

October 15, 2006

Mrs. Mary G. Korsnick  
Vice President, R. E. Ginna Nuclear Power Plant  
R. E. Ginna Nuclear Power Plant, LLC  
1503 Lake Road  
Ontario, New York 14519

**SUBJECT: R. E. GINNA NUCLEAR POWER PLANT PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT (PI&R) NO. 05000244/2006006**

Dear Mrs. Korsnick:

On August 31, 2006, the US Nuclear Regulatory Commission (NRC) completed a team inspection at the R. E. Ginna Nuclear Power Plant. The enclosed inspection report documents the inspection results, which were discussed on August 31, 2006, with you and members of your staff during an exit meeting.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, the team concluded that implementation of the corrective action program at Ginna was generally good. However, the team noted that weaknesses existed in the areas of documentation of issues, operability determinations, and reportability. There were three "green" findings identified by the inspectors during this inspection. The first finding was for operation in a condition prohibited by the Technical Specifications (TSs); specifically, for making a mode change and for operating at power with the standby auxiliary feedwater (SAFW) system inoperable. The second finding was associated with a failure to identify that the TS basis for the auxiliary feedwater (AFW) and SAFW systems was invalid. The third finding was associated with a failure to correct an NRC-identified finding in a timely manner; the specific issue was related to the absence of an alarm in the control room for the reactor coolant system leakage detection system. The first two findings were determined to be violations of NRC requirements. However, because each of the violations was of very low safety significance (Green) and because they were entered into your corrective action program, the NRC is treating these as Non-Cited Violations (NCV), in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny any of these Non-Cited Violations, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC, 20555-0001, with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC, 20555-0001; and the NRC Resident Inspector at the R.E. Ginna Nuclear Power Plant.

M. Korsnick

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Sincerely,

**/RA/**

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

Docket Nos. 50-244  
License Nos. DPR-18

Enclosure: Inspection Report No. 05000244/2006006  
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: 05000244/2006006

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

Facility: R. E. Ginna Nuclear Power Plant

Location: Ontario, New York

Dates: August 14, 2006 through August 31, 2006

Team Leader: B. S. Norris, Senior Project Engineer, Division of Reactor Projects (DRP)

Inspectors: M. Marshfield, Resident Inspector, DRP  
A. Rosebrook, Project Engineer, DRP  
A. Ziedonis, Reactor Engineer, DRP

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

## SUMMARY OF FINDINGS

IR 05000244/2006-006; 08/14/2006 - 08/31/2006; R. E. Ginna Nuclear Power Plant; biennial baseline inspection of the identification and resolution of problems; one violation and one finding were identified in the evaluation of the corrective action program, and one violation was identified in the use of operating experience.

This team inspection was performed by three regional inspectors and one resident inspector. Three findings of very low safety significance (Green) were identified during this inspection. Each of the findings were classified as a Non-Cited Violation (NCV). 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 made "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.

### Identification and Resolution of Problems

The team concluded that the implementation of the corrective action program (CAP) at the Ginna Nuclear Power plant was generally good. Ginna staff had a low threshold for identifying problems and entering them in the CAP. Once entered into the system, items were screened and prioritized in a timely manner using established criteria. Items entered into the CAP were properly evaluated commensurate with their safety significance. However, the team noted that weaknesses in the areas of documentation of issues, operability determinations, and reportability. Corrective actions were typically implemented in a timely manner; however, the documentation and tracking of the corrective actions was occasionally weak. Licensee audits and self-assessments were adequate; however, a few significant problems were identified, and issues identified were not always entered into the CAP when appropriate. The team observed that Ginna staff was generally good at reviewing and applying industry operating experience lessons learned. On the basis of interviews conducted during the inspection, workers at the site expressed freedom to enter safety concerns into the CAP.

There were three Green findings identified by the inspectors during this inspection. The first finding was associated with a failure to correct a 2004 NRC-identified finding in a timely manner; specifically, the absence of a control room alarm for the reactor coolant system leakage detection system. The second finding was a violation of the TSs for conducting a mode change and operating at power with the SAFW system inoperable. The third finding was a violation associated with a failure to identify that the TS basis for the AFW and SAFW systems was invalid.

### **Cornerstone: Initiating Events**

- Green. The NRC identified a Green Finding for the failure to take prompt corrective action for a 2004 NRC-Identified Finding. Specifically, Ginna did not install an alarm in the control room for the RCS leakage detection function of the containment radioactive airborne particulate detector, as identified in the Updated Final Analysis Safety Report (UFSAR). The

alarm was installed in August 2006, after the team questioned the status of the corrective actions.

The performance deficiency is a failure to promptly correct a condition adverse to quality. In 2004, the NRC identified that a control room alarm for the RCS leakage detection function was not present, as listed in the UFSAR. However, Ginna did not take corrective actions until August 2006, as a result of the NRC's questions. The finding is more than minor because the deficiency is associated with the design control attribute of the Initiating Events Cornerstone, and adversely affects the cornerstone objective of limiting the likelihood of those events that upset plant stability during power operations. Specifically, the failure to have the alarm, which would alert the operators to take actions in accordance with approved procedures, eliminates one of the first indications of a leak, which could precede a loss of primary coolant event. The finding was determined to be of very low safety significance (Green) because the finding would neither result in exceeding the TS limit for identified RCS leakage nor would the finding have affected mitigation systems resulting in a total loss of their safety function.

The finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna failed to take prompt corrective action for a 2004 NRC-identified condition adverse to quality. Specifically, they did not install a control room alarm for the RCS leakage detection function of the containment radioactive airborne particulate detector.

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

- Green. The NRC identified a Green NCV for operating in an unanalyzed condition that was in violation of the Ginna TSs. Specifically, with the SAFW system inoperable, a reactor mode change was made and the plant was operated at power for approximately ten days, a period in excess of the TS allowed outage time.

The performance deficiency is the failure to properly evaluate the interaction of the flow transmitters to the operation of the SAFW system, which caused the Ginna staff to not recognize that the system had been in an unanalyzed condition from April 8 until April 18, 2005. This resulted in the failure to identify that they had violated multiple conditions prohibited by TS. The finding is more than minor because it is associated with the Mitigating Systems Cornerstone objective to ensure the operability, availability, and reliability of both trains of the SAFW system. The specific attribute is human performance, which affected equipment operability. The Region I Senior Risk Analyst (SRA) determined that this issue was of very low safety significance (Green). A Phase 2 evaluation was required to assess the safety significance, because the finding represented a loss of a single train of SAFW for longer than the TS allowed outage time.

This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not properly evaluate the effect of the isolation of the flow transmitters on the operability of the SAFW system.

- Green. The team identified a Green NCV of 10CFR50, Appendix B, Criterion XVI, "Corrective Action," for a failure to identify that the TS basis for the AFW and SAFW systems was incorrect. Specifically, the TS Basis for the AFW and SAFW systems stated that the recirculation function was not required for operability of the pumps. This

change was originally made in the mid-1990's. However, Ginna missed several opportunities during the review of industry OE, to identify and correct the problem, most recently during a 10CFR50.59 screening for a TS Basis change in 2004.

The performance deficiency is the failure to identify, using industry Operating Experience (OE), that the basis for the operability of a safety-related system was inaccurate. Specifically, the TS Basis for the AFW and SAFW systems stated that the recirculation line was not required for system operability. This finding is more than minor because if left uncorrected, it could become a more significant safety concern. It affects the design control attribute of the Mitigating Systems Cornerstone and the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). This finding was determined to be of very low safety significance (Green) because it did not result in the loss of a safety function, it did not result in outage time for one or more trains of a structure, system or component (SSC) to exceed its allowed TS outage times, and it is not potentially risk significant due to a seismic, flooding, or severe weather initiating event.

This finding has a cross-cutting aspect in the area of problem identification and resolution for operating experience because Ginna did not effectively incorporate operating experience to identify an invalid TS basis for the AFW and SAFW systems.

#### Licensee-Identified Violations

None.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (PI&R) (Biennial - IP 71152B)

##### a. Assessment of the Corrective Action Program

##### (1) Inspection Scope

The inspection team reviewed the procedures describing the corrective action program (CAP) at the R. E. Ginna Nuclear Power Plant. Ginna identified problems by initiating condition reports (CR). The CRs were reviewed for conditions adverse to quality, human performance problems, equipment non-conformance, industrial or radiological safety concerns, and other significant issues. The CRs were subsequently screened for operability, categorized by priority/significance (1 through 4), and assigned to a department for evaluation and resolution.

The team reviewed CRs selected across the seven cornerstones of safety in the NRC's Reactor Oversight Program (ROP) to determine if problems were being properly identified, characterized, and entered into the CAP for evaluation and resolution. The team selected items from the maintenance, operations, engineering, emergency preparedness, physical security, radiation safety, training, and oversight programs to ensure that Ginna was appropriately considering problems identified in each functional area. The team used this information to select a risk-informed sample of CRs that had been issued since the last NRC PI&R inspection, which was conducted in November 2004.

The team selected items from other processes, to verify that Ginna appropriately considered these items for entry into the CAP. Specifically, the team reviewed a sample of engineering technical service requests, training work requests, maintenance work requests, operator log entries, control room deficiency and operator work-around lists, operability determinations, engineering system health reports, completed surveillance tests, and current temporary configuration change packages. In addition, the team interviewed plant staff and management to determine their understanding of and involvement with the CAP. The CRs and other documents reviewed, and a list of key personnel contacted, are listed in the Attachment to this report.

The team considered risk insights from the NRC's and Ginna's risk analyses to focus the sample selection and plant tours on risk-significant components. The team determined that the highest risk-significant systems were the 125 volt direct current (vdc) electrical distribution system, the 120 & 480 volt alternating current (vac) electrical distribution systems, the reactor protection system, the service water system, the safety injection system, and the component cooling water system. For the selected risk-significant systems, the team reviewed the applicable system health reports, a sample of work requests and engineering documents, plant log entries, and results from surveillance tests and maintenance tasks.

Enclosure

The inspection team reviewed the CRs to assess whether Ginna adequately evaluated and prioritized the identified problems. The CRs reviewed encompassed the full range of Ginna's evaluations, including root cause analyses (RCA), apparent cause evaluations (ACE), common cause analyses, and work group evaluations. The review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of the resolutions. For significant conditions adverse to quality, the team reviewed the effectiveness of Ginna's corrective actions to preclude recurrence. The team observed meetings of the Performance Improvement Committee (PIC) and the Management Review Committee (MRC), during which Ginna personnel reviewed new CRs for prioritization, and evaluated preliminary corrective action assignments, analyses, and plans. The team also reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems. The team assessed the backlog of corrective actions, emphasizing the backlogs in the maintenance and engineering departments, to determine, individually and collectively, if there was an increased risk due to delays in implementation. The team further reviewed equipment performance results and assessments documented in completed surveillance procedures, operator log entries, and trend data to determine whether the equipment performance evaluations were technically adequate to identify degrading or non-conforming equipment.

The team reviewed the corrective actions associated with selected CRs to determine whether the actions addressed the identified causes of the problems. The team reviewed CRs for repetitive problems to determine whether previous corrective actions were effective. The team also reviewed Ginna's timeliness in implementing corrective actions. The team reviewed the CRs associated with selected NCVs and findings (FINs) to determine whether Ginna properly evaluated and resolved these issues.

## (2) Assessment

No findings of significance were identified.

In general, the team considered the identification of equipment deficiencies at Ginna to be good. There was a low threshold for the identification of individual issues. Approximately 5000 CRs were written per year. The housekeeping and cleanliness of the plant was generally good and was reinforced by weekly management tours. This enhanced the ability of personnel to easily identify equipment deficiencies and monitor equipment for worsening conditions.

The team recognized that Ginna had recently transitioned from a paper-based CAP to the Constellation computer-based program SpesCom. The implementation of the computerized CAP made it easier to initiate and track CRs and provided Ginna with improved tools for trending.

However, the team did identify a few instances where station personnel had not identified conditions adverse to quality. For example, during a tour of the standby auxiliary feedwater (SAFW) room, the inspectors noted that scaffolding was in contact with the SAFW pump baseplate, and that the scaffolding was erected on both trains of

the system at the same time. Both of these conditions were prohibited by Ginna station scaffolding procedures. An evaluation by Ginna personnel was able to show that the safety function of the SAFW pumps would not have been affected by the scaffolding during a seismic event. The failure to erect the scaffolding in accordance with station procedures is considered a violation of minor significance. As such, this issue is not subject to enforcement action, in accordance with the NRC's Enforcement Policy.

#### Prioritization and Evaluation of Issues

One Green NCV was identified in the area of prioritization and evaluation of issues related to operating the plant in a condition prohibited by the Ginna Technical Specifications (TSs). Specifically, both trains of SAFW were inoperable when a reactor mode change was made, and the plant was operated at power for approximately 10 days with the SAFW system inoperable.

The team determined that Ginna's performance in this area was generally good. The station screened the CRs appropriately and properly classified them for significance. There were no items in the engineering and maintenance backlogs that were risk significant, individually or collectively. The team considered the efforts of the PIC and MRC added value to the CAP process. The discussions about specific topics were detailed, and there were no classifications or immediate operability determinations with which the NRC disagreed.

The quality of the causal analyses reviewed was generally good, with those performed later in the inspection period showing improved quality. Examples include the RCA for Intermittent Failures of a Tave/Delta T Instrument (CR 2005-0267) and the RCA for the Declining Performance Rating (CR 2005-3412).

Although the team concluded that the correct decision was made for the immediate operability of systems, the team noted a weakness in the area of reportability. During the inspection, the team identified two instances where the required NRC reports were not made.

- In April 2005, Ginna personnel identified, after a reactor/plant start-up, that the flow transmitters for both trains of SAFW were isolated. They failed to recognize that both trains of SAFW had been inoperable and that a mode change had been made, and that this would require the submittal of a Licensee Event Report (LER) to the NRC. This finding is discussed in detail in the Section 4OA2.a(3)(a).
- In July and August 2006, the electrical grid condition monitor alarmed on two occasions, indicating that off-site power was inoperable. Ginna failed to report these occurrences within 8 hours as required by 10CFR50.72. This issue will be documented in the 3<sup>rd</sup> quarter integrated inspection report (IR 05000244/2006004).

### Effectiveness of Corrective Actions

There was one Green finding identified in the area of effectiveness of corrective actions, involving the failure to implement timely corrective actions for a 2004 NRC-identified finding. The containment radioactive airborne particulate detector, credited for detection of RCS leakage, did not have an alarm in the control room, as described in the UFSAR.

The team concluded that corrective actions were generally adequate and completed in a timely manner. For significant conditions adverse to quality, corrective actions were identified to prevent recurrence. It was noted that Ginna had very few open operability determinations, which indicated that significant conditions were being fixed in a timely manner. The inspectors noted a decreasing trend in the number of items in the maintenance and engineering backlogs.

The team observed a general weakness in the quality and availability of documentation for many of the CRs reviewed. The corrective actions for several CRs, including some NRC-identified NCV's and findings, were not easily retrievable or were closed to a parallel work process making it difficult to verify that corrective actions were actually completed. Examples include:

- CR 2003-3282, written to address NCV 2004005-001, had no documented corrective action associated with it. However, through discussions with Ginna personnel, additional documents provided, and other CRs, the inspectors determined that the procedural enhancements were completed, and that the required training was completed.
- In 2003, station personnel identified a degraded electrical conduit on one of the component cooling water pumps. In 2005, station personnel noted that the condition had not been corrected and a second deficiency tag was attached. The inspectors noted that repairs were scheduled for 2007. The inspectors questioned if the as-found condition had been evaluated, to determine if it was acceptable or degrading. After discussions with the system engineer, the inspectors concluded that the operability of the pump was not affected; however, the system engineer had not documented this basis.

### (3) Findings

#### (a) Failure to Recognize that the SAFW System was Inoperable

Introduction: The team identified a Green NCV for operating in an unanalyzed condition that was in violation of the Ginna TSs. Specifically, with the SAFW system inoperable, a reactor mode change was made and the plant was operated at power for approximately ten days, a period in excess of the TS allowed outage time.

Description: On April 18, 2005, plant operators discovered that the SAFW flow transmitters (FT-4084 and FT-4085) were isolated. When discovered, the operators declared both trains of SAFW inoperable and entered TS Limiting Condition for

Operations (LCO) 3.7.5.F. The flow transmitters were returned to service and the SAFW system was declared operable. Subsequently, the licensing department determined that the system was operable, because (in their evaluation) the isolation of the flow instruments would not affect pump operability. Their reasoning was that the basis for TS 3.3.3, post accident monitoring, stated that only the AFW flow transmitters were required for post accident monitoring purposes. The Ginna investigation revealed that the instruments had been isolated during the spring 2005 refueling outage. The plant entered Mode 3 on April 8, 2005, the point at which the SAFW system was required to be operable.

FT-4084 and FT-4085 provide local and remote flow indication for the two trains of SAFW. In addition, the flow transmitter controls the automatic function of the associated pump discharge valve and recirculation valve. The basis for TS 3.7.5 states that in order for a train of SAFW to be operable, a pump, the associated instrumentation, and a flow path must be available. Because the flow instruments control automatic functions which affect the flow path, and would be relied upon to ensure proper operation of the train, having the instruments isolated resulted in the associated trains being inoperable. The Ginna TS's require the SAFW system to be operable in Modes 1, 2, and 3 (power operation, startup, and hot shutdown).

After the inspection team exited, Ginna re-evaluated their position with regard to the operability of the SAFW system. On September 6, 2006, Ginna agreed that the safety function of the SAFW system was lost and that the system was inoperable with the flow transmitter isolated. Specifically, Ginna determined that the isolated flow transmitters would have caused both the pump discharge valve and pump recirculation valve to fail full open. For certain scenarios (eg., a high energy line break (HELB) outside of containment) the pump would deliver a higher than design flow rate to the steam generators (SG). In addition, the pump motor breaker could trip due to exceeding the time-delay current protection setpoint. Ginna reported this condition to the NRC, in accordance with 10CFR50.72, for the identification of a previously unanalyzed condition (Event Notification #42831).

Analysis: The performance deficiency is the failure to properly evaluate the interaction of the flow transmitters to the operation of the SAFW system, causing Ginna to not recognize that the system had been in an unanalyzed condition from April 8 until April 18, 2005. This resulted in the failure to identify that they had violated multiple conditions prohibited by TS. The finding is greater than minor because it is associated with the Mitigating Systems Cornerstone objective to ensure the operability, availability, and reliability of both trains of the SAFW system. The specific attribute is human performance, which affected equipment operability.

In accordance with Inspection Manual Chapter (IMC) 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," the inspectors conducted a Phase I SDP screening and determined that a detailed Phase 2 evaluation was required to assess the safety significance, because the finding represented a loss of a single train of SAFW for longer than the TS allowed outage time for main steam line break (MSLB) transients.

Enclosure

The Region I SRA determined that this issue was of very low safety significance (Green) with a modified Phase 2 analysis using the Risk-Informed Inspection Notebook for Ginna, Revision 2, with the following assumptions:

- Isolation of the SAFW flow instruments would cause the flow control valves and the recirculation valves to fully open if the system was started. Given this condition:
  - A SAFW pump would provide sufficient flow to a SG if the SG was pressurized.
  - A SAFW pump that was pumping to a depressurized SG would fail, due to either pump run out or circuit breaker over-current trip.
- A MSLB is the only Phase 2 Notebook initiating event that would result in a SG being rapidly depressurized. If a MSLB occurred either upstream or downstream of the main steam isolation valve (MSIV), and at least one MSIV closed, one SG would remain pressurized. Given this condition:
  - One of the SAFW pumps would have been able to pump to a pressurized SG.
  - One of the SAFW pumps would have failed, because it would have been pumping to a depressurized SG.
- Given the conditions above, during a MSLB with at least one MSIV closing, one of the two SAFW pump would not have functioned when the two SAFW flow instruments were isolated for the 10 day exposure time.
- Using the Risk-Informed Inspection Notebook, Table 3.10 for a MSLB:
  - The initiating event likelihood of three (3) was decreased by one order of magnitude to four (4), because of the 10 day exposure time.
  - The remaining mitigation credit for SAFW was reduced from a two (2) to one (1), because one of the pumps would have failed.
  - This resulted in an estimated increase in core damage frequency (CDF) of several orders of magnitude below the 1 in 1,000,000 (E-6) years of reactor operation threshold. The dominant core damage sequence was a MSLB with at least one MSIV closing, with a failure of the remaining SAFW and AFW systems and subsequent failure to remove decay heat with a primary feed and bleed operation.

The initial event, leaving the flow transmitters isolated, was licensee identified and corrected. Normally, if a licensee-identified Green finding is a violation, it would be documented in the inspection report in Section 4OA7, "Licencee-Identified Violations." However, if a problem exists with the licensee's evaluation or corrective actions associated with the licensee-identified finding and if further inspection added significant value, then the finding is documented as an NRC-identified finding under the applicable section of the report. Although the licensee identified the finding, they did not recognize the problem identified by the inspectors. The licensee-identified finding was the identification of the isolated flow transmitters. The NRC-finding is the reactor mode change with the SAFW system inoperable, and the power operation with the SAFW system inoperable in excess of the allowed outage time. Each of these is a violation of the TS, Sections 3.0.4 and 3.7.5.F, respectively.

10CFR50.73, "Licensee Event Report System," requires the submittal of an LER within sixty days after the discovery of the event; this includes if the licensee knew of the information to be reported, but did not recognize that it was required to make a report. One of the conditions requiring a LER is any operation or condition which was prohibited by the plant's TS.

This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not properly evaluate the effect of the isolation of the flow transmitters on the operability of the SAFW system.

Enforcement: Ginna TS LCO 3.0.4 requires that all required systems must be operable before entry into a Mode which requires that system. TS LCO 3.7.5.F states that if both trains of SAFW are inoperable, at least one train of SAFW must be restored to an operable status within seven days. The SAFW system is required to be operable in Modes 1, 2, and 3. Contrary to the above requirements, on April 8, 2005, with the SAFW system inoperable, a mode change was made when the reactor status was transitioned from Mode 4 (hot standby, SAFW is not required) to Mode 3, and the reactor startup continued to Mode 1. In addition, the isolated flow transmitters were not identified until April 18, 2005, ten days after the reactor entered Mode 3. In August 2006, the NRC identified to the licensee that the SAFW system had been inoperable due to the isolated flow transmitters. The mode change was in violation of TS LCO 3.0.4, and the plant operated for ten days (in excess of the seven day allowed outage time) which was a violation of TS LCO 3.7.5.F. Corrective actions included a notification to the NRC, and the initiation of a RCA. However, because this finding was of very low safety significance (Green) and has been entered into the Ginna corrective action program (CR 2006-3949), this violation is being treated as an NCV, consistent with section VI.A.1 of the NRC Enforcement Policy.

**(NCV 05000244/2006006-001, TS Violation - Reactor Startup and Power Operation with the SAFW System Inoperable)**

(b) Failure to Correct a Previously NRC-Identified Finding with Respect to an RCS Leakage Detection Alarm

Introduction: The team identified a Green Finding for the failure to take prompt corrective action for a 2004 NRC-Identified Finding. Specifically, Ginna failed to install an alarm in the control room for the RCS leakage detection function of the containment radioactive airborne particulate detector, as identified in the UFSAR.

Description: In August 2004, the NRC identified that there was no control room alarm for the RCS leakage detection function associated with R-11, the containment airborne radioactive particulate detector. The alarm is listed in the UFSAR, Table 5.2-5. This was documented in IR 05000244/2004004, as a Green Finding (FIN 05000244/2004004-01). The R-11 leakage detection function is credited to provide the first indication of RCS leakage, as part of the Ginna leak-before-break analysis. The containment radioactive airborne particulate detectors are safety-related equipment; however, the alarm is not safety-related.

Ginna initiated an Action Report (CR 2004-2111) in August 2004 to address the issue. Although the alarm was described in the UFSAR, the initial disposition of the CR was that the alarm was not required, because operator rounds met the intent of Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems," and NUREG-1061, Volume 3, "Report of the U.S. Nuclear Regulatory Commission Piping Review Committee, Evaluation of Potential for Pipe Breaks." The planned corrective actions included establishing a plant process computer alarm for RCS leakage detection. However, the chemistry department considered the planned corrective action to be an "enhancement," which changed the priority of the work to low. At the time, the station's CAP did not require a re-review of the CR after the classification was changed, resulting in the corrective action being delayed. In January 2006, the Plant Health Committee determined that the alarm was needed, but did not establish a timely date for implementation of the corrective action. After discussion with the team, Ginna installed a plant process computer alarm for R-11.

Analysis: The performance deficiency is a failure to promptly correct a condition adverse to quality associated with the installation of an alarm described in Ginna's licensing basis. In 2004, the NRC identified that a control room alarm for the RCS leakage detection function was not present, as listed in the UFSAR. However, Ginna did not take corrective actions until August 2006, as a result of the NRC's questions. The finding is more than minor because the deficiency is associated with the design control attribute of the Initiating Events Cornerstone, and adversely affects the cornerstone objective of limiting the likelihood of those events that upset plant stability during power operations. Specifically, the failure to have the alarm, which would alert the operators to take actions in accordance with approved procedures, eliminates one of the first indications of a leak, which could precede a loss of primary coolant event. Using IMC 0609, Appendix A, "Determining Significance of Reactor Inspection Findings For At-Power Situations," the finding was determined to be of very low safety significance (Green) because the finding would neither result in exceeding the TS limit for identified RCS leakage nor would the finding have affected mitigation systems resulting in a total loss of their safety function.

The finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna failed to take prompt corrective action for a 2004 NRC-identified condition adverse to quality. Specifically, Ginna did not install a control room alarm for the RCS leakage detection function of the containment radioactive airborne particulate detector.

Enforcement: The alarm portion of the RCS leakage detection function of R-11 is not safety-related, and therefore no violation of regulatory requirements occurred. However, the failure to take timely corrective actions for a known deficiency was considered a finding. This was entered into the Ginna corrective action program (CR 2006-3934). **(FIN 05000244/2006006-02, Failure to Correct an NRC-Identified Finding in a Timely Manner)**

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The team reviewed a sample of OE issues for applicability to Ginna, and for the associated actions. The documents were reviewed to ensure that underlying problems associated with each issue were appropriately considered for resolution in accordance with the corrective action process. The team also reviewed a sample of action plans for maintenance rule a(1) systems, to see how operating experience was used. The team chose the AFW and SAFW systems for an extended review over the past five years.

(2) Assessment

There was one Green NCV identified in the area of use of OE involving the failure to appropriately consider pertinent OE with respect to the TS Basis statements for system operability for the AFW and SAFW systems, a condition which resulted in an inappropriate change to the basis.

The use of OE at Ginna was generally good. The OE issues were reviewed for applicability to Ginna and CRs were written, as needed, to request additional reviews and develop necessary corrective actions. Over the last few years, Ginna has increased the use of OE into plant activities by incorporating operating experience in daily management meetings, work packages, and training materials. The use of OE by the security organization was particularly thorough.

(3) Findings

(a) Failure to Use OE to Identify an Incorrect TS Basis for the AFW and SAFW Systems

Introduction: The team identified a Green NCV of 10CFR50, Appendix B, Criterion XVI, "Corrective Action," for a failure to identify that the TS basis for the AFW and SAFW systems was incorrect. Specifically, the TS Basis for the AFW and SAFW systems stated that the recirculation function was not required for operability of the pumps. This change was originally made in the mid-1990's. However, Ginna missed several opportunities during the review of industry OE, to identify and correct the problem, most recently during a 10CFR50.59 screening for a TS Basis change in 2004.

Description: The Basis for TS 3.7.5 stated that the pump recirculation lines were not required for the AFW and SAFW systems to be operable. The function of the recirculation line, as described in the vendor manual, is to provide pump protection by ensuring sufficient forward flow to ensure pump cooling is maintained in a low flow condition. There are several examples of OE which identify that the recirculation function of safety-related pumps is necessary to ensure pump operability. NRC Information Notice (IN) 2002-29, "Recent Design Problems in Safety Functions of Pneumatic Systems," identified that the recirculation function is safety-related and that the loss of this line would introduce a common mode failure mechanism which would result in the pumps failing during various scenarios.

The original change to the TS Basis was made in the mid-1990's, with the assumption that during an accident, forward flow to the SG would be maintained throughout the event. A number of pressurized water reactor plants had made similar changes to their TS Basis. However, this assumption was valid only if operator actions were not required to manually throttle flow. At Ginna, by procedure the operators must reduce flow to maintain the SG level in band and to minimize the cool-down rate of the RCS. When flow to the SG is reduced, the recirculation valve is required to open to ensure minimum flow is maintained to protect the pump. By Ginna's design, this is an automatic function of the recirculation valves and there is no remote indication of this function. In addition, the pump discharge valve has an automatic function to throttle flow to 200 gallons per minute (gpm); when the recirculation valve fails in the open position, flow would be diverted from the SG. This would cause the discharge valve to open further, resulting in increased flow through the pump and increased motor current which could result in a pump trip and loss of the safety function.

In 2004, Ginna revised the wording of the TS Basis. The 10CFR50.59 screening (#2004-0151) for the change determined that a full safety evaluation was not required. One of the bases for this decision was the statement that operability of the recirculation line was not essential for low flow pump protection. During this inspection, the team discussed the validity of the TS Basis. In response, Ginna wrote CR 2006-3932 and performed a review to determine if the recirculation function was required to ensure pump operability. On September 11, 2006, Ginna informed the inspectors that the recirculation function was required to ensure forward flow through the AFW/SAFW pumps, and to maintain pump operability; and therefore, that the TS Basis was invalid. Corrective actions included night orders to clarify the TS Basis, and plans to revise the TS Basis.

Analysis: The performance deficiency is the failure to identify, using industry OE, that the basis for the operability of a safety-related system was inaccurate. Specifically, the TS Basis for the AFW and SAFW systems stated that the recirculation line was not required for system operability. This finding is more than minor because, if left uncorrected, it could become a more significant safety concern. It affects the design control attribute of the Mitigating Systems Cornerstone and the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using IMC 0609, Appendix A, "Determining Significance of Reactor Inspection Findings For At-Power Situations," this issue screens to very low safety significance (Green) because it did not result in the loss of a safety function, it did not result in outage time for one or more trains of an SSC to exceed its allowed TS outage times (because there is no evidence that the recirculation line had been isolated when the system was operable), and it is not potentially risk significant due to a seismic, flooding, or severe weather initiating event.

This finding has a cross-cutting aspect in the area of problem identification and resolution for operating experience because Ginna did not effectively incorporate operating experience to identify an invalid TS basis for the AFW and SAFW systems.

Enforcement: 10CFR50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, in 2004, Ginna failed to identify that a nonconforming condition involving supporting information contained in the TS Basis that operators relied upon for system operation, and would have used for operability determinations of the AFW and SAFW systems, was incorrect with respect to the function of the pump recirculation line. Ginna missed several opportunities to identify and correct this condition adverse to quality during reviews of industry OE. Corrective actions included night orders to the operators to clarify the TS Basis, and plans to revise the TS Basis. However, because this finding was of very low safety significance (Green) and was entered into the Ginna corrective action program (CR 2006-3932), this violation is being treated as a NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000244/2006006-03, Failure to Use OE to Identify that the TS Basis for the AFW and SAFW Systems Was Invalid)**

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team reviewed a sample of Quality Performance and Assessment (QPA) audits, including the most recent audit of the CAP, the CAP trend reports, and departmental self-assessments. The team specifically reviewed the Constellation "Fleet Safety Culture Assessment Report." This review was performed to determine if problems identified through these evaluations were entered into the CAP system, and whether the corrective actions were properly completed to resolve the deficiencies. The effectiveness of the audits and self-assessments was evaluated by comparing audit and self-assessment results against self-revealing and NRC-identified findings, and observations during the inspection.

(2) Assessment

No findings of significance were identified.

Generally, the audits and self-assessments were adequate, but the team found few audits and planned self-assessments which identified significant issues. It was also noted that when audits and self-assessments did identify issues, a CR was not always initiated. The team noted several examples where an audit or self-assessment did not identify issues which were later identified by outside organizations. For example:

- The operation department conducted quarterly self-assessments of the aggregate impact of off-normal conditions. The self-assessments did not identify missed reviews in the implementation of the temporary alteration program. The inspectors noted several weaknesses during their review. For example, a review of the open temporary alterations log revealed that some of the temporary alterations had not been reviewed within ninety days. Also, a temporary alteration for compensatory measures did not receive a 10CFR50.59 review. Both of these conditions are required by the procedure. These are considered violations of minor significance,

and are not subject to enforcement action, in accordance with the NRC's Enforcement Policy.

- A self-assessment of the scaffolding program failed to identify programmatic problems that the inspection team noted. For example: the team noted that a scaffolding engineer was required to verify and approve sign off that scaffolding met seismic qualification standards; however, no standards existed for the engineer to use for this determination. Also, the procedure did not allow exceptions to qualify a scaffold that did not meet the requirements of the station procedure. Several scaffolds were in violation of the scaffolding procedure; i.e., less than 3 inches clearance between the scaffold and safety-related SSCs, but the scaffolds were approved by the scaffolding engineer. These are considered violations of minor significance, and are not subject to enforcement action, in accordance with the NRC's Enforcement Policy.
- The 2006 NRC triennial fire protection team identified several issues that the Fire Protection Program Self-Assessment examined but failed to identify.

The inspectors reviewed the results of the Constellation "Fleet Safety Culture Assessment," conducted between December 2005 and February 2006. The Constellation assessment consisted of a safety culture survey, a review of CRs, QPA, department self-assessments, and the site Employee Concerns Program (ECP). The report indicated that the Constellation fleet exhibited a strong commitment to nuclear safety; Ginna was generally consistent with the fleet. The inspectors did not identify any results that were inconsistent with Constellation's conclusions.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

During interviews with many of the station personnel, the team assessed the safety conscious work environment (SCWE) at Ginna. Specifically, the team interviewed personnel to determine whether they were hesitant to raise safety concerns to their management and/or the NRC, due to a fear of retaliation. The team also reviewed the Ginna ECP to determine if employees were aware of the program and were using it to raise concerns. The team reviewed a sample of the ECP files to ensure that issues were entered into the corrective action program.

(2) Assessment

No findings of significance were identified.

The team determined that the plant staff were aware of the importance of having a strong SCWE and expressed a willingness to raise safety issues. No one interviewed had experienced retaliation for safety issues raised, or knew of anyone who had failed to raise issues. All persons interviewed had an adequate knowledge of the CAP and ECP.

Based on these limited interviews, the team concluded that there was no evidence of an unacceptable SCWE.

4OA6 Meetings, including Exit:

Exit Meeting Summary

On August 31, 2006, the team presented the inspection results to Mrs. Mary Korsnick, Ginna Vice President, and other members of the Ginna staff, who acknowledged the findings. The inspectors confirmed that no proprietary information reviewed during inspection was retained.

ATTACHMENT: Supplemental Information

In addition to the documentation that the inspectors reviewed (listed in the attachment), copies of information requests given to the licensee are in ADAMS, under accession number ML062580366.

## ATTACHMENT - SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### **Licensee Personnel:**

A. Allen, Supervisor Issues Assessment  
J. Bergstrom, ECP Coordinator  
N. Brehse, Supervisor Quality Inspection  
K. Corl, Emergency Operating Procedure Coordinator  
G. Doyle, Director Performance Improvement (Corporate)  
M. Emerson, Maintenance PIC Representative  
S. Fregeau, General Supervisor Operations Support  
J. Germain, Site Performance Improvement Coordinator (Site PIC)  
T. Harding, Supervisor Regulatory Matters  
S. Kennedy, Director Emergency Preparedness  
M. Korsnick, Site Vice President, Ginna Station  
B. Leonard, Manager Nuclear Licensing  
M. Lilley, General Supervisor Equipment Reliability  
M. Milly, Maintenance Services Manager  
M. Montecalvo, I&C Maintenance Supervisor  
B. Montgomery, Manager Quality & Performance Assessment (Corporate)  
J. Neis, Senior Licensing Engineer  
T. O'Meara, Director Quality and Performance Assessment  
J. Pacher, Manager Nuclear Engineering  
R. Randall, Director Licensing  
W. Rapin, AFW System Engineer  
D. Smith, Security Performance Improvement Coordinator.  
L. Stavalone, Issues Assessment Analyst  
R. Teed, Director Nuclear Security  
G. Verdin, Principal Engineer Primary Systems  
J. Wayland, General Supervisor Electrical and Controls  
R. Whalen, Manager Maintenance  
S. Wihlen, Fire Marshall  
J. Yoe, Integrated Work Manager

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

#### Opened and Closed

050000244/2006006-01 NCV TS Violation - Reactor Startup and Power Operation with the SAFW System Inoperable  
050000244/2006006-02 FIN Failure to Correct an NRC-Identified Finding in a Timely Manner  
050000244/2006006-03 NCV Failure to Use OE to Identify that the TS Basis for the AFW and SAFW Systems Was Invalid

#### Discussed

05000244/2004004-01 FIN No Alarm on R-11 to Provide Early Detection of RCS Leakage  
05000244/2006004-02 NCV Failure to Make a 10CFR50.72(b)(3)(v)(A) Notification

## LIST OF DOCUMENTS REVIEWED

### **Procedures:**

A-58: Temporary Alterations, Revision 4  
 A-1406.1: Installation, Removal, and Control of Scaffolding, Revision 32  
 A-1603.3, Work Order Planning, Revision 35  
 AR-K-11, Alarm Response Procedure, Revision 6  
 CNG-MN-4.01-1000, Integrated Work Planning, Revision 0  
 IP-TQS-2, Training Oversight Committees, Revision 16  
 O-6.1, Auxiliary Operator Rounds and Log Sheets, Revision 24  
 A-103.9, Fire Brigade Training, Revision 18  
 A-1603.10, Fix It Now (FIN), Revision 1  
 A-52.12, Inoperability of Equipment Important to Safety, Revision 53  
 CNG-CA-1.01, Corrective Action Program, Revision 1  
 CNG-CA-1.01-1001, Management Review Committee, Revision 1  
 CNG-CA-1.01-1002, Corrective Action Review Board, Revision 1  
 CNG-CA-1.01-1003, Performance Improvement Coordinators, Revision 1  
 CNG-CA-1.01-1004, Root Cause Analysis, Revision 1  
 CNG-CA-1.01-1005, Apparent Cause Evaluation, Revision 1  
 CNG-CA-1.01-1006, Common Cause Analysis, Revision 1  
 CNG-HU-3.01, Safety Conscious Work Environment, Revision 0  
 CNO-Policy-8, Accountability, Dated April 15, 2005  
 EPG-2, Emergency Response Organization, Revision 8  
 GME-45-99-01, Electric Motor Inspection and Maintenance, Revision 12  
 IP-CAP-1, Condition Reporting, Revision 24  
 IP-CAP-1.1, Operability Determination for Current Operability and Past Operability, Revision 6  
 IP-CAP-1.2, Interim Disposition Form, Revision 4  
 IP-CAP-1.3, Attachment 1, CR/WR/TR Form, Revision 8  
 IP-CAP-1.3, Condition Report/WR/TR Form, Revision 8  
 IP-CAP-1.4, Condition Report Extension Request Form, Revision 6  
 IP-CAP-1.6, Condition Report Form (Parts 2 Through 5), Revision 6  
 IP-CAP-1.8, Effectiveness Review Form, Revision 2  
 IP-CAP-1.9, Boric Acid Leakage Initial Investigation Form, Revision 7  
 IP-CAP-5, Event Trending Process, Revision 8  
 IP-CAP-6, 10CFR21 Screening, Evaluating, and Reporting, Revision 4  
 IP-DES-1, Technical Staff Request, Revision 10  
 IP-DES-3, Temporary Modifications, Revision 15  
 IP-ECP-1, Employee Concerns Program (ECP) Implementation, Revision 1  
 IP-SEP-4, Operating Experience Program, Revision 6  
 ND-CAP, Corrective Action Program, Revision 9

### **Audits:**

AINT-2000-0014-BKS - Corrective Action and Operating Experience Programs  
 AINT-2001-0010-RTD - Problem Identification and Resolution Process Audit  
 AINT-2003-0001-BKS - Continuous Audit Report for the Third Trimester 2004  
 AINT-2004-0003-BKS - Continuous Audit Report for the Third Trimester 2004  
 AINT-2004-0004-BKS - Nuclear Industry Evaluation Program (NEIP) Audit of the Audit and  
 Inspection Programs

AINT-2004-0005-AZP - Corrective Action Program  
CAP-05-01-G - Corrective Action program  
DCC-06-01-G - Design and Configuration Control  
DOC-05-01-G - Procedures, Document Control, and Records Management  
EPP-05-01-G - Emergency Preparedness  
SEC-05-01-G - Security Program  
TQS-06-01-G - Nuclear Training  
TS-06-01-G - Technical Specifications

**Self Assessments:**

2005-0001 - Operations Self Assessment of Aggregate Impact of Off-Normal Conditions for 1<sup>st</sup> Quarter 2005  
2005-0002 - Operations Self Assessment of Aggregate Impact of Off-Normal Conditions for 2nd Quarter 2005  
2005-0003 - Operations Self Assessment of Aggregate Impact of Off-Normal Conditions for 3rd Quarter 2005  
2005-0004 - Operations Self Assessment of Aggregate Impact of Off-Normal Conditions for 4th Quarter 2005  
2005-0012 - Implementation of AP-913 Equipment Reliability Model  
2005-0013 - Corrective Action Process  
2005-0017 - Procedure Program Self Assessment Peer Review  
2005-0052 - Security - Quarterly Security Assessment  
2005-0054 - Security - Quarterly Security Assessment  
2005-0068 - Operations Work Control  
2005-0079 - Assessment of Operations Procedure Compliance with Regulatory Guide 1.33 and the EOP program  
2005-0081 - Effectiveness Evaluation of Corrective Actions for 2000 ATV and Subsequent Self-Assessments of the Maintenance Training Program  
2005-0082 - Assessment to Validate that Activities Identified by the Recovery Plan will Address all Issues Identified in Self-Assessments  
2005-0088 - CAP - Post-Implementation Focused Assessment  
2006-0002 - Status of Change Initiatives Upon Fleet Integration and Performance Improvement  
2006-0008 - AFW LCO Maintenance  
2006-0009 - EP  
2006-0019 - CAP Indicators - Performance Objective PI.2-12, Corrective Action Information Is Used to Support Department and Station Trending  
2006-0021 - Operations OJT/TPE Process  
2006-0023 - Operations Training 05-007 Recommendations - Incorporation of Operating Experience into Lesson Plans  
2006-0032 - Use of Operator Fundamentals During AR/AOP/EOP Performance  
2006-0034 - Self-Assessment Program  
2006-0041 - Pre-NIEP Audit (September 2006) Self-Assessment  
Constellation Fleet Safety Culture Assessment Report, Conducted December 2005 - February 2006

**Condition Reports (\* denotes a CR generated as a result of this inspection):**

2003-1927	2004-3092	2005-0830	2005-2766	2005-5029	2006-0185
2003-2007	2004-3121	2005-0842	2005-2796	2005-5080	2006-0186
2004-0937	2004-3174	2005-0874	2005-2802	2005-5128	2006-0189
2004-1634	2004-3194	2005-1064	2005-2807	2005-5215	2006-0294
2004-1877	2004-3195	2005-1076	2005-2812	2005-5228	2006-0354
2004-1966	2004-3198	2005-1090	2005-2819	2005-5272	2006-0355
2004-2101	2004-3223	2005-1119	2005-2822	2005-5284	2006-0356
2004-2111	2004-3300	2005-1287	2005-2857	2005-5333	2006-0357
2004-2309	2004-3311	2005-1301	2005-2858	2005-5408	2006-0405
2004-2312	2004-3312	2005-1307	2005-2862	2005-5422	2006-0446
2004-2313	2004-3313	2005-1310	2005-2949	2005-5444	2006-0481
2004-2314	2004-3314	2005-1326	2005-2980	2005-5445	2006-0526
2004-2315	2004-3315	2005-1341	2005-3082	2005-5477	2006-0537
2004-2611	2004-3316	2005-1357	2005-3198	2005-5644	2006-0547
2004-2625	2004-3317	2005-1412	2005-3233	2005-5654	2006-0598
2004-2637	2004-3318	2005-1413	2005-3309	2005-5672	2006-0686
2004-2648	2004-3339	2005-1424	2005-3317	2005-5709	2006-0704
2004-2653	2004-3347	2005-1425	2005-3361	2005-5728	2006-0882
2004-2654	2004-3368	2005-1426	2005-3412	2005-5745	2006-0887
2004-2655	2004-3371	2005-1428	2005-3443	2005-5753	2006-0941
2004-2656	2004-3373	2005-1444	2005-3468	2005-5770	2006-0973
2004-2656	2004-3375	2005-1462	2005-3487	2005-5793	2006-1041
2004-2657	2004-3403	2005-1475	2005-3488	2005-5804	2006-1042
2004-2658	2004-3456	2005-1477	2005-3502	2005-5813	2006-1043
2004-2660	2005-0003	2005-1504	2005-3540	2005-5819	2006-1044
2004-2661	2005-0043	2005-1512	2005-3549	2005-5881	2006-1045
2004-2665	2005-0048	2005-1601	2005-3550	2005-5939	2006-1058
2004-2668	2005-0052	2005-1624	2005-3574	2005-5942	2006-1135
2004-2669	2005-0094	2005-1644	2005-3617	2005-6091	2006-1538
2004-2692	2005-0147	2005-1662	2005-3636	2005-6180	2006-1539
2004-2696	2005-0151	2005-1689	2005-3695	2005-6222	2006-1556
2004-2734	2005-0171	2005-1762	2005-3721	2005-6231	2006-1558
2004-2796	2005-0242	2005-1994	2005-3804	2005-6397	2006-1624
2004-2800	2005-0267	2005-2082	2005-3876	2005-6467	2006-1661
2004-2805	2005-0328	2005-2091	2005-3961	2005-6559	2006-1750
2004-2806	2005-0330	2005-2116	2005-4129	2005-6561	2006-1807
2004-2838	2005-0365	2005-2211	2005-4154	2005-6780	2006-1939
2004-2871	2005-0433	2005-2213	2005-4168	2005-6854	2006-1942
2004-2906	2005-0441	2005-2254	2005-4172	2005-6872	2006-1993
2004-2911	2005-0442	2005-2330	2005-4329	2005-6924	2006-2021
2004-2921	2005-0470	2005-2425	2005-4406	2006-0047	2006-2024
2004-2934	2005-0624	2005-2487	2005-4407	2006-0068	2006-2052
2004-2948	2005-0630	2005-2505	2005-4686	2006-0069	2006-2099
2004-2955	2005-0653	2005-2580	2005-4691	2006-0078	2006-2110
2004-2999	2005-0703	2005-2633	2005-4779	2006-0135	2006-2154
2004-3011	2005-0794	2005-2664	2005-4795	2006-0158	2006-2160
2004-3074	2005-0806	2005-2725	2005-4827	2006-0161	2006-2164
2004-3089	2005-0818	2005-2726	2005-4873	2006-0182	2006-2192

2006-2310	2006-2626	2006-3557*	2006-3759*	2006-3901*	2006-3937*
2006-2333	2006-2666	2006-3583*	2006-3812*	2006-3904*	2006-3940*
2006-2457	2006-2670	2006-3613*	2006-3813*	2006-3917*	2006-3949*
2006-2463	2006-2717	2006-3617*	2006-3861*	2006-3918*	2006-3963*
2006-2547	2006-2727	2006-3624*	2006-3888*	2006-3922*	2006-3989*
2006-2578	2006-2850	2006-3626*	2006-3897*	2006-3924*	2006-4051*
2006-2609	2006-2873	2006-3713*	2006-3898*	2006-3932*	2006-4052*
2006-2617	2006-3555*	2006-3757*	2006-3900*	2006-3934*	2006-4054*

**Operating Experience Reviews:**

CATS12303	CATS13678	CR2004-0972	CR2004-3317	CR2005-2819	CR2006-0355
CATS12304	CATS14013	CR2004-3198	CR2004-3318	CR2005-2822	CR2006-0356
CATS12405	CATS14136	CR2004-3312	CR2005-0830	CR2005-3233	CR2006-0357
CATS12430	CR2002-2498	CR2004-3313	CR2005-2725	CR2005-4403	CR2006-0405
CATS12617	CR2003-2006	CR2004-3316	CR2005-2726	CR2006-0354	CR2006-0526
CATS12635	CR2003-2703				

**Maintenance Work Orders:**

20101230	20404508	20500950	20502911	20600696	20601950
20302231	20404724	20500963	20504544	20600698	20602189
20400406	20500157	20501061	20504832	20600805	20602590
20401106	20500544	20501793	20600578	20601626	20602808
20403447	20500824	20502075	20600694	20601810	20603081
20404313	20500836				

**Open Operability Evaluations:**

2006-0446	2006-1770	2006-3949
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**Work Requests:**

PCR 2005-0045	TSR 2006-0022	TWR 2005-1351
TWR 2005-1875	TWR 2003-1927	

**Non-Cited Violations and Findings Reviewed:**

FIN 2004004-01, No Alarm on R-11 to Provide Early Detection of RCS Leakage  
 FIN 2004004-02, Failure to Maintain the TSC Ventilation System  
 NCV 2004004-03, Gaps in the Control Room Emergency Zone Boundary  
 NCV 2004004-04, Non-rated Cable Tunnel Hatch  
 NCV 2004004-Licensee Identified, a Continuous Fire Watch Secured Improperly with Inadequate Compensatory Actions  
 NCV 2004005-01, Failure to Establish Appropriate Measures to Assure the Monitoring Panel for the Compensated Steam Support System Is Maintained  
 NCV 2005002-02, Failure to Provide Adequate Instruction in an RWP to Prevent an Unintended Uptake  
 FIN 2005002-03, Failure to Implement Effective Corrective Actions Associated with Component Mispositioning Events  
 NCV 2005003-01, Failure to Develop Adequate Procedures Concerning the Testing and Maintenance of Mechanical and Hydraulic Snubbers  
 NCV 2005003-02, Instrument Lines Not Adequately Supported

NCV 2005003-03, Failure to Meet Surveillance Frequency for Calibration of an Effluent Radiation Monitor  
FIN 2005003-04, A Bare Metal Inspection of the Lower Reactor Vessel Head Was Not Performed During the Spring 2005 Refueling Outage  
FIN 2005004-01, Auxiliary Operators Did Not Properly Monitor the Performance of the Relay Room Air Conditioning Systems  
FIN 2005004-02, Failure to Properly Restore the Blowdown System Resulting in a Shutdown to Correct Steam Generator Chemistry  
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### LIST OF ACRONYMS

ACE	Apparent Cause Evaluation
ADAMS	Agency Wide Document and Management System
AFW	Auxiliary Feedwater System
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR	Condition Report
CDF	Core Damage Frequency
Delta T	Differential Temperature
ECP	Employee Concerns Program
FIN	Finding
FT	Flow Transmitter
gpm	Gallons Per Minute
HELB	High Energy Line Break
IMC	NRC Inspection Manual Chapter
IN	NRC Information Notice
IR	NRC Inspection Report
LCO	Limiting Condition for Operation
LER	Licensee Event Report
MRC	Management Review Committee
MSIV	Main Steam Isolation Valve
MSLB	Main Steam Line Break

NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PCR	Procedure Change Request
PI&R	Problem Identification & Resolution
PIC	Performance Improvement Committee
QPA	Quality Performance and Assessment
RCA	Root Cause Analysis
RCS	Reactor Coolant System
ROP	Reactor Oversight Program
SAFW	Standby Auxiliary Feedwater System
SCWE	Safety Conscious Work Environment
SDP	Significance Determination Process
SG	Steam Generator
SSC	Structure, System, or Component
Tave	Reactor Coolant System Average Temperature
TS	Technical Specifications
TSR	Technical Service Request
TWR	Training Work Request
UFSAR	Updated Final Safety Analysis Report
VAC	Volts Alternating Current
VDC	Volts Direct Current
WO	Work Order