



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406

November 5, 2008

Mr. John T. Carlin  
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 05000244/2008004

Dear Mr. Carlin:

On September 30, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your R.E. Ginna Nuclear Power Plant. The enclosed integrated inspection report documents the inspection results, which were discussed on October 8, 2008, 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 self-revealing finding of very low safety significance (Green). This finding was determined to be a violation of NRC requirements. However, because of its very low safety significance, and because it was entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest this NCV in this report, you should provide a written 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 and its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Glenn T. Dentel, Chief  
Projects Branch 1  
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000244/2008004  
w/Attachment: Supplemental Information

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T. Judson, Central New York Citizens Awareness Network

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-244

License No.: DPR-18

Report No.: 05000244/2008004

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

Facility: R.E. Ginna Nuclear Power Plant

Location: Ontario, New York

Dates: July 1, 2008 through September 30, 2008

Inspectors: K. Kolaczyk, Senior Resident Inspector  
M. Marshfield, Resident Inspector  
H. Jones, Reactor Inspector  
R. Rolph, Health Physicist

Approved by: Glenn T. Dentel, Chief  
Projects Branch 1  
Division of Reactor Projects

Enclosure

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## SUMMARY OF FINDINGS

IR 05000244/2008004; 07/01/2008 – 09/30/2008; R.E. Ginna Nuclear Power Plant (Ginna), Event Follow-up.

The report covered a three-month period of inspection by resident inspectors and region-based inspectors. One Green non-cited violation (NCV) was 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). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

**Cornerstone: Emergency Preparedness**

Green. A self-revealing NCV of Technical Specification 5.4.1.a, "Procedures," was identified on August 28, 2008, when Ginna technicians failed to adequately implement CME-38-01-BYCTSC, "Solid State Controls, 500 Amp Battery Charger Maintenance for BYCTSC" which resulted in a loss of power to communications equipment for the control room and subsequent declaration of an Unusual Event (UE). Ginna entered this issue into their corrective action program for resolution.

This finding is more than minor because it is associated with the facilities and equipment performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of ensuring that Ginna was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors determined that the finding was of very low safety significance (Green) using IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," in that it was associated with an actual event classified as an Unusual Event, the loss of communication was for a short period of time, and compensatory measures were implemented. This finding has a cross-cutting aspect in the area of human performance because Ginna personnel failed to correctly implement expected human performance tools which directly contributed to the loss of power to the control room communications systems and declaration of a UE (H.4.a per IMC 0305). (Section 4OA3)

B. Licensee-Identified Violations

None.

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## REPORT DETAILS

Summary of Plant Status

R. E. Ginna Nuclear Power Plant (Ginna) began the inspection period operating at full rated thermal power and operated at full power for the entire period.

**1. REACTOR SAFETY****Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**1R04 Equipment Alignment (71111.04)Partial System Walkdown (71111.04Q – Four samples)a. Inspection Scope

The inspectors reviewed the alignment of system valves and electrical breakers to ensure proper in-service or standby configurations as described in plant procedures, piping and instrument drawings (P&ID), and the updated final safety analysis report (UFSAR). During the walkdown, the inspectors evaluated the material condition and general housekeeping of the system and adjacent areas. The inspectors also verified that operators were following plant technical specifications (TS) and system operating procedures. Documents reviewed are listed in the Attachment.

The following plant system alignments were reviewed:

- On July 13, 2008, the inspectors performed a walkdown of the boric acid system injection flow paths while the 'B' boric acid pump was removed from service for maintenance. During this walkdown, valve positions were compared to system drawing 33013-1266, "Chemical and Volume Control System," Rev. 33;
- On July 15, 2008, the electrical system alignment of the 'B' diesel generator was compared to the requirements as established by O-6.13, "Daily Surveillance Log," Rev. 16800, while the 'A' diesel generator was removed from service for maintenance activities. During this walkdown, the inspectors compared breaker positions to the criteria contained in plant TS;
- On August 3, 2008, the inspectors performed a walkdown of the 'A' residual heat removal (RHR) train and compared the valve and breaker positions to the alignment in system drawing 33013-1247, "Residual Heat Removal," Rev. 40. This walkdown was performed after a surveillance test had been completed on the 'A' RHR train; and
- On September 4, 2008, the inspectors performed a walkdown of the 'B' containment spray train and compared the valve and breaker positions to the alignment in system drawing 33013-1281, "Containment Spray," Rev. 37. This system was selected

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based on degraded conditions (boric acid leaks) on the system that had been identified by the inspectors.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

Quarterly Inspection (71111.05Q – Five samples)

a. Inspection Scope

The inspectors performed walkdowns of 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 inspected against Ginna's licensing basis and 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. Documents reviewed are listed in the Attachment. The following plant areas were inspected:

- 'A' Battery Room (Fire Area BR1A);
- 'B' Battery Room (Fire Area BR1B);
- Air Handling Room (Fire Zone AHR);
- 'A' Diesel Generator Room (Fire Zone EDG-1A); and
- 'B' Diesel Generator Room (Fire Zone EDG-1B).

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

On August 5, 2008, the inspectors observed a licensed operator simulator scenario, ECA3132A, "B' Steam Generator Tube Rupture/A' Steam Generator Cool Down Delay," Rev. 0. The inspectors reviewed the critical tasks associated with the scenario, observed the operators' performance, and observed the post-evaluation critique. The inspectors also reviewed and verified compliance with Ginna procedure OTG-2.2, "Simulator Examination Instructions," Rev. 43. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q - Two samples)a. Inspection Scope

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

The following issues were reviewed:

- Seat leakage past the inlet valves to the steam driven auxiliary feedwater pump, valves 3505A and 3504C; and
- The structural monitoring program for the intermediate building subbasement tendon area.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – Five samples)a. Inspection Scope

The inspectors evaluated the effectiveness of Ginna's maintenance risk assessments required by 10 CFR Part 50.65(a)(4). The inspectors discussed with control room operators and scheduling department personnel required actions 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 verify that actual plant configuration matched the assessed configuration. Additionally, the inspectors verified that risk management actions, for both planned and emergent work, were consistent with those described in CNG-OP-4.01-1000, "Integrated Risk Management," Revision 00002. Documents reviewed are listed in the Attachment.

Risk assessments for the following out-of-service SSCs were reviewed:

- Planned quarterly testing of 'A' RHR pump while the technical support center (TSC) diesel generator was already removed from service for planned maintenance (July 22, 2008);
- Planned monthly maintenance on the 'A' emergency diesel generator while the TSC

diesel generator was removed from service for planned maintenance (July 28, 2008);

- Unplanned emergent work when the service water (SW) loop drain valve, 4799Y, failed at a threaded connection causing a two gallon per minute leak in the intermediate building hot side basement (August 6, 2008);
- Planned outage of the 'D' standby auxiliary feedwater pump while the 'A' emergency diesel generator was in a higher than normal differential SW pressure across the diesel jacket water heat exchanger (August 12 and 13, 2008); and
- The week of September 8, 2008, included testing of the motor- and diesel-driven fire pumps, maintenance on the 'B' train of the motor-driven auxiliary feedwater system, 'B' RHR pump quarterly surveillance, and under-voltage testing on electrical bus 16.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - Four samples)

a. Inspection Scope

The inspectors reviewed operability evaluations and/or condition reports (CRs) in order to verify that the identified conditions did not adversely affect safety system operability or plant safety. The evaluations were reviewed using criteria specified in NRC Regulatory Issue Summary 2005-20, "Revision to Guidance Formerly Contained in NRC Generic Letter (GL) 91-18, Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability" and Inspection Manual Part 9900, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety." In addition, where a component was inoperable, the inspectors verified the TS limiting condition for operation implications were properly addressed. Documents reviewed are listed in the Attachment.

The inspectors performed field walkdowns, interviewed personnel, and reviewed the following items:

- CR 2008-5802, Unexpected average coolant temperature change following auto makeup to the volume control tank;
- CR 2008-6103, High vibrations on 'A' reactor coolant pump shaft due to load swap;
- CR 2008-6790, Two gallon per minute SW leak on intermediate building hot side basement; and
- CR 2008-7336, Loose seismic support on 'D' SW pump.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18 – Two samples)Temporary Modificationsa. Inspection Scope

The inspectors reviewed two temporary plant modifications to determine whether the temporary changes adversely affected 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 changes 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 changes were consistent with the approved, documented modification. The temporary modifications were reviewed by the inspectors to verify they had been installed in conformance with the instructions contained in procedures IP-DES-3, "Temporary Modifications," Revision 20; CNG-CM-1.01-1004, "Temporary Plant Configuration Change Process," Revision 0000; and A-58, "Temporary Alterations," Revision 0600. Documents reviewed are listed in the Attachment.

The inspectors reviewed the following temporary plant modifications:

- 2008-0014, "Heater Drain Tank Pump Valve 4113 Gasket Leak;" and
- 2008-0016, "Increase Set Point of RK-28A, Point 28 (TT-2173) [Loop 'B' hot leg nozzle air temperature]."

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - Five samples)a. Inspection Scope

The inspectors observed portions of post-maintenance testing (PMT) activities in the field to determine whether the tests were performed in accordance with approved procedures. The inspectors assessed each 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 TS requirements. The inspectors reviewed the recorded test data to determine whether the acceptance criteria were satisfied. Documents reviewed are listed in the Attachment.

The following PMT activities were reviewed:

- PT-3Q, "Containment Spray Pump Quarterly Test," Rev. 04501, under Work Order (WO) 20800174, "Motor Breaker Replacement," and WO 20800476, "Perform Grease Check and Stem Lube on Limitorque Operator Valve 860A" (July 1, 2008);
- STP-O-2.5.5, "Air Operated Valves and Manual Valve Quarterly Surveillance Clean Side Intermediate Building," Rev. 00100, to retest SW valve AOV 4562 after completion of WO 20804710, "SW Valve AOV 4562 Failed to Meet its Stroke Time" (July 22, 2008);
- STP-O-2.5.6, "R-19 Air Operated Valves, Quarterly Surveillance," Rev. 00000, to retest blowdown isolation valve AOV-5738 (containment isolation valve) after completion of WO 20603750, "Perform CPI-CV-5738, Calibration of Steam Generator 'A' Blowdown Isolation Air Operated Valve," Rev. 8 (July 23, 2008);
- Retest activities for WO 20805079, "Pressurizer Liquid Sample Line 966B Out of Service," Rev. 000 (August 7, 2008); and
- PT-36Q-D, "Standby Auxiliary Feedwater (SAFW) Pump 'D' Quarterly," Rev. 05500, to retest the 'D' SAFW pump suction valve and pump system after drain and fill to support WO 20704393, "Limitorque Operator/Valve 9629B Diagnostic Testing" (August 14, 2008).

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 – Six samples)

a. Inspection Scope

The inspectors observed the performance and/or reviewed test data for the following surveillance tests that are associated with selected risk-significant SSCs to verify that TSs were followed and that acceptance criteria were properly specified. The inspectors also verified that proper test conditions were established as specified in the procedures, no equipment preconditioning activities occurred, and acceptance criteria were met. Documents reviewed are listed in the Attachment.

- STP-O-2.2QB, "Residual Heat Removal Pump 'B' In-service Test," Rev. 00000 (July 2, 2008) (IST)
- WO 20801193, "Test Operability of the Main Condenser Pit Auxiliary Sump Pump and Associated Components," Rev. 0 (July 17, 2008)
- SRP-O-2.8Q, "Component Cooling Water Pump Quarterly Test," Rev. 0001 (July 31, 2008) (IST)
- STP-O-2.7.1B, "Loop 'B' SW Pump Test," Rev. 00001 (August 14, 2008) (IST)
- CPI-LVL-931, "Calibration of Spray Additive Tank Level Channel 931," Rev. 09 (August 14, 2008)
- WO 20803856, "Calibrate Turbine Emergency Lube Oil Pump Instrumentation," Rev. 1 (September 5, 2008)

b. Findings

No findings of significance were identified.

**Cornerstone: Emergency Preparedness**1EP6 Drill Evaluation (71114.06 – Two samples)a. Inspection Scope

On August 5, 2008, the inspectors observed a licensed operator simulator scenario, ECA3132A, “B’ Steam Generator Tube Rupture/A’ Steam Generator Cool Down Delay,” Revision 0, that included a limited test of Ginna’s emergency response plan. The inspectors verified that emergency classification declarations and notifications were completed in accordance with 10 CFR Part 50.72, 10 CFR Part 50 Appendix E, and emergency plan implementing procedures.

On September 9, 2008, the inspectors observed portions of the third quarter emergency preparedness (EP) drill. The drill scenario involved a steam generator tube rupture and involved state and local government EP organizations. The inspectors observed drill activities at the training simulator, the TSC, and the emergency operations facility. While observing the drill, the inspectors verified that appropriate emergency classifications were made and notifications to offsite agencies were completed as required in Ginna’s emergency response plan. Further, the inspectors verified that drill deficiencies were documented in Ginna’s corrective action program.

b. Findings

No findings of significance were identified.

**2. RADIATION SAFETY****Cornerstone: Public Radiation Safety (PS)**2PS2 Radioactive Material Processing and Transportation (71122.02 – Five samples)a. Inspection Scope

From July 21 to 24, 2008, the inspectors performed the following activities to verify that the radioactive material processing and transportation program complies with federal regulations. The inspectors reviewed shipment documentation and observed work activities.

Inspection Planning and System Walkdown

The inspectors reviewed Ginna’s UFSAR description of the radioactive waste processing system. The inspectors reviewed the recent radiological release report for information on the type and amount of radioactive waste disposed. The inspectors

verified that the scope of Ginna's audit program meets the requirements of NRC regulations. The inspectors walked down the radioactive material processing system to ensure it was as described in the UFSAR and in the Process Control Program (PCP), Revision 01000. The inspectors noted the equipment abandoned in place and that the equipment was drained and isolated to ensure the equipment would not contribute to an unmonitored release to the environment.

#### On-Site Inspection

The inspectors observed the sampling of resin as it was transferred from demineralizer vessels to a hold-up tank. The inspectors also observed the transfer of resin from a hold-up tank to a disposal container. The inspectors reviewed the current processes for transferring radioactive waste into shipping/disposal containers, to determine if appropriate waste stream mixing and sampling procedures and methodology for waste concentration averaging, provided representative samples of the waste product for the purpose of waste classification.

The inspectors reviewed documentation for eight radioactive shipments, the associated waste stream 10 CFR Part 61 analysis results, and the scaling factors used to calculate the activities for hard-to-detect isotopes. The inspectors reviewed Ginna's program to ensure that waste stream composition data accounts for changing operational parameters, and thus remains valid between the annual or biennial sample analyses. The inspectors reviewed the radioactive shipment documentation for compliance with NRC and United States Department of Transportation requirements.

The inspectors reviewed training documentation for personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation. The inspectors observed, and questioned radiation workers to determine if they were knowledgeable of shipping regulations.

#### Problem Identification and Resolution

The inspectors reviewed quality assurance audits and eight CRs related to the radioactive material processing and transportation program performed since the last inspection. The inspectors also reviewed the corrective action reports written against the associated CRs.

b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification (71151)

###### Cornerstone: Mitigating Systems

###### a. Inspection Scope (71151 – Five samples)

The inspectors completed a review of Mitigating Systems Performance Index (MSPI) data including a review of Ginna's train/system unavailability data, monitored component demands, and demand failure data. As part of this review, Ginna's MSPI basis document, "Ginna Nuclear Power Plant MSPI Basis Document," Revision 2, and Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were examined. The inspectors also reviewed out-of-service logs, operating logs, and maintenance rule information for the period of July 2007 to July 2008 to determine the accuracy and completeness of the reported unavailability data. For the selected systems, a review of maintenance and test history confirmed the accuracy of demand failure data for the identified active components for the most recent 12 quarters. The MSPIs reviewed included:

- Emergency AC Power System;
- High Pressure Safety Injection System;
- Heat Removal System (Auxiliary Feedwater);
- Residual Heat Removal System; and
- Cooling Water Systems (Component Cooling Water and SW Systems).

###### b. Findings

No findings of significance were identified.

##### 4OA2 Identification and Resolution of Problems (71152 – One sample)

###### .1 Continuous Review of Items Entered into the Corrective Action Program

###### a. Inspection Scope

As required by Inspection Procedure (IP) 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 Ginna's corrective action program (CAP). This review was accomplished by reviewing electronic copies of condition reports, periodic attendance at daily screening meetings, and accessing Ginna's computerized database.

###### b. Findings

No findings of significance were identified.

.2 Annual Sample – Leakage Monitoring Program Review (71152 – One sample)

a. Inspection Scope

The inspectors reviewed corrective actions implemented by Ginna to address a number of concerns regarding the boric acid and fluid leakage monitoring programs documented in the CAP. These issues ranged from failure to identify leaks from plant systems and components to failure to ensure that once leakage was identified, it was assessed and monitored as required by the site leakage monitoring program and/or the boric acid control program.

To conduct this review, the inspectors reviewed Ginna's boric acid corrosion control program (BACCP) to ensure compliance with commitments made in response to NRC GL 88-05, "Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components," and Ginna's leakage monitoring program as described in IP-HSC-3, "Ownership of Plant Areas", Revision 02200. The inspectors also performed a record review and an independent walkdown of plant areas including an infrequently accessed area behind the refueling water storage tank in the auxiliary building. The walkdown was conducted to verify that visual examinations focused on locations where boric acid leaks could cause degradation of safety significant components, and that degraded or nonconforming conditions were properly identified in Ginna's CAP. In addition, the inspectors interviewed engineering and maintenance department personnel to understand how the program was implemented, confirmed the performance of leakage evaluations, and reviewed what corrective actions were planned to address leakage that was found.

As part of this review, the inspectors reviewed CRs that documented issues associated with the leakage monitoring program, and the governing procedure for the BACCP to determine if the issues identified in the CRs were properly addressed by corrective actions in accordance with the program guidance. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. Although the inspectors determined that the site fluid leakage monitoring program was not being implemented in accordance with site procedures, and corrective actions had either not been implemented or were not effective, no significant degraded conditions were identified. The failure to comply with Ginna's procedures (the site fluid leakage monitoring program) constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC's enforcement policy. Items identified by the inspectors concerning the fluid leakage monitoring program were documented in Ginna's CAP.

4OA3 Event Follow-up (71153 - One sample)Inadequate Procedure Adherence Resulting in a Loss of Normal Control Room Communicationsa. Inspection Scope

On August 28, 2008, Ginna electricians were conducting maintenance on the TSC battery charger and inverter. At approximately 1:35 p.m., an incorrect breaker was opened and power was lost to the plant emergency notification systems, control room phones, and the plant process computers. Because of the loss of communication systems, Ginna declared an unusual event (UE) at 1:48 p.m. The inspectors responded to the control room and observed the operator response to the event, and subsequent attempts to restore the de-energized communication systems. The communication systems were restored, determined to be functional, and Ginna secured from the UE at 2:14 p.m.

Following the event, the inspectors interviewed Ginna management and operations personnel to gain an understanding of the conditions leading up to the improper breaker manipulation. The inspectors reviewed the plant maintenance risk plans for this evolution in accordance with NRC IP 71111.13, "Maintenance Risk Assessments and Emergent Work Control," to ensure Ginna had taken proper precautions in accordance with procedure CNG-OP-4.01-1000, "Integrated Risk Management," Revision 00002, prior to resuming work on the TSC inverter and battery charger.

b. Findings

Introduction: A Green self-revealing NCV of Technical Specification 5.4.1.a, "Procedures," was identified on August 28, 2008, when Ginna electricians failed to adequately implement CME-38-01-BYCTSC, "Solid State Controls, 500 Amp Battery Charger Maintenance for BYCTSC," which resulted in the loss of power to communications equipment for the control room, and subsequent declaration of an Unusual Event (UE).

Description: On August 28, 2008, Ginna electricians were conducting maintenance on the TSC battery charger and inverter. During this activity, procedure CME-38-01-BYCTSC, "Solid State Controls, 500 Amp Battery Charger Maintenance for BYCTSC," was the governing document in effect. To maintain power to the TSC vital system loads, CME-38-01-BYCTSC required an alternate power supply breaker to be closed. During the maintenance, step 7.10.5 of CME-38-01-BYCTSC required the electricians to reenergize the TSC battery charger for testing by closing breaker #4 on electrical panel ACPDPCD02. As a consequence of multiple human performance errors, at approximately 1:35 p.m., the electricians failed to close breaker #4 and instead opened the alternate power supply breaker to the TSC vital system loads, which de-energized power to the plant emergency communication systems and control room phones. Due to the loss of communication systems in accordance with plant procedure EPIP-1-0, "Ginna Station Event Evaluation and Classification," Revision 4200, plant operators

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declared a UE under Emergency Action Level (EAL) criteria 7.3.2, "Loss of all Communication Capability," Revision 4100.

The inspectors responded to the control room and observed operators' attempts to restore power to the TSC vital system loads and to determine which systems and equipment had been rendered non-functional by the improper breaker operation. After unsuccessful attempts to operate the control room hard-wired and satellite phone systems, operators determined that offsite communication systems were not functional and declared the UE per EAL 7.3.2. Because of inadequate training, the operators did not recognize the availability of two communication systems, a satellite phone and two hard-wired phones, automatically energized from an alternate power supply. When power was restored to the vital TSC system loads and the communications systems had been restored and determined to be functional, Ginna secured from the UE at 2:14 p.m.

Ginna performed a prompt investigation (CR 2008-7332) to determine the cause of this human performance event. Ginna determined that the two electricians assigned to the activity both identified the wrong component to operate, and failed to correctly implement step 7.10.5 of CME-38-01-BYCTSC. Peer checking prior to manipulation of the breaker failed to identify that the incorrect breaker was about to be operated. The evaluation also identified that the conduct of two procedures simultaneously contributed unnecessarily to the operators' multitasking requirements and complexity of the maintenance.

The performance deficiency associated with this self-revealing finding involved inadequate implementation of the procedure for conducting the maintenance on the TSC battery charger. The procedure for testing the TSC battery charger was not properly implemented, risk protection strategies were not effectively used, and the combination of actions resulted in a loss of communication from the Ginna control room.

Analysis: This finding is more than minor because it is associated with the facilities and equipment performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of ensuring that Ginna was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Operators could not perform their emergency plan functions without compensatory actions. During this event, operators were able to execute an unplanned and fortuitous method of communication using individual cell phones to achieve timely event notification to the counties and New York within the required time frames of the emergency response plan. The inspectors determined that the finding was of very low safety significance (Green) using IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," in that it was associated with an actual event classified as an Unusual Event, the loss of communication was for a short period of time, and compensatory measures were implemented.

This finding has a cross-cutting aspect in the area of human performance because Ginna personnel failed to correctly implement expected human performance tools which directly contributed to the loss of power to the control room communications systems and declaration of a UE (H.4.a per IMC 0305).

Enforcement: Technical Specification 5.1.4.a, "Procedures," requires, in part, that the

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applicable procedures recommended in Appendix A of Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operations)," shall be established, implemented and maintained. Regulatory Guide 1.33 specifically requires "Communication Systems Procedures" to be implemented. Step 7.10.5 of CME-38-01-BYCTSC, required the electricians to reenergize the TSC battery charger for testing by closing breaker #4 on panel ACPDPCD02.

Contrary to the requirements of step 7.10.5, on August 28, 2008, Ginna maintenance personnel failed to adequately implement CME-38-01-BYCTSC, and operated an incorrect breaker which de-energized the control room communications systems. Because this violation was of very low safety significance and was entered into Ginna's corrective action program (CRs 2008-7332/7333/7557), this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: **(NCV 05000244/2008004-01, Inadequate Procedure Adherence Resulting in a Loss of Normal Control Room Communications)**

#### 4OA5 Other Activities

##### .1 Quarterly Resident Inspector Observations of Security Personnel and Activities

###### a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with Ginna's security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

###### b. Findings

No findings of significance were identified.

#### 4OA6 Meetings, Including Exit

##### Exit Meeting Summary

On October 8, 2008, the resident inspectors presented the inspection results to Mr. John Carlin and other members of his staff, who acknowledged the findings. The inspectors verified that none of the material examined during the inspection is considered proprietary in nature.

**ATTACHMENT: SUPPLEMENTAL INFORMATION**

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**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

J. Carlin	Vice President, Ginna
D. Blankenship	Manager, Radiation Protection
D. Dean	Assistant Operations Manager (Shift)
M. Giacini	Scheduling Manager
E. Hedderman	Chemistry Supervisor
T. Hedges	Emergency Preparedness Manager
D. Holm	Plant Manager
J. Pacher	Manager, Nuclear Engineering Services
J. Sullivan	Manager of Operations

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

Opened and Closed

05000244/2008004-01	NCV	Inadequate Procedure Adherence Resulting in a Loss of Normal Control Room Communications (Section 4OA3)
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**LIST OF DOCUMENTS REVIEWED**

**Section 1R04: Equipment Alignment**

Document

Updated Final Safety Analysis Report, Rev. 20

Procedures

O-6.13	Daily Surveillance Log, Rev. 16800
S-17.1	Containment Spray System Alignment, Rev. 23
S-17.2	Spray Additive NAOH Tank Drain Down, Rev. 6

Drawings

33013-1247	Residual Heat Removal, Rev. 40
33013-1266	Chemical and Volume Control System, Rev. 33
33013-1281	Containment Spray, Rev. 37

**Section 1R05: Fire Protection**

Document

Ginna Fire Protection Program, Rev. 4d

Drawings

33013-1607 Fire Protection System Yard Loop, Rev. 37  
21488-0100 Fire, Smoke, and Pressure Barriers Elevation 253, Rev. 10

**Section 1R11: Licensed Operator Requalification**

Document

ECA3132A, 'B' Steam Generator Tube Rupture/'A' Steam Generator Cool Down Delay, Rev. 0

Procedures

AP-SG-1 Steam Generator Tube Leak, Rev. 01000  
E-0 Reactor Trip or Safety Injection, Rev. 04200  
E-3 Steam Generator Tube Rupture, Rev. 04300  
OTG-2.2 Simulator Examination Instructions, Rev. 43

**Section 1R12: Maintenance Effectiveness**

Procedure

EP-2-P-0169 Structural Assessment and Monitoring Program, Rev. 0100

Drawing

33013-1237 Auxiliary Feedwater, Rev. 54

Work Orders

20808883	20801417
20805782	20802132
20803276	20702056

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

Document

STP-O-2.2QA, Residual Heat Removal Pump 'A' In-Service Test, Rev. 00001

Procedure

CNG-OP-4.01-1000 Integrated Risk Management, Rev. 2

Condition Reports

2008-6413	2008-6948
2008-6790	2008-6933
2008-6831	

Work Orders

20800465  
20805237  
20704393

**Section 1R15: Operability Evaluations**Documents

Operational Decision Making Issue for CR 2008-6103  
 OPG Event Invest: 5, Event Notes, Attachment 2, Rev. 2, June 29, 2008  
 Variable Trend of Tavg and Power, June 30, 2008

Procedures

AR-AA-18, Reactor Coolant Pump Vibration Alert, Rev. 01200  
 AR-AA-26, Reactor Coolant Pump Vibration Danger, Rev. 01300  
 CNG-MN-1.01-1002, Troubleshooting Control Form for CR 2008-5802, Attachment 1, Rev. 0001  
 CNG-OP-1.01-1002, Operability Determination for Through Wall Leak Operability, Rev. 000

Drawings

33013-1264 Auxiliary Building Chemical Volume Control System P&ID, Rev. 24  
 33013-1266 Auxiliary Building Chemical Volume Control System P&ID, Rev. 33

Condition Reports

2008-5802	2008-7071
2008-6054	2008-7074
2008-6103	2008-7336
2008-6790	

Work Orders

20702685	20400259
20505080	20603616
20804580	

**Section 1R18: Plant Modifications**Documents

2008-0014, Heater Drain Tank Pump Valve 4113 Gasket Leak  
 2008-0016, Increase Set Point of RK-28A, Point 28 (TT-2173)

Procedures

A-58, Temporary Alterations, Rev. 0600  
 CNG-CM-1.01-1004, Temporary Plant Configuration Change Process, Rev. 0000  
 IP-DES-3, Temporary Modifications, Rev. 20

**Section 1R19: Post-Maintenance Testing**Procedures

CPI-CV-5738, Calibration of Steam Generator 'A' Blowdown Isolation Air Operator Valve, Rev. 8  
 IP-IIT-3, Containment Leakage Rate Test Program, Rev. 00600  
 IP-OPS-4, Post-Maintenance Operability Test, Rev. 00000  
 PT-3Q, Containment Spray Pump Quarterly Test, Rev. 04501  
 PT-36Q-D, Standby Auxiliary Feedwater Pump 'D' Quarterly, Rev. 05500

STP-O-2.5.5, Air Operated Valves and Manual Valve Quarterly Surveillance Clean Side Intermediate Building, Rev. 00100  
STP-O-2.5.6, R-19 Air Operated Valves, Quarterly Surveillance, Rev. 00000  
STP-O-2.7.1B, Loop 'B' Service Water Pump Test, Rev. 00001

Drawing

33013-1261 Containment Spray P&ID, Rev. 37

Condition Reports

2008-0259  
2008-0276  
2008-5897

Work Orders

20800174	20704393
20800476	20805079
20800365	20804710
20603750	

**Section 1R22: Surveillance Testing**

Document

TECO-Westinghouse Motor Company, Recommended Setting for Bearing RTD Trip and Alarms, Rev. 0

Procedures

CPI-LVL-931, Calibration of Spray Additive Tank Level Channel 931, Rev. 09  
PT-2.8Q, Component Cooling Water Pump Quarterly Test, Rev. 36  
SRP-O-2.8Q, Component Cooling Water Pump Quarterly Test, Rev. 0001  
STP-O-2.2QB, Residual Heat Removal Pump 'B' In-service Test, Rev. 00000  
STP-O-2.7.1B, Loop 'B' SW Pump Test, Rev. 00001

Drawing

33013-1247 Auxiliary Coolant Residual Heat Removal P&ID, Rev. 42

Condition Reports

2008-5899	2007-7395
2007-5463	2008-0355
2008-4290	2008-6994
2008-1472	2008-7001
2008-2625	

Work Orders

20801193  
20803856

**Section 1EP6: Drill Evaluation**Documents

Drill Scenario, August 5, 2008

ECA3132A, 'B' Steam Generator Tube Rupture/'A' Steam Generator Cool Down Delay, Rev. 0

**Section 2PS2: Radioactive Material Processing and Transportation**Document

Updated Final Safety Analysis Report, Rev. 20

Procedures

RP-4303, Sampling Spent Primary Resin during Spent Resin Transfer to HIC, Rev. 00000

RP-RAM-PACK-STORAGE, Guidelines for the On-site Packaging and Storage of Radioactive Material, Rev. 2

RP-RW-COMP-CFR61, 10 CFR Part 61, Waste Classification Methodology and Acceptance Criteria Documentation, Rev. 00600

RP-RW-FLTR-INV, Characterization and Inventory of Filters, Rev. 2

RP-RW-REP-SMPLG, Representative Sampling of Radioactive Material, Rev. 2

RPA-RW-PCP, Process Control Program, Rev. 01000

RPA-RW-SHIP-MTL, Shipment of Radioactive Material General Guidance, Rev. 00901

RPA-RW-SHIP-WSTE, Preparation and Shipment of Radioactive (Waste) Material, Rev. 2

Condition Reports

2007-2926	2008-3257
2007-3798	2008-3084
2007-4361	2008-3262
2007-4489	2008-5933

Audits, Assessments and Reports:

2007-0027 Quality Assessment Report

2007-0028 Quality Assessment Report

Radioactive Shipment Records:

2007-19	Class A	0.0102 Curies
2007-26	Class B	80.8 Curies
2007-45	Class A	1.29 Curies
2008-16	Class A	0.0074 Curies
2008-36	Class A	0.0040 Curies
2008-38	Class A	0.0079 Curies
2008-52	Class B	83.5 Curies

**Section 4OA1: Performance Indicator Verification**Documents

Ginna's Mitigating System Performance Index Basis Document, Rev. 2

NEI 99-02, Nuclear Energy Institute Regulatory Assessment Performance Indicator Guideline, Rev. 5, July 2007

Procedures

CNG-NL-1.01-1010, NRC and INPO Performance Indicator Reporting, Rev. 00201  
CNG-NL-1.01-2006, Consolidated Data Entry, Rev. 0000

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

Documents

GL 88-05, Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary  
WCAP-15988-NP, Generic Guidance for an Effective Boric Acid Inspection Program for  
Pressurized Water Reactors, Rev. 1

Procedures

CNG-AM-1.01-1013, Boric Acid Corrosion Control Program, Rev. 0  
IP-CAP-1.9, Boric Acid Leakage Initial Investigation Form, Rev. 7  
IP-HSC-3, Ownership of Plant Areas, Rev. 02200  
IP-IIT-7, Boric Acid Corrosion Monitoring Program, Rev. 00800

Condition Reports

2008-7229	2008-7243
2008-7230	2008-7244
2008-7233	2008-7248
2008-7234	2008-7254
2008-7236	
2008-7239	

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

Documents

GINNA's Nuclear Emergency Response Plan, Rev. 02800  
EPIP-1-0, Ginna Station Event Evaluation and Classification, Rev. 4200  
Emergency Action Level Criteria, Rev. 4100, Loss of All Communication Capability

Procedure

CNG-OP-4.01-1000, Integrated Risk Management, Rev. 00002  
CNG-MN-1.01-1000, Conduct of Maintenance, Rev. 00000  
CNG-HU-1.01-1001, Human Performance Tools and Verification Practices, Rev. 00301  
CNG-PR-1.01-1009, Procedure Use and Adherence Requirements, Rev. 00200  
CME-38-01-BYCTSC, Solid State Controls, 500 Amp Battery Charger Maintenance for BYCTSC,  
Rev. 07

Condition Reports

2008-7332  
2008-7333  
2008-7557

Work Order

20801524

**LIST OF ACRONYMS**

ADAMS	Agency-Wide Documents Access and Management System
BACCP	Boric acid corrosion control program
CAP	Corrective action program
CFR	Code of Federal Regulations
CR	Condition report
EAL	Emergency action level
EP	Emergency preparedness
GINNA	R.E. Ginna Nuclear Power Plant
IP	Inspection procedure
MSPI	Mitigating Systems Performance Index
NEI	Nuclear Energy Institute
NCV	Non-cited violation
NRC	U.S. Nuclear Regulatory Commission
P&ID	Piping & instrument drawing
PARS	Publicly Available Records
PCP	Process control program
PMT	Post-maintenance testing
RHR	Residual heat removal
SAFW	Standby auxiliary feedwater
SDP	Significance determination process
SSC	Systems, structures, and components
SW	Service water
TS	Technical specification
TSC	Technical support center
UE	Unusual event
UFSAR	Updated Final Safety Analysis Report
WO	Work order