acid leaks.” The commitment was noted as completed.

This program was an existing program that identified carbon steel components within the reactor coolant system (RCS) that are susceptible to corrosion from leakage of boric acid and provided for periodic visual inspection of adjacent components, structures, and supports for evidence of leakage and corrosion. The licensee enhanced their existing program to account for boric acid corrosion of non-RCS components located in areas where there was the potential for boric acid leakage, including cable connections, cable trays and other susceptible structures, systems, and components (SSCs).

The inspectors reviewed the licensing basis, program basis document, implementing procedures, completed boric acid walkdown inspections and evaluations, and related CRs; and interviewed the responsible plant personnel regarding these documents. In addition, the inspectors performed walkdown visual examinations of a risk-informed sample of accessible SSCs located in areas where there was the potential for boric acid leakage to independently assess the licensee’s boric acid control program implementation.

Based on review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment 8.

#### Commitment 9

Commitment 9 specified that the licensee would “[d]evelop a program to periodically assess the condition of non-EQ cables in adverse localized environments and noted this commitment was completed. The developed program is called the Non-EQ Insulated Cables and Connections AMP.

The inspectors reviewed SER Section 3.6 2.3.1, which addressed this commitment. The inspectors reviewed the program basis document, two plant procedures for determining adverse local environments and cable degradation, and three results reports of walkdowns for determining adverse localized environments and visual inspections for cable degradation in the containment and non-containment. The inspectors also reviewed four CRs which addressed identified cable issues and a materials laboratory analysis of debris on cables. The inspectors performed walkdown visual examinations of the cables in the diesel generator rooms and the battery rooms.

Based on review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment 9.

#### Commitment 10

Commitment 10 specified that the licensee would “[r]eplace or test a representative sample of fire water system sprinklers that have been in service for up to 50 years” prior to 2016. The licensee enhanced their existing Fire Protection Program to require the replacement or representative sample testing of sprinklers with a service life of 50 years. This program enhancement included a recurring task at 10 year intervals for this activity following the 50 year in-service testing.

The inspectors reviewed the licensing basis, program basis document, planned work orders and recurring tasks, and related CRs, and interviewed the responsible plant personnel regarding these documents. The fire protection system and component tests are performed in accordance with the applicable National Fire Protection Association (NFPA) codes and standards. The inspectors reviewed NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems to ensure that the licensee adequately incorporated the appropriate NFPA standards into their planned sprinkler replacement/testing.

Based on review of the timeliness and adequacy of the licensee’s actions, the inspectors determined that the licensee was meeting Commitment 10.

#### Commitment 13

Commitment 13 specified that the licensee “[e]nhance Structural Monitoring Program to include all structures within the scope of license renewal, and provide additional guidance for detecting aging effects” and was noted as completed.

The inspector reviewed LRA Section A2.1.23 to determine the scope of additional structures to be included in the Structural Monitoring Program (SMP). Additionally, supporting documentation was reviewed to determine the extent and appropriateness of processes, procedures, and results of the licensee's efforts, including Section 4.4 of the LRA, letters to NRC, program basis document, and procedure EP-2-P-0169, Rev 01000.

Based on the review of the timeliness and adequacy of the licensee's actions, the inspector determined that the licensee met Commitment 13.

#### Commitment No. 14

Commitment 14 specified that the licensee would "[e]nhance Systems Monitoring Program to include all systems within the scope of license renewal and provide additional guidance for detecting aging effects" prior to June 2004. The Systems Monitoring Program was an existing program that contained guidelines for system engineers to assess the material condition of SSCs during their periodic system walkdowns and was enhanced to include additional systems and specific guidance for managing aging effects such as loss of material, cracking, and fouling.

The inspectors reviewed the licensing basis, program basis document, implementing procedures, a risk-informed sample of refueling outage (RFO) and quarterly walkdown reports, and related CRs; and interviewed the responsible plant personnel regarding these documents. In addition, the inspectors performed a walkdown examination of a risk-informed sample of accessible SSCs to independently assess the licensee's identification, monitoring, and evaluation of potential aging effects. Specifically, the inspectors performed a visual inspection of external surfaces for leakage and evidence of material degradation; such as corrosion, cracking, coating or sealant degradation, deformation, and debris or corrosion product buildup.

Based on review of the timeliness and adequacy of the licensee's actions, the inspectors determined that the licensee met Commitment 14.

#### Commitment 15

Commitment 15 specified that the licensee would "[a]dd the house heating boiler and associated components in [the] screenhouse requiring aging management review" prior to September 2009. This commitment added SSCs within the scope of license renewal in the screenhouse.

The inspectors reviewed SER Section 2.1.3.1.2.2 and Ginna letters dated May 13, 2003, June 10, 2003, and July 11, 2003, which addressed this commitment. The inspectors reviewed System / Structure Scoping Report (LRSP-HHS), Heating Steam (LR-30), Rev. 1 dated February 11, 2008, and revised license renewal drawing 33013-1917-LRI, Rev. 20, which demonstrated that the licensee had properly included that applicable heating steam components within the license renewal program. Also, the inspectors performed walkdown visual examinations of the heating steam components in the

screenhouse to confirm that program changes had been appropriate and that no additional components should have been included.

Based on review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment 15.

#### Commitment 16

Commitment 16 specified that “[l]ocations judged to be potentially susceptible to thermal fatigue will be included in the sample population of small bore piping to be examined by appropriate volumetric technique” prior to September 2009.

In the LRA, the licensee used the One-Time Inspection Program to address one-time inspections of small bore Class 1 piping not inspected by volumetric techniques during inservice inspections. As part of this commitment, the licensee expanded and refined the approach for such piping, and identified piping locations which are normally stagnant and not isolable from the RCS.

The inspector discussed the program with the licensee’s staff, and reviewed program documents and the results of the ultrasonic and liquid penetrant examinations performed during the last outage. Using industry guidance, The licensee had identified two susceptible small bore welds. The two small bore welds were satisfactorily inspected.

Based on review of the timeliness and adequacy of the licensee’s actions, the inspectors determined that the licensee met Commitment 16.

#### Commitment 17

Commitment 17 specified that “[t]he pressurizer manway stainless steel insert will receive a visual and surface examination as part of the applicant’s Inservice Inspection Program to detect potential stress corrosion cracking” prior to September 2009.

Because the material used to fabricate the stainless steel insert is susceptible to stress corrosion cracking, the licensee included a step in procedure GMM-47-01-05, Removal and Installation of Pressurizer Manway Cover to perform a visual and surface examination of the stainless steel insert. The inspector reviewed the revised procedure (Step 7.2.17), work order, and completed inspection reports documenting that the visual and surface examinations had been completed.

Based on review of the timeliness and adequacy of the licensee’s actions, the inspectors determined that the licensee met Commitment 17.

#### Commitment 18

Commitment 18 specified that the licensee would “[a]dd System Monitoring [Program] as an aging management program applicable to the pipe represented by Table 3.[3]-2, line number (42)” prior to September 2009. This commitment added an additional AMP to hydrogen recombiner system piping already within the scope of license renewal.

The inspectors reviewed Request for Additional Information (RAI) 3.3-2 and Ginna’s letter dated May 23, 2003, which addressed this commitment. The inspectors reviewed System Monitoring Program documents and visually examined the applicable piping.

Based on review of the timeliness and adequacy of the licensee’s actions, the inspectors determined that the licensee met Commitment 18.

#### Commitment No. 22

Commitment No. 22 specified that “[t]hermographic inspections of 34.5 KV transformer yard components are to be performed at least once per refueling cycle while the components are energized” prior to September 2009. The Periodic Surveillance and Preventive Maintenance (PSPM) Program was an existing program that provided for visual inspection and examination (including thermography) of surfaces of selected SSCs for evidence of defects and age-related degradation (such as corrosion, wear, cracking, fouling, overheating, etc.) on a specified frequency based on operating experience (OE). The licensee enhanced this program to ensure that 34.5 KV yard components are thermographically monitored as part of IP-REL-2, “Equipment Diagnostic Monitoring.”

The inspectors reviewed the licensing basis, PSPM program basis document, implementing procedures, planned and completed work orders, trending data and hot spot evaluations, and related corrective action CRs; and interviewed the responsible plant personnel regarding these documents. The inspectors walked down the 34.5 KV transformer yard to perform a visual inspection (including a sample of hand-held thermal gun readings) of in-scope electrical components to independently assess the licensee’s monitoring of potential aging effects. In addition, the inspectors accompanied a thermography specialist on a 115 KV switchyard walkdown to perform the periodic check of an identified hot spot, including the post-walkdown trend review and evaluation.

Based on review of the timeliness and adequacy of the licensee’s actions, the inspectors determined that the licensee met Commitment 22.

#### Commitment 24

Commitment 24 specified that the licensee “[p]erform hardness tests, if feasible, on emergency diesel generator jacket water coolers and lube oil coolers channel heads” in 2005 RFO. These tests and other inspections for selective leaching were administratively controlled within the One-Time Inspection Program, which was addressed under Commitment 7.

The inspectors reviewed SER Section 3.0.3.9, a Ginna letter dated July 11, 2003, and the licensee's program basis document related to the Selective Leaching of Materials Program to verify the commitment scope and description. The inspectors reviewed the November 2005 materials laboratory report for hardness tests of the water jacket and lube oil cooler channel heads on the A and B emergency diesel generators, and six visual inspection records from 2001, 2005, and 2007. All inspections found conditions to be acceptable.

Based on review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment 24.

#### Commitment No. 25

Commitment No. 25 specified that the licensee "[p]erform visual inspections of electrical phase bus" prior to 2012. The phase buses at Ginna are used to provide offsite power from the station auxiliary transformers to Bus 12A and Bus 12B. The PSPM Program was an existing program that provided for visual inspection and examination of selected SSCs for defects and age-related degradation, and was enhanced to inspect electrical phase buses, including PVC boots and other materials for indication of joint overheating.

The inspectors reviewed the licensing basis, PSPM program basis document, implementing procedures, planned and completed work orders, and related corrective action CRs; and interviewed the responsible plant personnel regarding these documents. The inspectors also walked down accessible portions of the energized 12A and 12B buses to perform an external visual inspection to independently assess the licensee's monitoring of aging effects.

Based on review of the timeliness and adequacy of the licensee's actions, the inspectors determined that the licensee met Commitment 25.

#### Commitment 27

Commitment 27 specified that the licensee "perform two structural integrity tests at design pressure during period of extended operation" in 2015 and 2026.

This applies to the reactor containment/building. The inspector reviewed the licensee's response to the NRC request for information C-RAI 3.6-1 and a letter dated July 30, 2003, and LR-IWEL-Program Plan, Rev. 4. Additionally, ASME Section XI, Subsections IWE and IWL, and CR-2009-3018 were reviewed to determine the adequacy of the licensee's actions to satisfy this commitment. These tests had been scheduled for 2015 and 2026.

Based on the review of the timeliness and adequacy of the licensee's actions, the inspector determined that the licensee was meeting Commitment 27.

### Commitment 29

Commitment 29 specified that the licensee “include measurement of voltage between reference cells and rock anchors into Periodic Surveillance and Preventive Maintenance Program” prior to 2005.

This applies to the reactor containment/building. The inspectors reviewed the licensee’s response to the NRC letter July 30, 2003, and LR Program Plan LR-PSPM-Program Plan, Rev. 5, Action Item AI-2003 (Action 001), and CR-2008-2053 Containment Area Cathodic Protection, dated March 18, 2008. Additionally, the inspectors reviewed WO 20706891, AI-2003-011408, CR-2008-2053 and CR-2008-1201, and Ginna Rock Anchor Corrosion Testing Reports of July 29, 1981, May 3, 1991, July 26, 1999, and May 9, 2002.

Based on the review of the timeliness and adequacy of the licensee’s actions, the inspector determined that the licensee met Commitment 29.

### Commitment No. 30

Commitment No. 30 specified that the licensee “define the selection criteria, sample size, and periodicity of inspections for fire system piping” prior to September 2009. The Fire Water System Program was an existing program that was implemented by the Ginna Station Fire Protection Program, which included provisions for aging management of the fire water system and associated components. The licensee enhanced its existing program to more clearly define the selection criteria and sample size for the periodic inspection of fire water system components and implemented procedure EP-3-P-0180, Fire Water System Corrosion Monitoring Program to specify how Engineering identifies fire water system components which are susceptible to corrosion, monitors their wall thickness, and evaluates their condition for continued operation.

The inspectors reviewed the licensing basis, program basis document, implementing procedures, planned and completed work orders, and related CRs; and interviewed the responsible plant personnel regarding these documents. The inspectors also reviewed the ultrasonic test (UT) data records, and compared the UT data results to the established minimum wall thickness criteria for the selected piping locations. In addition, the inspectors walked down accessible portions of the fire water system in the service water (SW) greenhouse, in the turbine building (including the fire water storage tank), in the reactor building, and in the intermediate building (including the cable tunnel) to independently assess the material condition and the licensee’s aging management program.

On March 20, 2009, as part of their license renewal self-assessment, the licensee identified (CR 2009-01843) that an aspect of this commitment had not been met. Specifically, in a letter to the NRC dated August 8, 2003, the licensee stated that “a representative sample of sprinkler heads will be removed at Ginna Station prior to the expiration of the current operating license and a visual or remote visual (i.e., boroscope)

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inspection of the internal condition of the piping will be performed.” To address this oversight in not sampling the sprinklers, the licensee selected a representative sample based on sprinkler type (i.e., wet pipe, pre-action, and deluge) and location (most vulnerable to potential obstruction), established appropriate acceptance criteria, developed specific work orders for the nine selected sprinkler heads, and scheduled the work orders for completion prior to the period of extended operation. The inspectors verified that the licensee had scheduled all nine associated work orders (C90202876, C90202879, C90202880, C90202881, C90202883 - C90202886, & C90202888) prior to September 2009.

Based on review of the timeliness and adequacy of the licensee’s actions, the inspectors determined that the licensee was meeting Commitment 30.

Commitment 31 (supersedes Commitment 12)

Commitment 31 specified that the licensee “submit Reactor Vessel Internals Program for staff review and approval prior to September 2007.

Due to emergent issues related to the degradation of Alloy 600 in reactor vessel components, the industry assembled a generic approach to managing the affects of aging under the auspices of the Material Reliability Program, which was scheduled to deliver a draft program during December 2007, three months after the original commitment schedule. The licensee appropriately used its commitment change process to evaluate changing the due date of Commitment 31.

On February 27, 2009, the licensee submitted their License Renewal Aging Management Reactor Vessels Internals Program to the NRC. By email dated March 31, 2009, NRC confirmed that the submittal provided technical information sufficient to enable the staff to proceed with its review.

Based on review of the timeliness and adequacy of the licensee’s actions, the inspectors determined that The licensee met Commitment 31.

Commitment 32

Commitment 32 specified that the licensee would “add component cooling water [CCW] makeup water piping, valves and pumps from the refueling water storage tank to the spent fuel pool into the scope of license renewal” by July 2004.

The inspectors reviewed SER Open Item 2.3.3.2-1 and Ginna letters dated May 23, 2003, June 10, 2003, September 16, 2003, and December 9 and 19, 2003, which addressed this commitment. The inspectors reviewed the CCW system basis document and four license renewal drawings, which showed the revised CCW scoping boundary and demonstrated that the licensee had properly included many applicable components within the license renewal program.

The inspectors noted that the scoping boundary for one branch of CCW piping ended at a normally-open valve. While the basis for this boundary was procedural control which closed this valve during applicable system operation, subsequent review determined that no such procedural control existed. The licensee entered this disparity into DR 2009-3183 on May 6, 2009. Later the inspectors reviewed seven marked-up drawings, which extended the CCW system license renewal boundary.

Based on review of the timeliness and adequacy of the revised the licensee's actions, the inspectors determined that the licensee met Commitment 32.

#### Commitment 34

Commitment 34 specified that the licensee "perform joint resistance tests when visual inspections of PVC boots or other materials of construction indicate that the joint may be overheating" by July 2004.

This applies to electrical busses within the scope of Commitment 25 (see previous). The inspectors reviewed the Ginna letters, dated September 16, 2003, and April 08, 2005, and SER Section 3.6.2.4.4.1, Open Item 3.6-1 to determine the scope of the commitment. In addition, the inspectors reviewed the program basis document, Procedure CME-48-02-Bus11A/12A, AI-2004-011483, and AI-2004-011483-01, and determined that the joint resistance test/inspection requirement was adequately incorporated in the surveillance procedure CME-48-02-Bus 11A/12A.

Based on the review of the timeliness and adequacy of the licensee's actions, the inspector determined that the licensee met Commitment 34.

#### Commitment 35

Commitment 35 specified that the licensee would "add spent fuel pool (SFP) makeup path from the refueling water storage tank to the SFP into the scope of license renewal" by July 2004.

The inspectors reviewed SER Open Item 2.3.3.3-1 and the Ginna letter dated December 9, 2003, which addressed this commitment. The inspectors reviewed the System / Structure Scoping Report (LRSP-SPENTFUEL), Spent Fuel Cooling (LR-08), Rev 1 dated November 8, 2007 and two license renewal drawings, which showed the revised scoping boundary and demonstrated that the licensee had properly included the applicable components within the license renewal program.

Based on review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment 35.

### Commitment 36

Commitment 36 specified that the licensee would "add fire service water (SW) booster pump and associated valves and piping back to the SW system into the scope of license renewal" by July 2004.

The inspectors reviewed SER Open Item 2.3.3.6-1 and the Ginna letter dated December 9, 2003, which addressed this commitment. The inspectors reviewed the program basis document for the fire water system, the System / Structure Scoping Report (LRSP-FIRE), Fire Protection (LR-21), Rev 1, and two license renewal drawings, which showed the revised scoping boundary and demonstrated that the licensee had properly included the applicable components within the license renewal program. Also, the inspectors visually examined the components in the suction of the fire service water booster pump to confirm that program changes had been appropriate and that no additional components should have been included.

Based on review of the timeliness and adequacy of the licensee's actions, the inspectors determined that the licensee met Commitment 36.

### Commitment 39

Commitment 39 specified that the licensee "perform inspections of thimble tubes for wear and stress corrosion cracking (SCC) each refueling outage" beginning in 2005 for wear and 2009 for SCC and "VT-1 quality inspect stainless steel fillet weld joining the bottom mounted instrument (BMI) guide tube to the end of each BMI penetration, as well as the 82/182 weld between the SS safe end and the lower penetration nozzle, each refueling outage" beginning in 2005.

This applies to the reactor vessel. Subsequent to the renewed license and the initial implementation of the commitment, the licensee determined that on-going eddy current inspections could detect the presence of stress corrosion cracking in the thimble tube with slightly less reliability than the original SER discussion seemed to indicate. As a consequence, the licensee implemented a commitment change to clarify the commitment description in the NRC SER Section 3.1.2.3.7.2, which was taken from the Ginna letter of December 9, 2003, to read:

"Ginna operating experience indicates that OD-initiated SCC indications 20% through-wall and greater have been detected. Since sizing SCC indications from eddy current data is somewhat unreliable, remediation criteria are based on detections. Any thimble tube containing an SCC indication detected by eddy current examination is removed from service (isolated) and/or replaced."

The consequence of this commitment change was that the on-going eddy current examinations being applied were sufficient to meet the commitment.

Eddy current for wear of thimble tubes was implemented at the next RFO after 2005. VT-1 inspection of the fillet welds was implemented during the 2008 outage, due to an insufficient planning period to accomplish the inspections in the prior RFO. The inspector reviewed the inspection reports and corrective actions related to the examinations implemented during these two outages.

Based on review of the timeliness and adequacy of the licensee's actions, the inspectors determined that the licensee was meeting Commitment 39.

Commitment 40 (supersedes Commitment 21)

Commitment 40 specified that the licensee "submit License Amendment Request to incorporate specific particulate testing for diesel generator fuel oil, ASTM D2276 (or its successor), and eliminate the need for the "clear and bright" method of ASTM D4176" by December 2004.

The inspectors reviewed Ginna letter, dated December 9, 2003, SER Section 3.3.2.3.4-1, NRC letter to Technical Specification Task Force, dated January 13, 2005, and Action Items NL-2007-000070, and NI-2007-000070-001 through -012. The inspectors verified that the licensee had submitted a TS change – Tech Spec Change Request # TATF-374 as a revision to TS 5.5.13, which was reviewed and approved by the NRC. This commitment change is discussed in Section b.3 of this report.

Based on the review of the timeliness and adequacy of the licensee's actions, the inspector determined that the licensee met Commitment 40.

## b.2 Review of Newly Identified SSCs

The inspectors discussed the identification of new systems structures and components, under the purview of 10 CFR 54.37(b), at Ginna with the licensee's license renewal staff. The licensee's personnel indicated that some components had been identified that should have been within the scope of its license renewal program due to discovering components in the plant that were not accurately reflected in the database used to originally generate the application for a renewed license. Although present at the time the application was formulated, these components were considered "newly identified" pursuant to 10 CFR 54.37(b), which has been further clarified in Regulatory Issue Summary RIS-2007-16. The licensee staff reviewed each "newly identified" component, using the rules established for the original application, to determine if any new aging affect required additional aging management programs. In every case, the licensee determined that existing aging management programs already encompassed the components.

The inspectors contacted the Office of Nuclear Reactor Regulation, Division of License Renewal (NRR/DLR) staff for information on any generic NRC communications naming newly identified systems, structures, and components, and informed them that technical

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assistance in the review of new aging management programs that have been developed by the licensee would not be necessary. NRR/DLR staff advised the inspectors that the NRC has not specified additional newly identified

systems, structures, and components that the licensee must evaluate and include as applicable in its next Ginna UFSAR update in accordance with §54.37(b).

### b.3 Review of UFSAR and Commitment Change Process

As part of reviewing the AMPs associated with the commitments, the inspectors reviewed the UFSAR descriptions to confirm the implemented programs at the licensee were consistent with the UFSAR descriptions. No disparities were noted.

The inspectors reviewed the licensee's procedures to ensure that commitment revisions would follow the guidance in NEI 99-04, Guidelines for Managing NRC Commitment Changes, including the elimination of commitments, and would properly evaluate, report, and approve 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.

With respect to implementation, the inspectors reviewed changes associated with five commitments. The process was procedurally controlled and followed the guidance of NEI 99-04 and NRC Regulatory Issue Summary RIS 2000-17, Managing Regulatory Commitments Made By Power Reactor Licensees to the NRC Staff, September 21, 2000.

Specifically, the inspectors reviewed Commitment 21, "Modify technical specifications to incorporate specific particulate testing requirements for diesel generator fuel oil, and eliminate use of ASTM D4176," which was refined by Commitment 40, "Submit License Amendment Request to incorporate specific particulate testing for diesel generator fuel oil, ASTM D2276 (or its successor), and eliminate the need for the 'clear and bright' method of ASTM D4176." The inspectors noted that neither ASTM D2276 nor its successor was used by the licensee as the basis for the license amendment request. Instead a predecessor to ASTM D2276, ASTM D 6217-98 (2003), was used as the basis for the license amendment request. Through a technical comparison, the licensee concluded the test results of the two ASTM standards were equivalent. The amendment was approved by the NRC on January 13, 2005 (NRC Evaluation Report: TSTF-374, R.O. "Revision to STS 5.5.13, 'Diesel Fuel Oil Testing Program' and associated TS Bases for Diesel Fuel Oil").

The inspectors noted that in the absence of a license amendment request, this commitment change would have required notifying the NRC as part of NEI 99-04, Part 4.2, Step 4 and 5. Because a formal license amendment request results in a vigorous technical review by the NRC, the inspectors concluded that this process was an acceptable substitute for the process of informing the agency of a commitment change using the guidance of NEI 99-04.

In addition, during the review of Commitment 7 (One-Time Inspection Program), the inspectors noted that testing for one material/environment group had been completed acceptably but was not evaluated, because the licensee determined that NRC guidance did not mandate testing on this material/environment group. The inspectors noted that

both approaches were technically acceptable, but deletion of testing discussed in the License Renewal Application should have involved use of commitment change process, which had not been done. The licensee was planning to revise the approach to complete the evaluation of the material/environment group.

b.4 Review of Prior License Renewal Inspection Items

The inspectors selected a sample of prior inspection items which had been identified in license renewal inspections during the review of the LRA, including Inspection Reports 05000244/2003-009 and 2003-010. Specifically, the inspectors reviewed the licensee's Commitment and Action Tracking System (CATS) item 11330 related to specifications for bolting and CATS 11332 related to specifications on fire system inspection and flushing periodicity. The inspectors determined that CATS 11330 and 11332 had been satisfactorily resolved.

The inspectors also reviewed action request (AR) 2003-1386, related to an inconsistency in the documentation of some valve classifications between the Fleet Configuration Management System (FCMS) database and Table 5.1 of the Fire Protection Safe Shutdown Analysis. As part of this review, the licensee determined that AR 2003-1386 had not been resolved properly and that some valve classifications remained inconsistent between the two documents. This was determined to be a minor issue because it related to a documentation deficiency and not a material deficiency. The licensee entered this problem into the corrective action program as CR 2009-3613.

c. Overall Conclusions

The inspection team did not identify any substantive instances of incomplete license renewal commitments with respect to timeliness or adequacy. The inspection team concluded that commitments, license conditions, and regulatory requirements associated with the issuance of the renewed operating license were being met at the R. E. Ginna Nuclear Power Plant. The team identified a few areas that resulted in changes to existing programs.

O4 MANAGEMENT MEETINGS

Exit Meeting Summary

The inspectors presented the results of the inspection to Mr. David Holm and other members of the licensee's staff on May 21, 2009. The inspectors confirmed that no proprietary material was examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

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**ATTACHMENT**

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

D. Holm	Plant Manager
J. Wells	Manager, Engineering Programs
M. Canny	Program Owner, Buried Piping
M. Edelstein	System Engineer, Fire Water
M. Fallin	Principal Engineer, Constellation License Renewal
T. Harding	Director, Licensing
K. Kemp	Aging Management Coordinator
D. Lovgren,	Electrical Engineer
D. Markowski	System Engineer, RHR
J. Pacher	Engineering Manager
J. Sullivan	Operations Manager
M. Ruby	Principal Engineer, Licensing

Observers

R. Leski	Nine Mile Point license renewal
R. Saunderson	Nine Mile Point license renewal
M. Bowman	Calvert Cliffs license renewal

**LIST OF DOCUMENTS REVIEWED**

Aging Management Program Basis Documents

LR-BAC-PROGPLAN, Boric Acid Corrosion Program, Rev. 3  
LR-BTNK-PROGPLAN, Buried Piping and Tanks Inspection Program, Rev. 4  
LR-CAPS-PROGPLAN, Rev 4, "Reactor Vessel Surveillance Program"  
LR-CBL1-PROGPLAN, Non-EQ Insulated Cables and Connections, Rev 4  
LR-CCW-PROGPLAN, Closed-cycle Cooling Water System Surveillance Program, Rev 5  
LR-FATM-PROGPLAN, Fatigue Monitoring Program, Rev 2  
LR-FOIL- PROGPLAN, Fuel Oil Chemistry, Rev 3  
LR-FWS- PROGPLAN, Fire Water System Program, Rev 4 & 5  
LR-IWBD-PROGPLAN, ASME Section XI, Subsection IWB, IWC, and IWD Inservice Inspection Program, Rev 5  
LR-IWEL-PROGPLAN, ASME Section XI, Subsection IWE and IWL Inservice Inspection Program, Rev 4  
LR-LEAC-PROGPLAN, Selective Leaching of Materials Program, Rev 4  
LR-OTI - PROGPLAN, One-Time Inspection Program, Rev 4 & 5  
LR-PSPM- PROGPLAN, Periodic Surveillance & Preventive Maintenance Program, Rev 4

LR-STRM- PROGPLAN, Structural Monitoring Program, Rev 2  
LR-SYSM- PROGPLAN, Systems Monitoring Program, Rev. 4

Aging Management Program Procedures

System/Structure Scoping Report (LRSP-HHS), Heating Steam (LR-30), Rev 1  
System/Structure Scoping Report (LRSP-SPENTFUEL), Spent Fuel Cooling (LR-08), Rev 1  
System/Structure Scoping Report (LRSP-FIRE), Fire Protection (LR-21), Rev 1  
LR Tendons Program, Rev 1  
Tendon Surveillance Program, Rev 02501  
TLAA Concrete Containment Tendon Pre-stress (CS-02), Section 5.4  
TLAA Procedure DA-CE-2002-016-01, Rev. 0  
CNG-CM-6.01-1000 One-Time Inspection of Mechanical Systems AMP, Rev 00100  
CNG-FES-004, One-Time Inspection Methodology, Rev 00000  
EP-2-P-0169, Structural Assessment and Monitoring Program, Rev 01000 & 01200  
EP-3-P-0173, Cable Aging Management Adverse Environment Field Walkdown, Rev 0  
EP-3-P-0174, Cable Aging Management Cable Degradation Walkdown, Rev 0

Procedures

CH-261, Collection and Analysis of Groundwater Samples, Rev 1  
CME-48-02-BUS11A/12A, Westinghouse 4160 Volt Metal-Clad Switchgear 4KV Maintenance  
for Bus 11A and Bus 12A, Rev 2  
CME-48-02-BUS11B/12B, Westinghouse 4160 Volt Metal-Clad Switchgear 4KV Maintenance  
for Bus 11B and Bus 12B, Rev 5 and Rev 6  
DA-ME-2003-012, Evaluation of B Hot Leg Sampling Line for Cyclic Operation During  
License Renewal, Rev 0  
EP-2-P-0176, System Engineering Walkdown Procedure, Rev 1  
EP-3-P-0180, Fire Water System Corrosion Monitoring Program, Rev 0  
EP-UT-211, Ultrasonic Examination of Small Diameter Piping Butt Welds, Socket Welds and  
Base Material for Thermal Fatigue Damage, Rev 0  
GMM-47-01-05, Removal and Installation of Pressurizer Manway Cover, Rev 5  
IP-IIT-7, Boric Acid Corrosion Monitoring Program, Rev 8  
IP-REL-2, Equipment Diagnostic Monitoring, Rev 5  
M-15.10, 1A or 1B Emergency Diesel Generator Underground Fuel Oil Storage Tank Leak  
Tightness Testing, Rev 11  
PT-27-22, Rev 02501  
RE-10.2, Flux Mapping Emergency and Calibration Procedure, Rev 02300

Drawings

33013-1245-LRI, Aux Cooling – Component Cooling Water P&ID, Rev 30  
33013-1246-LRI, Aux Cooling – Component Cooling Water P&ID, Rev 12  
33013-1248-LRI, Aux Cooling – Spent Fuel Pool Cooling P&ID, Rev 35  
33013-1251-LRI, Reactor Coolant Pressurizer, Rev 24 (mark-up)  
33013-1258-LRI, Station Service Cooling Water, Rev 20  
33013-1261-LRI, Containment Spray, Rev 37  
33013-1266-LRI, Aux Bldg – CVCS – Boric Acid, Rev 23 (mark-up)  
33013-1268-LRI, Aux Bldg – Boric Acid Evaporator to Monitor Tanks, Rev 22  
33013-1268-LRI, Aux Bldg – Boric Acid Evaporator to Monitor Tanks, Rev 23 (mark-up)

33013-1269-LRI, Aux Bldg – Reactor Makeup Water P&ID, Rev 10 (mark-up)  
33013-1270-LRI, Aux Bldg - Waste Disposal – Liquid Waste Drains, Rev 8 (mark-up)  
33013-1917-LRI, Screenhouse Heating Steam & Condensate P&ID, Rev 20 (mark-up)  
33013-1990-LRI, Fire Protection Systems, Fire Service Water, sheet 1, Rev 15  
33013-2274-LRI, Aux Bldg – Boric Acid Evaporator Skid, Rev 6 (mark-up)  
33013-2275-LRI, Aux Bldg – Gas Stripper, Rev 6 (mark-up)  
B-1995, 6000 GAL No. 2 Diesel Oil Tank, Rev 1

Condition Reports (CR-)

2006-5218  
2007-7221  
2007-8775  
2007-8899  
2007-6630  
2007-8380  
2007-8734  
2007-8749  
2007-8750  
2007-8768  
2008-0210  
2008-0470  
2008-0933  
2008-2053  
2008-2323  
2008-2374  
2008-3218  
2008-3304  
2008-4458  
2008-5864  
2008-5903  
2008-5906  
2008-6154  
2008-6156  
2008-6754  
2008-9418  
2008-9420  
2009-0607  
2009-0608  
2009-0900  
2009-1393  
2009-1851  
2009-2100  
2009-3018  
2009-3183  
2009-3473  
2009-3493

2009-3214  
2009-3216  
2009-3217  
2009-3218  
2009-3219  
2009-3227  
2009-3230  
2009-3245  
2009-3251  
2009-3580

Work Orders (WO)

2040450  
20404506  
20500299  
20602640  
20701247  
20701251  
20701252  
20701253  
20701442  
20701756  
20702304  
20702389  
20702605  
20703880  
20704384  
20705874  
20706376  
20706891  
20800665  
20802564  
20804819  
20805914

Repetitive Tasks (Recurring Work Orders)

P200100  
P201526  
P301699  
P301700  
P301740  
P301776  
P302070  
P302071  
P302072  
P302073  
P302074  
P302075

P302076  
P302077  
P302078  
P302079  
P302080  
P302081  
P302082  
P302083  
P302084  
P302085  
P302086  
P302087

Action Items (AIs), Nuclear Licensing (NLs) & Corrective Actions (CAs)

AI-2003-011408  
AI-2004-011483  
AI-2004-011483-01  
AI-2002-011411  
AI-2003-011410-001  
AI-2002-010880  
AI-2003-011257-001  
AI-2003-011258  
AI-2004-011488

NL-2007-000070; NL-2007-000070-001, -002, -003 , -004 through -012; NL-2007-000071; NL-2007000071-001, -002, -003, -007;  
NL-2007-000068-006  
NL-2007-000069-001

CA-2008-001201; CA-2009-003018

NDE Inspection Reports

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02GV369  
08GU098  
08GP013  
08GU097  
08GU101  
08GU102  
08GU108  
08GU109  
08GV386

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BOP-UT-03-227  
BOP-UT-08-082

BOP-UT-08-103  
BOP-UT-08-104  
BOP-UT-08-105  
BOP-UT-08-106  
BOP-UT-08-120  
BOP-UT-08-130  
BOP-UT-08-131  
BOP-UT-09-025  
BOP-UT-09-026  
BOP-UT-09-027  
BOP-UT-09-028  
BOP-UT-09-029  
BOP-UT-09-030  
BOP-UT-09-069

BOP-VT-03-523  
BOP-VT-03-619  
BOP-VT-03-634  
BOP-VT-05-1190  
BOP-VT-05-1188  
BOP-VT-06-201  
BPO-VT-06-202  
BOP-VT-06-670  
BOP-VT-06-671  
BOP-VT-08-407  
BOP-VT-08-408  
BOP-VT-08-012  
BOP-VT-08-013  
BOP-VT-08-022  
BOP-VT-08-115  
BOP-VT-08-116  
BOP-VT-08-241  
BOP-VT-08-395  
BOP-VT-08-424  
BOP-VT-08-438

BOP-VT-09-018  
BOP-VT-09-028  
BOP-VT-09-050  
BOP-VT-09-060  
BOP-VT-09-063  
BOP-VT-09-070  
BOP-VT-09-071  
BOP-VT-09-072  
BOP-VT-09-073  
BOP-VT-09-074  
BOP-VT-09-075  
BOP-VT-09-076  
BOP-VT-09-077  
BOP-VT-09-088

BOP-VT-09-222  
BOP-VT-09-361  
BOP-VT-09-369  
BOP-VT-09-422

Incore Flux Thimble Gudes Tube Eddy Current Report BOP-ET-06-017  
Incore Flux Thimble Gudes Tube Eddy Current Report EIN SRC15

System Health, Trending, and Walkdown Reports

2008 RFO BACCP Inspection Tour, dated 4/16/08 and 4/21/08  
Auxiliary Feedwater System Health Report, Q1 - 2009  
Auxiliary Feedwater System Walkdown Checklist, dated 3/27/09  
Boric Acid Corrosion Program Health Report, Q1 – 2009  
Buried Piping and Tanks Program Health Report, Q1 – 2009  
Bus 12 Data (Bus 12 A/B Thermography Trend Report)  
Containment HVAC System Health Report, Q1 - 2009  
Containment HVAC Walkdown Report (Containment), dated 4/21/08 and 5/16/08  
Diesel Generator Emerg Power System Health Report, Q1 – 2009  
Emergency Diesel Generator System Walkdown Checklist, dated 3/31/09  
Fire Protection System Health Report, Q1 - 2009  
Fire Protection System Walkdown Report (Containment), dated 4/21/08  
Fire Protection System Walkdown Report (Yard/Power Block), dated 4/13/09  
RCS System Walkdown Report (Containment), dated 4/22/08 and 5/22/08  
RHR System Health Report, Q1 - 2009  
RHR System Walkdown Checklist, dated 3/27/09  
RHR System Walkdown Checklist (Containment), dated 4/22/08  
Safety Injection System Health Report, Q1 - 2009  
Safety Injection System Walkdown Checklist, dated 3/27/09  
Service Water System Health Report, Q1 - 2009  
Service Water System Walkdown Report, dated 5/1/09  
Station 13A Data (115 KV Thermography Trend Report)  
Transformer Yard Data (34.5 KV Thermography Trend Report)

Materials Laboratory reports

Identification of Debris on Electrical Cable, January 29, 2008  
A Containment Spray Seal Water License Renewal Inspection, July 14, 2008  
Aux Feed Pump water bearing cooler, August 5, 2008  
Identification of Debris from C SI Pump Seal Water Heat Exchanger, May 10, 2009

Miscellaneous Documents

Apparent Cause Evaluation (Spent Fuel Pool Leakage), September 6, 2007  
Operational Decision Making Checklist (Spent Fuel Pool Leakage), December 21, 2007  
Operational Decision Making Checklist (115 KV Bus Thermography Temperature Deviation),  
October 17, 2008  
Boric Acid leakage Evaluation (B RHR Pump), March 27, 2009  
One-Time Program Results Summary  
License Renewal Related Condition Report Trends, 3<sup>rd</sup> Quarter 2008  
License Renewal Related Condition Report Trends, 4<sup>th</sup> Quarter 2008

Operations Night Orders, dated May 20, 2009  
RFO 2008 Primary Coolant Leakage Corrective Maintenance Status Report, dated 5/21/08  
Test Report – Spent Fuel Pool Leakage Test 1/26-27/08  
M-15.10, 1A or 1B EDG Underground Fuel Oil Storage Tank Leak Tightness Testing,  
completed on 4/8/08, 6/2/08, and 4/13/09  
Time Limited Aging Analyses Summary Report LRTA-01  
FP-GINN-313, Fatigue Usage and Cycle Counting April 10, 2004 through August 1, 2007, Rev 0  
RGE-12Q-310, Surge Line and Pressurizer Lower Head Fatigue Analysis, Rev 0  
Four completed NRC Regulatory Commitment Evaluation Summaries per CNG-NL-1.01-1006  
CNG-NL-1.01-1007, Attachment 1, Change Request Package, Rev 0100 for “New Identified  
SCCs as per 10 CFR 54.37 (b)”

#### NRC Documents

Safety Evaluation Report Related to the License Renewal of R. E. Ginna Nuclear Power Plant  
(NUREG-1786)

NUREG-1413

NRC Letter to Technical Specifications Task Force, dated January 13, 2005

IN 89-64: Electrical Bus Bar Failures, dated 9/7/89

IN 2000-14: Non-Vital Bus Fault Leads to Fire and Loss of Offsite Power, dated 9/27/00

IN 2004-05: Spent Fuel Pool Leakage to Onsite Groundwater, dated 3/3/04

IN 2006-13: Ground-Water Contamination due to Undetected Leakage of Radioactive Water,  
dated 7/10/06

#### License Renewal Correspondence

Application for Renewal of Operating License – R. E. Ginna Nuclear Power Plant

Letters to NRC, dated July 30, 2002

February 19, 2003

May 13, 2003

May 23, 2003

June 10, 2003

June 20, 2003

July 11, 2003

July 16, 2003

July 30, 2003

August 3, 2003

August 8, 2003

September 16, 2003

December 9, 2003

April 18, 2005

#### Other Ginna Correspondence to NRC

Technical Specification Change Request # TSTF-374

License Amendment Request, Methodology for Determining Reactor Coolant System Pressure  
and Temperature and Low Temperature Over Pressure Limits

RCS Pressure and Temperature Limits Report PTLR, Rev 5

Attachment

WCAP-15885, "R.E. Ginna Heatup and Cooldown Limit Curves for Normal Operation", Rev 0

Industry Documents

Boric Acid Corrosion Guidebook (EPRI Technical Report), Rev 1  
 EPRI Technical Report 1006534, Infrared Thermography Guide, Rev 3  
 EPRI Technical Report 1007933, Aging Assessment Field Guide, December 2003  
 NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 1998 Edition

**LIST OF ACRONYMS**

AMP	Aging management program
BACCP	Boric Acid Corrosion Control Program
CR	Condition Report
EDG	Emergency Diesel Generator
EPRI	Electric Power Research Institute
FAC	Flow Accelerated Corrosion
FOST	Fuel Oil Storage Tank
HVAC	Heating, Ventilation and Air Conditioning
LRA	License Renewal Application
NDE	Non-Destructive Examination
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PEO	Period of Extended Operation
PSPM	Periodic Surveillance and Preventive Maintenance
PVC	Polyvinyl Chloride
RCS	Reactor Coolant System
RFO	Refueling Outage
RG&E	Rochester Gas & Electric
RHR	Residual Heat Removal
SSC	Structure, System, and Component
SW	Service Water
TR	Technical Report
UFSAR	Updated Final Safety Analysis Report
UT	Ultrasonic Test
VT	Visual Testing