January 25, 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 05000244/2005005

Dear Mrs. Korsnick:

On December 31, 2005, the US Nuclear Regulatory Commission (NRC) completed an inspection at your R. E. Ginna Nuclear Power Plant. The enclosed inspection report documents the inspection results, which were discussed on January 13, 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 NRC-identified finding of very low safety significance (Green) which was determined to involve a violation of NRC requirements. However, because of the 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 the 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 the 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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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 Website at <u>http://www.nrc.gov/reading-rm/adams.html</u> (the Public Electronic Reading Room).

Sincerely,

## /RA/

James M. Trapp, Chief Reactor Projects Branch 1 Division of Reactor Projects

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

Enclosure: Inspection Report 05000244/2005005 w/ Attachment: Supplemental Information

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# U.S. NUCLEAR REGULATORY COMMISSION

# **REGION I**

Docket No.:	50-244
License No.:	DPR-18
Report No.:	05000244/2005005
Licensee:	Constellation Energy, R.E. Ginna Nuclear Power Plant, LLC
Facility:	R. E. Ginna Nuclear Power Plant
Location:	Ontario, New York
Dates:	October 1, 2005 through December 31, 2005
Inspectors:	K. Kolaczyk, Senior Resident Inspector L. Cline, Senior Resident Inspector, Nine Mile Point M. Marshfield, Resident Inspector J. McFadden, Health Physicist D. Silk, Senior Emergency Preparedness Inspector
Approved by:	James M. Trapp, Chief Reactor Projects Branch 1 Division of Reactor Projects

# TABLE OF CONTENTS

SUMMARY OF FINDINGS iii			
REPORT DETAILS			
REACTOR SAFETY11R01Adverse Weather Protection11R04Equipment Alignment11R05Fire Protection21R11Licensed Operator Requalification Program31R12Maintenance Effectiveness41R13Maintenance Risk Assessments and Emergent Work Control41R14Operator Performance During Non-routine Evolutions and Events51R15Operability Evaluations61R19Post-Maintenance Testing71R22Surveillance Testing71R23Temporary Plant Modifications81EP4Emergency Action Level and Emergency Plan Changes81EP6Drill Evaluation9			
RADIATION SAFETY			
OTHER ACTIVITIES124OA2Identification and Resolution of Problems124OA5Other Activities134OA6Meetings, Including Exit14			
ATTACHMENT: SUPPLEMENTAL INFORMATION KEY POINTS OF CONTACT			

## SUMMARY OF FINDINGS

IR 05000244/2005-005; 10/01/2005 - 12/31/2005; R. E. Ginna Nuclear Power Plant; Fire Protection.

The report covered a 3-month period of inspection by resident inspectors and announced inspections by regional specialists. 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). 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

• <u>Green</u>. The inspectors identified a non-cited violation (NCV) of Technical Specification (TS) 5.4.1, which requires, in part, that fire protection procedures be established, implemented, and maintained. Contrary to TS 5.4.1, during a walkdown of fire protection procedure SC-3.16.1, "Operating Instructions - Fire Service Water Service Pumps, Supply Piping and Tank," the inspector noted that the procedure contained incorrect operating instructions for the diesel-driven and motor-driven fire pumps. The licensee entered these errors into the Ginna corrective action program.

The inspectors determined that the procedure errors in SC-3.16.1, were more than minor because they were associated with the procedure quality attribute of the Mitigating System Cornerstone and affected the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. The inspectors assessed the finding using the fire protection Significance Determination Process (SDP) and determined the finding to be of very low safety significance. The finding was of very low safety significance because the procedure errors did not result in a loss of safety function. Specifically, the fire pumps were not rendered inoperable by the procedure errors. As a result, the procedure issues were assigned a degradation rating of low, which screens to Green in the fire protection SDP. The cause of this finding is related to the cross-cutting area of problem identification and resolution. (Section 1R05)

B. <u>Licensee-Identified Violations</u>

None.

## REPORT DETAILS

## Summary of Plant Status

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

## 1. **REACTOR SAFETY**

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

1R01 <u>Adverse Weather Protection</u> (71111.01 - 1 sample, cold weather preparations w/2 specific systems)

## a. Inspection Scope

Using Ginna Procedures A-54.4.1 "Cold Weather Walkdown Procedure," M1306.1, "Ginna Station, Maintenance Department Winterizing Inspection Program," and the Ginna Updated Final Safety Analysis Report (UFSAR) as a reference, the inspectors reviewed Ginna's preparations for cold weather by walking down plant areas. Two risksignificant systems were selected and specifically reviewed for this inspection, the standby auxiliary feedwater system and the plant service water system. In addition to conducting the plant walkdowns, the inspectors conducted discussions with control room operators and system engineers to verify system preparations were complete.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04 - 2 samples)

## Partial Walkdown

a. Inspection Scope

The inspectors performed partial walkdowns of plant systems to verify operability of redundant or diverse trains and components when safety equipment was inoperable. The inspectors used plant technical specifications, Ginna operating procedures, plant piping and instrument drawings (P&ID), and the UFSAR as guidance for conducting the 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 spaces. The inspectors also verified that operations personnel were following plant technical specifications (TS). The following plant system alignments were reviewed:

- On November 9, 2005, the inspectors completed a walkdown of the "A" emergency diesel generator (EDG) air start and fuel oil systems while the "B" EDG was out-of-service for maintenance. This system was examined as it was the sole TS required source for backup alternating current (AC) power while the "B" EDG was not available.
- On December 2 and 20, 2005, the inspectors completed a walkdown of the "Immediate," "Alternate," and "Emergency" Boric Acid system injection flow paths, while the "Normal" injection flow path was out-of-service for maintenance.
- d. <u>Findings</u>

No findings of significance were identified.

- 1R05 Fire Protection (71111.05 8 samples)
- a. <u>Inspection Scope</u>

Using the Ginna Fire Protection Program documents as a guide, the inspectors performed walkdowns of the following fire zones 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 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 fire zones were inspected:

- Auxiliary Building Mezzanine (ABM) Level, Fire Zone ABM
- "B" Diesel Generator Room, Fire Zone EDG1B
- "A" Diesel Generator Room, Fire Zone EDG1A
- Standby Auxiliary Feedwater (SAF) Pump Room, Fire Zone SAF
- Screenhouse (SH), Fire Zone SH-2
- Service Building (SB) Office Level, Fire Zone SB-2
- Intermediate Building (IB) Subbasement, Fire Zone IB-0
- Auxiliary Building Basement (ABB) Floor, Fire Zone ABB

## b. Findings

<u>Introduction</u>: The inspectors identified a Green non-cited violation (NCV) of TS 5.4.1.d, which requires, in part, that procedures be established, implemented, and maintained covering the fire protection program. A Ginna fire protection procedure was reviewed which contained several errors that would have prevented proper system implementation if executed as written.

<u>Description</u>: Procedure SC-3.16.1, "Operating Instructions - Fire Service Water Service Pumps, Supply Piping and Tank," provides instructions for operation of the water supply to fixed piping systems. Included in the procedure are instructions for operating the motor-driven and diesel-driven fire pumps. While conducting a walkdown of procedure

SC-3.16.1, the inspectors noted it contained several significant errors, including incorrect operating guidance and improper references. For example, step 3.9 stated that the diesel-driven fire pump can be cooled using an alternate supply of cooling water from house service water system through valve 9003 and an alternate connector. However, the inspectors determined that an alternate cooling connection is not available on the diesel-driven fire pump, and valve 9003 is not located near the Screenhouse. Valve 9003 is the inlet instrument air check valve to atmospheric relief valve 3411 located in the "clean side" of the Intermediate Building. Step 4.3.1 incorrectly stated that if the motor-driven fire pump does not start, the pump can be emergency started by performing procedure P-15, "Operations Local Operating Instructions Guidelines and Index of P-15 Series Procedures." However, the inspector noted procedure P-15 does not contain instructions on how to perform an emergency pump start.

<u>Analysis</u>: The inspectors determined that the procedure errors in SC-3.16.1, were more than minor because they were associated with the procedure quality attribute of the Mitigating System Cornerstone and affected the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. The inspectors assessed the finding using Appendix F of the Significance Determination Process (SDP) and determined the finding to be of very low safety significance. The finding was of very low safety significance because the procedure errors did not result in a loss of safety function. Specifically, the fire pumps were not rendered inoperable by the procedure errors since the errors were located in sections of the procedure that addressed contingencies. As a result, the procedure issues were assigned a degradation rating of low, which screens to Green in the fire problem identification and resolution.

<u>Enforcement</u>: TS 5.4.1.d requires, in part, that written procedures be established, implemented, and maintained for implementing the fire protection program. Contrary to TS 5.4.1, during a walkdown of fire protection procedure SC-3.16.1, the inspector noted that the procedure contained incorrect operating instructions for the diesel-driven and motor-driven fire pumps. Because this violation was determined to be of very low safety significance, it is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy: **NCV 05000244/2005005-01: Failure to Maintain Fire Protection Procedures as Required by Technical Specification 5.4.1.** This violation is in the Ginna corrective action program as condition report (CR) 2005-6223, "Enhancements to Fire Procedures SC-3.16.1 and SC-3.16.2."

## 1R11 <u>Licensed Operator Regualification Program</u> (71111.11 - 1 sample)

## Resident Inspector Quarterly Review

## a. Inspection Scope

On October 18, 2005, the inspectors observed a licensed operator simulator scenario. The test observed was scenario ES3123-12, "Steam Generator Tube Rupture." 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."

b. Findings

No findings of significance were identified.

- 1R12 <u>Maintenance Effectiveness</u> (71111.12 2 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:

- The lubrication process and schedule for the bearings on the control rod drive motor-generator sets. Lubrication activities were conducted on November 28, 2005, under Work Order 20502964.
- Data recorders in the control room have caused intermittent operator distractions over the long term, most conspicuously RK-28A and RK-28B. Corrective actions taken and planned for these systems, as well as long term plans to improve recorder reliability, were reviewed.
- b. Findings

No findings of significance were identified.

- 1R13 <u>Maintenance Risk Assessments and Emergent Work Control</u> (71111.13 5 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 "A" diesel generator (October 18-21, 2005)
- Troubleshooting and repair of Bus 18 diesel generator supply breaker (October 20-22, 2005)
- Planned maintenance on the "B" diesel generator (November 8-11, 2005)
- Divers cleaned and inspected service water pump inlet strainers (December 7, 2005)
- Unplanned maintenance on the "B" diesel generator exciter cabinet (December 21, 2005)
- b. Findings

No findings of significance were identified.

- 1R14 Operator Performance During Non-routine Evolutions and Events (71111.14 1 sample)
- c. Inspection Scope

For the non-routine event described below, the inspectors reviewed operator logs, plant computer data, the UFSAR, and station procedures to determine what occurred and how the operators responded, and to determine if the response was in accordance with plant procedures.

- On October 31, 2005, at 8:30 p.m., plant operators entered ER-SC.4, "Earthquake Response Plan," when they were notified by the plant security force and station workers who lived in the Ginna area that unexplained ground tremors had occurred. No ground motion was detected by the plant accelerograph. An inspection of the plant by plant operators revealed no visible damage, and the station exited ER-SC.4 the following day at 5:30 a.m. On November 2, 2005, Ginna personnel confirmed that the ground tremors had been caused by a small earthquake that was centered in Ontario, New York, and had registered 2.6 on the Richter scale. The inspectors toured portions of the plant on November 1, 2005, and confirmed the ground tremors did not have an adverse effect on the plant. Further, the inspectors confirmed that the intensity of the earthquake was below the detection level for installed plant seismic monitoring equipment.
- b. Findings

No findings of significance were identified.

### 1R15 Operability Evaluations (71111.15 - 3 samples)

#### c. Inspection Scope

The inspectors reviewed three 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 2005-5364, Evaluate Control Room Envelope Potential Issues Associated
  With Water Migration
- CR 2005-6352, Review of Past-Operability and Current Operability of Emergency Diesel Generators (EDG) with Respect to Failed Bolts Found in EDG "B" Bus Work in EDG "B" Vault
- CR 2005-5769, FT-116A, Reactor Coolant Pump (RCP) "B" Seal Injection Flow Failed High
- b. Findings

No findings of significance were identified.

- 1R16 <u>Operator Workarounds</u> (71111.16 1 cumulative sample and 1 selected sample)
- c. Inspection Scope

The inspectors conducted a control room walkdown, interviewed operators, toured the plant with auxiliary operators, and reviewed the Ginna computerized maintenance tracking database, to verify longstanding degraded conditions had been assessed as required by A-52.16, "Operator Work-Around & Challenge Control." During the plant and control room walkdowns, the inspectors examined maintenance identification tags, local operating instructions, operator aids, temporary alterations and equipment that had been placed out-of-service. The inspectors also reviewed Ginna-identified operator workarounds and operator challenges, and selected corrective action reports. In addition, the inspectors reviewed the November 15, 2005, list of "Operator Workarounds and Challenges."

As part of the review, the inspectors evaluated the operators' ability to implement normal, off-normal, and emergency operating procedures with the existing equipment deficiencies. The inspectors also determined whether the functional capability of a system or an operator response to an initiating event would be adversely affected. Lastly, the inspectors evaluated the cumulative and synergistic effects of the identified operator workarounds to determine whether there was an effect on multiple mitigating systems. This review constituted one sample of cumulative review of operator workarounds.

As part of this review, the inspectors selected the following Ginna-identified degraded condition for additional review:

- Additional instructions provided to operators regarding how to operate the blocking water system for the auxiliary feedwater trains to prevent service water introduction into the steam generators.
- b. Findings

No findings of significance were identified.

- 1R19 <u>Post-Maintenance Testing</u> (71111.19 5 samples)
- a. Inspection Scope

The inspectors observed portions of 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-12.1, Emergency Diesel Generator "A" (October 21, 2005)
- PT-2.1Q, Safety Injection System Quarterly Test (October 31, 2005)
- Work Order (WO) 20504855, Remove and Replace Boric Acid Transfer Pump "B" (November 18, 2005)
- WO 20401795, Replace 966A, Pressurizer Steam Space Sample Isolation Valve (December 16, 2005)
- WO 20505076, Replace Diesel Generator "A" Prelube Pump (December 19, 2005)
- g. <u>Findings</u>

No findings of significance were identified.

- 1R22 <u>Surveillance Testing</u> (71111.22 3 samples)
- a. Inspection Scope

The inspectors witnessed the performance and/or reviewed test data for the following surveillance tests that are associated with selected risk-significant systems, structures, and components (SSCs) to verify that 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.

- PT-36Q-D, Standby Auxiliary Feedwater Pump "D" Quarterly (November 8, 2005)
- S-12.4, Reactor Coolant System (RCS) Leakage Surveillance (November 7, 2005)
- M1306, Ginna Station Material Condition Inspection Program (October 28, 2005)

## b. Findings

No findings of significance were identified.

- 1R23 <u>Temporary Plant Modifications</u> (71111.23 3 samples)
- c. Inspection Scope

The inspectors reviewed the following temporary plant modifications and temporary alterations 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. If applicable, the inspectors reviewed the post-installation test results to verify whether the actual impact of the change had been adequately demonstrated by the test. The temporary modifications and alterations were reviewed by the inspectors to verify they were installed in conformance with the instructions contained in procedure IP-DES-3, "Temporary Modifications," and A-58, "Temporary Alterations."

- Temporary Modification 2005-0021, Temporary Leak Repair to Floor Drain Pipe
- Temporary Modification 2005-0026, Bypass of TT2139 on RK-28B
- Temporary alteration performed under WO 20504026 to install a temporary fan in the Relay Room for plant process computer system (PPCS) cabinets
- b. Findings

No findings of significance were identified.

## **Cornerstone: Emergency Preparedness**

- 1EP4 <u>Emergency Action Level and Emergency Plan Changes</u> (71114.04 1 sample)
- c. Inspection Scope

An in-office inspection that reviewed recent changes to the emergency plan and implementing procedures was conducted on December 27, 2005. These changes were

made in accordance with 10 CFR 50.54(q), which the licensee had determined did not result in a decrease in effectiveness to the emergency plan and concluded that the changes continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. During this inspection, the inspector conducted a sampling review of the changes which could potentially result in a decrease in effectiveness. This review does not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4, and the applicable requirements in 10 CFR 50.54(q) were used as reference criteria.

d. <u>Findings</u>

No findings of significance were identified.

- 1EP6 Drill Evaluation (71114.06 1 sample)
- a. Inspection Scope

On October 18, 2005, the inspectors observed a licensed operator simulator scenario that included a limited test of the Ginna emergency response plan. Scenario ES3123-12, "Steam Generator Tube Rupture," was observed. During the exercise, the crew did not successfully classify the event. The inspectors verified that the incorrect classification would be counted as an exercise failure in the Ginna "Drill/Exercise Performance" performance indicator.

b. Findings

No findings of significance were identified.

## 2. RADIATION SAFETY

## **Cornerstone: Occupational Radiation Safety**

## 2OS1 Access Control to Radiologically Significant Areas (71121.01 - 4 samples)

a. Inspection Scope

The inspector reviewed radiological work activities and practices and procedural implementation during observations and tours of the facilities. In addition, the inspector reviewed procedures, records, and other program documents to evaluate the effectiveness of the licensee's access controls to radiologically-significant areas. This inspection activity represents the completion of four (4) samples relative to this inspection area (i.e., inspection procedure sections 02.06.a and b and 02.07.a and b) and fulfills the annual inspection requirements.

## Radiation Worker Performance (02.06.a and b)

During job performance observations, the inspector observed radiation worker performance with respect to stated radiation protection work requirements. The inspector determined that the radiation workers were aware of the significant radiological conditions in their workplace and of the radiological work permit (RWP) controls/limits in place and that their performance took into consideration the level of radiological hazards present. Also, the inspector reviewed a number of radiological problem reports during this inspection cycle in which the cause of the event was due to radiation worker errors. The inspector did not identify any significant observable pattern traceable to a similar cause. This perspective matched the corrective action approaches taken by the licensee to resolve the reported problems. The inspector discussed the corrective actions planned or taken with cognizant radiation protection supervision.

## Radiation Protection Technician Proficiency (02.07.a and b)

During job performance observations, the inspector observed radiation protection technician performance with respect to the radiation protection work requirements. The inspector determined that the radiation protection technicians were aware of the radiological conditions in their workplace and the RWP controls/limits, and that their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities. Also, the inspector reviewed a number of radiological problem reports during this inspection cycle in which the cause of the event was due to radiation protection technician error. The inspector determined that there was no significant observable pattern traceable to a similar cause. This perspective matched the corrective action approach taken by the licensee's management to resolve the reported problems.

## Related Activities

The inspector toured the radiologically-controlled area (RCA) several times. During these tours, the inspector observed radiation workers and a radiation protection technician during work activities on ventilation exhaust fans on the top elevation of the intermediate building and on a charging pump on the bottom elevation of the auxiliary building. Also, during these tours of the radiologically-controlled area, the inspector examined and verified the adequacy of the postings, barriers, and locking for the selected locations which were examined.

The inspector reviewed a selection of documents (as cited in the Attachment to this Enclosure) to evaluate the adequacy of radiological controls. These documents were compared to criteria contained in 10 CFR 19.12, 10 CFR 20 (Subparts D, F, G, H, I, and J), technical specifications, and plant procedures.

## b. Findings

No findings of significance were identified.

### 2OS2 ALARA Planning and Controls (71121.02 - 1 sample)

#### a. Inspection Scope

The inspector reviewed the effectiveness of the licensee's program to maintain occupational radiation exposure as low as reasonably achievable (ALARA). This inspection activity represents the completion of one (1) sample relative to this inspection area (i.e., inspection procedure section 02.08.a) and fulfills the biennial inspection requirements.

#### Problem Identification and Resolutions (02.08)

The inspector reviewed the licensee's self assessments and audits related to the ALARA program. The inspector determined that the scope and frequency of Ginna's overall audit program (for all applicable areas under the Occupational Cornerstone) met the requirements of 10 CFR 20.1101. Specifically, the inspector examined the procedure, RPA-SELF-ASSESSMENT, Rev. 1, "Radiation Protection Self-Assessment," and the "Radiation Protection Program On-Going Self-Assessment, 2004 Annual Report," dated March 8, 2005, in addition to other self-assessment and quality assurance documents (as listed in the Attachment to this Enclosure).

#### **Related Activities**

The inspector examined a selection of documents (as cited in the Attachment to this Enclosure) for regulatory compliance and for adequacy of control of radiation exposure. These documents were compared against criteria contained in 10 CFR 20.1101 (radiation protection programs), 10 CFR 20.1701 (use of process or other engineering controls), and plant procedures.

b. Findings

No findings of significance were identified.

#### 2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03 - 1 sample)

a. Inspection Scope

The inspector reviewed the program for health physics instrumentation and protective equipment to determine the accuracy and operability of the instrumentation and of the personnel protective equipment. This inspection activity represents the completion of one (1) sample relative to this inspection area (i.e., inspection procedure section 02.05) and fulfills the biennial inspection requirements.

#### Radiation Protection Technician Instrument Use (02.05)

The inspector verified the calibration expiration dates and source response check currency on radiation detection instruments staged for use. The inspector reviewed the

procedures used to implement the daily response checks for continuous-use and shiftuse radiation detection instrumentation. The inspector reviewed radiation survey records and interviewed radiation protection technicians in order to check for appropriate instrument selection and for self-verification of an instrument's operability prior to use.

## Related Activities

The inspector examined a selection of documents (as cited in the Attachment to this Enclosure) for regulatory compliance and adequacy. The documents were compared against criteria contained in 10 CFR 20.1501, 10 CFR 20 Subpart H, technical specifications, and plant procedures.

b. Findings

No findings of significance were identified.

## 4. OTHER ACTIVITIES

## 4OA2 Identification and Resolution of Problems

.1 <u>Review of Items Entered into the Corrective Action Program</u> (71152)

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 all items entered into the licensee's corrective action program. This was accomplished by reviewing paper copies of each new CR, attending daily screening meetings, and accessing Ginna's computerized databases.

- .2 <u>Semi-Annual Review to Identify Trends</u>
- a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of the licensee's corrective action program (CAP) at Ginna to identify trends that could indicate the existence of more significant safety issues. To perform the review, the inspectors examined CRs generated between May 1 and November 17, 2005, quality assurance audit reports completed during the third and fourth quarters of 2005, NRC inspection reports from the first, second, and third quarters of 2005, NRC performance indicators, Ginna site performance indicators and power history, and licensee event reports generated in the second, third and fourth quarters of 2005. The inspectors also compared NRC inspection results with the results of the nuclear assessment department's Tri-Annual Analysis Report for May through August 2005.

#### b. Assessment and Observations

The inspectors did not identify adverse performance trends not already documented in the Ginna corrective action program. Ginna's corrective action process is currently addressing trends in inadequate use of human performance tools, poor procedure and work package quality, and failure to adhere to procedure and work package guidance. These areas contributed significantly to recent performance at Ginna, and were an important part of the NRC's assessment of Constellation's performance at Ginna in 2005.

## .3 Identification and Resolution of Problems - Occupational Radiation Safety (71121)

## a. Inspection Scope

The inspector selected eleven issues identified in the CAP for detailed review CR Numbers 2005-4413, -5447, -5526 thru -5532, -6036, and -6150). These issues were associated with a failed portal monitor calibration, a radiation boundary violation, seven national voluntary laboratory accreditation program deficiencies, work activity above eight feet without notification to radiation protection, and a ventilation back flow issue, respectively. The documented reports for the issues were reviewed to ensure that the full extent of the issues were identified, appropriate evaluations were performed, and appropriate corrective actions were specified and prioritized.

#### b. Findings

No findings of significance were identified.

## 40A5 Other Activities

(<u>Closed</u>) NRC Unresolved Item (05000244/2005002-01) Spent Fuel Pool Cooling Heat Exchanger Flow Exceeds the Values Listed in the FSAR

NRC inspection report 05000244/2005002 documented an inspector observation that Ginna personnel routinely operated the spent fuel cooling system at flow rates that exceeded the heat exchanger design values contained in the plant UFSAR. Specifically, flow through the tube side of the "B" spent fuel pool (SFP) heat exchanger was 1300 gallons per minute (gpm) or 100 gpm above the 1200 gpm maximum design flow rate listed in Table 9.1-4 of the plant Updated Final Safety Analysis Report (UFSAR). Similarly, flow through the "A" spent fuel pool heat exchanger was typically 740 gpm or 150 gpm greater than the UFSAR design limit. This condition was documented in Action Report 2005-0242, "A and B SFP Heat Exchanger Flow Rates." A subsequent Ginna engineering analysis of this condition concluded that although the heat exchanger flow rates had exceeded the UFSAR design values, this condition would not result in premature heat exchanger failure because both heat exchangers had excessive design margin. This conclusion was supported, in part, by recent eddy current testing that was performed on both heat exchangers, which indicated the heat exchanger tubes were not exhibiting excessive wear. As a result, Ginna concluded the heat exchangers can be

safety operated at the higher flow rates. Accordingly, Ginna plans to update the UFSAR to indicate the new design flow rates. The inspectors reviewed the Ginna analysis and concluded it provided a reasonable basis to support operation of the heat exchangers at the higher spent fuel pool system flow rates. The failure to operate the spent fuel pool heat exchangers within the UFSAR design limits was a finding of minor safety significance that is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy.

## 4OA6 Meetings, Including Exit

#### Exit Meeting Summary

Periodically during the inspection period, the resident inspector staff and visiting inspectors met with Ginna management to discuss inspection results. For example, on December 2, 2005, Jack McFadden met with Mr. David Holm, and other members of his staff who acknowledged the inspection results. On January 13, 2006, the resident inspectors presented the inspection results to Ms. M. 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.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## A-1

## SUPPLEMENTAL INFORMATION

## **KEY POINTS OF CONTACT**

#### Licensee personnel

S. Adams	Manager of Operations
D. Blankenship	Director, Radiation Protection
M. Gallaway	Manager, Ginna Maintenance
E. Groh	Assistant Operations Manager (Shift)
D. Haney	General Supervisor, Mechanical Maintenance
T. Harding	Senior Licensing Engineer
D. Holm	Plant Manager
J. Pacher	General Supervisor, System Engineering
R. Whalen	Manager Nuclear Engineering Services
G. Wrobel	Nuclear Safety and Licensing Manager
J. Yoe	Manager, Integrated Work Management
J. Zulawski	General Supervisor, Integrated Maintenance (FIN)

# LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

**Opened and Closed** 

- 05000244/2005005-01 N
- NCV Failure to Maintain Fire Protection Procedures as Required by Technical Specification 5.4.1. (Section 1R05)

Closed

05000244/2005002-01 URI Asse

URI Assess the significance of spent fuel pool flow through the heat exchangers exceeding the values listed in the UFSAR. (Section 4OA5)

Discussed

None

## A-2

## LIST OF DOCUMENTS REVIEWED

## Section 1R01: Adverse Weather Protection

#### Procedures

A-54.4.1	Cold Weather Walkdown Procedure
1306.1	Ginna Station, Maintenance Department Winterizing Inspection Program

## Condition Reports

2005-5248	TB Lower Crank Out Windows
2005-5768	Cold Weather Work Orders Delayed Beyond Late End Date
2005-6234	Intermediate Building Flooding Alarms
2005-6599	Cold Weather Walkdown A-54.4.1 Doesn't Address IB Pneumatic Vent Louvers

## Section 1R04: Equipment Alignment

#### Drawings

33013-1239	Diesel Generator - A (Sheets 1 and 2) P& ID Drawing
33013-1265	Chemical and Volume Control System Charging
33013-1266	Auxiliary Building Chemical and Volume Control System Boric Acid

## Condition Reports

2005-6928	Missing Pipe Support Clamp on RMW Piping
2005-6929	Near Miss Falling Object
2005-6930	N2 System Tubing Support Clamp Missing

## Section 1R05: Fire Protection

## **Procedures**

- SC-3.16.1 Operating Instructions-Fire Service Water Service Pumps, Supply Piping and Tank
- SC-3.16.2 Control Room Fire Panel (Old System Panel)

## Condition Reports

- 2005-6223 Enhancements to Fire Procedures SC-3.16.1 and SC-3.16.2
- 2005-6234 Intermediate Building Flooding Alarms
- 2005-6739 Scaffold Permit Not Signed

## Section 1R12: Maintenance Rule Implementation

#### Condition Reports

2005-5678 B1 Battery Charger Failed, No Output Indicated

#### Work Orders

20504229	Temp Mod 2005-0026 to Bypass TT2139
20503626	Locate and Repair TT-2185
20503462	RK28B Spurious Alarm Pt. 17
20503460	Remove and Repair RK28B
20502232	RK28B Printing Error Code After Every Point
20500906	Repair RK28B
20404294	Point 15 on RK28A is Erratic

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

#### Work Orders

20502747	Perform PM on 52/EG1A2 - Emergency Diesel Generator Breaker
20504597	52/EG1A2 Failed to Close During the White Light Test
20502367	Divers Clean and Inspect Service Water Pump Strainers
20505386	Hot Connection Point on "B" EDG Exciter Cabinet

#### Condition Reports

52/EG1A2 Breaker Failure to Close During White Light Testing
Stripped Threaded Socket on D/G B Oil Pressure Timer
Megger Reading was Found Outside Acceptance Criteria on KDG01B
Loose Connection at Terminal for CR54 and CR51 Diodes

## Safety Evaluations

PSAER 2001-0022	Battery Room Flooding
PSAER 2001-0027	Control Room Door 51

## Section 1R14: Personnel Performance During Non-routine Plant Evolutions

## Condition Reports

2005-6142 Entered ER-SC.4 Due to Possible Seismic Event

A-4

## Section 1R15: Operability Evaluations

#### Condition Reports

2005-5769	FT-116A, RCP "B" Seal Injection Flow Failed High
2005-6352	Broken Bolt Found on "B" D/G Bus Bar

### Work Orders

20504811Replace the "A" EDG Electrical Bus Bar Connection Bolts20303226Troubleshoot and Repair FT-116A Loop 'B' RCP Seal Flow

## Section 1R16: Operator Work-Arounds

#### Procedures

A-52.16, "Operator Work-Around & Challenge Control

#### Documents

Operations Self-Assessment of Aggregate Impact of Off-Normal Conditions for 3<sup>rd</sup> Quarter 2005

## Section 1R19: Post Maintenance Testing

Procedures

PT-12.1	Emergency Diesel Generator "A"
PT-2.1Q	Safety Injection System Quarterly Test
IP-FFD-7	Overtime Work Policy
PT-2.5.4	AOV's Quarterly Surveillance
11.23	Worthington Double Helical Rotary Pump Inspection and Maintenance

<u>Drawings</u>

33013-1262 Safety Injection and Accumulators (Sheets 1 and 2) P& ID Drawing

#### Condition Reports

2005-6350	"B" EDG Lube Oil Temp Switch Out of Tolerance
2005-6355	EDG "B" Dehumidifier Not Functioning
2005-6376	Smoke Coming from "B" Diesel Generator
2005-6452	Many Workers Exceeded Overtime Rules While Working on "B" D/G
2005-6662	Three Performance Monitoring Personnel Worked 22 Hours Straight During "B"

- LCO Maintenance
- 2005-6641 Slight Oil Leak on Diesel Generator 'A' Prelube Pump

## Work Orders

20504855	Remove and Replace Boric Acid Transfer Pump 'B'
20401795	Replace 966A, Pressurizer Steam Space Sample Isolation Valve
20505076	Replace Diesel Generator 'A' Prelube Pump

## Section 1R22: Surveillance Testing

## Procedures

PT-36Q-D	Standby Auxiliary Feedwater Pump D- Quarterly
M1306	Ginna Station Material Condition Inspection Program
S-12.2	Operator Action in the Event of Indication of Significant Increase in Leakage
S-12.4	RCS Leakage Surveillance Record Instructions

## Condition Reports

2005-6367	Evaluate Relocation of Condensate Makeup Line Vent Vale 9674
2005-6306	Items Mistakenly Added to Procedure S-12.4 Rev 49

## Section 1EP4: Emergency Action Level and Emergency Plan Changes

## **Procedures**

Nuclear Emergency Response Plan, Rev 25

- EPIP 1-1 Unusual Event, Rev 8
- EPIP 1-2 Alert, Rev 9
- EPIP 1-3 Site Area Emergency, Rev 10
- EPIP 1-4 General Emergency, Rev 12
- EPIP 1-5 Notifications, Rev 67 & 68
- EPIP 1-6 Site Evacuation, Rev 20
- EPIP 1-7 Accountability of Personnel, Rev 11
- EPIP 1-9 Technical Support Center Action, Rev 31
- EPIP 1-18 Discretionary Actions for Emergency Conditions, Rev 10
- EPIP 2-1 Protective Action Recommendations, 23 & 24
- EPIP 3-1 Emergency Operations Facility (EOF) Activation and Operations, Rev 31
- EPIP 3-2 Engineering Support Center, Rev 13
- EPIP 3-4 Emergency Termination and Recovery, Rev 14
- EPIP 4-3 Accidental Activation of Ginna Emergency Notification System Sirens, Rev 18
- EPIP 4-8 Testing of the Ginna Sirens from the Technical Support Center, Rev 8
- EPIP 4-10 Silent Testing of the Ginna Sirens from the County Activation Points, Rev 8
- EPIP 5-1 Offsite Emergency Response Facilities and Equipment Periodic Inventory Checks and Tests, Rev 33
- EPIP 5-2 Onsite Emergency Response Facilities and Equipment Periodic Inventory Checks and Tests, Rev 37
- EPIP 5-7 Emergency Organization, Rev 50

EPIP 5-9 Testing the Off Hours Call-In Procedure and Quarterly Telephone Number Check, Rev 13

## Section 20S1: Access Control to Radiologically Significant Areas

## Procedures **Procedures**

Procedure A-1, Rev. 073, Radiation Control Manual Procedure A-1.8, Rev. 022, Radiation Work Permits Procedure RP-SUR-RADIATION, Rev. 4, Performance of Radiation Surveys Procedure RP-JC-JOBCOVERAGE, Rev. 007, Job coverage Procedure IP-CAP-1, Rev. 022, Condition Reporting Radiation survey information for RWP 050001, Rev. 0, Performance of routine maintenance and tests in non-high-radiation areas, for October 24 thru November 29, 2005 Focused Self-Assessment No. 2005-0076, Storage of radioactive material atGinna Station, July 01 - 25, 2005 Assessment Report No. 2005-0010, Quality Performance Assessment, Auxiliary Building Radiological Surveys and Contamination Boundary Control, November 28, 2005

## Section 2OS2: ALARA Planning and Controls

## **Documents and Procedures**

Procedure RPA-QA, Rev. 1, Radiation Protection Quality Assurance Program Procedure RPA-SELF-ASSESSMENT, Rev. 1, Radiation Protection Self-Assessment Ginna Station post-outage collective dose tracking Ginna Station ALARA Five Year Plan as of December 2, 2005 Station ALARA Committee meeting minutes for September 12, 2005 and October 17, 2005 Radiation Protection Program On-Going Self-Assessment, 2004 Annual Report, March 8, 2005 Draft Self-Assessment of ALARA Draft Radiation Protection Program Health Report, Third Quarter 2005 Quality Assurance Program for Station Operation, Rev. 32 Quality & Performance Assessment of Ginna Nuclear Power Plant, Report for Third Quarter 2005, July 1 through September 30, 2005, dated October 3, 2005

Quality & Performance Assessment Audit Report RPP-05-01-G, RadiationProtection, October 10 - November 1, 2005, dated November 17, 2005

## Section 20S3: Radiation Monitoring Instrumentation

## **Documents and Procedures**

Procedure INS-C-BETA, Rev. 2, Determining Correction Factor for Beta Survey Instruments Procedure INS-C-LIS, Rev. 2, Calibration of Survey Instruments Used by LISPersonnel Procedure INS-O-METERS, Rev. 7, Operation of Portable Survey Meters Procedure INS-JC-DAILY-SRC-CHKS, Rev. 22, Daily Instrument Source Checks Procedure RP-INS-M&TE, Rev. 7, Radiation Protection Measurement and Test Equipment Control

Attachment

Routine daily source check log for continuous /daily use instruments Source check log and sign-out sheet for shift-use instruments On-Site Assessment Report for National Institute of Standards and Technology/National Voluntary Laboratory Accreditation Program, conducted on September 26-27, 2005, dated September 27, 2005

## Section 4OA2: Identification and Resolution of Problems

## Condition Reports

2005-5525 STA Inattentiveness to Control Room Operations

## **Documents**

Nuclear Assessment Tri-Annual Report - 2nd Trimester, 2005 Assessment Report No. 2005-0004, Management Involvement in the Corrective Action Process G-ORS-9, "Action Report (AR) Trending Sheet, Causal Department Codes and Cause Codes" IP-CAP-5, "Event Trending Process" IP-CAP-1, "Condition Reporting"

## Section 40A5: Other Activities

## Action Report

2005-0242 "A" and "B" SFP Heat Exchanger Flow Rates

# LIST OF ACRONYMS

ABM	Auxiliary Building Mezzanine
AC	Alternating Current
ADAMS	Agency-Wide Documents Access and Management System
ALARA	As Low As Reasonably Achievable
AR	Action Report
CAP	Corrective Action Program
CFR	Code of Federal Regulation
CR	Condition Report
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
IB	Intermediate Building
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NCV	Non-Cited Violation
NRC	U.S. Nuclear Regulatory Commission
OA	Other Activities
OS	Occupational Radiation Safety
P&ID	Piping and Instrument Drawing
PARS	Publicly Available Records
RCA	Radiologically Controlled Area
RCS	Reactor Coolant System
RP	Radiation Protection
RTP	Rated Thermal Power
RWP	Radiation Work Permit
SAF	Standby Auxiliary Feedwater
SB	Service Building
SDP	Significance Determination Process
SFP	Spent Fuel Pool
SH	Screenhouse
SSC	Structures, Systems or Components
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item

## A-8