

October 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, New York 14519

SUBJECT: R. E. GINNA NUCLEAR POWER PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000244/2006004

Dear Mrs. Korsnick:

On September 30, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your R. E. Ginna facility. The enclosed integrated inspection report documents the inspection results, which were discussed on October 5, 2006, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents one finding of very low safety significance (Green) and two NRC-identified findings which were determined to involve a violation of NRC requirements. Additionally, a licensee-identified violation, which was determined to be of very low safety significance is listed in this report. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating the three violations as non-cited violations (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at R.E. Ginna Nuclear Power Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the

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Sincerely,

**/RA/**

Arthur L. Burritt, Acting Chief  
Projects Branch 1  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000244/2006004  
w/ Attachment: Supplemental Information

cc w/encl:

M. J. Wallace, President, Constellation Generation  
J. M. Heffley, 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.  
P. R. Smith, New York State Energy Research and Development Authority  
J. Spath, SLO Designee New York State Energy Research and Development Authority  
T. Wideman, 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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Distribution w/encl:

S. Collins, RA

M. Dapas, DRA

B. Sosa, RI OEDO

R. Laufer, NRR

P. Milano, PM, NRR

B. McDermott, DRP

A. Burrirt, DRP

K. Kolaczyk, DRP, Senior Resident Inspector

M. Marshfield, DRP, Resident Inspector

S. DiMora, DRP, Resident OA

Region I Docket Room (with concurrences)

[ROPreports@nrc.gov](mailto:ROPreports@nrc.gov)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-244

License No.: DPR-18

Report No.: 05000244/2006004

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

Facility: R. E. Ginna Nuclear Power Plant

Location: Ontario, New York

Dates: July 1, 2006 through September 30, 2006

Inspectors: K. Kolaczyk, Senior Resident Inspector  
M. Marshfield, Resident Inspector  
F. Arner, Senior Reactor Inspector  
S. Barber, Senior Project Engineer  
K. Diederich, Reactor Inspector  
J. Josey, Reactor Inspector  
S. Lewis, Reactor Inspector  
M. Patel, Reactor Engineer

Approved by: Arthur L. Burritt, Acting Chief  
Projects Branch 1  
Division of Reactor Projects

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## SUMMARY OF FINDINGS

IR 05000244/2006-004; 07/01/2006 - 09/30/2006; R. E. Ginna Nuclear Power Plant; Operability Evaluations, Other Activities.

The report covered a 3-month period of inspection by resident inspectors and announced inspections by regional specialists. Two non-cited violations (NCVs), one Green finding and one unresolved item were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### A. NRC-Identified and Self-Revealing Findings

#### **Cornerstone: Mitigating Systems**

Green. The inspectors identified that Ginna personnel did not adequately assess the effects of a service water leak that occurred in the room cooler for the "C" Standby Auxiliary Feedwater (SAFW) pump. As a result, water that had accumulated in electrical control panels for the pump was not detected. When the water was found by Ginna personnel during the performance of a routine surveillance test of the "C" SAFW pump, the pump was declared inoperable until the water was removed, which resulted in approximately 19 additional hours of out-of-service time.

This finding is more than minor because it is associated with the Mitigating Systems Cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance (Green) by using Phase 1 of the Inspection Manual Chapter (IMC) 0609, "Significance Determination Process." The finding screened to Green since it was not a design or qualification deficiency and did not result in a loss of safety function. This finding is related to the cross-cutting aspects of problem identification and resolution in that Ginna did not fully evaluate the operability of the "C" SAFW pump following the leak, which sprayed water on electrical components. (Section 1R15)

Severity Level IV. The inspectors identified that on two occasions Ginna personnel failed to notify the NRC that offsite power to the plant was inoperable. Specifically, on July 17 and August 1, 2006, Ginna did not report to the NRC that offsite power to the plant was inoperable. The finding was determined to be a non-cited violation of 10 CFR 50.72, "Immediate Notification Requirements for Operating Nuclear Power Reactors."

This deficiency was evaluated using the traditional enforcement process since the failure to make a required report could adversely impact the NRC's ability to carry out its regulatory mission. Because this finding was of very low safety significance and has been entered into the corrective action program it is being treated as an NCV. (Section 1R13).

Severity Level IV. The inspectors identified that Ginna did not notify the NRC within 30 days of the identification of a medical condition that caused a reactor operator to fail to

meet the requirements of 10 CFR 55.21. Specifically, Ginna became aware of a medical condition in June 2006 that caused a licensed reactor operator to fail to meet the requirements of 10 CFR 55.21 and for which a conditional (restricted) license would be required. However, Ginna did not provide a Form 396 (medical condition certification) to the NRC until August 2006. The finding was determined to be a non-cited violation of 10 CFR 50.74, "Notification of Change in Operator or Senior Operator Status."

This deficiency was evaluated using the traditional enforcement process since the failure to make a required report could adversely impact the NRC's ability to carry out its regulatory mission. Because this finding was of very low safety significance and has been entered into the corrective action program it is being treated as an NCV. (Section 4OA3).

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by Ginna, has been reviewed by the inspectors. Corrective actions taken or planned by Ginna have been entered into Ginna's corrective action program. This violation and corrective action(s) are listed in Section 4OA7 of this report.

## REPORT DETAILS

### Summary of Plant Status

Ginna began the period at full Rated Thermal Power and operated at essentially full power for the entire report period.

#### 1. REACTOR SAFETY

##### **Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

1R01 Adverse Weather Protection (71111.01 - 2 samples weather-related, 1 sample cold weather preparations with 2 specific systems)

a. Inspection Scope

During the weeks of July 17, and July 31, 2006, the Rochester area experienced unusually warm weather with temperatures in the mid 90s. In response to the warm weather, the inspectors performed walkdowns of plant areas that contain equipment which is vulnerable to high temperature conditions. Areas examined included the battery and diesel generator rooms, as well as the standby auxiliary feedwater pump room. As part of the walkdowns, local area temperatures were checked as well as the operability of ventilation and air conditioning cooling systems to ensure that the equipment located in the rooms was not affected by the high external air temperature conditions.

Using Ginna procedure M1306.1, "Ginna Station Maintenance Department Winterizing Inspection Program" and the Ginna Updated Final Safety Analysis Report (UFSAR) as references, the inspectors reviewed Ginna's preparations for cold weather by walking down plant areas and observing the installation of cold weather protective equipment. Two risk-significant systems were selected for review as part of this inspection: the service water and auxiliary feedwater systems.

b. Findings

No findings of significance were identified.

1R02 Evaluation of Changes, Tests, or Experiments (IP 71111.02 - 20 samples)

a. Inspection Scope

The inspectors reviewed four safety evaluations (SEs), three of which were either issued during the past two years or associated with plant modifications that were completed during the past two years, and one that had been issued and installed in the previous four years. The SEs reviewed were in the Initiating Event, Mitigating Systems, and Barrier Integrity cornerstones. The selected SEs were reviewed to verify that changes to the facility or procedures as described in the UFSAR were reviewed and documented in accordance with 10 CFR 50.59, and that the safety issues pertinent to the changes were properly resolved or adequately addressed. The reviews also included the verification that Ginna had appropriately concluded that the changes and tests could be accomplished without obtaining license amendments. The SEs reviewed are listed in Attachment 1.



The inspectors also reviewed sixteen screened-out evaluations for changes, tests, and experiments for which Ginna determined that SEs were not required. This review was performed to verify that Ginna's threshold for performing SEs was consistent with 10 CFR 50.59. The listing of the screened-out evaluations reviewed is provided in Attachment 1.

In addition, the inspectors reviewed the administrative procedures that were used to control the screening, preparation, and issuance of the SEs to ensure that the procedure adequately covered the requirements of 10 CFR 50.59.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown (3 samples)

a. Inspection Scope

The inspectors used plant technical specifications, Ginna operating procedures, plant piping and instrument drawings (P&ID), and the UFSAR as guidance for conducting partial system walkdowns. The inspection reviewed the alignment of system valves and electrical breakers to ensure proper in-service or standby configurations as described in plant procedures and drawings. During the walkdown, the inspectors evaluated material conditions and general housekeeping of the system and adjacent areas. The inspectors also verified that operations personnel were following plant technical specifications (TS). The following plant system alignments were reviewed:

- On July 6, 2006, the inspectors completed a walkdown of the Turbine Driven Auxiliary Feedwater (TDAFW) system while the "B" Motor Driven Auxiliary Pump was potentially unavailable because of maintenance on the "B" Emergency Diesel Generator. This system was examined because it provides a diverse means of supplying feedwater to the steam generators in the event of a loss of power to the motor driven auxiliary feedwater (AFW) pumps.
- On July 10, 2006, the inspectors completed a walkdown of the "A" Containment Spray train while the "B" Containment Spray was out of service for Motor Operated Valve Analysis and Test System (MOVATS) testing and maintenance on the "B" train discharge valve to containment. This system was examined because it is a redundant means of providing containment depressurization and atmospheric scrubbing in the event of a design basis accident.
- On August 22, 2006, the inspectors completed a walkdown of the "D" Standby Auxiliary Feedwater train while the "C" Standby Auxiliary Feedwater train was out of service for power-uprate related maintenance activities.

b. Findings

No findings of significance were identified.

## .2 Complete Walkdown (1 sample)

### a. Inspection Scope

The inspectors conducted a detailed walkdown of the alignment and condition of the containment penetration cooling system. This system was chosen because if it failed to properly operate, containment penetrations that are cooled by the system may begin to degrade, which could result in containment failure during certain postulated reactor plant events. In addition to verifying proper system alignment as required by section 9.4.1.2.10 of the Ginna Updated Final Safety Analysis Report (UFSAR) and Ginna procedures and drawings, the inspector reviewed system maintenance and condition reports.

### b. Findings

Introduction: The inspectors identified that Ginna did not have procedures which controlled the operation of the supply dampers for the containment penetration cooling system. Further, cooling air was not being supplied to several penetrations, and the operability of penetration instrumentation was not checked. Finally the system P&ID did not match what was installed in the field. This issue is unresolved pending further inspection and evaluation by Ginna.

Description: Large containment penetrations at Ginna that contain hot fluid or steam are cooled by a containment penetration cooling system that supplies cool air to 17 penetrations. The system is located in the auxiliary building and consists of two cooling fans, a heat exchanger that is cooled by service water, piping which directs the air to the penetrations, and temperature probes and alarms that monitor the temperature of air leaving the individual penetrations. The system operates continuously using outside air from the auxiliary building roof. Although the system is not safety-related, it does have an important-to-safety function in that it is designed to keep the bulk concrete temperature surrounding the penetrations from exceeding 150 degrees. The temperature of the penetrations is monitored by alarm switches and temperature detectors located in the discharge plenums of each penetration. If the temperature of the exhaust air leaving the penetrations exceeds 120 degrees, an alarm will sound in the control room alerting operators of an impending high temperature condition.

While performing a walkdown of this system and a review of the system preventive maintenance program, the inspector noted the following:

- Although a calibration procedure exists to calibrate the penetration temperature detectors, there was no record of Ginna calibrating the temperature elements for the containment penetration cooling system. Absent a calibration check, it was not evident to the inspector that the temperature detectors would alert operators that a penetration had become overheated.
- The alignment of the dampers for the individual containment penetrations is not checked by station procedures, and supply dampers were essentially closed for four penetrations, two of which routinely contained hot reactor coolant. The inspector could not determine if the penetration temperature detectors could accurately monitor the temperature of the penetrations that had closed dampers.

- The piping and instrument diagram (P&ID) for the penetration cooling system did not accurately reflect the configuration in the plant. Specifically, contrary to what was depicted on the system P&ID, exhaust air from the penetration cooling system for the “B” main steam piping discharged into the auxiliary building vice the outside air, and certain penetrations had multiple vice single exhaust monitoring systems.

When informed of these observations, Ginna personnel performed a walkdown of the system and initiated several condition reports and a Technical Services Request (TSR) that documented the inspector’s observations. The condition reports documented the need to examine the surveillance program for the penetration cooling alarm switches, and assess the adequacy of the current system lineup. The TSR was initiated to evaluate the need to relocate the penetration exhaust piping for the “B” main steam line so the configuration would match the plant P&ID. Finally, the reports documented the need to determine if the concrete that was located adjacent to the penetrations was damaged because of inadequate cooling.

Analysis: The configuration of the Containment Penetration Cooling system has not been maintained, controlled or operated as outlined in the plant UFSAR and the system P&ID. This issue is Unresolved pending further inspection and evaluation by Ginna. **(URI 05000244/20060004-01, Review the significance of not maintaining the Containment Penetration Cooling system in accordance with the UFSAR and system P&IDs)**

1R05 Fire Protection (71111.05)

.1 Quarterly Inspection ( 8 samples)

a. Inspection Scope

Using the Ginna Fire Protection Program documents as a guide, the inspectors performed walkdowns of the following fire areas to determine if there was adequate control of transient combustibles and ignition sources. The material condition of fire protection systems, equipment and features, and the material condition of fire barriers were also inspected against industry standards. In addition, the passive fire protection features were inspected, including the ventilation system fire dampers, structural steel fire proofing, and electrical penetration seals. The following plant areas were inspected:

- Screenhouse, Fire Zone SH-2
- Service Building Basement, Fire Zone SB-1
- “A” Battery Room, Fire Area BR1A
- “B” Battery Room, Fire Area BR1B
- “A” Diesel Generator Room, Fire Zone EDG1A
- “B” Diesel Generator Room, Fire Area EDG 1B
- Standby Auxiliary Feedwater Pump Room, Fire Zone SAF
- Relay Room, Fire Zone RR

b. Findings

No findings of significance were identified.

.2 Fire Brigade Drill - Annual Sample

a. Inspection Scope

The inspectors observed an announced test of the Ginna station fire brigade conducted at 9:00 p.m. on July 18, 2006. The test involved a simulated fire in the "B" motor generator that is located in the lower level of the "clean side" of the intermediate building. The inspectors verified the fire brigade personnel, which consisted of three auxiliary operators and two contract personnel, responded quickly to the fire, and used appropriate personal protective equipment. While combating the fire, the inspector verified the brigade used proper firefighting techniques and performed satisfactorily as a team. Following the drill, the inspectors verified that the post-drill critique was thorough.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07B - 4 samples)

a. Inspection Scope

To verify any potential heat exchanger (HX) deficiencies which could mask degraded performance are identified, the inspector examined a sample of HXs. Based on a plant-specific risk assessment, past inspection results, and recent operational experience, the inspector selected a sample of four safety-related heat HXs: the "A" Closed Cooling Water (CCW) HX, the "A" Emergency Diesel Generator (EDG) jacket water and lube oil HXs, and the "B" Standby Auxiliary Feedwater (SAFW) Pump room cooler. The Service Water (SW) system, which provides cooling to the CCW HXs, was also reviewed.

The inspector reviewed performance tests, periodic cleaning, eddy current inspections, chemical control methods, tube leak monitoring, tube plugging condition, potential water hammer analysis, operating procedures, maintenance practices, and verified that controls for the selected components conformed to Ginna's commitments to Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment." The inspectors compared the inspection results to the established acceptance criteria to verify that the results were acceptable and that the HXs operated in accordance with design. The inspector walked down the systems, structures, and components. The inspectors reviewed system health reports and interviewed applicable system engineers.

The inspector verified that potential common cause heat sink performance problems that had the potential to increase risk were identified and corrected by Ginna. The inspectors closely examined potential macro fouling (silt, debris, etc.) issues and biotic fouling issues. The inspectors walked down accessible areas of the Service Water (SW) intake, chlorination system, and other support and sub components of the Service Water system to assess the material condition of these systems and components.

The inspectors reviewed a sample of condition reports (CRs) related to the CCW HXs, EDG HXs, the safety-related room coolers, and the SW system to ensure that Ginna was appropriately identifying, characterizing, and resolving problems related to these systems and components within regulatory requirements and Ginna's commitments.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11Q - 1 sample)

a. Inspection Scope

On September 21, 2006, the inspector observed a licensed operator simulator training scenario that was conducted using revised Emergency Operating Procedures (EOP)s which would be used following the completion of the October refuel outage when plant power would be increased by approximately 17 percent. The scenario observed was a small-break Loss of Coolant Accident (LOCA). The purpose of the training scenario was to inform operators of significant changes to the LOCA-specific EOPs, provide an overview of the rationale for the changes, and provide an opportunity for operators to use the procedures and identify possible areas for improvement.

The inspector attended the pre-scenario briefing where instructors provided operators an overview of changes to the EOPs and discussed differences between the current and post power uprate plant configurations. During the scenario the inspector observed and verified that operators were properly utilizing the EOPs, and training personnel were documenting issues that the operators had identified with the new EOPs.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12 - 3 samples)

a. Inspection Scope

The inspectors evaluated Ginna's work practices and follow-up corrective actions for selected system, structure, or component (SSC) issues to assess the effectiveness of Ginna's maintenance activities. The inspectors reviewed the performance history of those SSCs and assessed Ginna's extent-of-condition determinations for those issues with potential common cause or generic implications to evaluate the adequacy of Ginna's corrective actions. The inspectors reviewed Ginna's problem identification and resolution actions for these issues to evaluate whether Ginna had appropriately monitored, evaluated, and dispositioned the issues in accordance with Ginna procedures and the requirements of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance." In addition, the inspectors reviewed selected SSC classification, performance criteria and goals, and Ginna's corrective actions that were taken or planned, to verify whether the actions were reasonable and appropriate. The following issues were reviewed:

- Corrective actions to address a through-wall leak in a weld for a relief valve off of the Service Water portion of the "A" Component Cooling Water heat exchanger that occurred initially during July 2005 and degraded over the next seven weeks.

- Exposed rebar and spalled concrete on the containment structure were identified by the inspectors during a tour of the containment dome area. The inspector reviewed portions of the Ginna ASME Section XI Subsections IWE and IWL containment inspection program and procedure EP-2-P-0169, "Ginna Structural Assessment and Monitoring Program" and verified that these degraded areas had either been previously identified by Ginna or were subsequently dispositioned in accordance with these programs.
- A failure of the Main Steam Check Valve counterweight arm with subsequent elevation of the Main Steam system to "A(1)" status was reviewed by the inspectors. Immediate corrective actions and the plans for future monitoring of the system were reviewed.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 6 samples)

a. Inspection Scope

The inspectors evaluated the effectiveness of Ginna's maintenance risk assessments required by paragraph a(4) of 10 CFR 50.65. This inspection included discussions with control room operators and scheduling department personnel regarding the use of Ginna's online risk monitoring software. The inspectors reviewed equipment tracking documentation and daily work schedules, and performed plant tours to gain reasonable assurance that actual plant configuration matched the assessed configuration. Additionally, the inspectors verified that Ginna's risk management actions, for both planned and/or emergent work, were consistent with those described in procedure IP-PSH-2, "Integrated Work Schedule Risk Management." Risk assessments for the following out-of-service systems, structures, and/ or components were reviewed:

- Planned maintenance on the "C" safety injection pump while the "B" containment spray system was still inoperable due to maintenance which occurred on the previous day. (July 11, 2006)
- Unplanned maintenance on residual heat removal flow transmitters FT-931A and FT-931B. (July 25 and 26, 2006)
- Response to a declaration of off-site power being inoperable, as calculated on the Contingency Monitor at the Energy Control Center, in the event of a plant trip. (August 1, 2006)
- Unplanned maintenance to replace one of two "A" Main Steam Line Non-return Check Valve counter weight lever arms when it was found on the floor under the valve. (August 11, 2006)
- Unplanned maintenance when the "A" Residual Heat Removal (RHR) Heat Exchanger flow control valve was determined to be incorrectly positioned and thus potentially rendering the system inoperable. (August 19, 2006)

- Unplanned troubleshooting activities conducted on the steam driven auxiliary feedwater pump discharge valve MOV-3996. (September 19, 2006)

b. Findings

Introduction: A non-cited violation (NCV) of 10 CFR 50.72(b)(3)(v)(A) was identified for not reporting to the NRC that offsite power had degraded on two occasions.

Description: The operability of offsite power at Ginna is determined, in part, by a software "Contingency Monitoring Program" that monitors the local electrical distribution grid. The software program and supporting hardware are located at the energy control center (ECC) for the local electrical grid transmission system operator (TSO), Rochester Gas and Electric (RG&E). If the contingency monitoring program determines that conditions on the local electrical grid have deteriorated to a point that the offsite power lines to Ginna may not be operable, an alarm is generated at RG&E's ECC. This information is then relayed to the Ginna control room where operators are directed in procedure O-6.13, "Daily Surveillance Logs" to declare offsite power inoperable until the undesirable grid conditions are resolved.

On July 17, 2006 and August 1, 2006, the contingency monitoring program indicated that conditions on the electrical grid had degraded to the point that Ginna's offsite power may not be operable because of high electrical demand. These conditions existed for approximately nine minutes and eight hours respectively. Although Ginna control room operators declared offsite power inoperable, the inspectors noted that they did not report the degraded electrical conditions to the NRC Operations Center per 10 CFR 50.72(b)(3)(v)(A). Page 54 of NUREG-1022 "Event Reporting Guidelines" indicates that such reports should be made if either the offsite power or onsite emergency power is unavailable to the plant regardless of whether the other system is available.

Ginna personnel attributed the missed reports to an inaccurate interpretation of NUREG-1022 and stated that future occurrences would be reported. Subsequently on August 2, 2006, when the grid contingency monitor indicated that the electrical distribution grid was degraded for approximately five hours, Ginna properly informed the NRC Operations Center via the Emergency Notification System (ENS). The following day on August 3, Ginna updated the August 2, 2006, ENS report to the NRC with information pertaining to the July 17<sup>th</sup> and August 1<sup>st</sup> events. The failure to notify the NRC of the degraded grid conditions was documented in Condition Report (CR) 2006-003331, "Missed NRC Notifications per 10 CFR 50.72 Regarding Inoperability of Both Offsite Power Lines."

Analysis: The performance deficiency involved a failure of Ginna personnel on two occasions to notify the NRC that offsite power to the plant was inoperable per 10 CFR 50.72(b)(3)(v)(A). This deficiency was evaluated using the traditional enforcement process since the failure to make a required report could adversely impact the NRC's ability to carry out its regulatory mission. The inspectors evaluated the severity of this violation using the criteria contained in Supplement I - Reactor Operations and Section VI.A.1 of the NRC's Enforcement Policy and determined that this finding met the criteria for dispositioning as a non-cited violation.

Enforcement: 10 CFR 50.72(b)(3)(v)(A) requires the NRC to be informed of any event or condition that at the time of discovery could have prevented the fulfillment of the safety

function of structures, systems, or components that are needed to shutdown the reactor and maintain it in a shutdown condition. Contrary to the above, on July 17, 2006 and August 1, 2006, Ginna did not report to the NRC that offsite power to the plant was inoperable. This is a violation of 10 CFR 50.72(b)(3)(v)(A). Because this finding met the criteria contained in Section VI.A.1 of the NRC's enforcement policy, it is being dispositioned as a non-cited violation. **(NCV 5000244/2006004-02, Failure to Make a 10 CFR 50.72(b)(3)(v)(A) Notification)**

1R15 Operability Evaluations (71111.15 - 5 samples)

a. Inspection Scope

The inspectors reviewed operability determinations to verify that the operability of systems important to safety was properly established, that the affected components or systems remained capable of performing their intended safety functions, and that no unrecognized increase in plant or public risk occurred. In addition, the inspectors reviewed the following operability evaluations to determine if system operability was properly justified in accordance with IP-CAP-1.1, "Technical Evaluation for Current Operability and Past Operability Determination Worksheet":

- CR 2006-003054, Leak on "A" CCW Pump Mechanical Seal
- CR 2006-003111, EDG Air Manifold Pressure Low
- CR 2006-003857, RHR Flow Control Valve is Incorrectly Set
- CR 2006-004291, Water Leaking From Bolts on TDAFW Pump
- CR 2006-004391, Service Water Leak in SAFW Pump Room Cooler "A"

b. Findings

Introduction: A Green self-revealing finding was identified when Ginna personnel did not adequately assess the effects of a service water leak that occurred in the room cooler for the "C" Standby Auxiliary Feedwater (SAFW) pump. As a result, water that had accumulated in electrical control panels for the pump was not detected. When the water was found by Ginna personnel during the performance of a routine surveillance test of the "C" SAFW pump, the pump was declared inoperable until the water was removed, which resulted in approximately 19 additional hours of out-of-service time.

Description: Ginna has a SAFW system that was installed in 1977 as a backup to the Auxiliary Feedwater (AFW) system. The system includes redundant pumps, valves, and air coolers that are cooled by service water. The air coolers are located above each SAFW pump, and are required to support pump operability when outside air temperature exceeds 85 degrees. Although both pumps are located in close proximity to each other, some separation is provided by a concrete divider wall located between both pumps. The system is manually actuated, and is intended to be used in the event the AFW system is damaged if a high energy line break (HELB) occurred in the intermediate building. On September 24, 2006, at 2016, a security guard informed control room personnel that a large amount of water was flowing out of the access door to the SAFW building. A subsequent investigation by Ginna operations personnel determined that the water was leaking from a failed gasket in the room cooler for the "C" SAFW pump. Operators isolated the leak and drained water from the SAFW pump room. Because water did not appear to have sprayed on any electrical components that were associated with the "C" SAFW pump, the pump was not declared inoperable.



On September 25, 2006, when preparing to perform a scheduled surveillance test on the "C" SAFW pump, per PT-36Q "C Standby Auxiliary Feedwater Pump Quarterly" operators discovered water in electrical controllers for the "C" SAFW pump. Because the water could affect pump operability, Ginna control room personnel declared the pump inoperable.

After the water had been removed from the electrical controllers, resistance measurements checked, and PT-36Q successfully completed, the pump was declared operable at 0421 on September 26. Because Ginna personnel did not perform an adequate assessment of how the service water leak would affect the operability on September 24, a potential undetected failure mechanism- water accumulation in the SAFW pump electrical controllers was not identified and corrected. As a result, the "C" SAFW pump was potentially inoperable for an additional 19 hours.

Analysis: The performance deficiency associated with this finding was a failure to adequately assess the operability of the "C" SAFW pump following a service water leak in the associated room cooler. This was contrary to the guidance contained in Attachment 1 of Station Procedure IP-CAP-1, "Condition Reporting," which states that when a condition report has been prepared, a licensed SRO/Shift Manager will review it to ensure appropriate actions are taken as required by the situation. This finding is more than minor because it is associated with the Mitigating Systems Cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance (Green) by using Phase 1 of the Inspection Manual Chapter (IMC) 0609, "Significance Determination Process." The finding screened to Green since it was not a design or qualification deficiency and did not result in a loss of safety function. This finding is related to the cross-cutting aspects of problem identification and resolution in that Ginna did not fully evaluate the operability of the "C" SAFW pump following the leak, which sprayed water on electrical components.

Enforcement: No violation of NRC requirements occurred since the "C" SAFW pump was not out of service for greater than the seven day Limiting Condition for Operation (LCO) time outlined in plant Technical Specifications (TS). This issue has been entered into the Ginna corrective action program as CR 2006-004391, "Service Water Leak in SAFW Pump Room Cooler" and CR 2006-004420, "Found Water in Standby Aux Feedwater Pump "C" Instrument and Local Control Panels." **(FIN 05000244/2006-004-03, Did not conduct a thorough operability assessment and identify that the "C" SAFW was degraded)**

1R17 Permanent Plant Modifications (IP 71111.17B - 7 samples)

a. Inspection Scope

The inspectors reviewed seven risk-significant plant modification packages selected from the design changes and procedure changes that were completed within the past two years. The review was performed to verify that: (1) the design bases, licensing bases, and performance capability of risk-significant structures, systems, and components (SSCs) had not been degraded through the modifications; and (2) the

modifications performed during increased risk configurations did not place the plant in an unsafe condition. The modifications reviewed are listed in Attachment 1.

The selected plant modifications were distributed among the Initiating Event, Mitigating Systems, and Barrier Integrity cornerstones. For these selected modifications, the inspectors reviewed applicable design inputs, assumptions, and design calculations to determine the design adequacy. The inspectors also reviewed field change notices that were issued during the installation to confirm that the problems associated with the installation were adequately resolved. In addition, the inspectors reviewed the post-modification testing, functional testing, and instrument and relay calibration records to determine readiness for operations. Finally, the inspectors reviewed the affected procedures, drawings, design basis documents, and UFSAR sections to verify that the affected documents were appropriately updated.

For the accessible components associated with the hardware modifications, the inspectors also walked down the systems to detect possible abnormal installation conditions.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 6 samples)

a. Inspection Scope

The inspectors observed portions of six post-maintenance testing activities in the field to determine whether the tests were performed in accordance with approved procedures. The inspectors assessed the test's adequacy by comparing the test methodology to the scope of maintenance work performed. In addition, the inspectors evaluated the test acceptance criteria to verify that the tested components satisfied the applicable design and licensing bases and technical specification requirements. The inspectors reviewed the recorded test data to determine whether the acceptance criteria were satisfied. The following post-maintenance testing activities were reviewed:

- PT-3Q, "Containment Spray Pump Quarterly Test," to retest after motor swap out of MOV 860D under Work Order (WO) 20404504, "Swap out Existing Actuator with Rebuilt Actuator" (July 11, 2006)
- PT-2.2Q, "Residual Heat Removal System - Quarterly," to retest the "A" RHR pump following lube oil change under WO 20503495, "RHR Pump 'A' / Perform an Oil Change" (July 27, 2006)
- PT-36-COMP-C, "Standby Auxiliary Feedwater Pump 'C' - Comprehensive Test," conducted after Extended Power Uprate modifications completed under WO 20503635, "Install New Trim on MOV-9701A per PCR 2004-0083" (August 23, 2006)

- CPI-IR-N36, "Calibration of Nuclear Instrument System Intermediate Range N-36," conducted after WO 20601304, "Install New Low Voltage and High Voltage Power Supplies in IRNI N-36" (September 12, 2006)
- PT-33A, "Spent Fuel Pool Pump 'A'" conducted after WO20604079, "Rebuild of SFP Pump 'A'" (September 21, 2006)
- PT-16Q-T, "Auxiliary Feedwater Turbine Pump-Quarterly" conducted after WO20602183, Retorque TDAFW Pump Casing Stub Cap Nuts (September 19, 2006)

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20 - 1 sample)

a. Inspection Scope

Prior to the refuel outage, the inspectors observed preparatory activities which included the performance of surveillance tests on equipment that is used during outage activities. Activities observed included observation of a surveillance test that tests the auxiliary building crane interlocks.

The inspectors also reviewed the outage schedule and risk profile to verify that Ginna had attempted to identify and assess risk-significant activities and mitigate risk where appropriate.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 7 samples)

a. Inspection Scope

The inspectors witnessed the performance and/or reviewed test data for the following seven surveillance tests that are associated with selected risk-significant systems, structures, and components (SSCs) to verify that Technical Specifications (TS) were followed and that acceptance criteria were properly specified. The inspectors also verified that proper test conditions were established as specified in the procedures, that no equipment preconditioning activities occurred, and that acceptance criteria had been met or the deficiency was appropriately entered into the Ginna Corrective Action Program.

- PT-16Q-T, Auxiliary Feedwater Turbine Pump - Quarterly (June 28, 2006)
- PT-13.3, Fire Pump Electrical Equipment Checks (July 3, 2006)
- PT-2.9, Check Valve and Manual Valve Exercising Quarterly Surveillance (July 7, 2006)

- PT-17.2, Process Radiation Monitors R-11-R-22 Iodine Monitors R-10A and R-10B (July 18, 2006)
- PT-12.1, Emergency Diesel Generator "A" (July 26, 2006)
- Work Order 20600605, Performance Test LS-6848 and LS-6851, Intermediate Building Sump Pump Level Switches (August 10, 2006)
- S-12.4, RCS Leakage Surveillance Record Instructions (August 31, 2006)

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23 - 2 samples)

a. Inspection Scope

The inspectors reviewed the following temporary plant modifications to determine whether the temporary change adversely affected system or support system availability or adversely affected a function important to plant safety. The inspectors reviewed the associated system design bases, including the UFSAR and TS, and assessed the adequacy of the safety determination screening and evaluation. The inspectors also assessed configuration control of the temporary change by reviewing selected drawings and procedures to verify whether appropriate updates had been made. The inspectors compared the actual installation with the temporary modification documents to determine whether the implemented change was consistent with the approved documented modification. The inspectors reviewed the post-installation test results to verify whether the actual impact of the temporary change had been adequately demonstrated by the test. The temporary modifications were reviewed by the inspectors to verify they were installed in conformance with the instructions contained in procedure IP-DES-3, "Temporary Modifications."

- 2006-0015, Use of a Temporary Reverse Osmosis Skid to Remove Silica From the Reactor Water Storage Tank (RWST) and Spent Fuel Pool (SFP)
- 2006-0018, Add Union in Small Bore Safety-Related Service Water System Copper per Line Spec 125-1

b. Findings

No findings of significance were identified.

**Cornerstone: Emergency Preparedness**

1EP6 Drill Evaluation (71114.06 - 1 sample)

a. Inspection Scope

On August 8, 2006, the inspectors observed portions of the third quarter emergency preparedness drill. The drill scenario involved a small break loss of coolant accident, and tested use of the Outage Control Center as the new Operations Support Center. The inspector verified that the appropriate emergency classifications were made, and

notifications to external parties were completed in a timely manner as required by the Ginna emergency response plan.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES**

4OA2 Identification and Resolution of Problems (IP 71152)

.1 Identification and Resolution of Problems - Permanent Plant Mods (71111.17-02.03)

a. Inspection Scope

The inspectors reviewed condition reports (CRs) associated with 10 CFR 50.59 issues and plant modification issues to ensure that Ginna had identified, evaluated, and corrected problems associated with these areas and that the planned or completed corrective actions for the issues were appropriate. The listing of the CRs reviewed is provided in Attachment 1.

b. Findings

No findings of significance were identified.

.2 Review of Items Entered into the Corrective Action Program

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the Ginna corrective action program. This review was accomplished by reviewing electronic versions of each condition report (CR), attending daily screening meetings, and accessing Ginna's computerized database.

4OA3 Event Follow-up (71153 - 1 sample)

.1 Loss of Spent Fuel Pool Cooling

a. Inspection Scope

During the week of September 18, 2006, the inspectors followed Ginna's response to a loss of both spent fuel pool (SFP) cooling pumps in the spent fuel pool cooling system and the corrective actions taken. The "B" pump failed when it was started for surveillance testing on the 12<sup>th</sup> of September, and found to be cavitating later that evening. Subsequently on September 18<sup>th</sup>, the "A" pump failed when it was being stopped and restarted to facilitate testing of the "B" pump SFP motor. In response to the loss of cooling, the plant entered ER-SFP.1, Loss of Spent Fuel Pool Cooling, and formed an Incident Response Team to provide 24 hour coverage until the issue was resolved. On September 21, spent fuel pool cooling was restored when a temporary skid-mounted SFP pump was installed. The "A" and "B" pumps were subsequently

repaired and restored to service on September 22. Ginna formed a root cause inspection team to investigate the pump failures.

b. Findings

No findings of significance were identified.

.2 (Closed) LER 05000244/2006001-00 Potential Failure of Charging Pumps due to Unevaluated Fire Scenario

On May 17, 2006, Ginna identified a previously unevaluated failure mode that potentially existed for the charging pumps in certain Appendix R fire scenarios. This event was reviewed, assessed, and dispositioned by the Triennial Fire Inspection Team (Inspection Report 05000244/2006007) as part of the Problem Identification and Resolution portion of that inspection. As outlined in the report, no enforcement action was taken by the NRC regarding this issue since the item met the enforcement discretion criteria for fire-related design issues. Accordingly this LER is closed.

.3 (Closed) LER 05000244/2006002-00 Off-Site Power Systems Declared Inoperable

This LER was written to document that on July 17, August 1, and August 2, 2006, offsite power was inoperable at Ginna for up to eight hours at various times because of high demand on the electrical grid. Details surrounding the events are discussed in section 1R13 of this report. This LER was reviewed by the inspectors and no additional findings of significance or violations of NRC requirements were identified. Ginna documented the degraded offsite power events in several condition reports, including CR 2006-003290, "Offsite Power Inoperability." This LER is closed.

.4 (Closed) LER 05000244/2006003-00 Inoperability of Two Channels of Flow Instrumentation

On July 25, 2006, during a review of planned work on Residual Heat Removal (RHR) to Safety Injection (SI) flow transmitters, Ginna identified that the flow transmitters were not powered from the electrical train which powers the associated RHR pump. As a result, electrical train separation was not maintained in accordance with the plant licensing basis. The condition was an original plant design deficiency and constituted a violation of Technical Specification 3.3.3, which requires two operable channels of RHR instrumentation. When this condition was discovered, Ginna promptly entered the appropriate Limiting Condition for Operation (LCO) in TS 3.3.3 and initiated a modification to reconfigure the electrical power to the flow transmitters so the power would be aligned with the respective RHR pump. The modification was completed and the LCO exited on July 26, 2006. This finding is more than minor because it affected the design control attribute of the Mitigating Systems Cornerstone impacting the objective to ensure reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically the design flaw would have impacted the operators' ability to properly transfer the plant into a high pressure recirculation mode in certain accident sequences. The violation was considered to have very low safety significance (Green), screening directly to Green in accordance with the SDP because it does not result in a loss of operability of the RHR system. This Ginna-identified finding involved a violation of TS 3.3.3, Post Accident Monitoring

Instrumentation. The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

#### 4OA5 Other Activities

Introduction: A Green NRC-identified non-cited violation (NCV) of 10 CFR 50.74(c), "Notification of Change in Operator or Senior Operator Status," was identified for failure to notify the NRC within thirty days of a change in a licensed operator's medical status.

Description: The NRC identified that during the period between June 2, 2006, and August 15, 2006, a licensed reactor operator stood several watches in a Technical Specification (TS) license position with a medical condition that would prohibit solo operation as outlined in ANSI/ANS-3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants." When Ginna became aware of the operator's medical condition on June 2, 2006, the facility failed to notify the NRC within 30 days as required by 10 CFR 50.74, "Notification of Change in Operator or Senior Operator Status."

The Ginna training department is responsible for the scheduling of operator medical examinations. IP-TQS-3, "Operator and Fire Brigade Physicals" is the governing procedure for tracking these items. The inspector noted that IP-TQS-3, did not specify when the NRC should be notified regarding the development of long term medical conditions.

When the inspector informed the Ginna training department of the missed notification, Condition Report 2006-003168, "Failure to Notify NRC in Accordance With 10 CFR 50 74," was written. On August 15, 2006, Ginna sent a letter to the NRC that, in part, informed the NRC of the change in the medical status of the licensed operator.

Analysis: The performance deficiency associated with this finding was a failure of Ginna to notify the NRC within 30 days of the identification of a medical condition that caused a licensed reactor operator to fail to meet the standards of 10 CFR 55.21 as required by 10 CFR 50.74(c). The NRC relies on facility licensees to evaluate medical conditions and, if warranted, to report those changes to the NRC, so that the NRC can take appropriate regulatory action, including issuance of a conditional (restricted) license. The inspectors determined that Ginna's failure to report the medical status of the operator to the NRC impacted the regulatory process, in that between June and August 2006, the NRC was unaware of a medical condition that warranted issuance of a conditional (restricted) license. Because this finding impacted the regulatory process, it was dispositioned using the traditional enforcement process instead of the SDP.

Enforcement: 10 CFR 50.74(c) requires, in part, that each facility licensee notify the NRC within 30 days of a permanent disability or illness as described in 10 CFR 55.25 in regards to a licensed or senior licensed operator. 10 CFR 55.25 requires, in part, that if a licensed reactor operator develops a permanent physical or mental condition that causes the reactor operator to fail to meet the requirements of 10 CFR 55.21, the facility must notify the NRC within 30 days of learning of the diagnosis. For conditions for which a conditional (restricted) license is required, the facility licensee must provide medial certification on NRC Form 396, "Certification of Medical Examination by Facility Licensee." Contrary to the above, Ginna did not notify the NRC within 30 days of

learning of a medical condition of a licensed reactor operator for which a conditional (restricted) license was required. Specifically, Ginna became aware of a medical condition in June 2006 that caused a licensed reactor operator to fail to meet the requirements of 10 CFR 55.21 and for which a conditional (restricted) license was required. Ginna did not provide the NRC Form 396 medical condition certification to the NRC until August 2006.

Ginna's failure to notify the NRC of the licensed reactor operator's medical condition is considered a violation of 10 CFR 50.74(c). The violation is determined to be a Severity Level IV (Supplement 1) violation. Because this finding met the criteria contained in Section VI.A.1 of the NRC's enforcement policy, it is being dispositioned as a non-cited violation. **(NCV 5000244/2006004-04, Ginna Did Not Notify the NRC of a Licensed Operator's Medical Condition)**

#### 4OA6 Meetings, Including Exit

##### Exit Meeting Summary

On October 5, 2006, the resident inspectors presented the inspection results to Mrs. Korsnick and other members of her staff, who acknowledged the findings. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. Proprietary information was examined during this inspection, but is not specifically discussed in the report.

#### 4OA7 Licensee-identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements, which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

- TS 3.3.3 requires that two channels of flow indication for RHR to SI, one for each medium head injection recirculation flowpath be available for post-accident monitoring and to support operator response. Contrary to this requirement, the flow transmitters for each pump were not powered from the same electrical train as the respective RHR pump. As a result, both flow transmitters were inoperable for post-accident monitoring. This condition was documented by Ginna in CR 2206-003090 and subsequently corrected. This finding is of very low safety significance because it did not involve a loss of operability of the RHR system.

ATTACHMENT: SUPPLEMENTAL INFORMATION



**SUPPLEMENTAL INFORMATION****KEY POINTS OF CONTACT**Licensee personnel

S. Adams	Manager of Operations
D. Blankenship	Manager, Radiation Protection
E. Groh	Assistant Operations Manager (Shift)
D. Holm	Plant Manager
S. Kennedy	Emergency Preparedness Manager
M. Korsnick	Vice President, Ginna
J. Pacher	Manager Nuclear Engineering Services
B. Randall	Nuclear Safety and Licensing Manager
P. Swift	Principal Engineer, Electrical/I&C
W. Thomson	General Supervisor, Chemistry
R. Whalen	Manager, Ginna Maintenance
D. Wilson	Principal Engineer, Balance of Plant
J. Yoe	Scheduling Manager

**LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**Opened

05000244/2006004-01	UNR	Review the significance of not maintaining the Containment Penetration Cooling system in accordance with the UFSAR and system P&IDs
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Opened and Closed

05000244/2006004-02	NCV	Failure to Make a 10-CFR 50.72(b)(3)(v)(A) Notification
05000244/2006004-03	FIN	Did not conduct a thorough operability assessment and identify that the "C" SAFW was degraded
05000244/2006004-04	NCV	Ginna Did Not Notify the NRC of a Licensed Operator's Medical Condition

Closed

05000244/2006001-00	LER	Potential Failure of Charging Pumps due to Unevaluated Fire Scenario (Section 4OA3.2)
05000244/2006002-00	LER	Off-Site Power Systems Declared Inoperable (Section 4OA3.3)
05000244/2006003-00	LER	Inoperability of Two Channels of Flow Instrumentation (Section 4OA3.4)

Discussed

NONE

## LIST OF DOCUMENTS REVIEWED

### **Section 1R01: Adverse Weather Protection**

#### Procedures

M1306.1 Ginna Station Maintenance Department Winterizing Inspection Program

#### Condition Reports

2006-004388 Intake Structure Weir Cover May be an illegal Temporary Mod  
2006-004453 M1306.1 Needs Updating and Clarification, Attachment 2 Instructions Vague

### **Section 1R02: Evaluation of Changes, Tests, or Experiments**

#### 10 CFR 50.59 Screened-out Evaluations

2005-0568 Feedwater Isolation Valve Modification - Actuator Addition - Uprate, Rev. 0  
2004-0076 TDAFW Oil Cooler and Thrust Bearing Cooling, Rev. 0  
2005-0448 Add and Upgrade Existing FW and MS Supports to Comply with EPU Operation, Rev. 0  
2005-0460 EPU FWIV Actuator Addition - Phase A - Install Cable/Conduit/Conduit Support, Rev. 0  
2006-0028 Local MOV Operation, Rev.0  
2004-0032 Replace Charging Pump Relief Valve Inlet and Outlet Piping, Rev. 0  
2004-0131 Procedure Revisions Related to New Alarm Responses for Low SW Press, Rev. 0  
2004-0145 Isolation of Auxiliary Building Exhaust Fan A, Rev. 0  
2004-0331 Condensate Booster Pump/Motor Uprate - Phase I, Rev. 0  
2005-0609 EOP Changes for Local Isolation of MOV-313 During SI Event, Rev. 0  
2006-0193 AP-FW.1, MFW Pump Flow or NPSH, Rev. 0  
2005-0318 Emergency Diesel Generator Lube Oil Heater and Jacket Water Heater Maintenance, Rev. 0  
2006-0011 Equivalency of Capacitors for Inverters and Constant Voltage Transformer, Rev. 0  
2004-0283 Replace Motor Drive AFW Motors, Rev. 0  
2004-0007 Feed Reg Valve Operability Clarification, Rev. 0  
2006-0034 Replacement of Condensate Cooler (ECD05) in Support of Extended Power Uprate, Rev. 0

#### Safety Evaluations

2002-0001 SI Pump Discharge Check Valves 878G & 878J Replacement, Rev. 0  
2005-0001 Reload for Cycle 32, Rev. 0  
2005-005 Local Throttling of AOV 624/625 In Emergency Procedures, Rev. 0  
2005-0002 Block the Turbine Bearing High Vibration Trip Function, Rev. 0



**Section 1R07: Heat Sink Performance**

Action Reports

Action Report 2000-0203  
Action Report 2002-2814  
Action Report 2004-3224  
Action Report 2005-0784  
Action Report 2005-1009  
Action Report 2005-1005  
Action Report 2005-1038  
Action Report 2005-1314  
Action Report 2005-2730  
Action Report 2005-4329

Documents

D-340-A, Typical Joint, 16"-18"-20" SP-5 Pipe, 6/15/59  
291.66-2, 20" P.S. x P.E. Adapter, Rev. 0, 1/12/67  
291.66-4, 20" P.S. x Flg. Adapter, Rev. A, 2/28/67  
PCR 2000-0014, Plant Change Record, Screen House and Associated Structures, Rev. 3,  
8/30/05  
AR-I-1, Alarm Response Procedure, Screen House Lo Level 22', Rev. 11  
AR-I-9, Alarm Response Procedure, Screen HUse Lo-Lo Level, 19', Rev. 12  
ER-SC.3, Low Screenhouse Water Level, Rev. 17  
O-6.13, Daily Surveillance Log, Rev. 153  
DA-ME-97-016, CCW and RHR HX Performance Evaluation, Rev. 0, 10/9/98  
DA-ME-98-138, EDG Lube Oil and Jacket Water HX Plugging Limits and Thermal Performance  
at Limiting SW Flows, Rev. 1, 10/29/98  
DA-ME-98-139, EDG Lube Oil and Jacket Water HX SW D/P Limits, Rev. 1, 7/9/99  
DA-ME-99-067, SAFW Pump Room Coolers Thermal Performance Evaluation, Rev. 0, 4/12/00  
DA-ME-2003-039, CCS HX A & B Thermal Performance Testing, performed 9/16/03, Rev. 0,  
3/9/04  
Updated Final Safety Analysis Report (UFSAR), Rev. 18, 4/04  
2.2.2.3, Waterways  
3.8.4.1.6, Screen House  
10.6.2.1, Intake Structure  
2A.1.2, Discussion of Factors  
SWSROP, Service Water System Reliability Optimization Program, Rev. 7, 4/26/06  
Repetitive Task Number P301717, EAC01A - Clean, Inspect, Eddy Current tube side [CCW  
HX], 4/19/06  
Repetitive Task Number P301709, CMP-10-03-ESW08A/ESW09A - Clean Inspect, Eddy  
Current tube side [EDG HXs], 3/3/06  
Repetitive Task Number P401084, Open Inspect Clean SAFW Pump Room Cooler per  
M-11.34.12 M-37.130 M-93, 3/10/06  
CMP-10-04-EAC01A, Maintenance for EAC01A [CCW HX] performed 12/13/04, Rev. 3,  
12/15/97  
CMP-10-03-ESW08A, Maintenance for ESW08A [EDG JW HX] performed 10/21/05, Rev. 4,  
2/23/05  
CMP-10-03-ESW09A, Maintenance for ESW09A [EDG LO HX] performed 10/21/05, Rev. 5,  
3/8/05

M-11.34.12, Clean and inspect A and B standby auxiliary feedwater cooling fans cooling coils, performed 12/8/04, Rev. 3, 7/28/99

M-92, Underwater Inspection/Cleaning of Mechanical Equipment Structures in the Screenhouse and Discharge Canal, Rev. 14

M-92.1, Underwater Inspection and Maintenance of the Intake Tunnel Structure and Shaft, Rev. 5

M-92.1, Underwater Inspection and Maintenance of the Intake Tunnel Structure and Shaft, performed 3/28/94, Rev. 4, 2/14/92

M-92.1, Underwater Inspection and Maintenance of the Intake Tunnel Structure and Shaft, performed 3/25/05, Rev. 5, 3/10/05

M-92.2, Inservice Inspection of Miscellaneous Water Control Structures at Ginna, Rev. 7

Apparent Cause Evaluation Report for Action Report 2004-3224, 2/8/05

CCW "A" HX Final Eddy Current Results, 12/8/04

Diesel Jacket Water Cooler "A" Final Eddy Current Results, 10/19/05

Diesel Lube Oil Cooler "A" Final Eddy Current Results, 10/19/05

Assessment 2006-0036, Snapshot Self-Assessment Report, Heat Sink Performance, 6/30/06

Project 10172-001, Service Water Safety System Functional Inspection, 6/23/97

RG&E letter, Response to Generic Letter 89-13, 1/29/90

RG&E letter, Status information Concerning Generic Letter 89-13, 10/28/91

RG&E letter, Schedule for Thermal Performance Testing of Service Water Heat Exchangers (Generic Letter 89-13), 6/1/92

RG&E letter, Service Water System, 12/11/2000

RG&E letter, Supporting Documentation for use of EPRI Report TR-113594 for evaluating Generic Letter 96-06 Waterhammer issues, 11/26/02

PRA risk values, FV RRW RAW, Components of Service Water, 7/11/06

PRA risk values, FV RRW RAW, Components of CCW, 7/11/06

CATS Item #M07105, Basis for Closure, 7/10/00

PT-60.6A, Component Cooling Water HX thermal performance test

International Underwater Contractors letter, Rochester Intake Survey, 6/30/67

Graph, Great Lakes Water Levels for Lake Ontario for 2002-2005, 6/21/06

Service Water System health report, Q2-2006

Drawings

33013-1750 Sheet 1 of 3, Station Service Cooling Water Safety Related P&ID, Rev. 41, 5/22/06

33013-1750 Sheet 2 of 3, Station Service Cooling Water Safety Related P&ID, Rev. 32, 1/4/06

33013-1750 Sheet 3 of 3, Station Service Cooling Water Safety Related P&ID, Rev. 38, 3/10/06

33013-2630 Sheet 1 of 3, Service Water System "B" Header Supply Buried Piping Isometric, Rev. 0, 6/23/00

33013-2630 Sheet 2 of 3, Service Water System "A" Header Supply Buried Piping Isometric, Rev. 0, 6/23/00

33013-2630 Sheet 3 of 3, Service Water System Return Buried Piping Isometric, Rev. 0, 6/23/00

33013-2142 Plant Arrangement Screen House, Rev. 4, 4/19/04

33013-12 Intake Tunnel - Core Borings, plot plan and logs, Void, 10/30/97

33013-11 Brookwood Lake Intake Preliminary Sounds, void EWR 10441, 10/30/97

33013-6 Brookwood Lake Elevations Preliminary Intake Study June 1966, void EWR 10441, 10/30/97

33013-2240 Ginna Station System P&ID Index, Rev. 50, 6/10/05

33013-1245 Auxiliary Coolant Component Cooling Water, Rev. 30, 9/30/05  
33013-1246 Sheet 1 of 2, Auxiliary Coolant Component Cooling Water, Rev. 14, 1/26/04  
33013-1246 Sheet 2 of 2, Auxiliary Coolant Component Cooling Water, Rev. 12, 9/30/05  
T080-001 AService Water Drawing, Rev. 3, 11/7/02  
T098-002 AComponent Cooling, Rev. 2, 6/3/04 (year of date partially illegible)

Work Orders

19440071 M-92.1 underwater inspection of intake structure and shaft, 3/21/94  
20401101 Screen House, 4/7/05  
20402295 A CCW HX, 12/16/04  
20403120 CMP-10-03-ESW08A/ESW09A - Clean Inspect, Eddy Current tube side [EDG HXs], 7/16/04  
20403276 Open, Inspect, Clean SAFW Pump Room Cooler A per M-11.34.12, M-37.130, M-93, 7/30/04  
20401904 SAFW Pump Room Cooling Coil, 12/9/04

**Section 1R11: Licensed Operator Requalification**

Procedures

E-0 Reactor Trip or Safety Injection  
E-1 Loss of Reactor or Secondary Coolant  
ES-1.2 Post LOCA Cooldown and Depressurization

Condition Report

CR-2006-003168 Failure to Notify NRC in Accordance with 10 CFR 50.74

**Section 1R12: Maintenance Rule Implementation**

Condition Reports

2006-003500 "A" S/G CV3519 North Weighted Lever Arm  
2006-003841 Main Steam System Train MSS01 Failures Causes Transition to A1  
2006-004191 Roof Drains  
2006-004192 Lack of Chain on Fixed Ladder  
2006-004193 Broken Light Fixture  
2006-004194 Dome Containment Issue  
2006-004195 Broken Line on Auxiliary Building Roof

Work Order

20603374 Reattach "A" S/G Non-Return Check Valve 3519 North Weighted Lever Arm

Procedures

VT-112 Visual Examination of class MD and Metallic Liners of Class CC Components (IWE)  
EP-2--P-0169 Structural Assessment and Monitoring Program

Programs and Other Documents

Containment Program  
Main Steam System Performance Report  
Apparent Cause Evaluation for CR 20067-003500

**Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation**

Plant Change Request

PCR 2005-0040

Condition Reports

2006-003290 Offsite Power Inoperability  
2006-003331 Missed NRC Notification per 10 CFR 50.72  
2006-003336 Offsite Power Declared Inoperable on 8/2/96 but no CR Written  
2006-003900 RHR To SI Flow Transmitters are Powered from the Wrong Train  
2006-004278 MOV 3996 Did Not Operate As Expected During MOD Testing

Work Order

20600988

**Section 1R15: Operability Evaluations**

Condition Reports

2006-003054 Leak on "A" CCW Pump Mechanical Seal  
2006-003111 EDG Air Manifold Pressure Low  
2006-003857 RHR Flow Control Valve Travel is Incorrectly Set  
2006-004291 Water Leaking From Bolts on TDAFW Pump  
2006-004391 Service water Leak in SAFW Pump Rom Cooler "A"  
2006-004420 Found Water in STDBY Aux Feedwater Pump "C" Instrument and Local Control Panels.

Work Order

20604150 Troubleshoot and Repair Service Water Leak From Room Cooler

**Section 1R17: Permanent Plant Modifications**Modifications

PCR 2005-0041 Consolidate Local Controls for Charging Pump A, Rev. 0  
 PCR 2004-0055 Exciter to Generator Coupling Modification, Rev. 0  
 PCR 2004-0032 Condensate Booster Pump/Motor Uprate - Phase I, Rev. 0  
 PCN 2005-4107 Steam Generator Tube Leak (AP-SG.1), Rev. 3  
 PCN 2005-1792 Reactor Trip or Safety Injection (E-0), Rev. 37  
 PCR 2005-0011 EPU - Increase Capacity of Condensate Storage Tanks (WBS 99.08),  
 Rev. 0  
 PCR 2004-0034 Main Step-Up Transformer Uprate, Rev. 1

Temporary Modification

PCR 2005-0023 Service Water Motors A, B, C and D Stator Winding Heaters Temporary  
 Power Feed, Rev. 0

Calculations

109682-M-015 Condensate/FW System Normal Operation with Finalized Pump Curves,  
 Rev. 0  
 109682-M-025 EPU Condensate Inventory Requirements for Station Blackout Event and  
 for Station Blackout Event Using Firewater, Rev. 1  
 1430-A04 Water Level Correction (Process Bias) of Replacement Steam  
 Generators at Power Uprate Conditions, Rev. 0  
 59529-M-005 Impact of Modified Condensate Booster Pump on Condensate and  
 Feedwater System Performance During EPU and Pre-EPU Operation,  
 Rev. 0  
 109682-M-011 Condensate Storage Tank Volume and Level Requirements for EPU  
 Operation, Rev. 1  
 CN-SEE-04-86 Ginna EPU: Condensate Storage Tank Minimum Volume Requirements,  
 Rev. 0

Other

SM-2005-0041, Consolidate Local Controls for "A" Charging Pump, Rev. 0  
 Ginna Calculation Note 66, Impact of EPU on GL-89-10 MOVs in NSSS System, Rev. 0  
 PSAER 2005-0014, Rev. 0

Work Orders

20502107                      20502760                      20502822

Drawings

10909-51 D.C. System Fuse Reference ABELIP & IBELIP Panels, Rev. 4  
 10905-0081A Service Pump A Elementary Wiring Diagram, Rev. 3  
 10905-0081B Service Pump C Elementary Wiring Diagram, Rev. 3  
 10905-0082A Service Pump B Elementary Wiring Diagram, Rev. 3  
 10905-0082B Service Pump D Elementary Wiring Diagram, Rev. 3  
 33013-17935H ABELIP Cabinet Wiring Diagram, Rev. 3



33013-2539 AC System Plant Load Distribution One Line Diagram, Rev. 14  
33013-1353 Sht. 3 Turbine Trip Signals, Rev. 4

Procedures

5059RM, 10 CFR 50.59 Resource Manual, Rev. 8  
A-52.16, Operator Workaround/Challenge Control, Rev. 19  
O-6.11, Surveillance Requirement/Routine Operations Check Sheet, Rev. 146  
IP-SEV-1, Preparation, Review and Approval of 50.59 Applicability Determinations and 50.59 Screens, Rev. 12  
IP-SEV-2, Preparation, Review and Approval of 50.59 Evaluations, Rev. 13  
IP-DES-2, Plant Change Process, Rev. 23  
IP-DES-3, Temporary Modifications, Rev. 14  
EP-3-S-0308, Maintenance Rule Scoping, Rev. 8  
C-7428, Condensate Booster Pump Test Performance Curves, Rev. 0  
O-1.2, Plant Startup from Hot Shutdown to Full Load, Rev. 172

Audits and Self-Assessments

FOCUSSA 2006-0030, Plant Modification and 50.59 Process Self Assessment, dated June 19-23, 2006

**Section 1R19: Post Maintenance Testing**

Procedures

PT-3Q Containment Spray Pump Quarterly Test  
PT-2.2Q Residual Heat Removal System - Quarterly  
PT-36-COMP-C Standby Auxiliary Feedwater Pump 'C' - Comprehensive Test  
CPI-IR-N36 Calibration of Nuclear Instrument System Intermediate Range N-36  
PT-33A Spent Fuel Pool Pump 'A'

Work Orders

20404504 Swap out Existing Actuator with Rebuilt Actuator  
20503495 RHR Pump 'A' / Perform an Oil Change  
20503635 Install New Trim on MOV-9701A per PCR 2004-0083  
20601304 Install New Low Voltage and High Voltage Power Supplies in IRNI N-36  
20604079 Rebuild of SFP Pump 'A'

**Section 1R20: Refueling and Outage Activities**

Procedure

RF-10.1 Auxiliary Building Interlock Checkout

Condition Report

2006-003037 During Performance of RF-10.1 Auxiliary Building Crane Failed to Stop

**Section 1R22: Surveillance Testing**

Condition Reports

2006-003914 LCV-112A Leaks by the Seat to the CVCS Holdup Tanks  
2006-003488 LS-6848 Did Not Actuate During Testing per WO#20600605  
2006-004133 Clarification of the ITS Testing Requirements of the EDG Room Ventilation  
2006-004136 Evaluate Revising Tech Spec Basis SR 3.8.1.3  
2006-004178 Evaluate OE22643 D/G Relay Settings For Applicability to Ginna

Procedures

PT-13.3 Fire Pump Electrical Equipment Checks  
PT-16Q-T Auxiliary Feedwater Turbine Pump - Quarterly  
PT-2.9 Check Valve and Manual Valve Exercising Quarterly Surveillance  
PT-17.2 Process Radiation Monitors R-11-R-22 Iodine Monitors R-10A and R-10B  
S-12.4 RCS Leakage Surveillance Record Instructions (August 29, 2006)

Work Order

20600605 Performance Test LS-6848 and LS-6851

**Section 1R23: Temporary Plant Modifications**

Condition Reports

2006-0015 Use of a Temporary Reverse Osmosis Skid to Remove Silica From The RWST and SFP  
2006-0018 Add Union in Small Bore Safety-Related SWS Copper per Line Spec 125-1

**Section 4OA2: Identification and Resolution of Problems**

Condition Reports

2006-2719	2005-3644	2005-1952	2005-2161
2005-3874	2006-3473	2006-0334	2005-5285
2006-2428	2006-3399	2006-0026	2006-3487*
2004-2261	2006-3431	2005-1557	2006-3494*
2004-0585	2005-6597	2005-1848	
2005-0148	2005-1703	2006-2335	
2006-0489	2005-6876		

**Section 4OA3: Event Follow-up**

Condition Reports

- 2006-003090 RHR to SI Flow Transmitters are Powered from the Wrong Train
- 2006-004138 "B" Spent Fuel Pool Pump Cavitating/Vibrating
- 2006-004265 Failure of SFP Pump "A"
- 2006-004280 Leaks on Piping Associated with the Skid Mounted Spent Fuel Pool Pump
- 2006-004307 A Significant Amount of Debris has Accumulated on the under side of the SFP Upper Intake Strainer
- 2006-004351 SFP Oil Sample and Waste Left in Chemistry Hot Lab
- 2006-004438 Audible Squeal Heard While Sampling SFP ("A" Pump)
- 2006-004514 Deficiencies Found in Maintenance Procedures for 'A' and 'B' SFP Pump Rebuild
- 2006-004520 Spent Fuel Pool Pumps Historically Started with Discharge Valves Fully Open
- 2006-004521 Spent Fuel Pool Strainer not Addressed in any Maintenance Program

Work Order

- 20604079 Perform Oil Change and Rebuild "A" Spent Fuel Pool Pump

Procedures

- ER-SFP.1 Loss of Spent Fuel Pool Cooling
- S-9S Standby SFP Cooling System Operation

Documents

- UFSAR (Rev.19) Section 9.1.3.1, Spent Fuel Pool Design Bases
- RSSP-2.2 Diesel Generator Load and Safeguard Sequence Test

**LIST OF ACRONYMS**

- ABELIP Auxiliary Building Emergency Local Instrument Panel
- ADAMS Agency-Wide Documents Access and Management System
- AFW Auxiliary Waterfeeder
- ALARA As Low As Reasonably Achievable
- AOV Air Operated Valve
- AR Action Report
- ASME American Society of Mechanical Engineers
- CATS Commitment Action Tracking System
- CCW Component Cooling Water
- CFR Code of Federal Regulation
- CR Condition Report
- D/P Differential Pressure
- ECC Energy Control Center
- EDG Emergency Diesel Generator
- ENS Emergency Notification System
- EOP Emergency Operating Procedure
- EP Emergency Preparedness
- EPRI Electric Power Research Institute

EPU	Extended Power Uprate
EWR	Engineering Work Request
FV	Fussell-Vesely
FWIV	Feedwater Isolation Valve
GL	Generic Letter
HELB	High Energy Line Break
HX	Heat Exchanger
IMC	Inspection Manual Chapter
IP	Inspection Procedure
LER	Licensee Event Report
LCO	Limiting Condition for Operation
LOCA	Loss of Coolant Accident
MFW	Main Feed Water
MOV	Motor Operated Valve
MOVATS	Motor Operated Valve Analysis and Test System
MS	Main Steam
NCV	Non-Cited Violation
NPSH	Net Positive Suction Head
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records
PCN	Procedure Change Notice
PCR	Procedure Change Request
PI&D	Piping and Instrument Drawings
PI&R	Problem Identification and Resolution
PRA	Probabilistic Risk Analysis
RAW	Risk Achievement Worth
RG&E	Rochester Gas & Electric
RHR	Residual Heat Removal
RRW	Risk Reduction Worth
RSTW	Reactor Water Storage Tank
SAFW	Standby Auxillary Feedwater
SDP	Significance Determination Process
SE	Safety Evaluation
SI	Safety Injection
SFP	Spent Fuel Pool
SRO	Senior Reactor Operator
SSC	Structure, System, and Component
SW	Service Water
SWS	Service Water System
SWSROP	SWS Reliability Optimization Plan
TDAFW	Turbine Driven Auxiliary Feedwater
TS	Technical Specifications
TSO	Transmission System Operator
TSR	Technical Services Request
UFSAR	Updated Final Safety Analysis Report
WO	Work Order