



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
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November 3, 2010

Mr. John T. Carlin, Vice President
R.E. Ginna Nuclear Power Plant, LLC
Constellation Energy Nuclear Group, LLC
1503 Lake Road
Ontario, New York 14519

SUBJECT: R.E. GINNA NUCLEAR POWER PLANT, LLC - NRC INTEGRATED
INSPECTION REPORT 05000244/2010004

Dear Mr. Carlin:

On September 30, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your R.E. Ginna Nuclear Power Plant. The enclosed integrated inspection report documents the inspection results, which were discussed on October 12, 2010, with Mr. Eric Larson and other members of your staff.

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

This report documents one NRC-identified and one self-revealing finding of very low safety significance (Green). These findings were determined to be violations of NRC requirements. However, because of the very low safety significance, and because they were entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a written response within 30 days of the date of this inspection report with the basis of 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 addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspector at R.E. Ginna Nuclear Power Plant.

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

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Sincerely,



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

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

Enclosure: Inspection Report No. 05000244/2010004
w/ Attachment: Supplemental Information

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Sincerely,

/RA/

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

Docket No. 50-244
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Enclosure: Inspection Report No. 05000244/2010004
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-244

License No.: DPR-18

Report No.: 05000244/2010004

Licensee: Constellation Energy Nuclear Group, LLC

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

Location: Ontario, New York

Dates: July 1, 2010 through September 30, 2010

Inspectors: G. Hunegs, Senior Resident Inspector
L. Casey, Resident Inspector
F. Arner, Senior Reactor Inspector
N. Perry, Senior Project Engineer
S. Pindale, Senior Reactor Inspector
K. Young, Senior Reactor Inspector
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Approved by: Glenn T. Dentel, Chief
Projects Branch 1
Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000244/2010004; 07/01/2010 – 09/30/2010; R.E. Ginna Nuclear Power Plant, LLC (Ginna), Maintenance Risk Assessments and Emergent Work Control, Post-Maintenance Testing.

The report covered a three-month period of inspection by resident inspectors and region-based inspectors. Two Green non-cited violations (NCVs) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspect for each finding was determined using IMC 0310, "Components Within the Cross-Cutting Areas." 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 4, dated December 2006.

Cornerstone: Mitigating Systems

- **Green.** The inspectors identified a very low safety significance (Green) non-cited violation (NCV) of 10 CFR 50.65, "Maintenance Rule," paragraph (a)(4), when Ginna did not perform an accurate risk assessment prior to removing the technical support center (TSC) battery charger and fire system S01, suppression for the auxiliary building basement cable trays, from service, which resulted in an underestimation and lack of awareness of the risk during these maintenance activities. Ginna's corrective actions included immediately updating their risk model to reflect the actual plant configuration. When re-evaluated, the core damage frequency (CDF) risk, during the maintenance, increased from low to medium.

The finding is more than minor because if the overall risk had been correctly assessed, it would have placed Ginna into a higher risk category. The finding is associated with the configuration control attribute of the Mitigating Systems cornerstone and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding is of very low safety significance because the incremental core damage probability deficit was less than $1.0E-6$. This finding has a cross-cutting aspect in the area of human performance, work control, in that Ginna operators were not fully apprised of the work status of the TSC inverter work and its operational impact (H.3.b per IMC 0310). (Section 1R13)

- **Green.** A self-revealing non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was determined based on Ginna's failure to identify that vibration data exceeded the inservice testing (IST) acceptance criteria for five pumps. On June 30, 2009, Ginna identified that the 'B' RHR pump vibration data had exceeded the required action range for IST criteria for the previous four surveillance tests due to vibration data being incorrectly measured and analyzed. Ginna's apparent cause evaluation (ACE) documented that an extent of condition review was completed which identified all the additional components that were unknowingly in the IST alert or required action range from May 2008 to June 2009. On August 4, 2010, Ginna tested

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the 'A' motor-driven auxiliary feedwater (MDAFW) pump and determined that it was in the alert range for inboard bearing vibration. During their analysis, Ginna discovered that during the last comprehensive test in October 2008, the same vibration point was in the IST alert range. This had not been identified during Ginna's previous extent of condition review. Subsequently, Ginna performed another extent of condition review and identified that four other components were outside the vibration acceptance criteria and in the alert range. Ginna's immediate corrective actions included entering this issue into their CAP and verifying that all other IST pumps were within the IST acceptable range.

This finding is more than minor because it was repetitive and it affected a number of pumps. The finding is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of safety function, and did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding has a cross-cutting aspect in the area of problem identification and resolution (PI&R), corrective action program, in that Ginna did not thoroughly evaluate IST program vibration data during their extent of condition review conducted in 2009 as a result of the 'B' residual heat removal pump exceeding the IST required action range (P.1.c per IMC 0310). (Section 1R19)

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REPORT DETAILS

Summary of Plant Status

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

1. REACTOR SAFETY**Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**1R01 Adverse Weather Protection (71111.01 – One sample)External Flood Protection Measuresa. Inspection Scope

The inspectors performed a review of the external flood preparation and mitigation program. To perform this review, the inspectors toured the auxiliary building and emergency diesel generator (EDG) rooms. The inspectors used procedure ER-SC.2, "High Water (Flood) Plan," Revision 00702, and the updated final safety analysis report (UFSAR) as reference material. The purpose of the walkdown was to verify Ginna personnel could implement procedures that were developed to mitigate the consequences of an external flood condition and to verify flood protection equipment was installed in accordance with UFSAR.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)Partial System Walkdown (71111.04Q – Three samples)a. Inspection Scope

The inspectors reviewed the alignment of system valves and electrical breakers to ensure proper in-service or standby configurations as described in plant procedures, piping and instrument drawings (P&IDs), and the UFSAR. During the walkdown, the inspectors evaluated the material condition and general housekeeping of the system and adjacent spaces. The inspectors also verified that operators were following plant technical specifications (TSs) and system operating procedures. The inspectors performed a partial walkdown of the following systems:

- The standby auxiliary feedwater (AFW) system while the 'A' train of motor-driven auxiliary feedwater (MDAFW) was out of service (OOS) for planned maintenance;
- The 'A' train of the residual heat removal (RHR) system while the 'B' train was OOS for planned maintenance; and

- The 'A' and 'B' MDAFW trains while the turbine-driven auxiliary feedwater (TDAFW) system was OOS for planned maintenance.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Inspection (71111.05Q – Five samples)

a. Inspection Scope

The inspectors performed walkdowns of fire areas to determine if there was adequate control of transient combustibles and ignition sources. The material condition of fire protection systems, equipment and features, and the material condition of fire barriers were inspected against Ginna's licensing basis and industry standards. In addition, the passive fire protection features were inspected including the ventilation system fire dampers, structural steel fire proofing, and electrical penetration seals. The following plant areas were inspected:

- Auxiliary Building Operating Floor (Fire Zone ABO);
- Auxiliary Building Mezzanine Floor (Fire Zone ABM);
- Auxiliary Building Basement Floor (Fire Zone ABB);
- Control Room (Fire Zone CR); and
- Screen House (Fire Area SH).

b. Findings

No findings were identified.

.2 Annual Inspection (71111.15A – One sample)

a. Inspection Scope

The inspectors observed an announced test of Ginna's fire brigade on August 18, 2010. The test involved a simulated main transformer fire. The inspectors observed fire brigade personnel obtain their protective equipment, travel to the simulated fire location, and demonstrate how they would extinguish a main transformer fire. Following the drill, the inspectors observed the post-drill critique and verified that performance issues were discussed and documented in Ginna's corrective action program (CAP). The inspectors evaluated the performance of the brigade using the criteria outlined in the following procedures: SC-3.1.1, "Fire Alarm Response (Fire Brigade Activation)," Revision 17; SC-3.4.1, "Fire Brigade Captain and Control Room Personnel Responsibilities," Revision 03901; and FRP-32.0, "Transformer Yard," Revision 6. The fire brigade successfully completed the objectives of the drill.

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b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11Q – One sample)a. Inspection Scope

On July 27, 2010, the inspectors observed a licensed operator simulator scenario, Cycle Evaluation-1, "Abnormal Operating Exam No. 1," Revision 0. The inspectors reviewed the critical tasks associated with the scenario, observed the operators' performance, and observed the post-evaluation critique. The inspectors also reviewed and verified compliance with Ginna procedure OTG-2.2, "Simulator Examination Instructions," Revision 43.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – Three samples)a. Inspection Scope

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

The following issues were reviewed:

- Equipment deficiencies associated with the EDG room ventilation system;
- Fire protection system components scoped in the maintenance rule; and
- Reactor protection system.

b. Findings

No findings were identified.

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

The inspectors evaluated the effectiveness of Ginna's maintenance risk assessments required by 10 CFR Part 50.65(a)(4). The inspectors discussed the use of Ginna's online risk monitoring software with control room operators and scheduling department personnel. The inspectors reviewed equipment tracking documentation and daily work schedules, and performed plant tours to verify that actual plant configuration matched the assessed configuration. Additionally, the inspectors verified that risk management actions, for both planned and emergent work, were consistent with those described in CNG-OP-4.01-1000, "Integrated Risk Management," Revision 00601.

Risk assessments for the following OOS SSCs were reviewed:

- Planned testing and maintenance on the 'A' EDG and technical support center (TSC) batteries while Rochester Gas & Electric (RG&E) was performing work in station 13A (August 5, 2010);
- Emergent work on circuit 767 in Ginna's transformer yard due to erroneous voltmeter indications while RG&E was performing work in station 13A (August 25, 2010);
- Planned maintenance on the 'B' train of RHR and testing of the containment recirculation fans units (September 8, 2010); and
- Planned maintenance on the TSC inverter and emergent work on fire system S23, transformer 12B automatic deluge system, which removed the auto start function of the diesel fire pump from service (September 13, 2010).

b. Findings

Introduction: The inspectors identified a very low safety significant (Green), non-cited violation (NCV) of 10 CFR 50.65, "Maintenance Rule," paragraph (a)(4), when Ginna did not perform an accurate risk assessment prior to removing the TSC battery charger and fire system S01, suppression for auxiliary building basement cable trays, from service.

Description: On September 13, 2010, the work week schedule had TSC inverter work planned for the day that would place the plant in a yellow risk condition with a core damage frequency (CDF) probabilistic risk factor of 4.1 for the duration of the maintenance. The work week schedule did not take into account any emergent work activities for the day. On September 13, in addition to the TSC inverter work, emergent work for the day included removal of the auto start function of the diesel fire pump as well as removal of fire system S01 for maintenance. The inspectors identified that Ginna's real-time risk model showed a green risk with a probabilistic risk factor of 1.9, despite in progress TSC inverter maintenance. Operations guideline, OPG-AUTO-SOFTWARE, "Control Room Software Operation," Revision 01000, and procedure, A-52.12, "Nonfunctional Equipment Important to Safety," Revision 06302, require operators to control and update this risk model as components are removed and returned to service.

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The inspectors reviewed the maintenance procedure for the TSC inverter and noted that the maintenance made the TSC battery charger unavailable. This battery charger is credited in Ginna's risk model to provide backup power to the station batteries during 10 CFR 50, Appendix R, fire events. The battery charger was not removed from service in the plant risk model. The plant risk was yellow at 4.1 with the TSC battery charger OOS based on the Ginna risk software. The inspectors noted that operators believed that plant risk was green and had the control room posted as such. Therefore, operators did not have accurate risk awareness. Additionally with the belief that plant risk was green, operators had removed fire system S01 from service while the TSC battery charger was OOS. The TSC battery charger and S01 are both needed for a fire in the auxiliary building basement. Operators, however, did not realize the resultant risk with both S01 and the TSC battery charger OOS as an increased medium (yellow) probabilistic risk factor of 8.1.

The inspectors also noted that several risk management tools were not utilized by Ginna operations staff. Specifically, Ginna did not complete procedure A-52.12 documentation for removing the TSC battery charger from service as required. Additionally, procedure CNG-OP-1.01-100, "Operations Log Keeping and Station Rounds," Revision 00200, requires narrative log entries to be made by the control room supervisor at the start of risk significant activities describing plant risk due to activity initiation and compensatory measures. Ginna did not update the standard logs to reflect the risk associated with this maintenance as required by this procedure. Ginna's corrective actions included immediately updating their risk model to reflect the actual plant configuration. This condition is documented in CR 2010-5607.

Analysis: The performance deficiency associated with this finding is that Ginna did not perform an accurate risk assessment prior to removing the TSC battery charger and fire system S01 from service. Using IMC 0612, "Power Reactor Inspection Reports," Appendix E, Example 7.e, the finding is more than minor because if the overall risk had been correctly assessed, it would have placed Ginna into a higher risk category. This finding is associated with the configuration control attribute of the Mitigating Systems Cornerstone and affects the Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance (Green) using IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flow chart 1, because the incremental core damage probability deficit was less than $1.0E-6$. This finding has a cross-cutting aspect in the area of human performance, work control, in that Ginna operators were not fully apprised of the work status of the TSC inverter work and its operational impact (H.3.b per IMC 0310).

Enforcement: 10 CFR 50.65, paragraph (a)(4), "Maintenance Rule," states, in part, that before performing maintenance activities, the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. Contrary to the above, on September 13, 2010, Ginna failed to accurately assess the increase in risk prior to removing the TSC battery charger and fire system S01 from service for maintenance. Ginna's immediate corrective actions included promptly updating their risk model to reflect the actual plant configuration. Because this finding was determined to

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be of very low safety significance and was entered into Ginna's CAP (CR 2010-5607), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000244/2010004-01, Failure to Adequately Assess the Risk of Technical Support Center Inverter Maintenance)**

1R15 Operability Evaluations (71111.15 – Five samples)

a. Inspection Scope

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

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

- CR 2010-4835, 'A' MDAFW Pump Inboard Vertical Vibrations in Alert Range;
- CR 2010-5015, 'B' EDG Fuel Oil Transfer Pump Low Discharge Pressure;
- CR 2010-2598, Emergency operating procedures direct an alignment of service water (SW) to the component cooling water (CCW) heat exchanger (HX) that may result in accident analysis flows not being met when aligned to the alternate discharge;
- Engineering Change Package (ECP) 10-000653, Evaluation of July 6, 2010, Offsite Power Inoperability; and
- CR 2010-3514, Oil Leak from the TDAFW System Lube Oil Pressure Switch Housing.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – One sample)

Temporary Modification

a. Inspection Scope

The inspectors reviewed ECP 10-000557, "Add Temporary Jumper to Bypass Broken Test Switch." This ECP installed a jumper in rack R1 of channel one of the reactor protection system in order to restore operability to the channel when a sliding linkage providing circuit continuity broke during planned maintenance. The inspectors reviewed

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the ECP to determine whether the temporary change adversely affected system availability or a function important to plant safety. The inspectors reviewed the associated system design bases including the UFSAR and TS, and assessed the adequacy of the safety determination screening and evaluation. The inspectors also assessed configuration control of the temporary change by reviewing selected drawings and procedures to verify whether appropriate updates had been made. The inspectors compared the actual installation with the temporary modification documents to determine whether the implemented change was consistent with the approved, documented modification.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – Six samples)

a. Inspection Scope

The inspectors observed portions of post-maintenance testing (PMT) activities in the field to determine whether the tests were performed in accordance with approved procedures. The inspectors assessed each test's adequacy by comparing the test methodology to the scope of maintenance 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 PMT activities were reviewed:

- STP-O-16-COMP-A, "AFW Pump 'A' – Comprehensive Test," Rev. 400, and STP-O-16QA, "AFW Pump 'A' Quarterly," Rev. 401, to test the 'A' train of MDAFW following maintenance performed under work orders (WOs) C90691808, "Swap Out Relief Valve 4021," C90828034, "Make Repairs to 'A' AFW Pump Cooling Water Strainer Bypass Solenoid," and C90215885, "Replace 4000C with a Nozzle Check Valve per ECP 2009-0022," (August 4, 2010);
- CPI-PRESS-940, "Calibration of Safety Injection (SI) Accumulator 'A' (Loop 'B') Pressure Loop 940," Rev. 800, to test SI accumulator 'A' pressure indicator 940 after its replacement under WO C90819192, "Change SI Accumulator Set Points per ECP 2009-0030," (August 17, 2010);
- CMM-11-05-PAC07A, "Ingersoll-Rand, Type 4 X 13 Low Pressure, Centrifugal Pump Maintenance for Spent Fuel Pool (SFP) Recirculation Pump 'A'," Rev. 00301, to perform maintenance and testing of the 'A' SFP pump under WO C90780705, "SFP Recirculation Pump 'A' Minor Preventive Maintenance (PM) Inspection," (August 19, 2010);
- STP-O-17.2, "Process Radiation Monitors R-11 thru R-18, R-20 thru R-22, and Iodine Monitors R-10A and R-10B Source Check, Alarm Setpoint Verification, and Functional Test," Rev. 0, to test radiation detector R-20A, SFP HX 'A', after calibration under WO C90732595, "Calibration of SFP HX 'A' Process Detector," (August 23, 2010);

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- STP-O-2.2QB, "RHR Pump 'B' IST," Rev. 00700, to test the 'B' RHR train after maintenance under WO C90803731, "Perform Grease Check and Stem Lube on Motor for Valve 857B, RHR HX 'B' Outlet Motor-Operated Valve (MOV) to SI and Containment Spray Pumps," (September 8, 2010); and
- STP-O-16-COMP-T, "AFW Turbine Pump – Comprehensive Test," Rev. 01200, to test the TDAFW pump following planned maintenance under WO C90835831, "Perform Inspection of the Stem and Bushings of V-9519E," (September 28, 2010).

b. Findings

Introduction: A very low safety significant (Green) self-revealing NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was determined based on Ginna's failure to identify that vibration data exceeded the IST acceptance criteria for five pumps.

Description: On June 30, 2009, Ginna identified that the 'B' RHR pump vibration data had exceeded the required action range for IST criteria for the previous four surveillance tests due to vibration data being incorrectly measured and analyzed. Ginna's apparent cause evaluation (ACE) documented that an extent of condition review was completed which identified all the additional components that were unknowingly in the IST alert or required action range from May 2008 to June 2009. As a part of their extent of condition, Ginna identified that the 'A' EDG fuel oil transfer pump was also in the alert range. Other corrective actions included changing all of the vibration analyzer display units, training operators on how to take the vibration measurements, and updating IST procedures to specify acceptance criteria. Ginna documented this condition in CR 2009-4517. The inspectors documented this issue as a licensee-identified violation in inspection report 05000244/2009005.

On August 4, 2010, Ginna tested the 'A' MDAFW pump and determined that it was in the alert range for inboard bearing vibration. During their analysis, Ginna determined that during the last comprehensive test in October 2008, the same vibration point unknowingly had been in the IST alert range. This had not been identified during Ginna's previous extent of condition review. Subsequently, Ginna performed another extent of condition review and identified that four other components were outside the vibration acceptance criteria and in the alert range. These pumps included the 'B' AFW pump on July 1, 2008, the 'A' SI pump on June 29, 2008, and January 1, 2009, the 'B' SI pump on July 9, 2008, and the 'B' SFP pump on March 14, 2009. Since the most current tests for these pumps were within IST acceptable vibration range, Ginna performed an engineering evaluation that determined the previous higher than acceptable vibration readings were due to inadequate vibration measurement techniques. The 'A' MDAFW pump remains in the IST alert range and is required to be tested at an increased periodicity. Ginna's corrective actions included immediately verifying that all other IST pumps were within the IST acceptable range. Ginna documented this issue in CR 2010-4853.

Analysis: The performance deficiency associated with this finding is that during a previously conducted extent of condition review, Ginna did not identify that the IST performance criteria were exceeded for five pumps. Using IMC 0612, "Power Reactor Inspection Reports," Appendix E, Example 2.c, the finding is more than minor because it

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was repetitive and it affected a number of pumps. This finding was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance (Green) using IMC 0609, Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." Specifically, the finding was not a design or qualification deficiency, did not represent a loss of safety function, and did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding has a cross-cutting aspect in the area of PI&R, corrective action program, in that Ginna did not thoroughly evaluate IST program vibration data during their extent of condition review conducted in 2009 as a result of the 'B' RHR pump exceeding the IST required action range (P.1.c per IMC 0310).

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that conditions adverse to quality shall be promptly identified and corrected. Contrary to the above, Ginna did not promptly identify that five pumps were in the IST alert range during their extent of condition review in 2009 for the 'B' RHR pump exceeding the IST required action range. Ginna's immediate corrective actions included verifying that all other IST pumps were within the IST acceptable range. Because this finding was determined to be of very low safety significance and was entered into Ginna's CAP (CR 2010-4853), the NRC is treating this as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000244/2010004-02, Failure to Identify Five Pumps in the Inservice Testing Alert Range)**

1R22 Surveillance Testing (71111.22 – Six samples)

a. Inspection Scope

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

- STP-O-16-COMP-T, "AFW Turbine Pump – Comprehensive Test," Rev. 01100 (July 26, 2010);
- STP-O-2.8Q, "CCW Pump Quarterly Test," Rev. 00501 (July 27, 2010);
- STP-O-12.2, "EDG 'B'," Rev. 00701 (July 27, 2010);
- STP-E-12.5, "TSC Diesel Test," Rev. 00001 (August 24, 2010);
- STP-O-12.6B, "Diesel Generator Fuel Oil Transfer Pump 'B' Test," Rev. 00300 (August 25, 2010); and
- STP-E-2.3.1Q, "Containment Recirculation Fan Testing – Quarterly," Rev. 00001 (September 9, 2010).

b. Findings

No findings were identified.

Enclosure

1EP6 Drill Evaluation (71114.06 – One sample)**a. Inspection Scope**

On July 29, 2010, the inspectors observed portions of a scheduled drill of Ginna's emergency preparedness organization. Following the drill, the inspectors observed the post-drill critique and assessment of TSC performance during the drill. The drill scenario included an unisolable secondary side line break with a steam generator tube rupture. The inspectors verified that emergency classification declarations and notifications were completed in accordance with 10 CFR Part 50.72, 10 CFR Part 50 Appendix E, and emergency plan implementing procedures. The inspectors verified that the TSC post-drill critique was thorough, and that drill enhancements were identified in Ginna's CAP.

b. Findings

No findings were identified.

2. RADIATION SAFETY**Cornerstone: Public/Occupational Radiation Safety****2RS01 Radiological Hazard Assessment and Exposure Controls (71124.01 – One sample)****a. Inspection Scope**

From September 27 to 30, 2010, the inspectors performed the following activities to verify that Ginna properly assessed the radiological hazards in the workplace and implemented appropriate radiation monitoring and exposure controls during routine operations. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, relevant TSs, and Ginna procedures.

Radiological Hazard Assessment

The inspectors reviewed work activities for the clean-up of the waste hold up tank, auxiliary building floor drains, auxiliary building sump, and the sump tank. The inspectors also reviewed activities in progress for the independent spent fuel storage installation. The inspectors verified that appropriate pre-work surveys were performed and that appropriate hazards were properly identified.

The inspectors verified air samples were collected and analyzed in accordance with Ginna procedures. The inspectors observed work in progress and verified that portable air sampling was representative of the individuals' breathing zone.

Enclosure

Instructions to Workers

The inspectors verified that workers would be informed of changing conditions by the radiological controls technician providing continuous job coverage.

Contamination and Radioactive Material Control

The inspectors verified that Ginna has not established a de facto "release limit" by altering the instrument's typical sensitivity through altering energy discrimination or placing instruments in high background radiation areas.

Radiological Hazards Control and Work Coverage

There were no opportunities to observe work in areas with significant dose gradients during this inspection period. Ginna has no posted airborne radiation areas. Therefore, the inspectors had no opportunities to observe work in such areas and could not evaluate controls for those areas.

b. Findings

No findings were identified.

2RS02 Occupational ALARA Planning and Controls (71124.02 – One sample)

a. Inspection Scope

From September 27 to 30, 2010, the inspectors performed the following activities to verify that Ginna was properly implementing operational, engineering, and administrative controls to maintain personnel exposure as low as reasonably achievable (ALARA) for activities performed during routine operations. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and Ginna's procedures.

Inspection Planning

The inspectors reviewed pertinent information regarding cumulative exposure history, current exposure trends, and ongoing activities. The inspectors reviewed the site's 3-year rolling average dose and compared the site's average with industry's average.

The inspectors reviewed Ginna's trend in collective exposure and the site's source term measurements.

Verification of Dose Estimates and Exposure Tracking Systems

The inspectors reviewed ALARA packages from the previous outage. The inspectors verified the exposure estimates for accuracy.

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The inspectors verified that Ginna has established measures to track, trend, and set trigger points to prompt additional ALARA planning and controls.

The inspectors performed an evaluation of Ginna's method of adjusting exposure estimates when unexpected changes occur.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

40A1 Performance Indicator (PI) Verification (71151)

.1 Cornerstone: Mitigating Systems (71151 – Three samples)

a. Inspection Scope

The inspectors completed a review of mitigating systems performance index (MSPI) data including a review of Ginna's train/system unavailability data, monitored component demands, and demand failure data. As part of this review, Ginna's MSPI basis document, "Ginna Nuclear Power Plant MSPI Basis Document," Revision 5; and Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment PI Guideline," Revision 6, were examined. To verify the accuracy of the data, the inspectors reviewed monthly operating reports, NRC inspection reports, and Ginna event reports from August 2009 to August 2010. The inspectors also reviewed OOS logs, operating logs, and maintenance rule information for the period of August 2009 to August 2010 to determine the accuracy and completeness of the reported unavailability data. For the selected systems, a review of maintenance and test history confirmed the accuracy of demand failure data for the identified active components for the most recent 12 quarters. The MSPIs reviewed included:

- Emergency Air Conditioning Power System;
- High Pressure SI System; and
- Heat Removal System (AFW).

b. Findings

No findings were identified.

Enclosure

.2 Cornerstone: Public Radiation Safety (71151 – One sample)

Radiological Effluent Technical Specification/Offsite Dose Calculation Manual
Radiological Effluent Occurrences

a. Inspection Scope

The inspectors reviewed relevant effluent release reports for the period September 1, 2009, through August 31, 2010, for issues related to the public radiation safety PI, which measures radiological effluent release occurrences that exceed 1.5 millirem/quarter whole body or 5.0 millirem/quarter organ dose for liquid effluents; 5 millirads/quarter gamma air dose, 10 millirads/quarter beta air dose, and 7.5 millirads/quarter for organ dose for gaseous effluents.

b. Findings

No findings were identified.

.3 Cornerstone: Occupational Radiation Safety (71151 – One sample)

Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors reviewed implementation of Ginna's occupational exposure control effectiveness PI program. Specifically, the inspectors reviewed recent action reports, and associated documents, for occurrences involving locked high radiation areas, very high radiation areas, and unplanned exposures against the criteria specified in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 6, to verify that all occurrences that met the NEI criteria were identified and reported as performance indicators.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution

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

a. Inspection Scope

As specified by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into Ginna's CAP. This review was accomplished by reviewing electronic copies of CRs, periodic attendance at daily screening meetings, and accessing Ginna's computerized database.

Enclosure

b. Findings

No findings were identified.

.2 Annual Sample: Review of Incore Flux Mapping System Drive Failures (71152 – One sample)

a. Inspection Scope

CR 2009-5450 documented that while performing flux mapping of the core on August 7, 2009, the 'B' detector intermittently stopped during insertion. The detector needs to operate smoothly in order to obtain meaningful flux mapping data during performance of the associated TS surveillance. Ginna determined that the most likely cause of the 'B' drive intermittent operation was a fault in the encoder/decoder system. However, the cause could not be definitively identified during troubleshooting. The inspectors also reviewed several CRs documenting other failures of the incore flux mapping system. Ginna determined that the cause of increasing system failures appeared to be age-related degradation of the system. Ginna placed the incore flux mapping system on the top 10 material condition list because of past system performance history and to ensure that it received proper attention for issue resolution.

The inspectors assessed Ginna's problem identification threshold, cause analyses, extent-of-condition reviews, operability determinations, and the prioritization and timeliness of corrective actions to determine whether Ginna was appropriately identifying, characterizing, and correcting problems associated with these issues and whether the planned or completed corrective actions were appropriate to prevent recurrence. Additionally, the inspectors performed walkdowns of accessible system components to assess if abnormal conditions existed. The inspectors also interviewed plant personnel regarding the identified issues and implemented corrective actions.

b. Findings and Observations

No findings were identified. Ginna appropriately implemented their corrective action process regarding the initial discovery of the reviewed issues. The CR package was complete and included an ACE, operability determinations, extent-of-condition reviews, and implemented and planned corrective actions. In addition, the elements of the CR and the ACE were detailed and thorough. Interim corrective actions such as performing system maintenance and having spare system parts available onsite to perform system repairs were appropriate to minimize potential failures of the incore flux mapping system pending system upgrades. The corrective actions for the various system failures included developing a troubleshooting plan with vendor support, reviewing preventive/corrective maintenance practices with vendor support, developing a failure modes and effects analysis identifying potential failure modes of the system/components, and developing contingency plans including implementing standing WOs to perform system repairs if necessary. Additionally, Ginna had long-term corrective action plans in place to replace the incore thimbles and to replace the incore flux mapping system electronics. The inspectors verified that at no time was invalid flux

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mapping data obtained or were TS incore mapping surveillances missed because of system failures.

.3 Annual Sample: Power-Operated Relief Valve Nitrogen Accumulator Leakage (71152 – One sample)

a. Inspection Scope

This inspection focused on Ginna's identification, evaluation, and resolution of problems related to nitrogen leakage from the piping and/or components that provide pressurized nitrogen to operate the pressurizer power-operated relief valves (PORVs). This source of nitrogen, which includes an accumulator, provides the motive source to operate the PORVs in the overpressure protection mode (during shutdown conditions), and for loss of heat sink and steam generator tube rupture scenarios.

The inspectors reviewed Ginna's associated evaluations and corrective action reports. The inspectors also interviewed plant personnel and reviewed troubleshooting results to evaluate the performance of the components and the effectiveness of Ginna's corrective actions. In addition, the inspectors reviewed Ginna's TSs and UFSAR to assess the potential adverse impact of leakage and the associated configuration on plant operations.

b. Findings and Observations

No findings were identified. The inspectors noted that the PORV nitrogen accumulator challenges were most recently associated with the 'B' train, but have historically occurred on both trains. The impact of the nitrogen leakage and associated pressure reduction resulted in frequent accumulator fill activities by the operators. This action was necessary to keep the PORV and actuation train operable (greater than 400 pounds per square inch gauge (psig)). The alarm annunciates at 725 psig, requiring operator response. The frequency of filling the accumulators has varied between several hours to several weeks. CR 2009-8455 documented the adverse trend in the 'B' overpressure protection accumulator refills.

The inspectors reviewed the actions associated with CR 2009-8455, which included a systematic troubleshooting activity to identify the possible sources of leaks. The troubleshooting ultimately concluded that the primary source of the leakage was from a flanged connection in the nitrogen regulator. As the existing regulators have been part of a removal/refurbishment rotation, Ginna decided to procure new regulators as an action to abate the leakage. For the interim, condition monitoring is expected to identify continued challenges and institute corrective actions (refill) to ensure that PORV operability is not challenged. Ginna plans to install the new regulators in the next refueling outage, scheduled for spring 2011.

Ginna's evaluation also considered the impact of the PORV nitrogen accumulator challenges to plant operators. Accordingly, the frequent accumulator charging was added to Ginna's operator challenges list. The inspectors confirmed that Ginna was adequately monitoring and trending relevant parameters so that worsening conditions

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could be identified and addressed in a timely fashion. The inspectors found that Ginna's actions to evaluate and correct the PORV challenges were appropriate.

4. Annual Sample: Assessment of Corrective Actions Associated with the Pressurizer Power-Operated Relief Valve Block Valves, 515 and 516 (71152 – One sample)

a. Inspection Scope

This inspection was performed to assess Ginna's evaluation and corrective actions for grease degradation and stem factor calculation discrepancies associated with the 515 and 516 PORV block valves. Additionally, the inspectors reviewed Ginna's evaluation of a bent stem associated with block valve 516 to ensure the proposed corrective actions were reasonable to correct the identified cause and prevent recurrence of the issue. During testing and maintenance work performed on the block valves in September 2009, Ginna determined that degraded grease conditions existed with both the 515 and 516 PORV block valves. The inspectors reviewed the degraded grease apparent cause analysis to verify corrective actions completed and proposed were reasonable to ensure efficient transfer of valve actuator torque to thrust was maintained within expected design assumptions. This review included corrective actions such as providing additional training to plant staff on the proper method of grease application and revisions to PM procedures to ensure proper lubrication of MOV actuators and stems.

The inspectors interviewed plant personnel to discuss PORV block valve test data and reviewed revised stem factor assumptions within design calculations to ensure that design margins were maintained. Additionally, the inspectors reviewed Ginna's operability review associated with a slightly bent stem for the 516 valve to ensure that the conclusion was reasonable based on test data and analysis.

b. Findings and Observations

No findings were identified. The inspectors found that the issues had been accurately documented within the CAP and appropriate extent-of-condition reviews had been performed to assess the potential impact on other valves. The inspectors found the completed and proposed corrective actions for the grease degradation, stem factor discrepancies, and bent stem issue to be reasonable based on the information reviewed within Ginna's CAP and discussions with plant personnel. During the review of the stem issue associated with PORV block valve 516, the inspectors identified an error of minor significance in a Ginna stem thread wear and coefficient of friction evaluation. Ginna had performed this evaluation through a review of actual valve test data to assess stem thread wear, coefficient of friction margin, and the adequacy of the test frequency going forward. The inspectors noted that incorrect inputs were used in the 516 valve spreadsheet for overall actuator ratio, stem thread type, and thread pitch. Ginna entered this issue into the CAP as CR 2010-5789, performed an extent-of-condition review, and verified that two other valves had a similar deficiency with incorrect spreadsheet inputs. Ginna revised the inputs and reevaluated the coefficient of friction and stem thread wear margins for the affected valves and found margins remained acceptable with no impact on valve operability. The inspectors evaluated the deficiency noted above for potential significance in accordance with the guidance in IMC 0612, Appendix B, "Issue

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Screening," and Appendix E, "Examples of Minor Issues," and determined that the issue was not a finding of more than minor significance since there was no impact on valve operability.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153 – One sample)

1. Power to TSC Inverter Loads was De-energized During Inverter Maintenance

a. Inspection Scope

On September 14, 2010, power to the TSC inverter loads was inadvertently de-energized during scheduled maintenance. The cause was a result of an incorrect step in the maintenance procedure, CME-38-01-INVTTCSC,"Solidstate Controls, 50 KVA Three Phase Inverter/CVT Main INVTTCSC," Rev. 00901, which was being performed. The loss of the TSC inverter loads resulted in a loss of the plant process computer system, normal control room telephones, radiological emergency communication system telephone line, "blue" control room outside telephone lines, and the control room radio base station. The inspectors responded to the control room to monitor and observe operator response. The inspectors compared operator actions with applicable procedures and reviewed emergency action level (EAL) technical basis document section 7.3, "Loss of Indications/Alarms/Communication Capability," to assess that appropriate EALs were determined. The inspectors noted that no EAL thresholds were exceeded based on communication capability utilizing the NRC emergency notification system telephone and/or hardwired shift manager communications which remained available.

b. Findings

No findings were identified.

4OA5 Other Activities

Inspection Results for Temporary Instruction (TI) 2515/179

a. Inspection Scope

From September 27 to 30, 2010, the inspectors performed the following activities to confirm that inventories of materials possessed by Ginna were appropriately reported and documented in the national source tracking system in accordance with 10 CFR 20.2207. This inspection activity completes the requirements for closeout of this TI.

Inventory Verification

The inspectors obtained a copy of Ginna's national source tracking system inventory for comparison and performed a physical inventory. The inspectors verified the information listed on Ginna's inventory record.

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Determine the Location of Unaccounted for Nationally Tracked Sources

The inspectors verified there were no unaccounted for nationally tracked sources.

Review of Other Administrative Information

The inspectors reviewed the administrative information with Ginna personnel to ensure that the information was up to date.

b. Findings

No findings were identified.

40A6 Meetings, Including Exit

Exit Meeting Summary

On October 12, 2010, the resident inspectors presented the inspection results to Mr. Eric Larson and other members of his staff, who acknowledged the findings. The inspectors verified that none of the material examined during the inspection is considered proprietary in nature.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Carlin	Vice President, Ginna
J. Bowers	General Supervisor, Radiation Protection
T. Hedges	Director, Emergency Preparedness
E. Larson	Plant Manager
K. McLaughlin	General Supervisor-Shift Operations
T. Paglia	Manager, Integrated Work Management
S. Snowden	Chemistry Supervisor
J. Sullivan	Manager, Operations
P. Swift	Manager, Engineering Services

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000244/2010004-01	NCV	Failure to Adequately Assess the Risk of Technical Support Center Inverter Maintenance (Section 1R13)
05000244/2010004-02 Range (Section 1R19)	NCV	Failure to Identify Five Pumps in the Inservice Testing Alert

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Document

UFSAR

Procedures

ER-SC.2, High Water (Flood) Plan, Rev. 00702

SC-3.17, Auxiliary Building Flood Barrier Installation/Removal/Inspection, Rev. 00100

Condition Reports

2008-8213

2008-8947

2009-1557

2009-3873

Section 1R04: Equipment Alignment

Drawing

33013-1238, Standby AFW P&ID, Rev. 26

Section 1R05: Fire Protection

Document

Ginna Fire Protection Plan, Rev. 5

Procedures

FRP-4.0, Auxiliary Building Basement, Rev. 00701

FRP-5.0, Auxiliary Building Intermediate Floor, Rev. 00802

FRP-6.0, Auxiliary Building Operating Floor, Rev. 00602

FRP-20.0, Control Room, Rev. 00701

FRP-30.0, Screen House Basement, Rev. 00701

FRP-31.0, Screen House Operating Floor, Rev. 007

FRP-32.0, Transformer Yard, Rev. 6

SC-3.1.1, Fire Alarm Response (Fire Brigade Activation), Rev. 17

SC-3.4.1, Fire Brigade Captain and Control Room Personnel Responsibilities, Rev. 03901

Drawings

33013-2552, Fire Response Plan Auxiliary Building–Operating Floor Elevation 271 feet, Rev. 6

33013-2546, Fire Response Plan Auxiliary Building–Intermediate Floor Elevation 253 feet, Rev. 4

33013-2571, Fire Response Plan Screen House above Elevation 253 feet 6 inches, Rev. 6

33013-2559, Fire Response Plan Control Building Plan Views, Rev. 13

Section 1R11: Licensed Operator Regualification Program

Document

Cycle 10-5, Simulator vs. Plant Differences, July 23, 2010

Procedures

AP-SG.1, Steam Generator Tube Leak, Rev. 01300

OTG-2.2, Simulator Examination Instructions, Rev. 43

Section 1R12: Maintenance Effectiveness

Documents

AutoLog Entries from 01/01/2007 to 8/12/2010 for EDG Room Cooling Fans

EDG Room Ventilation System Health Report, 2nd Quarter 2010

Fire Protection System Train Performance Criteria Events

Reactor Protection System Health Report, 2nd Quarter 2010

System Report for Fire Protection System

Drawing

33013-1873, Ventilation for EDGs P&ID, Rev. 3

Condition Reports

2007-1858	2007-8162	2008-9254	2009-2207
2007-6994	2007-8588	2009-0417	2009-9361
2007-6999	2008-6060	2009-1476	
2007-8151	2008-9084	2009-2190	

Section 1R13: Maintenance Risk Assessments and Emergent Work ControlDocument

AutoLog Entries for All Logs 8/5/2010

Procedure

A-52.12, Nonfunctional Equipment Important to Safety, Rev. 06302
 CNG-OP-1.01-100, Operations Log Keeping and Station Rounds, Rev. 00200
 CNG-OP-4.01-1000, Integrated Risk Management, Rev. 00601
 OPG-AUTO-SOFTWARE, Control Room Software Operation, Rev. 01000

Condition Reports

2010-4804
 2010-4858

Section 1R15: Operability EvaluationsDocument

ECP 10-000653, Evaluation of July 6, 2010, Offsite Power Inoperability

Procedure

STP-O-12.6-COMP-B, EDG Fuel Oil Transfer Pump 'B' Comprehensive Test, Rev. 00000

Drawings

33013-1237, AFW, Rev. 55
 33013-1250, Station SW P&ID, Sheet 2 of 3, Rev. 39

Condition Reports

2009-4517	2010-4835	2010-5015
2010-2598	2010-4853	
2010-3514	2010-4859	

Section 1R18: Plant ModificationsDocument

ECP 10-000557, Add Temporary Jumper to Bypass Broken Test Switch

Section 1R19: Post-Maintenance TestingProcedures

CMM-11-05-PAC07A, Ingersoll-Rand, Type 4 X 13 LP, Centrifugal Pump Maintenance for SFP
 Recirculation Pump 'A', Rev. 00301
 CPI-MON-R20A, Calibration of Radiation Monitoring System SFP HX 'A' SW Monitor R-20A,
 Rev. 01002

Attachment

CPI-PRESS-940, Calibration of SI Accumulator 'A' (Loop 'B') Pressure Loop 940, Rev. 800
P-9, Radiation Monitoring System, Rev. 09802
STP-O-2.2QB, RHR Pump 'B' In-service Test, Rev. 00700
STP-O-16-COMP-A, AFW Pump 'A' – Comprehensive Test, Rev. 400
STP-O-16-COMP-T, AFW Turbine Pump – Comprehensive Test, Rev. 01200
STP-O-16QA, AFW Pump 'A' Quarterly, Rev. 301
STP-O-17.2, Process Radiation Monitors R-11 thru R-18, R-20 thru R-22, and Iodine Monitors
R-10A and R-10B Source Check, Alarm Setpoint Verification, and Functional Test, Rev. 0
STP-O-33A, SFP Pump 'A', Rev. 00100

Drawings

33013-1234, Condensate Storage P&ID, Rev. 38
33013-1237, AFW P&ID, Rev. 55
33013-1248, Auxiliary Cooling SFP Cooling P&ID, Rev. 36
33013-1002, AFW Pump Instrumentation Upgrade, Rev. 4

Condition Reports

2010-4839
2010-4913
2010-4915
2010-5944

Work Orders

C90691808	C90819192	C90835831
C90828034	C90780705	C90803731
C90215885	C90732595	

Section 1R22: Surveillance Testing

Procedures

STP-E-2.3.1Q, Containment Recirculation Fan Testing – Quarterly, Rev. 00001
STP-E-12.5, TSC Diesel Test, Rev 00001
STP-O-2.8Q, CCW Quarterly Test, Rev. 00501
STP-O-12.2, EDG 'B', Rev. 00701
STP-O-12.6B, Diesel Generator Fuel Oil Transfer Pump 'B' Test, Rev. 00300
STP-O-16-COMP-T, AFW Turbine Pump – Comprehensive Test, Rev. 01100

Drawings

33013-1239, EDG 'B' P&ID, Sheet 2 of 2, Rev. 21
33013-1245, Auxiliary CCW P&ID, Rev. 31

Condition Reports

2010-05558
2010-05507
2010-05523

Work Order

C090803795

Section 2RS1: Radiological Hazard Assessment and Exposure ControlsProcedures

A-1.1, Access Control to Locked High Radiation and Very High Radiation Areas, Rev. 04700
 RP-JC-JOBCOVERAGE, Job Coverage, Rev. 01601
 RP-SUR-CONTAM, Performance of Contamination Surveys, Rev. 00601
 RP-SUR-HOTPART, Performance of Hot Particle Surveys, Rev. 2
 RP-SUR-RADIATION, Performance of Radiation Surveys, Rev. 00800

Condition Reports

2009-7621	2009-5297	2009-2934	2009-4122
2009-7622	2009-2748	2009-3412	2009-4441
2009-3836	2009-2889	2009-4067	

Radiation Work Permits

10-5001
 10-5003
 10-6007

Section 2RS2: Occupational ALARA Planning and ControlsProcedure

ND-ALARA, ALARA, Rev. 00702

Audits and Self-Assessments

2009-000229, ALARA Outage Preparation

Section 4OA1: PI VerificationDocuments

Ginna Nuclear Power Plant MSPI Basis Document, Rev. 5
 NEI 99-02, Regulatory Assessment PI Guideline, Rev. 6

Section 4OA2: Problem Identification and ResolutionDocuments

86-1234820-03, Low Temperature Overpressure Analysis Summary, dated 9/19/97
 ACE, PORV Block Valve 516 Grease Degradation, dated 10/19/09
 ACE, During Valve Actuator Maintenance on Valve 516 the Valve Operating Stem was Bent,
 dated 11/10/09
 DA-NS-92-014, Reactor Coolant System (RCS) Overpressurization Protection System Nitrogen
 Accumulator Tanks, TRC03 'A' & 'B', Low-Pressure Limit, Rev. 000
 ECP 2009-0083, Design Change Revise DA-ME-006/007 for MOVs 515 and 516, Rev. 0
 Incore Flux Mapping System Complex Troubleshooting Plan and Data Sheet Associated with
 WO C90211012
 Maintenance Rule Status Report
 Operator Challenges List, dated 5/5/10
 Plant Health Committee Issues List
 System PM Task and Schedule List for Incore Flux Mapping System
 SYS32, Incore Instrumentation System RGE-32, Training System Description, Rev. 11

Attachment

Top 10 Material Conditions List

UFSAR

Vendor Manual W0120-0335.00, Westinghouse Electric Detector Flux Mapping System

Procedures

- CNG-AM-1.01-1000, Equipment Reliability Process, Rev. 00300
- CNG-CA-1.01-1000, CAP, Rev. 00300
- CNG-CA-1.01-1005, ACE, Rev. 00300
- CNG-FES-037, Detection and Evaluation of MOV Stem Nut Wear, Rev. 0
- M-52.1, Installation of Detector and Cable and Maintenance on Miniature Detector Flux Mapping System, Rev. 01900
- NSD-EIS, Analog Flux Mapping System Maintenance at Ginna, Rev. 0
- RE-10.1, Flux Mapping Normal Procedure, Rev. 01600
- RE-10.4A, Incore Flux Map Data Reduction and Review Using Incore-3D, Rev. 00902
- STP-O-2.6.5, RCS Overpressure Protection System PORV Operability Verification, Rev. 00100

Drawings

- 22832, Panel Assembly Drive Control, Sheet 1, 1/9/68
- 22389, Panel Assembly Common Control, Sheet 1, 3/21/68
- 22400, Control Assembly Flux Mapping, Sheet 1, Rev. A
- 22400, Control Assembly Flux Mapping, Sheet 2, Rev. A
- 22400, Schematics Tubing Control System Flux Mapping, Sheet 3, 5/17/68
- 22411, Drive Assembly Incore Detector Insertion, Flux Mapping System, Sheet 1, 3/5/69
- 22427, Schematic Cable Drive System, Rev. 000, 2/16/68

Condition Reports

2008-4367	2009-6791	2009-7356	2010-0966
2009-4708	2009-6843	2009-8428	2010-4544*
2009-5450	2009-7161	2009-8455	2010-5789*
2009-1890	2009-7188	2009-8459	
2009-5797	2009-7304	2009-8460	

*initiated as a result of this inspection.

Work Orders

C20500832	C20801372	C90644717
C20602732	C20802266	
C20602986	C20803632	

System Health Reports

- 2nd, 3rd, 4th Quarter 2009 Incore Flux and Temperature Monitoring
- 1st Quarter 2010 Incore Flux and Temperature Monitoring

Section 4OA3: Followup of Events and Notices of Enforcement Discretion

Procedure

- CME-38-01-INVTTSC, Solid State Controls, 50 KVA Three Phase Inverter/CVT Main INVTTSC, Rev. 00901
- S-26.2, PPCS OOS, Rev. 04402

Condition Reports

2010-5620
2010-5626
2010-5627
2010-5629

LIST OF ACRONYMS

ACE	apparent cause evaluation
ADAMS	Agencywide Documents Access and Management System
AFW	auxiliary feedwater
ALARA	as low as reasonably achievable
CAP	corrective action program
CDF	core damage frequency
CFR	Code of Federal Regulations
CCW	component cooling water
CR	condition report
EAL	emergency action level
ECP	engineering change package
EDG	emergency diesel generator
Ginna	R.E. Ginna Nuclear Power Plant
HX	heat exchanger
IMC	Inspection Manual Chapter
IST	Inservice testing
MDAFW	motor-driven auxiliary feedwater
MOV	motor-operated valve
MSPI	mitigating systems performance index
NEI	Nuclear Energy Institute
NCV	non-cited violation
NRC	U.S. Nuclear Regulatory Commission
OOS	out of service
PARS	Publicly Available Records
P&ID	pipng and instrument drawing
PI	performance indicator
PI&R	problem identification and resolution
PM	preventive maintenance
PMT	post-maintenance testing
PORV	power-operated relief valve
psig	pounds per square inch guage
RCS	reactor coolant system
RG&E	Rochester Gas & Electric
RHR	residual heat removal
SDP	significance determination process
SFP	spent fuel pool
SI	safety injection
SSC	system, structure, and component
SW	service water
TDAFW	turbine-drive auxiliary feedwater
TS	technical specification
TSC	technical support center
UFSAR	updated final safety analysis report
WO	work order