January 31, 2007

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 05000244/2006005

Dear Mrs. Korsnick:

On December 31, 2006, the US Nuclear Regulatory Commission (NRC) completed an inspection at your R. E. Ginna facility. The enclosed integrated inspection report documents the inspection results, which were discussed on January 26, 2007 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 two findings of very low safety significance (Green) of which one was determined to involve a violation of NRC requirements. Additionally, two licensee-identified violations, which were determined to be of very low safety significance are listed in this report. However, because of the very low safety significance, and because they were entered into your corrective action program (CAP), the NRC is treating the three violations as non-cited violations (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at R.E. Ginna Nuclear Power Plant. In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in

the 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 http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Brian J. McDermott, Chief
Projects Branch 1
Division of Reactor Projects

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

Enclosure: Inspection Report 05000244/2006005
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.:	05000244/2006005
Licensee:	Constellation Energy, R.E. Ginna Nuclear Power Plant, LLC
Facility:	R. E. Ginna Nuclear Power Plant
Location:	Ontario, New York
Dates:	October 1, 2006 through December 31, 2006
Inspectors:	K. Kolaczyk, Senior Resident Inspector M. Marshfield, Resident Inspector T. Burns, Reactor Inspector E. Gray, Senior Reactor Inspector J. Kulp, Reactor Inspector K. Mangan, Senior Reactor Inspector T. Moslak, Health Physicist J. Nick, Senior Health Physicist R. Ragland, Jr., Senior Health Physicist M. Snell, Reactor Engineer
Approved by:	Brian J. McDermott, Chief Projects Branch 1 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000244/2006-005; 10/01/2006 - 12/31/2006; R. E. Ginna Nuclear Power Plant; Refueling and Other Outage Activities, Other Activities.

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

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a non-cited violation (NCV) of Technical Specification (TS) 3.5.3, "Emergency Core Cooling Systems" (ECCS) due to lead blankets covering the 'B' containment recirculation sump grating with the plant in the Hot Standby Mode. As a result of the covered sump grating, the recirculation function was degraded and the ECCS was not operable for approximately six hours while the plant transitioned to the Cold Shutdown Mode.

This finding is more than minor because it is associated with the Mitigating System Cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance (Green) by using Phase 1 Appendix G, of the SDP. The finding screened to Green since the ECCS remained available to supply high and low pressure injection into the reactor coolant system if needed. This finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna did not ensure all of the lead blankets had been removed from the 'B' containment sump grating when the error was initially identified. (Section 1R20)

Cornerstone: Barrier Integrity

Green. The inspectors identified a finding in that Ginna did not adequately maintain the containment penetration cooling system as described in the Updated Final Safety Analysis Report (UFSAR) and system drawings to ensure it would be capable of performing its intended function in a reliable manner.

This finding is more than minor because it is associated with the Barrier Integrity Cornerstone and affects the cornerstone objective of providing reasonable assurance that the physical design barriers (fuel cladding, RCS, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was determined to be of very low safety significance (Green) using the Phase 1 screening of

the SDP. The finding screened to Green since it did not represent an actual open pathway in the physical integrity of the reactor containment. This finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna personnel did not identify the containment penetration cooling system deficiencies issues during periodic system walkdowns. (Section 4OA5)

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by Ginna, have been reviewed by the inspectors. Corrective actions taken or planned by Ginna have been entered into Ginna's Corrective Action Program (CAP). These violations and corrective action(s) are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Ginna began the period at 100 percent power. The plant was shutdown on October 8, 2006, for a refueling outage (RFO) and restarted on November 2, 2006. On November 17, 2006, Ginna achieved its new 100 percent power level and the plant operated that level for the rest of the period of this report except for short durations for testing or maintenance.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R02 Evaluations of Changes, Tests, or Experiments (71111.02 - 1 sample)

a. Inspection Scope

The inspectors performed an in-office review of one safety evaluation (SE), the core reload analysis, which was performed to meet the minimum sample size for inspection procedure (IP) 7111102. The SE reviewed was in the Barrier Integrity cornerstone. The selected SE was reviewed to verify that changes to the facility or procedures as described in the USFAR were reviewed and documented in accordance with 10 CFR 50.59, and that the safety issues pertinent to the change were properly resolved or adequately addressed. The review also included the verification that Ginna had appropriately concluded that the change could be accomplished without obtaining a license amendment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04 - 3 samples)

Partial Walkdown

Inspection Scope

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

- On October 9, 2006, the inspectors completed a walkdown of the Low Temperature Overpressure Protection (LTOP) system when the system was placed in service at the start of an RFO. This system was examined because it provides the primary means of overpressure protection during the cooldown phase in preparations for refueling.

- On October 16, 2006, the inspectors conducted a walkdown of both trains of the spent fuel pool cooling system, while the systems were required to be operable to facilitate refueling activities.

- On October 25, 2006, the inspectors completed a walkdown of the Reactor Coolant Pump (RCP) Lube Oil Collection system while the system was available during an RFO for a thorough review. This system was chosen because it is located in an area inaccessible during normal plant operation and it provides protection against possible fires caused by lube oil spray in the RCP cubicles and loop areas below the pumps.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05 - 8 samples)

a. Inspection Scope

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

- 'A' Diesel Generator Room (Fire Area EDG1A);
- 'B' Diesel Generator Room (Fire Zone EDG1B);
- Containment Operating Floor (Fire Zone RC-1);
- Containment Intermediate Floor (Fire Zone RC-2);
- Containment Basement Floor (Fire Zone RC-1);
- 'A' Battery Room, (Fire Area BR1A);
- 'B' Battery Room, (Fire Area BR1B); and
- Air Handling Room, (Fire Zone AHR).

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - 1 internal sample)

a. Inspection Scope

The inspectors evaluated Ginna's internal flood protection measures for the 'A' and 'B' battery and the control air handling rooms. To perform this evaluation, the inspectors reviewed the Ginna UFSAR, design drawings, and the preventive maintenance programs for the flood protection equipment that is located in these areas. The inspectors also toured these areas and examined, to the extent practicable, the condition of the sumps, and flood mitigation equipment.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities (71111.08 - 5 samples)

a. Inspection Scope

The inspector observed samples of activities in process and reviewed selected additional samples of completed nondestructive examination (NDE) and repair/replacement activities. The sample selection was based on the objectives and risk priority of those components and systems where degradation would result in a significant increase in risk of core damage. The observations and documentation reviews were performed to verify that in-service inspection (ISI) activities were performed in accordance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements. The inspector reviewed a sample of inspection reports and condition reports (CRs) initiated as a result of problems identified during ISI examinations and selected plant modifications. Also, the inspectors evaluated the effectiveness in the resolution of problems identified during selected ISI activities. The inspectors reviewed Ginna's boric acid corrosion control program walkdowns, engineering evaluations and related corrective actions.

The inspector reviewed the examination reports for four types of NDE activities, ultrasonic testing (UT), radiography, visual examination (VT) and liquid penetrant examination (PT). These samples included inspection of welding activities on a pressure boundary and the reexamination by PT of areas of potential degradation as followup from the previous operating cycle in accordance with the ASME Code.

The inspector observed the video records of VT activities on the upper and lower reactor pressure vessel (RPV) to verify the effectiveness of the examiner, process, and equipment to identify degradation of risk significant systems, structures and components (SSCs) and to evaluate the activities for compliance with the requirements of ASME Section XI of the Boiler and Pressure Vessel Code.

The inspector reviewed the examination reports of four UT tests, comparing the test parameters to the applicable UT procedure and the ASME Code and Performance

Demonstration Initiative (PDI) procedures. The welds sampled included the pressurizer reducer-to-pipe (surge line), summary I014000, a steam generator shell to tubesheet weld, summary I071400, a High Pressure Safety Injection (HPSI) system pipe-to-elbow weld, summary I161140, and a Feedwater (FW) system elbow-to-safe end weld, summary I099900.

The PT test reports for five dissimilar metal pressurizer line welds made with stainless steel were reviewed as followup to previous examinations made over the 2000 to 2005 period to confirm surface condition adequacy. These welds were not subject to the MRP-139 examination/mitigation program applicable to Alloy 82/182 weld material.

The inspector reviewed the modification work packages for the replacement of the feedwater feed regulation valves and reviewed the radiographs for the FW-AOV-4269 welds 1 and 2.

The inspector noted that eddy current examination of the Ginna Station Steam Generator tubes were not required or performed during the 2006 RFO.

Additionally, the inspector identified no items with recordable indications were accepted by Ginna for continued service.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

On November 28, 2006, the inspectors observed a licensed operator simulator scenario. The test observed was scenario ES3123-06, "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 Ginna procedure OTG-2.2, "Simulator Examination Instructions" and assessed how well the Ginna simulator evaluators complied with the guidance in that document.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12 - 1 sample)

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 PI&R 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 issue was reviewed:

- Failure of the power supply fuse to the safety injection system flow transmitter, FT-925, during calibrations. The repair activities were conducted on October 18, 2006.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 4 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 'B' Condensate Water Storage Tank (December 6, 2006);
- Planned maintenance to hydrolase and Instacote the Spent Fuel Pool Slot Area (Week of December 4, 2006);
- Planned maintenance on the 'A' coolant charging pump (December 20, 2006); and;
- Planned maintenance on the 'B' diesel generator fuel oil system (December 27, 2006).

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 5 samples)

a. Inspection Scope

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

- CR-2006-005061, "Reactor Cavity Boot Seal (N_2 Blanket) Hose Connection was Fabricated Using Brass Fittings Rather than Stainless Steel";
- CR-2006-005934, "'B' RCP #3 Seal Leakage";
- CR-2006-005499, "Cavity Water In-leakage through Crack in Containment Floor";
- CR-2006-006472, "R-11 Monitor Filter Paper Failure"; and
- CR-2006-006341, "Turbine Driven Auxiliary Feed Water Pump Rotation Past Operability."

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 7 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 TS requirements. The inspectors reviewed the recorded test data to determine whether the acceptance criteria were satisfied. The following post-maintenance testing activities were reviewed:

- Sump 'A' Level Transmitter CPI-LT-2044, Calibration of Containment Sump 'A' Level Transmitter, LT-2044 (October 10, 2006);
- SM-2004-0057.4, Feedwater Isolation Valve Electrical Work at AOV 3994 and post modification testing after the installation of fast closing feedwater isolation valves required for Extended Power Uprate (EPU) (October 27, 2006);
- PT-2.6.1, Main Steam Atmospheric Relief Valve Exercise, PMT for WO 20604701, "Repair Worm Gear on ARV 3411" (October 29, 2006);
- PT-7, ISI System Leakage Test RCS for WO20600714, "Coordinate Seal Table Work" (October 30, 2006);

- T-18C, Turbine Overspeed Trip Test, testing in support of EPU, High Pressure Turbine and Steam Plant Mods installed in accordance with PCR 2004-0044, (November 1-2, 2006);
- T-18B, Turbine Main Steam Stop Valves Test, testing in support of EPU, High Pressure Turbine and Steam Plant Mods installed in accordance with PCR 2004-0044, (November 3, 2006); and
- T-18A, Intercept and Reheat Stop Valve Test, testing in support of EPU, High Pressure Turbine and Steam Plant Mods installed in accordance with PCR 2004-0044, (November 3, 2006).

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

On October 8, 2006, the inspectors observed the plant shutdown for a scheduled RFO. The shutdown included a trip of the main turbine without overspeed testing due to extensive modifications planned during the outage, and a manual reactor trip. The shutdown was conducted smoothly by the watch section.

Shortly after the plant entered Mode 4, the inspectors toured the containment structure to examine the condition of plant structures and components. Particular attention was paid to the RCP oil leakage collection system, the condition of the 'B' containment sump, and Ginna's efforts to identify and assess boric acid leakage from plant systems and components.

While the plant was in Mode 5, the inspector walked down both trains of the 'A' and 'B' residual heat removal (RHR) system to ensure they were available to provide decay heat removal. During the walkdown, the inspector verified that both trains had electric power, and maintenance was not being performed on the system.

Once the plant entered Mode 6, the inspector toured the refueling cavity and verified the refueling cavity seal was installed and pressurized. Questions that the inspector had regarding the use of non-stainless steel fittings on the nitrogen supply lines were resolved by Ginna.

The inspectors verified preparations for refueling and observed several hours of fuel shuffle operations in containment and the control room. Ginna resolved several procedural challenges and was required to submit one licensee event report (LER) during this period for a failure to maintain proper control of refueling ventilation requirements. The LER is reviewed in Section 4OA3.

The inspectors walked down and verified a tag-out applied to support the outage and specifically to support work on key components in the Chemical and Volume Control

System. As part of the walk down of this tag-out, several normally locked high radiation areas (HRA) were reviewed for general cleanliness conditions, equipment performance and boric acid leaks. All other available but normally inaccessible locked HRAs were also walked down the same day.

When refueling was completed, the plant transitioned to Mode 5 in preparation for plant startup, during this time the inspectors toured the containment to verify Ginna was removing refueling related equipment, and issues that were identified during boric acid walkdown inspections had been resolved. Specific attention was devoted to the 'B' sump which was walked down by the inspectors to ensure no foreign material was present that could impact the performance of the ECCS pumps. The condition of the sump screens were also examined to ensure they were intact, and not obstructed. Sump walls were also verified to be intact.

While the plant was in Mode 5, the inspectors verified Ginna had established adequate controls to ensure electrical power to safety-related equipment was protected.

The inspectors observed portions of the RCS heatup, and toured the containment when the 350 and 1000 pound leak test inspections were being performed by Ginna NDE personnel. When observing the leak test inspections, the inspector verified that examination points were identified in procedure, PT-7, "ISI System Leakage Test RCS," personnel were following the procedure, and maintenance personnel were appropriately briefed on salient aspects of the examination.

The inspectors observed several tests of the primary system control functions to ensure operability after small modifications to support EPU including an Advanced Digital Feedwater Control System test, 10 percent load swing tests, and a 30 percent turbine trip test. The control systems for steam generator level, pressurizer level, pressurizer pressure and rod control performed within specifications during each test.

The inspectors verified that in situ core physics testing indicated the core was performing as designed. In addition, as part of power uprate verifications, the inspectors walked down time critical emergency action procedure steps to verify that actions could be completed in the time period required by post uprate analysis. All timelines reviewed were determined to be achievable.

b. Findings

Introduction. The inspectors identified a non-cited violation (NCV) of Technical Specification (TS) 3.5.3, “Emergency Core Cooling Systems” (ECCS) due to lead blankets covering the 'B' containment recirculation sump grating with the plant in the Hot Standby Mode. As a result of the covered sump grating, the recirculation function was degraded and the ECCS was not operable for approximately six hours while the plant transitioned to the Cold Shutdown Mode.

Description. The 'B' containment recirculation sump at Ginna is designed to collect water and provide a suction source for the ECCS pumps when the plant enters the

recirculation mode following certain postulated events. Plant TS 3.5.3 indicates that at least one train of ECCS systems is required to be operable when the plant is in Mode 4. On October 9, 2006 at 0400, while the plant was in Mode 4 and in the process of cooling down to begin a refueling outage (RFO), Ginna outage management personnel discovered that the grating for the 'B' containment recirculation sump had been covered with temporary lead shielding. Since this condition would have restricted the ability of water to enter the 'B' sump, the sump was not operable.

When this condition was identified, Ginna outage management personnel directed that the lead blankets be removed. However, the inspector noted during a tour of containment at 0530 on the morning of October 9, 2006, that this action was not complete, since one blanket remained on the grating. Although the inspector immediately informed Ginna personnel that the ECCS sump was still partially obstructed, the blanket was not removed until after the plant had entered Mode 5 at 0815 when TS 3.5.3 was not applicable. As a result, the plant ECCS sustained an additional 2.5 hours of out of service time.

A Ginna investigation into this event determined that the lead shielding had been installed earlier that day at 0230, as a means of reducing radiation levels in the general area in preparation for subsequent outage related modification activities. Although this activity was a planned event in the outage schedule, the individuals who developed the outage schedule and authorized this activity did not understand how sump operability would be affected.

Analysis. The performance deficiency associated with the finding was a failure to adequately assess how scheduled work activities would affect the operability of ECCS equipment. This finding is more than minor because it is associated with the Mitigating System Cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance (Green) by using Phase 1 Appendix G, of the IMC 0609. The finding screened to Green since the ECCS remained available to supply high and low pressure injection into the RCS if needed. This finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna did not ensure all of the lead blankets had been removed from the 'B' sump when the inadvertent sump covering was initially identified.

Enforcement. TS 3.5.3 requires that one ECCS train shall be operable while in Mode 4. The bases for TS 3.5.3 states that an operable ECCS train must also be capable of taking suction from containment sump 'B' to provide recirculation. Contrary to TS 3.5.3, one ECCS train was not operable when the plant was in Mode 4 on October 9, 2006, from approximately 0230 to 0815. Because this violation was determined to be of very low safety significance and Ginna entered the deficiency into their corrective action system in condition report 2006-004787, it is being treated as an NCV, consistent with section VI.A.1 of the NRC Enforcement Policy. **(NCV 5000244/2006005-01, ECCS Rendered Inoperable While in Mode 4.)**

1R22 Surveillance Testing (71111.22 - 4 samples)

a. Inspection Scope

The inspectors witnessed the performance and/or reviewed test data for the following four surveillance tests that are associated with selected risk-significant SSCs to verify that the 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, that no equipment preconditioning activities occurred, and that acceptance criteria had been met.

- RSSP 2.1, Safety Injection System Functional Test (October 25, 2006);
- PT-7, ISI System Leakage Test RCS (October 30, 2006);
- RSSP 7.0, Control Rod Drop Test (October 30, 2006); and
- PT-16Q-T, Auxiliary Feedwater Turbine Pump Quarterly (December 8, 2006).

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 - 1 sample)

a. Inspection Scope

On November 28, 2006, the inspectors observed a licensed operator simulator scenario that included a limited test of the Ginna emergency response plan. Scenario ECA3132-04, "Steam Generator Tube Rupture" was observed. During the exercise, the crew successfully classified the event in a timely manner, and the drill was counted as a success 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 - 19 samples)

a. Inspection Scope

During the periods of October 16-20 and November 27-30, 2006, the inspectors conducted the following activities to verify that Ginna was properly implementing physical, administrative, and engineering controls for access to locked HRAs and other radiologically controlled areas (RCA), and that workers were adhering to these controls when working in these areas during routine operations. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, Ginna's TSs and procedures. This inspection activity represents completion of 19 samples, completing the annual inspection requirement of 21 samples.

Plant Walkdown and RWP Reviews

The inspectors reviewed controls and surveys implemented by Ginna for work activities conducted within radiation areas, HRAs (<1 R/h), or airborne radioactivity areas in the containment and auxiliary buildings to determine if controls (e.g., surveys, postings, barricades, and radiation work permits) were acceptable. Work areas reviewed included the charging pump room in the auxiliary building and various elevations of the containment building.

With the assistance of Ginna personnel, the inspectors performed independent surveys of selected areas in the containment, auxiliary and intermediate buildings to confirm the accuracy of survey maps, the adequacy of postings, and that TS locked high radiation areas were properly secured and posted. Areas surveyed included the spent fuel pool filter system, chemical and volume control system components, charging pump room, and residual heat exchanger piping. The inspectors verified that radiation and HRAs or their perimeters to determine: whether prescribed radiation work permits (RWP), procedure, and engineering controls were in place, whether Ginna surveys and postings were complete and accurate, and whether air samplers were properly located.

The inspectors reviewed RWPs used to access HRAs and identified what work control instructions or control barriers were specified. The inspectors then performed walkdowns to ensure access controls were implemented according to RWP, TS 5.7, "HRAs," and UFSAR 12.5.3.3.2, “Access Control” requirements. In addition, the inspectors reviewed RWPs and associated engineering controls for potential airborne radioactivity areas located in the auxiliary and containment buildings. The inspector specifically observed the placement of breathing zone samplers on workers replacing plungers on the 'B' charging pump and reviewed the measured airborne concentrations indicated on in-place continuous airborne monitoring instrumentation in the auxiliary building.

The inspector also reviewed electronic personal dosimeter (EPD) alarm set points (both integrated dose and dose rate) for conformity with survey indications and plant policy. Through interviews with outage support workers, the inspector performed a review to determine if workers knew what actions were required if their EPD noticeably malfunctioned or alarmed. Work activities reviewed included replacement of a plunger on the 'B' Charging Pump (RWP 06-0001) and ventilation damper surveillance testing in the containment building (RWP 06-1008).

The inspector reviewed RWPs for airborne radioactivity areas with the potential for individual worker internal exposures of >50 mrem committed effective dose equivalent (CEDE (20 DAC-hrs)). The inspector verified barrier integrity and engineering controls performance (e.g., High Efficiency Particulate Air ventilation system operation).

The inspector reviewed RWPs and personnel dose records and found that no significant personal internal exposures greater than 50 mrem CEDE occurred from January 1, 2006-October 20, 2006. Accordingly, Ginna had not performed any actual internal exposures assessments for internal doses greater than 50 mrem CEDE. The inspector reviewed procedural guidance and discussed the conduct of internal dose assessments with cognizant personnel.

Radiation Worker Performance

The inspectors selected three jobs being performed during the RFO in radiation areas, airborne radioactivity areas, or HRAs (<1R/h) for observation or review, including recovery of a highly radioactive piece from incore tube C-3; containment laser scanning; and installation of a strainer system and diverter wall for containment 'B' sump. In addition, the inspectors observed the performance of the plunger replacement on the 'B' Charging Pump. The inspectors reviewed all radiological job requirements; observed selected health physics pre-job briefings; and observed job performance with respect to these requirements. The inspectors also reviewed multiple pre-job briefings and conducted work area walkdowns to determine if radiological conditions in the work area were adequately communicated to workers through briefings and postings.

The inspectors conducted multiple job performance observations to verify the adequacy of radiological controls, such as required surveys (including system breach radiation, contamination, and airborne surveys), radiation protection job coverage (including audio and visual surveillance for remote job coverage), and contamination controls.

The inspectors reviewed radiation work permits and radiological surveys to identify work areas with significant dose rate gradients. The inspector then reviewed Ginna’s use of dosimetry to effectively monitor occupational dose limits specified in 10 CFR 20.1201. The inspector reviewed CRs, related to radiation worker and radiation protection technician errors, and personnel contamination reports (PCR) to determine if an observable pattern traceable to a common cause was evident.

The inspectors conducted multiple performance observations by direct field observations and through live video monitoring to evaluate worker performance with respect to stated

radiation protection work requirements. By observations of health physics briefings, observations of field work, and through interviews with workers, the inspectors evaluated worker knowledge regarding significant radiological conditions in their workplace, RWP controls/limits in place, and determined if worker performance took into consideration the level of radiological hazards present.

The inspector conducted multiple job performance observations to observe radiation protection technician performance with respect to all radiation protection work requirements. The observations included a review to determine if technicians were aware of the radiological conditions in their workplace and the RWP controls/limits, and if their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

Problem Identification and Resolution

The inspectors reviewed elements of Ginna's CAP, including CRs and Quality Performance Assessment Reports, related to controlling access to the RCA to determine if problems were being entered into the program for resolution. Details of this review are contained in Section 4OA2 of this report.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02 - 8 samples)

a. Inspection Scope

During the period of October 16-20, 2006, the inspector selected 5 of the top 10 work activities with the highest exposure significance. The inspector then reviewed the As Low As Reasonably Achievable (ALARA) work activity evaluation exposure estimates, and exposure mitigation requirements to determine if Ginna had established procedures, engineering and work controls, based on sound radiation protection principles, to achieve occupational exposures that were ALARA. The inspector also determined if Ginna had reasonably grouped the radiological work into work activities, based on historical precedence, industry norms, and/or special circumstances. The inspector compared the results achieved (dose rate reductions, person-rem used) with the intended dose projections established by Ginna's ALARA planning group. The inspector evaluated the reasons (e.g., failure to adequately plan the activity, failure to provide sufficient work controls, etc.) for any inconsistences between intended and actual work activity doses.

On October 19, 2006, the inspector attended a Station ALARA Committee (SAC) Meeting. The meeting was conducted to review the status of RFO dose and to consider a reduction of the station dose goal. The Radiological Engineering Supervisor reported that due to improved chemistry performance, radiation dose rates in containment were less than originally projected, and due to enhancements in work efficiency related to the

use of remote reading electronic dosimetry and installation and use of a state-of-the art audio-visual communication monitoring system, total radiation dose for the RFO was well below original projections. The plant manager recommended revising the station dose goal down in order to continually challenge the staff to reduce unnecessary radiation exposures. The SAC approved a reduction in the RFO dose goal from 51 person-rem to 40 person-rem.

During the period November 27-30, 2006, the inspector conducted the following activities to verify that Ginna was properly implementing operational, engineering, and administrative controls to maintain personnel exposure ALARA for tasks conducted during routine power operations and during a recently completed RFO.

Radiological Work Planning

The inspector reviewed pertinent information regarding cumulative exposure history, current exposure trends, and ongoing operational and maintenance activities to assess current exposure challenges and past outage performance. The inspector determined the plant's 3-year rolling collective average exposure and concluded that the site is ranked in the top performance quartile (lowest collective dose) for U.S. pressurized water reactors.

The inspector reviewed outage ALARA reviews (ARs), ALARA Challenge Board meeting presentations, Work-In-Progress ALARA evaluations, SAC meeting minutes, and outage Post-Job ALARA evaluations that addressed estimating and controlling dose for specific tasks. Work activities included installing passive strainers in the 'B' sump, reactor vessel penetration inspections, laser mapping of containment, and reactor refueling.

The inspector reviewed departmental dose summary reports, dose records for selected individuals receiving the highest dose to date for 2006, and exposure data for routine power operations to determine if projected dose correlated with actual exposures.

The inspector evaluated the departmental interfaces between radiation protection, operations, chemistry, maintenance crafts, and engineering to identify missing ALARA program elements and interface problems. The evaluation was accomplished by interviewing the Supervisor, RP Operations and the Supervisor, Rad Engineering, and review of SAC meeting minutes and post-job ALARA evaluations. The inspector also attended two pre-job briefings to assess inter-departmental coordination regarding plunger replacement in the 'B' charging pump and charcoal filter damper testing in containment during power operations.

Verification of Dose Estimates and Exposure Tracking Systems

The inspector reviewed the assumptions and basis for the annual site collective exposure estimate and the RFO dose projection.

The inspector reviewed Ginna's method for adjusting exposure estimates when actual dose approached estimated exposures. The inspector reviewed Ginna's exposure tracking system to determine whether the level of dose tracking detail, exposure report timeliness, and departmental distribution was sufficient to support the control of collective and individual exposures.

Job Site Inspection and ALARA Controls

The inspector observed maintenance activities being performed for charging pump repairs and containment ventilation damper testing. The inspector verified that the appropriate radiological controls were implemented including radiation protection technician coverage, proper electronic dosimeter dose/dose rate alarm setpoints, contamination mitigation, airborne sampling, and that pre-job briefings provided sufficient detail to assure workers were knowledgeable of radiological conditions at the job site.

Radiation Worker Performance

The inspector observed radiation worker and radiation protection technician performance for selected tasks. Tasks observed included 'B' charging pump plunger replacement, testing charcoal filter dampers, and routine daily radiation protection tasks. The inspector determined whether the individuals were aware of radiological conditions, access controls, and that the skill level was sufficient with respect to the radiological hazards involved.

Declared Pregnant Workers

The inspector determined through interviews that no declared pregnant workers were employed to perform outage related work within RCAs during 2006.

In total, this inspection activity represents the completion of 8 samples, partially completing the biennial inspection requirement of 15 samples.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation (71121.03 - 3 samples)

a. Inspection Scope

The inspector verified the calibration expiration and source response check currency on radiation detection instruments staged for use. The inspector interviewed radiation protection technicians and observed technicians select and self verify instrument operability prior to use.

Based on the updated UFSAR, TSs and Emergency Operating Procedure requirements, the inspectors reviewed the status and surveillance records of self-contained breathing apparatuses (SCBAs) staged and ready for use in the plant; inspected Ginna's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center during emergency conditions; determined that control room operators and other emergency response and radiation protection personnel were trained and qualified in the use of SCBA; and determined that personnel assigned to refill bottles were trained and qualified for that task.

The inspectors reviewed the qualification documentation for onsite personnel designated to perform maintenance on vendor-designated vital components such as the SCBA regulator and the low-pressure alarm. Currently, all maintenance on vital SCBA components are performed by a qualified offsite vendor. The inspector reviewed SCBA maintenance records and found that all maintenance records for SCBAs designated as "ready for service" were well maintained and complete. The inspector selected three SCBAs and noted that the required periodic air cylinder hydrostatic testing was documented and records were up to date, and the U.S. Department of Transportation (DOT) required retest air cylinder markings were in place. No inconsistencies in licensee practices and SCBA manufacturers' recommended practices were identified.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation (71122.02 - 6 samples)

a. Inspection Scope

During the period November 6 - 10, 2006, the inspector conducted the following activities to verify that Ginna's radioactive material processing and transportation programs complied with the requirements of 10 CFR 20, 61, and 71; and DOT regulations 49 CFR 170-189.

- The inspector reviewed the descriptions of the solid and liquid radioactive waste systems described in the UFSAR and the 2005 radiological effluent release report for information on the types and amounts of radioactive waste disposed. The inspector also reviewed the scope of Ginna's most recent audit of the radioactive materials processing and transportation programs to verify that it meets the requirements of 10 CFR 20.1101.

- The inspector walked-down selected accessible portions of the liquid and solid radioactive waste collection, processing, and storage systems/locations to verify that the current system configuration and operation agree with the descriptions contained in the UFSAR and in the Process Control Program (PCP); reviewed the status of any radioactive waste process equipment that is not operational

and/or is abandoned in place; and verified that the changes were reviewed and documented in accordance with 10 CFR 50.59, as appropriate.

- The inspector reviewed the radio-chemical sample analysis results for each of Ginna's radioactive waste streams [powdered resin, bead resin, dry active waste (DAW), and filters]; reviewed the licensee's use of scaling factors and calculations with respect to these radioactive waste streams to account for difficult-to-measure radionuclides; verified that Ginna's program assured compliance with 10 CFR 61.55 and 10 CFR 61.56 as required by Appendix G of 10 CFR Part 20; and, reviewed Ginna's program to ensure that the waste stream composition data accounts for changing operational parameters.

- The inspector observed shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifests, shipping papers provided to the driver, and licensee verification of shipment readiness; and verified that the receiving licensee is authorized to receive the shipment packages. The inspector determined that the shipper was knowledgeable of the shipping regulations and that shipping personnel demonstrate adequate skills to accomplish the package preparation requirements for public transport with respect to NRC Bulletin 79-19 and 49 CFR Part 172 Subpart H, and verified that Ginna's training program provides training to personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities.

- The inspector sampled the following non-excepted package shipment records and reviewed these records for compliance with NRC and DOT requirements.

  - 2004-27, reactor vessel head shipped to Envirocare on September 14, 2004;
  - 2004-35, bead resins and charcoal shipped to Studsvik on November 19, 2004;
  - 2005-15, DAW shipped to Duratek on February 16, 2005;
  - 2005-35, DAW shipped to RACE on April 28, 2005;
  - 2005-40, bead resin/charcoal/DAW shipped to Barnwell on June 21, 2005;
  - 2005-46, DAW/metal/wood shipment to RACE on August 2, 2005; and
  - 2006-48, laundry shipped to Unitek on October 25, 2006.

- The inspector reviewed Ginna's audits, surveillance reports, and self-assessments related to the radioactive material processing and transportation programs performed since the last inspection and determined that identified problems are entered into the CAP for resolution. The inspector also reviewed corrective action reports written against the radioactive material processing and shipping programs since the previous inspection.

b. Findings

No significant findings or observations were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 - 3 samples)

.1 Cornerstone: Mitigating Systems

a. Inspection Scope

Using the criteria specified in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 4, the inspectors verified the completeness and accuracy of data submitted for the Safety System Functional Failure performance indicator (PI) for the period from August 2004 to September 2006. To verify the accuracy of the data the inspector reviewed monthly operating reports, NRC inspection reports, Ginna CAP reports, and operator logs.

b. Findings

No findings of significance were identified.

.2 Cornerstone: Occupational Radiation Safety

a. Inspection Scope

The inspector reviewed implementation of Ginna's Occupational Exposure Control Effectiveness PI program. Specifically, the inspector reviewed CRs, and associated documents, for the period October 1, 2005 through September 30, 2006, for occurrences involving locked HRAs, very HRAs, and unplanned exposures against the criteria specified in NEI 99-02, Regulatory Assessment PI Guideline, Revision 4, to verify that all occurrences that met the NEI criteria were identified and reported as PIs. This inspection activity represents the completion of one (1) sample relative to this inspection area, completing the annual inspection requirement.

b. Findings

No findings of significance were identified.

.3 Cornerstone: Public Radiation Safety

a. Inspection Scope

The inspector reviewed relevant effluent release reports for the period October 1, 2005 through September 30, 2006, for issues related to the RETS/ODCM Radiological Effluent Occurrences PI, which measures radiological effluent release occurrences that

exceed 1.5 mrem/qtr whole body or 5.0 mrem/qtr organ dose for liquid effluents; 5 mrads/qtr gamma air dose, 10 mrad/qtr beta air dose, and 7.5 mrads/qtr for organ dose for gaseous effluents. This inspection activity represents the completion of one (1) sample relative to this inspection area, completing the annual inspection requirement.

The inspector reviewed the following documents to ensure Ginna met all requirements of the PI from the fourth quarter 2005 through the third quarter 2006:

- Monthly projected dose assessment results due to radioactive liquid and gaseous effluent releases;
- Quarterly projected dose assessment results due to radioactive liquid and gaseous effluent releases; and
- Dose assessment procedures.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Continuous Review of Items Entered Into The Corrective Action Program

a. Inspection Scope

As required by 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 the Ginna CAP. This review was accomplished by reviewing paper copies of each CR, attending daily screening meetings, and accessing Ginna's computerized database.

b. Findings

No findings of significance were identified.

.2 Semi-Annual Review (71152 - 1 sample)

a. Inspection Scope

In order to identify trends that might indicate the existence of a more significant safety issue, the inspectors reviewed a listing of CRs initiated from June 2006, through December 5, 2006. Additionally, the inspectors reviewed system health reports, Quality Performance Assessment Reports, and discussed trends and potential trends with appropriate station personnel.

b. Findings and Observations

No findings of significance were identified. The inspectors identified that an adverse trend in snubber performance was apparent based on the refuel outage inspection and surveillance testing results. This trend had not been identified by Ginna, but was subsequently documented in CR 2006-006847. Ginna engineering personnel indicated the snubber program manual may need to be revised to ensure snubber test results are assessed to identify adverse trends.

.3 Identification and Resolution of Problems - Inservice Inspection (71111.08)

a. Inspection Scope

The inspector reviewed the corrective action reports listed in the Attachment, which involved in-service inspection related problems, to ensure that these issues were properly addressed.

b. Findings

No findings of significance were identified.

.4 Annual Sample: Failure of Spent Fuel Pool Cooling Pumps (71152 - 1 sample)

a. Inspection Scope

The inspectors reviewed the actions taken by Ginna to identify the causes of the failures of two spent fuel pool (SFP) cooling pumps that occurred in September 2006. The inspectors reviewed the root cause analysis performed by Ginna to assess if corrective actions taken and planned would correct the problems identified in the root cause analysis. Additionally, the inspector conducted interviews with plant personnel, walked down the SFP cooling system, and reviewed associated system hydraulic calculations and in-service test data to determine if the problems identified by Ginna were adequate to explain the cause of the failures. Finally, the inspectors reviewed additional CRs written by the licensee before and during the inspection to ensure they adequately documented the problems identified.

b. Findings and Observations

No findings of significance were identified. The inspector concluded that Ginna had identified the probable causes for the pump failures. However, the inspector questioned the adequacy of corrective actions for one potential cause related to the failure of the 'B' SFP pump. The inspector noted that the root cause had identified that air entrainment in the suction piping, when temporary piping was added to the system, may have lead to the failure of the SFP pump thrust bearing. The inspector determined that Ginna had taken actions to ensure air would be removed from the system prior to startup but did not fully address the potential for air leakage into the system during normal operation. The inspector determined that after connecting temporary piping to the SFP system the

procedure did not require a system leak check be performed and therefore a hole in the piping could allow air to be drawn into the piping because during operation, portions of the piping are at negative pressure. Ginna entered the issue into the plant corrective action process for resolution.

.5 Public Radiation Safety Cornerstone (71122.01)

a. Inspection Scope

The inspector reviewed sixteen corrective action CRs that were initiated between January 2005 and November 2006 and were associated with the radioactive material processing and shipping programs. The inspector verified that problems identified by these CRs were properly characterized in Ginna's event reporting system, and that applicable causes and corrective actions were identified commensurate with the safety significance of the radiological occurrences.

b. Findings

No significant findings or observations were identified.

.6 Extended Power Uprate Erosion/Flow Accelerated Corrosion (EC/FAC) Inspection (71004)

a. Inspection Scope

The inspector reviewed a sample of CRs and resulting corrective actions relating to the EC/FAC program shown in the attachment which identified EC/FAC conditions discovered during the current operating cycle. The inspector verified that the conditions and other deficiencies identified were reported, characterized, evaluated and appropriately dispositioned and entered into the CAP.

b. Findings

No findings of significance were identified.

.7 ALARA Planning and Controls (71121.02)

a. Inspection Scope

The inspector reviewed eighteen CRs, three 2006 Quality Performance Assessment quarterly reports, a Quality Performance Assessment Audit (RPP-05-01-G), and outage quality summary reports for the period October 11 - 19, 2006, relating to maintaining personnel exposure ALARA, to evaluate the threshold for identifying, evaluating, and resolving radiological control problems. This review was conducted against the criteria contained in 10 CFR 20, TSs, and Ginna's procedures.

b. Findings

No findings of significance were identified.

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

.1 Turbine Power Transient

a. Inspection Scope

On September 17, 2006, the plant experienced a transient attributed to the electro-hydraulic (EH) system which controls the position of the high pressure turbine control valves. The main turbine EH system shifted to “Impulse Out” unexpectedly and did not shift in a “bumpless” manner causing a four to five second 10 megawatt (MW) load rejection event to occur. The plant responded as designed. The steam dump system briefly activated and then secured when reactor coolant temperature was restored.

b. Findings

No findings of significance were identified.

.2 (Closed) LER 05000244/2006004-00 Inoperability of Two Trains of Standby Auxiliary Feedwater

On September 6, 2006, an issue previously identified by an NRC PI&R Inspection Team and documented in Report Number 05000244/2006006 was reported to the NRC. The issue involved the inoperability of both trains of standby auxiliary feedwater due to the failure to properly restore to service water flow transmitters in the discharge header of each train. The failures actually occurred in March of 2005 and the failure to identify and report the failures was addressed in the PI&R Team Report cited above. This LER is closed.

.3 (Closed) LER 05000244/2006005-00 'B' Containment Sump Covered While in Mode 4

The circumstances and enforcement issues involving this event were previously reviewed in Section 1R20 of this report. This LER is closed.

.4 (Closed) LER 05000244/2006006-00 Core Alterations and Movement of Irradiated Fuel with Containment Ventilation Isolation (CVI) Inoperable

On October 16, 2006, Ginna discovered that while conducting core alternations, and moving spent fuel in the reactor vessel, the dc power supply to the Engineered Safety Features relay racks was de-energized, which rendered the Containment Ventilation Isolation (CVI) system inoperable. This condition was prohibited by TS Section 3.3.5. which requires CVI to be operable when conducting core alterations and moving spent fuel in the reactor vessel. A subsequent investigation of this event revealed that the

power supply had been de-energized on October 13, 2006, to facilitate a maintenance activity. Immediate corrective actions included stopping core alterations and movement of fuel assemblies and restoring power to the CVI system. Additional corrective actions included reviewing the outage schedule to ensure no additional conflicts existed between the schedule and the requirements for Mode 6, and requiring the control room supervisor, in addition to the work control center, to review all tagouts prior to issuance.

This finding is more than minor because it had a credible impact on safety, in that the CVI system would not have automatically isolated in the event a fuel handling accident occurred in containment. This finding affects the Barrier Integrity Cornerstone and affects the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. This finding was determined to be of very low safety significance (Green) by using Phase 1 Appendix H, of the IMC 0609, "SDP." The finding screened to Green since although the automatic containment isolation capability of containment was not operable, the issue occurred when the refueling cavity water level was at or above the minimum level required for movement of irradiated fuel assemblies as defined by TS. This licensee-identified finding involved a violation of TS 3.3.5, "Instrumentation." The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

.5 (Closed) LER 05000244/2006007-00 Main Steam Safety Valve Setpoint Exceedance

On October 7, 2006, with the plant in mode one, Ginna conducted in-place testing of main steam safety valves and determined that two valves failed the surveillance test, exceeding the acceptance band of +1 percent / -3 percent of the setpoint. Both valves lifted at higher than the +1 percent limit. The procedure is conducted one valve at a time to assure that each valve is restored to operable status prior to removing the next valve from service for the test. In this case, however, since the cause of the two unsatisfactory as-found lift pressures may have arisen over a period of time during the previous operating period, Ginna determined that the plant likely operated with inoperable safety valves for a time period greater than allowed by TS 3.7.1, "Main Steam Safety Valves." The TS requires eight main steam safety valves to be operable in modes 1, 2, and 3 and allows operation with one valve inoperable for a four hour period. Ginna has not fully determined the cause of this event. All eight safety valves actually measured higher than the "as left" condition at the last testing but only two valves exceeded the limit. Ginna plans a supplement to this LER when results are received from testing being conducted by the vendor. Pending the vendor results and Ginna root cause determination, the significance of this licensee identified violation of TS 3.7.1 is unresolved. **(URI 05000244/2006005-02, Determination of Performance Deficiency Associated with TS 3.7.1, Main Steam Safety Valves, Violation Identified in LER 2006-007-00)**

.6 (Closed) LER 05000244/2006008-00 Charcoal Filter Efficiency Test Failure

On October 26, 2006, with the plant shutdown for an RFO, Ginna identified that the SFP Charcoal Absorber System Filter was not operable while spent fuel that had decayed

less than 60 days was moved in the auxiliary building. Ginna discovered this condition when they received the test results from a vendor who had been contracted to analyze a sample of the charcoal absorber system as part of a routine surveillance test. The results indicated that the charcoal efficiency was 64.3 percent, which was less than the TS limit of 85.5 percent. The sample was taken from SFP Absorber System on September 27, 2006. Since spent fuel that had decayed less than 60 days was moved in the auxiliary building starting on October 15, TS 3.7.10, "Auxiliary Building Ventilation System" (ABVS) was not followed.

Ginna determined the cause of the event to be due to inadequate implementation of a TS surveillance test. Specifically, although a sample of the charcoal was taken on September 27, Ginna personnel did not ensure the test results were received prior to movement of the spent fuel assemblies. While conducting followup to this event, Ginna discovered that three previous surveillance tests on this system conducted prior to the 2002, 2003, and 2005 refuel outages, were performed incorrectly. Specifically, an incorrect flow velocity was used that provided nonconservative results and masked degradation of the charcoal assemblies. Therefore the system may not have been operable during those previous refuel outages as well. Ginna could not reach a conclusive determination regarding the operability of the system during those refuel outages since the previous test samples had been discarded.

This finding is more than minor since it affected the design control attribute of the Barrier Integrity Cornerstone impacting the objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, if a recently irradiated fuel assembly was damaged in the SFP and radionuclides were released, the SFP charcoal filtration system would not be operable in accordance with design requirements which could increase the amount of radio activity released to the environment. This finding affects the Barrier Integrity Cornerstone and was considered to have very low safety significance (Green) using Phase 1 Appendix H of the SDP because the likelihood of an accident leading to core damage was not affected. Also, the probability of early containment failure and therefore a large early release was not affected. This licensee-identified finding involved a violation of TS 3.7.10.3, ABVS. The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

.7 (Closed) LER 05000244/2006002-01 Off-site Power Systems Declared Inoperable

Revision one to this LER deleted the July 17, 2006, occurrence of a loss of off-site power that was previously reported in the original version of this LER. This revision was based on further engineering analysis that the off-site power system was operable on that date. The basis for the change was reviewed by the inspectors. This revision to the original LER is closed.

4OA5 Other Activities

.1 Temporary Instruction (TI) 2515/152 - Reactor Pressure Vessel (RPV) Lower Head Penetration (LHP) Nozzles (NRC BULLETIN 2003-02)

a. Inspection Scope

Although the Ginna Station had performed the TI 2515/152 - RPV Lower Head Penetration (LHP) Nozzles (NRC BULLETIN 2003-02) examination scope during the Spring 2005 refuel outage, additional visual inspection was performed of the lower vessel head nozzle area in the Fall 2006 outage. The inspector reviewed the LHP nozzle examination procedure (VT-116 Rev 9) to determine whether it provided adequate guidance and examination criteria to implement Ginna's examination plan.

The inspector reviewed the video examination record for the 2006 outage of several penetration nozzles to evaluate the effectiveness of the VT examination and confirm the conclusion of the Ginna staff that no pressure boundary leakage was present at the LHP nozzles.

b. Findings

No findings of significance were identified.

.2 TI 2515/150 - Reactor Pressure Vessel Head and Head Penetration Nozzles (NRC Order EA-03-009)

a. Inspection Scope

The fall 2006 outage was the second refueling outage following the replacement of the reactor vessel head in 2003. Per NRC Order EA-03-009, inspection of the reactor vessel head and head penetration nozzles was not required during the fall 2006 outage. Ginna did perform a video documented VT of the general condition of the top of the reactor vessel head which included views of portions of the head to control rod drive mechanisms (CRDM) intersections. The inspector reviewed a sample of the video documentation of the licensee's examination of the upper head to CRDM areas and the overall head condition. The licensee did not identify any evidence of active boric acid leakage.

b. Findings

No findings of significance were identified.

.3 TI 2515/169 - Mitigating System Performance Index Verification

a. Inspection Scope

The objective of TI 2515/169 was to verify that Ginna had correctly implemented the Mitigating Systems Performance Index (MSPI) guidance for voluntarily reporting unavailability and unreliability of the monitored safety systems. On a sampling basis, the inspector validated the accuracy of the unavailability and unreliability input data used for both the 12-quarter period of baseline performance and for the first reported results (second calendar quarter 2006). Specific attributes examined by the inspectors per this TI included: surveillance activities which, when performed, do not render the train unavailable for greater than 15 minutes; surveillance activities which, when performed, do not render the train unavailable due to credit for prompt operator recovery actions; and for each MSPI system, on a sampling basis, the inspectors independently confirmed the accuracy of baseline planned unavailability, actual planned and unplanned unavailability, and the accuracy of the failure data (demand, run, and load as appropriate) for the monitored components.

Evaluation of Inspection Requirements:

The TI requested the Inspectors to evaluate and answer the following questions:

Question 1: For the sample selected, did Ginna accurately document baseline planned unavailability hours for the MSPI systems?

Answer: With two minor exceptions, Ginna accurately documented baseline planned unavailability hours. The exceptions were documented in Condition Report 2006-006906. One item of interest associated with the baseline calculations was Ginna's choice to use different methodologies to determine baseline planned unavailability for different MSPI systems. Specifically, actual data was used for the baseline data of all systems except the Safety Injection system for which a probabilistic risk type approach was used. Inspector feedback on this topic was documented in Condition Report 2006-007020.

Question 2: For the sample selected, did Ginna accurately document actual unavailability hours for the MSPI systems?

Answer With one minor exception, Ginna accurately documented the actual unavailability hours for MSPI systems. The exception was documented in Condition Report 2006-006906.

Question 3: For the sample selected, did Ginna accurately document actual unreliability information for each MSPI monitored component?

Answer: Yes, Ginna accurately documented actual unreliability information.

Question 4: Did the inspector identify significant errors in the reported data, which resulted in a change to the indicated index color?

Answer: No.

Question 5: Did the inspector identify significant discrepancies in the basis document which resulted in (1) a change to the system boundary; (2) an addition of a monitored component; or (3) a change in the reported index color?

Answer: The Ginna MSPI Basis Document was under review at the time of the inspection. The inspector's comments on inconsistencies in the baseline determination approach utilized by Ginna were documented in Condition Report 2006-007020. However, the changes to the basis document will not cause any change in system boundary, monitored components or reported index color.

b. Findings

No findings of significance were identified.

.4 TI 2515/166 - Pressurized Water Reactor Containment Sump Blockage

a. Inspection Scope

The inspectors performed the inspection in accordance with TI 2515/166. The TI was developed to support the NRC review of licensee activities in response to NRC Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors (PWR)". Ginna submitted an extension request, which was approved by the NRC on October 4, 2006, to install an interim strainer design, until further strainer analysis can be performed. The temporary strainer is in place of the active strainer design originally submitted in Ginna's GL 2004-02 response.

The inspectors verified implementation of the modifications and procedure changes committed to in the extension request. The inspectors reviewed a sample of the licensing and design documents to verify that they were either updated or in the process of being updated to reflect the interim sump modifications. A sample of material specifications, testing and surveillance procedures, and calculations were reviewed to verify that they were updated to reflect the effects of the modification, and the new requirements for the containment sumps and debris generation sources. The inspectors performed a walkdown of the interim strainer installation and flow diverter wall installation to verify they were performed in accordance with the approved design change package. Additionally, the inspectors verified that work was in progress to remove and replace CalSil insulation in containment that could be dislodged during a loss of coolant accident. Finally, the inspectors verified that there were no choke-points that could prevent water from reaching the recirculation sump during a design basis accident.

Evaluation of Inspection Requirements:

The TI requested the Inspectors to evaluate and answer the following questions:

Question 1: Did the licensee implement the plant modifications and procedure changes committed to in their GL 2004-02 response?

Answer: Ginna implemented the interim plant modifications, procedure changes, and operator training committed to in their extension request for corrective actions in response to GL 2004-02. The inspector reviewed Ginna's extension request to GL 2004-02 and the design change package to verify that Ginna implemented the modifications and changes committed to in their extension request.

Ginna installed three passive strainer modules that increased the available sump screen size, developing additional margin over the current licensing basis, until the final strainer design can be implemented during the Spring 2008 RFO. Ginna also installed a flow diverter wall in the basement of containment to reduce the direct transport of debris from the break generating the highest postulated debris, a postulated break in the 'B' RCS, to the recirculation sump.

Additionally, Ginna implemented operator training on indications of and responses to clogging in the recirculation sump; continued aggressive containment cleaning and foreign materials controls; and continued ensuring containment drainage paths are unblocked and recirculation sump screens are free of adverse gaps and breaches.

Finally, the inspectors found that procedures to programmatically control potential debris generation sources were updated. The inspectors noted that Ginna had not completed the long term downstream effects evaluation or the effects of chemical precipitants on the strainer head loss at the time of the inspection.

Question 2: Has the licensee updated its licensing basis to reflect the corrective actions taken in response to GL 2004-02?

Answer: The inspectors verified that changes to the facility or procedures, as described in the UFSAR, that were identified in Ginna's extension request were reviewed and documented in accordance with 10 CFR 50.59 and the licensee had obtained NRC approval prior to implementing those changes that require such approval as stated in 10CFR 50.59. Finally, the inspectors verified that Ginna intends to update the Ginna licensing bases to reflect the final modification and associated procedure changes taken in response to GL 2004-02. Constellation also intends to update the Ginna GL 2004-02 response to reflect these changes. The TI will remain open to allow for the review of portions of the GL response that

have not been completed. Specifically, Ginna plans to install a permanent modification of the sump strainer in the Spring 2008 RFO. Further, Constellation had not completed their downstream effects analysis or chemical precipitant analysis. The results of these analyses have the potential to impact the final size of the strainer, licensing basis and programmatic procedures. Therefore the inspection will be considered incomplete until the results are reviewed.

b. Findings

No findings of significance were identified.

.5 (Closed) URI 05000244/2000009-01, Adequacy of Hemyc Cable Wrap Fire Barrier Qualification Test and Evaluation.

Inspection Report 05000244/2000009 documented the potential inadequacy of Hemyc fire barrier wrap material at Ginna Nuclear Power Plant. The issue was unresolved pending further NRC review to determine whether the qualification tests of the Hemyc fire wrap systems were acceptable. In subsequent NRC fire tests, results indicated that Hemyc/MT materials cannot be routinely relied upon as one hour fire barriers. The NRC staff has completed a significant effort informing industry of the concerns associated with these materials by issuing information notice (IN) 2005-07, Results of Hemyc Electrical Raceway Fire Barrier System Full Scale Fire Testing, and GL 2006-03, Potentially Nonconforming Hemyc and MT Fire Barrier Configurations. As required by GL 2006-03, Ginna Nuclear Power Plant has responded appropriately to the NRC concerns by identifying all applications of Hemyc/MT materials, implementing compensatory measures as appropriate and initiating corrective actions to resolve as necessary. Therefore, the NRC staff has determined that there was no performance deficiency associated with the issue and this URI is closed.

.6 (Closed) URI 05000244/2006004-01, Review the Significance of Not Maintaining the Containment Penetration Cooling System in Accordance With the UFSAR and System P&IDs.

a. Inspection Scope

The inspectors conducted followup to a URI that was identified when conducting a walkdown of the containment penetration cooling system documented in Inspection Report 05000244/2006004.

b. Findings

Introduction: The inspectors identified a Green finding in that Ginna did not adequately maintain the Containment Penetration Cooling system as described in the UFSAR and system drawings to ensure it would be capable of performing its intended function in a reliable manner.

Description: Inspection Report 05000244/2006004 documented an inspector discovery that Ginna had not maintained, controlled or operated the containment penetration cooling system as described in the UFSAR and system P&IDs. The purpose of the system as described in section 9.4.1.2.10 of the plant UFSAR, is to prevent the deterioration of concrete that is adjacent to containment penetrations that contain hot liquids or gases by supplying cool air to the area around those penetrations. This issue was unresolved pending further inspection and evaluation by Ginna. A subsequent walkdown of this system by Ginna personnel identified several deficiencies. These issues included the following items:

- System dampers for several penetrations were not correctly positioned;
- Temperature detectors and alarm switches for the penetrations were either not functioning or were not properly calibrated; and
- The system configuration in the field did not match what was indicated on the system P&ID.

These deficiencies were documented in several CRs including CR 2006-004551, “No Penetration Cooling Airflow from P111, RHR Pump Discharge to RCS 'B' Cold Leg." Immediate corrective actions implemented by Ginna included restoring air flow to the penetrations that were not receiving adequate cooling, and initiating a calibration and/or replacement program for the system temperature detectors and alarm switches.

A preliminary Ginna engineering evaluation of the as found condition of the system concluded that although certain penetrations had not been properly cooled, and system temperature detectors had not been calibrated, the adjacent concrete did not show signs of dehydration or disintegration due to high temperature conditions. Based on this evaluation, Ginna concluded that the containment remained operable. The inspector reviewed this assessment and agreed with its overall conclusion that an immediate safety issue did not exist.

Analysis: The performance deficiency associated with this finding was a failure to maintain the containment penetration cooling system as described in the plant UFSAR and system P&ID. As a result, certain containment penetrations did not receive adequate cooling and system temperature detectors were either not functional or were not properly calibrated. This finding is more than minor because it is associated with the Barrier Integrity Cornerstone and affects the cornerstone objective of providing reasonable assurance that the physical design barriers (fuel cladding, RCS, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was determined to be of very low safety significance (Green) by using Phase 1 of the IMC 0609. The finding screened to Green since it did not represent an actual open pathway in the physical integrity of the reactor containment. This finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna personnel did not identify these system performance issues during periodic system walkdowns.

Enforcement: No violation of NRC requirements occurred since the containment penetration cooling system is not a safety-related system and cooling was restored to

the containment penetrations before the containment concrete was damaged. **(FIN 05000244/2006005-03, Failure to Maintain the Containment Penetration Cooling System in accordance with the UFSAR and System Drawings.)**

.7 Power Uprate Related Inspection Activities (IP71004 - 1 sample)

Transient and Turbine Trip Testing

a. Inspection Scope

Transient testing was conducted at the new uprated 30 percent power and the uprated 99 percent power to test the control systems for pressurizer level, rod control, average reactor coolant temperature, and steam generator water level control systems. Power was decreased by 10 percent at 1 percent a minute, allowed to stabilize and then raised back to the starting point at 1 percent a minute. During both tests all systems responded as designed and expected.

A turbine trip test was conducted from the uprated 30 percent power level to evaluate the impact on balance of plant and reactor control systems. The steam dump system operated as designed during the transient. All other control systems also operated as designed and expected during the resulting transient caused by the turbine trip.

Condensate and Feedwater System Testing

In addition to the testing which was conducted on feed and condensate systems as a result of the transient tests imposed on the whole plant, step change tests were conducted on the steam generator level control system and feedwater control systems to evaluate the systems performance at the new higher flow rates. The tests were performed by inserting a step change, both down and then up, to the required level input for the steam generator level control system and evaluating system response. The system performed as designed and expected in all cases. The flow distribution between the feedwater pumps is unbalanced but not out of specification for any safety parameters. Ginna is continuing to evaluate ways to improve the load sharing between the feed pumps.

Modifications to Supports

The inspector reviewed portions of the engineering calculations and evaluations that established the power uprate loads and the extent of the subsequent needed Main Steam and FW pipe support and pipe snubber modifications in preparation for plant power uprate. Also, the modification areas were walked down to observe the condition of the installation work that was completed and staging for the work to be done. The work scope was reviewed with the modification project manager and the responsible engineer. The snubber data packages were reviewed noting that they included factory conducted test data sheets for the snubbers. The pipe supports and related pipe snubbers added are safety (risk) significant but not "safety related," such that they will not be included in the inservice testing (IST) population of approximately 149 safety

related snubbers. However, they will be included in the safety significant set of snubbers for tracking and testing.

Extended Power Uprate (EPU) Radiation Surveys

The inspector reviewed Ginna's surveys and evaluation of the post-EPU dose rates. Ginna performed post-EPU dose rate surveys of affected areas of the containment building, auxiliary building, and intermediate building to detect any abnormal readings at various reactor power levels. The post-EPU power levels included: 85 percent (the former Ginna 100 percent power level), 88 percent, 91 percent, 94 percent, 97 percent, and 100 percent. The inspector verified that Ginna had performed the surveys and evaluated the results. Ginna concluded through an evaluation of the survey data, that there was no increase in the post-EPU dose rates that could be attributed to the EPU.

Erosion Corrosion Inspection Program

The objectives of this inspection were to determine whether Ginna's activities relative to erosion-corrosion / flow-accelerated-corrosion (EC/FAC) monitoring and maintenance were being accomplished in accordance with 10 CFR 50.65, the Maintenance Rule, Ginna commitments to implement GL 89-08, "Erosion/Corrosion Induced Pipe Wall Thinning," and Ginna approved procedures. The inspector reviewed the EC/FAC program to determine whether Ginna has taken required action to detect adverse effects (wall thinning) on systems and components as a result of operating changes related to EPU such as increased flow in primary or secondary systems, including their interfacing systems. The inspector noted through documentation review that responsibility for the implementation of the Ginna EC/FAC program is delegated by controlled procedure, to the Nuclear Engineering Services organization. The Assigned Erosion/Corrosion (E/C) engineer has overall responsibilities concerning erosion/corrosion activities and is delegated responsibility for the overall program effort.

The inspector reviewed Ginna's implementation of a long term EC/FAC monitoring program to determine whether it was consistent with GL 89-08 and the guidelines in Electric Power Research Institute Report NSAC-202L-R2. Also, the inspector reviewed procedures and administrative controls to determine whether those procedures and controls ensure the structural integrity of high energy (single phase and two phase) carbon steel systems. The inspector reviewed Ginna's established EC/FAC program to determine whether the degradation of piping and components is described in the procedures and, the examination activities are managed, maintained and documented.

The inspector reviewed the program to determine whether it was well defined and included systematic methods for predicting which systems and specific locations within those systems are susceptible to EC/FAC. In particular, the inspector reviewed those steps taken to identify specific locations that were most likely to be adversely affected by a change (increase) in operating variables (temperature, flow, etc) as a result of increased power levels. Also, the inspector reviewed the Ginna EC/FAC activity to determine status and effective utilization of the industry sponsored predictive program (CHECWORKS) to verify the selection of the most susceptible locations for inspection

and additional locations based on unique operating conditions and industry experience. The inspector noted the inspection results are compared to the locations predicted as most susceptible to high wear to verify the program predictive accuracy. The inspector reviewed a portion of the inspection data and analysis of the most susceptible piping components to determine if the results were clearly documented. Also, the inspector reviewed how inspection data was trended to determine EC/FAC wear rates and identify the future inspection locations. The inspector reviewed several CRs which identified wall thinning in piping during the current outage which was replaced based on predictive analysis of remaining life.

The inspector performed a documentation review to determine if examination activities were performed in accordance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements. The inspector reviewed the EC/FAC program to determine whether it contained specific guidance for actions such as additional inspection (extent of condition) and engineering evaluation and repair or replacement of those components when wall thinning is detected. The inspector reviewed the IPs to determine that repair or replacement of components determined or predicted to wear below minimum wall thickness requirements was to be performed in accordance with Ginna's ASME Section XI program or the original design code requirements. Additionally, Ginna's method of performing UT of carbon steel for material thickness measurement was reviewed and found to be described in site approved procedures. Personnel conducting the NDEs were documented as qualified to perform thickness measurements.

The inspector selected portions of the moisture separator reheater drains and the extraction steam systems for a detailed review of Ginna's EC/FAC monitoring activities and effectiveness. The sample selection was based on the IP objectives and risk priority of those components and systems where accelerated wear rates were predicted to cause wall thinning. The inspector performed a "walkdown" of portions of the selected systems (piping and components) to verify the as built configuration matches the plant specific EC/FAC program isometrics. The inspector reviewed five EC/FAC program component isometrics and fifteen specific locations within the selected systems which had been predicted to be susceptible to wear during the initial EC/FAC program evaluations using the CHECKWORKS predictive model. The inspector also reviewed selected locations in these systems that had been identified as susceptible to a projected increase in EC/FAC wear rates using the higher EPU operational variables with the CHECKWORKS model. The inspector determined that the increase in wear rates was recognized and being incorporated into the program data base for future inspection sample selection.

The inspector reviewed the specified acceptance criteria for required wall thickness to determine that sufficient margin above the applicable code limits was provided to permit an evaluation and determination of appropriate corrective actions.

Implementation of the Piping Vibration Monitoring Program

The inspectors reviewed PCR 2004-0057, "Feedwater Isolation Valve Modification - Actuator Addition," which was installed October 2006. This modification installed pneumatic actuators on main feedwater isolation valves (MFIVs) 3994 and 3995. This modification was part of the EPU changes to the containment response analysis to credit these valves for feedwater isolation, if a main feedwater regulating valve (MFRV) fails. The pneumatic controls were added to allow the MFIVs to actuate faster, which allows these valves to be credited to mitigate containment parameters during a postulated steam line break inside containment. The evaluation consisted of walking down the modification in the field; interviews with plant staff; and reviewing operating procedures, operator training, UFSAR, License Amendment No. 95, and applicable system drawings. This review was performed to ensure the plant modification can perform its intended safety function, at EPU conditions, in accordance with licensing and design bases, and that these bases were updated in accordance with the NRC SE. A listing of documents reviewed is provided in the attachment to this report.

The inspectors reviewed how Ginna implemented a vibration monitoring program that was developed to monitor plant systems and components as power was increased to the new 100 percent EPU level. This monitoring program was described in the Ginna document "Piping Vibration Monitoring Program for Ginna Nuclear Plant EPU Program." The approach Ginna would use to monitor vibration as power was increased to the new EPU level was described in the July 11, 2006, SE that was issued by the Office of Nuclear Reactor Regulation related to Amendment No. 97 to Renewed Facility Operating License No. DPR-18 R. E. Ginna Nuclear Power Plant, Inc.

The inspectors observed the acceptance walkdown of piping systems of interest upon achieving 100 percent EPU power level, walked down piping systems daily to monitor for differences in the vibrational response of piping in the plant, and conducted interviews with operators, engineers and contractors. The inspectors also reviewed vibration data taken during contractor walkdowns of affected piping systems during ascension to 100 percent power, and conducted independent measurements to verify accuracy of vibration measurements taken by contractors. The inspectors conducted this review to verify that the acceptance criteria and test procedures used were in accordance with industry standards and were implemented satisfactorily.

Assessment of a Historical Industry Event.

On August 20, 1974, a power-operated relief valve (PORV) failed open at the Beznau plant (2-loop Westinghouse) in Switzerland because of a mechanical failure in the valve stem. At the time of that event, Ginna was equipped with the same design (and material) PORVs. The inspectors reviewed Ginna's evaluation of this event and noted that although historical documentation for the Ginna plant followup to the Beznau failure was not readily available, it was apparent that the Ginna plant PORVs were replaced in the 1980s and they were not the same material as the Beznau PORV that failed. This lack of documentation regarding replacement of the PORV was entered into the Ginna corrective action program as condition report CR 2006-005457.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On January 26, 2007, the resident inspectors presented the inspection results to Mrs. Mary Korsnick and other members of her staff, who acknowledged the findings. The inspectors asked Ginna personnel whether any of the material examined during the inspection should be considered proprietary. Proprietary information was examined during this inspection, but is not specifically discussed in the report.

4OA7 Licensee-identified Violations

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

TS 3.7.10 requires the ABVS to be operable when moving irradiated fuel assemblies in the Auxiliary Building when one or more fuel assemblies in the Auxiliary Building has decayed less than 60 days. Contrary to this requirement, on October 15, 2006, Ginna commenced movement of irradiated spent fuel assemblies in the auxiliary building when the ABVS was not operable. This condition was documented by Ginna in CR 2006-005906 and subsequently corrected. This finding is of very low safety significance because it did not increase the probability or consequences of a core damage event.

TS 3.3.5 requires the CVI to be operable when conducting core alterations. Contrary to this requirement, between October 14 and October 16, 2006, core alterations occurred without an operable CVI system. This condition was documented by Ginna in CR 2006-005298, and subsequently corrected. This finding is of very low safety significance because it did not increase the probability of a core damage event.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

D. Blankenship	Manager, Radiation Protection
E. Groh	Assistant Operations Manager (Shift)
D. Holm	Plant Manager
S. Kennedy	Emergency Preparedness Manager
M. Korsnick	Vice President, Ginna
J. Pacher	Manager, Nuclear Engineering Services
B. Randall	Nuclear Safety and Licensing Manager
W. Thomson	Chemistry Supervisor
R. Whalen	Manager, Ginna Maintenance
J. Yoe	Operations Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000244/2006005-02	URI	Determination of Performance Deficiency Associated with TS 3.7.1, Main Steam Safety Valves, Violation Identified in LER 2006-007-00 (Section 4OA3.5)

Opened and Closed

05000244/2006005-01	NCV	ECCS Rendered Inoperable While in Mode 4
05000244/2006005-03	FIN	Failure to Maintain the Containment Penetration Cooling System in accordance with the UFSAR and System Drawings

Closed

05000244/2006004-00	LER	Inoperability of Two Trains of Standby Auxiliary Feedwater (Section 4OA3.2)
05000244/2006005-00	LER	'B' Containment Sump covered While in Mode 4 (Section 4OA3.3)
05000244/2006006-00	LER	Core Alterations and Movement of Irradiated Fuel with Containment Ventilation Isolation (CVI) Inoperable (Section 4OA3.4)
05000244/2006007-00	LER	Main Steam Safety Valve Setpoint Exceedance (Section 4OA3.5)

05000244/2006008-00	LER	Charcoal Filter Efficiency Test Failure (Section 4OA3.6)
05000244/2006002-01	LER	Off-site Power Systems Declared Inoperable (Section 4OA3.7)
05000144/2000009-01	URI	Adequacy of Hemyc Cable Wrap Fire Barrier Qualification Test and Evaluation (Section 4OA5.5)
05000244/2006004-01	URI	Review the Significance of Not Maintaining the Containment Penetration Cooling System in accordance with the UFSAR and System P&IDs (Section 4OA5.6)

Discussed

NONE

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Condition Reports
2006-004704

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

Safety Evaluations
2006-002 Core Reload for Cycle 33, Revision 0

Section 1R04: Equipment Alignment

Condition Reports

2006-004185	2006-004601	2006-00574	2006-006514
2006-004551	2006-004743	2006-006359	

Documents and Drawings
TS 3.4.12 TS: TOP System
B 3.4.12 TS Bases for LTOP System
Updated Final SE Report (UFSAR) Section, Rev 19, 5.2.2.2 LTOP System
Pressure Temperature Limits Report (PTLR) Section 2.2 and 2.3 LTOP System Setpoints
33013-1263 RCS Overpressure Protection Nitrogen Accumulator System P&ID
33013-2248 RCP Lube Oil Spillage Collection System P&ID
UFSAR, Rev 19, Sections 5.4.1.1.5 and 9.5.1.2.4.4

Work Orders
20600999 ITS - Perform CPI-PRESS-450 Calibration of Over Pressure Protection Loop 450
20601000 ITS - Perform CPI-PRESS-451 Calibration of Over Pressure Protection Loop 451
20601001 ITS - Perform CPI-PRESS-452 Calibration of Over Pressure Protection Loop 452

Section 1R05: Fire Protection

Condition Reports
2006-004896

Work Orders
20505235 Clean Out Containment Drains

Section 1R06: Flood Protection Measures

Drawings
33013-2681 Ssump Pumps Drains and Sewage Pumps

Procedures
Annual Inspection and Operational Check of Backflow Protection System (1995)

Documents
P201212 Clean Inspect, and Test PXCB006 and ACPDPCB07

Section 1R08: Inservice Inspection Activities

Condition Reports

CR 2006-005342	CR 2006-005374	CR 2006-005464	CR 2006-005351
CR 2006-005453	CR 2006-005406	CR 2006-005407	CR 2006-005266
CR 2006-005356	CR 2006-005313	CR 2006-005353	CR 2006-005419
CR 2006-005303	CR 2006-005337	CR 2006-005457	CR 2006-005463
CR 2006-005431	CR 2006-005430	CR 2006-005090	CR 2006-005254

Procedures
VT-116, Revision 9, 10/08/2006; VT of Reactor Vessel Head
PT-7, Rev 55. ISI System Leakage Test for the RCS, for Boric Acid
IP-11T-7, Revision 6; Boric Acid Corrosion Monitoring Program
UT-210, Revision 6, 10/08/2006; Manual UT Examination of Dissimilar Metal Pipe Welds (PDI)
UT-208, Revision 00, 1/10/2006; Manual Ultrasonic Examination of Austenitic Pressure Piping Welds (PDI)
UT-301 Rev 5. Manual Ultrasonic Examination of ASME Section XI Pressure Vessels Greater than 2.0 inches in Thickness
RT-104, Revision 8, 8/29/00; Radiographic Examination of Power Piping, Vessel Welds and Associated Attachments
PT-106, Revision 11, 11/3/04; Liquid Penetrant Examinations
VT-103, Revision 6, 2/17/05; VT of Welds

NDE Examination Reports
UT Report # 06GU004, Summary No. I161140 to Procedure UT-208
UT Report # 06GU017, Summary No. I014000 to Procedure UT-208
UT Report # 06GU021, Summary No. I071400 to Procedure UT-301
UT Report # 06GU016, Summary No. I099900 to Procedure UT-210
Pressurizer Line PT Reports. 06GP009, 06GP013, 06GP014, 06GP016, and 06GP023

Plant Modifications:
Work packages FCV 4269 and 4270 for the replacement of the feedwater feed regulation valves.
PCR 2005-0031, Rev 0 for the Main Steam (MS) and Feedwater (FW) Piping System support modifications for power uprate including supports MS 35A, 50A, 52, 62, 64, 149, 150, 151, 153 and FW 78.
PCR 2004-0009, Ginna Power Uprate Calculations PS-008 and PS-013 by S&W.

Miscellaneous Documents
Program Health Report for the Flow Accelerated Corrosion Program (FAC), dated 8/6/2006.
Boric Acid Evaluations for WO #'s 20502294, 20504899, and 20504901.

Section 1R11: Licensed Operator Requalification

Condition Reports
2006-004004
2006-004945

Other Documents

DBCOR 2006-0057	Appendix R time Critical Tasks Validation for EPU
DA-ME-2000-075	Pressurizer, Volume Control Tank and RWST Evaluations for Appendix R, Revision 2, March 28, 2006
ES3123-06	Steam Generator Tube Rupture
OTG-2.2	Simulator Examination Instructions

Procedures

ER-FIRE.1	Alternate Shutdown for Control Complex Fire, Revision 23
ER-FIRE.2	Alternate Shutdown for Cable Tunnel Fire, Revision 20
ER-FIRE.3	Alternate Shutdown for Aux Bldg Basement / Mezzanine Fire, Revision 23

Section 1R12: Maintenance Rule Implementation

Condition Reports
2006-005425
2006-006397
2006-003090

Documents

UFSAR	Table 6.3-7, Instrumentation Readouts on the Control Board for Operator Monitoring During Recirculation

UFSAR Table 7.5-1, Comparison of Ginna Station Post Accident Instrumentation to Regulatory Guide 1.97, Revision 3
ACE Apparent Cause Evaluation for CR-2006-003090, RHR to SI Flow Transmitters are Powered from the Wrong Train
TSR 2006-0228 Evaluate the Need to Modify Flow Loop F-925 due to Being Powered From Both 'A' and 'B' Train Power

P&ID Drawings
33013-1262 Safety Injection and Accumulators (SI) Sheets 1 and 2 of 2
33013-1247 Auxiliary Coolant Residual Heat Removal (AC)

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Drawings
P&ID 33013-1234 Condensate Storage Tank

Work Order
20604843 Perform Decon and Instacote SFP Transfer Slot
20602058 Charging Pump 'A' Varidrive Unit / 4 Month PM Inspection

Condition Reports
2006-007137

Section 1R15: Operability Evaluations

Condition Reports

2006-005061	2006-005499	2006-006029	2006-006341
2006-005797	2006-006204	2006-006472	
2006-005934			

Section 1R17: Permanent Plant Modifications

Condition Reports

2006-005480		2006-005484	
2006-005482			

Section 1R19: Post Maintenance Testing

Condition Reports

2006-004891	2006-005950	2006-005987	2006-006212
2006-005817	2006-005960	2006-006068	

Procedures

SM-2004-0057.4	Feedwater Isolation Valve Electrical Work at AOV 3994 and Post Modification Testing
SM-2004-0057.5	Feedwater Isolation Valve Electrical Work at AOV 3995 and Post Modification Testing
PT-2.6.1	Main Steam Relief Valve Exercise
T-18C	Turbine Overspeed Trip Test, Revision 23
T-18D	Turbine Overspeed Trip Mechanism Oil Pressure Test, Revision 9
T-18B	Turbine Main Steam Stop Valves Test, Revision 21
T-18A	Intercept and Reheat Stop Valve Test, Revision 11

Work Orders

20600714	Coordinate Performing Seal Table Work
20604701	Repair Work Gear on 3411
20500794	Perform CPI-LT-2044

Section 1R20: Refueling and Outage Activities

Procedures

IP-IIT-7	Boric Acid Corrosion Monitoring Program
PT-60.6A	CCW Heat Exchanger Performance Test
O-1.2	Plant Startup From Hot Shutdown to Full Load
O-15.1	Administrative Requirement Checklist for Entry to Mode 6 and Refueling Conditions
O-6.13	Daily Surveillance Log
A-3.1	Containment Storage and Closeout Inspection

Condition Reports

2006-004725	2006-004970	2006-005348	2006-005660
2006-004787	2006-005006	2006-005356	2006-005680
2006-004816	2006-005061	2006-005447	2006-005691
2006-004848	2006-005083	2006-005453	2006-005702
2006-004882	2006-005131	2006-005458	2006-005726
2006-004891	2006-005236	2006-005485	2006-005818
2006-004899	2006-005267	2006-005521	2006-005834
2006-004921	2006-005285	2006-005535	2006-005852
2006-004927	2006-005298	2006-005546	2006-005903
2006-004929	2006-005307	2006-005621	
2006-004962	2006-005339		

Work Orders

20604499	Clean Boric Acid Deposits on CRDM 32
20604386	Clean Oil on RCP's and Check Lube Oil Collection System Hardware

Documents and Drawings

Fire Hazard Analysis, Sect 14, Appendix R III.O Compliance - RCP Lube Oil Collections System

ESM-97-009 Effectiveness Review of RCP Motor Lube Oil Spillage collection System

Section 1R22: Surveillance Testing

Condition Reports
2006-004751
2006-004753

Procedures

RSSP-10.3	Preparation for and Performance of Main Steam Safety Valve Test
FS-5340	Field Service Procedure
RSSP 2.1	Safety Injection System Functional Test
PT-7	ISI System Leakage Test RCS
PT-16Q-T	Auxiliary Feedwater Turbine Pump Quarterly

Section 2OS1: Access Control to Radiologically Significant Areas

Work Orders/Radiation Work Permits

20605164	Perform Routine Maintenance & Tests in Non-HRAs / RWP06-0001
20602358	General Inspection & Tests in Containment Vessel While Reactor Critical / RWP06-1008

Section 2OS2: ALARA Planning and Controls

Procedures

A-1.6, Revision 21	Station ALARA Committee
A-1.6.1, Revision 28	ALARA Job Reviews
IP-ALA-1, Revision 0	ALARA Challenge Board
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061025; 061026; 061027; 061028; 061029; 061030; 061031; 061032; 061033; 061034; 061035; 061036; 061037; 061038; 061039; 061040; 061041; 061042; 061043; 061044; 061045; 061046; 061047; 061048; 061049; 061050; 061051; 061052; 061053; 061054; 061055; 061056; and 061061.

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LIST OF ACRONYMS

ABVS	Auxiliary Building Ventilation System
ADAMS	Agency-Wide Documents Access and Management System
ALARA	As Low As Reasonably Achievable
AR	Alara Review
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CEDE	Committed Effective Dose Equivalent
CFR	Code of Federal Regulation
CR	Condition Report
CRDM	Control Rod Drive Mechanism
CVI	Containment Ventilation Isolation
DAW	Dry Active Waste
dc	Direct Current
DOT	U. S. Department of Transportation
ECCS	Emergency Core Cooling Systems
EC/FAC	Erosion Corrosion/Flow-Accelerated Corrosion
EPD	Electronic Personal Dosimeter
EPU	Extended Power Uprate
FSAR	Final Safety Analysis Report
FW	Feed Water
GL	Generic Letter
HPSI	High Pressure Safety Injection

HRA	High Radiation Area
IMC	Inspection Manual Chapter
IN	Information Notice
IP	Inspection Procedure
ISI	In-Service Inspection
IST	In-Service Testing
LER	Licensee Event Report
LHP	Lower Head Penetration
LTOP	Low Temperature Overpressure Protection
MFIV	Main Feedwater Isolation Valves
MFRV	Main Feedwater Regulating Valves
MSPI	Mitigating Systems Performance Index
MW	Megawatt
NCV	Non-Cited Violation
NDE	Non-Destructive Examination
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Off Site Dose Calculation
PARS	Publicly Available Records
PCP	Process Control Program
PCR	Personnel Contamination Report
PI	Performance Indicator
P&ID	Piping and Instrument Drawings
PI&R	Problem Identification and Resolution
PORV	Power-Operated Relief Valve
PT	Liquid Penetrant Examinations
PWR	Pressurized Water Reactor
RCA	Radiologically Controlled Area
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RETS	Radiological Effluent Technical Specification
RFO	Refueling Outage
RHR	Residual Heat Removal
RPV	Reactor Pressure Vessel
RWP	Radiation Work Permit
SAC	Station ALARA Committee
SCBA	Self Contained Breathing Apparatus
SDP	Significance Determination Process
SE	Safety Evaluation
SFP	Spent Fuel Pool
SSC	Systems, structures and components
TI	Temporary Instruction
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
UT	Ultrasonic Testing
VT	Visual Examination