



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
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November 1, 2007

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

SUBJECT: R. E. GINNA NUCLEAR POWER PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000244/2007004

Dear Mr. Carlin:

On September 30, 2007, 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 10, 2007, with you and other members of your staff.

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

This report documents two self-revealing findings of very low safety significance (Green) that were determined to be violations of NRC requirements. Because the violations were of very low safety significance and were entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region 1; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at R.E. Ginna Nuclear Power Plant.

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

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Sincerely,

**/RA/**

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

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

Enclosure: Inspection Report 05000244/2007004  
w/ Attachment: Supplemental Information

cc w/encl:

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T. Judson, Central New York Citizens Awareness Network

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**SUNSI Review Complete: BAB4 (Reviewer's Initials)**

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-244

License No.: DPR-18

Report No.: 05000244/2007004

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

Facility: R. E. Ginna Nuclear Power Plant

Location: Ontario, New York

Dates: July 1, 2007 through September 30, 2007

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Approved by: Glenn T. Dentel, Chief  
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## SUMMARY OF FINDINGS

IR 05000244/2007-004; 07/01/2007 - 09/30/2007; R. E. Ginna Nuclear Power Plant (Ginna); Maintenance Effectiveness, Operability Evaluations.

The report covered a three-month period of inspection by resident inspectors and region-based inspectors. Two Green 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). 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.

### A. NRC-Identified and Self-Revealing Findings

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

Green. Inspectors identified a self-revealing NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," when Ginna failed to correct a condition adverse to quality associated with incorrect calibration of the lead and lag timing modules in the over temperature delta temperature (OTDT) reactor protection trip channel instruments. Specifically, on multiple occasions from October 2006 to September 2007, the lead and lag timing circuits were found to be outside the requirements in the Core Operating Limits Report, Cycle 33, Revision 0, indicating that Ginna failed to correctly calibrate the lead and lag modules in the OTDT trip channel instruments. Ginna's corrective actions included conducting an extensive analysis of the circuit for this trip function and revising the procedure to ensure proper setting of the modules.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone's objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because it was not a design or qualification deficiency, it did not represent a loss of safety function, and it was not potentially risk significant due to seismic, flood, fire, or weather-related initiating events. Additional reanalysis by the vendor determined the OTDT instruments would have performed their design function. The finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna did not thoroughly evaluate the problem when it initially occurred such that the resolution addressed the causes (P.1.c per IMC 0305). (Section 1R12)

Green. Inspectors identified a self-revealing NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," when service water leakage from the 'C' Standby Auxiliary Feedwater (SAFW) cooler indicated that Ginna failed to correct a condition adverse to quality associated with SAFW room cooler head installation. Specifically, Ginna failed to correct head gasket installation deficiencies in September 2006 associated with the 'C' SAFW room cooler as evidenced by the leakage in June 2007. Ginna did not ensure that correct torque values were applied and material gasket selection was appropriate such that pressure transients within cooler design did not cause SAFW cooler head

leakage. Ginna's corrective actions included gasket replacement and issuance of a condition report (CR) to address corrective action issues associated with the events.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone's objective to ensure the reliability and availability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because it was not a design or qualification deficiency, it did not represent a loss of safety function, and was not potentially risk significant due to seismic, flood, fire, or weather-related initiating event. The finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna did not implement appropriate corrective actions to correct head gasket installation issues in September 2006 (P.1.d per IMC 0305). (Section 1R15)

B. Licensee-Identified Violations

None.



## REPORT DETAILS

### Summary of Plant Status

R. E. Ginna Nuclear Power Plant began the inspection period operating at full Rated Thermal Power (RTP). On July 1, 2007, power was reduced to 33 percent power to repair a steam leak on the 2A moisture separator reheater. Power was restored to full RTP on July 3. On July 4, a power reduction was commenced to facilitate repairs on the turbine control system. The power reduction was halted for several hours on July 4 with the plant at 97 percent of RTP when a partial loss of control room annunciators occurred. Following repair of the annunciator system, the power reduction resumed and power was reduced to 45 percent. On July 5, following completion of repairs to the turbine control system, power was increased and full RTP was achieved the following day. The plant remained at full RTP for the remainder of the report period.

### 1. REACTOR SAFETY

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

#### 1R01 Adverse Weather Protection (71111.01 - One sample)

##### a. Inspection Scope

The inspectors performed a review of cold weather preparations before the onset of the cold weather season in order to evaluate the site's readiness for seasonal susceptibilities. This review included an assessment of Interface Administrative Procedure IP-REL-7, "Seasonal Readiness Program." The 'A' emergency diesel generator (EDG) and risk significant supporting systems were selected for review. The inspectors assessed the effectiveness of Ginna's cold weather readiness program to ensure that the systems would remain functional and available for plant shutdown during cold weather conditions as specified by Technical Specifications (TS). The inspectors conducted discussions with control room operators, the seasonal readiness coordinator, and the system engineer to understand protective measures applicable to these systems. The inspectors performed partial field walkdowns of the systems to evaluate the material condition and functionality of the freeze protection equipment (e.g., heat tracing, instrumentation, and ventilation). During the inspection, the inspectors also reviewed with operators the protocol between the offsite transmission system operator and Ginna. Documents reviewed are listed in the Attachment.

##### b. Findings

No findings of significance were identified.

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

The inspectors reviewed the alignment of system valves and electrical breakers to ensure proper in-service or standby configurations as described in plant procedures and drawings. During the walkdown, the inspectors evaluated material conditions and general housekeeping of the system and adjacent spaces. The inspectors also verified that operations personnel were following plant TS and that alignments were consistent with TS, operating procedures, piping and instrument drawings (P&ID), and the Updated Final Safety Analysis Report (UFSAR). Documents reviewed are listed in the Attachment.

The following plant system alignments were reviewed:

- On August 20, 2007, the inspectors performed a walkdown of the 'B' EDG and its support systems while the 'A' EDG was out of service for performance testing;
- On August 23, 2007, the inspectors performed a walkdown of the 'D' SAFW train while the 'C' train was out of service for planned maintenance activities;
- On September 17, 2007, the inspectors conducted a walkdown of the steam driven auxiliary feedwater (AFW) system, while the 'A' EDG was out of service for planned maintenance activities; and
- On September 17, 2007, the 'B' train of the motor driven AFW system was walked down while the 'A' EDG was out of service for planned maintenance activities.

b. Findings

No findings of significance were identified.

.2 Complete Walkdown (71111.04S - One sample)a. Inspection Scope

The inspectors performed a detailed walkdown of the AFW system to identify any discrepancies between the existing equipment lineup and the specified lineup. The AFW system was chosen because of its risk significant function to provide makeup water to the steam generators. The inspectors verified proper system alignment as specified by TS, UFSAR, and Ginna procedures and drawings. Documentation associated with open maintenance requests and design issues were reviewed and included items tracked by plant engineering to assess their collective impact on system operation. In addition, the inspectors reviewed the associated CR database to verify that any equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment.

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b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05 – Nine samples)

a. Inspection Scope (71111.05Q)

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 fire protection program and industry standards. Additionally, the passive fire protection features were inspected including the ventilation system fire dampers, structural steel fire proofing, and electrical penetration seals. Documents reviewed are listed in the Attachment. The following plant areas were inspected:

- Charging Pump Room (Fire Area CHG);
- Intermediate Building South 253' Level (Fire Zone IBS-1);
- Intermediate Building South 271' Level (Fire Zone IBS-2);
- 'A' Battery Room (Fire Area BR1A);
- 'B' Battery Room (Fire Area BR1B);
- Air Handling Room (Fire Zone AHR);
- Auxiliary Building Basement (Fire Zone ABB);
- Intermediate Building North 253' Level (Fire Zone IBN-1); and
- 'B' EDG Room (Fire Zone EDG1B).

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

On August 7, 2007, the inspectors observed licensed operator simulator scenario, FRP1-05, "Pressurized Thermal Shock." 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." Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

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

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

- Control Building Heating, Ventilation, and Air Condition System performance; and
- OTDT Trip Circuitry Calibration and Configuration.

b. Findings

Introduction. Inspectors identified a green, self-revealing finding of 10 CFR 50, Appendix B, Criterion XVI, 'Corrective Action,' when Ginna failed to correct a condition adverse to quality associated with incorrect calibration of the lead and lag timing modules in the OTDT reactor protection trip channel instruments. Specifically, on multiple occasions from October 2006 to September 2007, Ginna incorrectly calibrated the lead and lag timing modules and were found to be outside the requirements as specified in the Core Operating Limits Report (COLR), Cycle 33.

Description. There are four channels of the OTDT reactor protection trip system. The primary function of the safety-related OTDT trip is to ensure the design limit from departure of nuclear boiling is maintained during accident conditions.

In October 2006, all four channels of the OTDT reactor protection trip channels were calibrated to new values outlined in the COLR for the next operating cycle. During this calibration, technicians encountered problems in reading the graphic printouts used to set the lead and lag time constants due to the resolution set up used with the graphical printer. In addition, the procedure in use allowed the operators to set the lag time constant at 5 plus or minus 0.2 seconds despite the COLR stating that the constant shall be less than or equal to 5 seconds.

In December 2006, channel 1 of the OTDT instruments was found to have a lag time setting of 5.5 seconds, greater than the COLR limit and outside the settings expected for the as left time constant from the October 2006 maintenance. At the time, this discovery was not considered significant, and maintenance personnel reset the time constant in accordance with procedure guidance and did not write a corrective action report to

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document the out-of-tolerance condition. Subsequent to this event, on March 13, 2007, channel 2 of OTDT was found to have a lag time of 7.1 seconds. A corrective action report was written at this time and an operability evaluation was conducted. Channels 3 and 4 were subsequently tested in early April 2007 as part of the extent of condition review and both were found to have lead or lag times constants which did not match the requirements of the COLR.

Following the March and April issues, Ginna changed the procedural guidance for setting the lag and lead time constants to ensure the allowable bands were within the limits outlined in the COLR. Furthermore, additional guidance was provided to the operators for setting up the recorder and reading the graphic printouts. Despite these changes, during subsequent surveillance tests in August and September 2007, the lag settings for channels 1 and 2 were found to be greater than five seconds. At this point, Ginna initiated CR 2007-6475, and a root cause team was created. The team subsequently determined that each channel had unique circuitry including isolation amplifiers and input impedances that were not addressed in the calibration procedure. A new procedure was subsequently developed for setting the lead and lag times, and the channels were calibrated to values outlined in the COLR.

The inspectors determined that the performance deficiency was a failure of Ginna personnel to conduct a thorough evaluation of the out-of-specification readings in April 2007, and implement corrective actions that properly calibrated the timing modules. In all cases, subsequent analysis by the vendor verified the OTDT instruments were operable and within analyzed values, when conservatism in the calculations which were performed to develop the original setpoints in the COLR were removed.

Analysis. The finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone's objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to correctly calibrate the lead and lag timing modules resulted in a condition where there was a reasonable doubt with respect to the operability of the OTDT circuitry and its trip function. This finding is similar to examples 3.j and 3.k of Appendix E of IMC 0612. Using Phase 1 of IMC 0609, Appendix A, the inspectors determined that the finding was of very low safety significance (Green) because the finding was not a design or qualification deficiency, did not represent a loss of system safety function, and was not potentially risk significant due to external events.

The finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna did not thoroughly evaluate the problem when it initially occurred such that the resolution addressed the causes. (P.1.c per IMC 0305)

Enforcement: 10 CFR 50, Appendix B, criterion XVI, "Corrective Action," states, in part, that measures be established to assure conditions adverse to quality are promptly identified and corrected. Contrary to the above, Ginna did not promptly correct a condition adverse to quality in that lead and lag modules in the OTDT trip channel circuits were not correctly calibrated to maintain the time standards in the COLR from October 2006 to September 2007. Because this issue is of very low safety significance

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and has been entered into Ginna's corrective action program (CR 2007-006475), this violation is being treated as a NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000244/2007004-01, Failure to correctly calibrate lead and lag timing modules for the OTDT reactor protection trip channels.)**

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - Six samples)

a. Inspection Scope

The inspectors evaluated the effectiveness of Ginna's maintenance risk assessments required by paragraph a(4) of 10 CFR Part 50.65. The inspectors discussed with control room operators and scheduling department personnel the use of the station's online risk monitoring software. The inspectors reviewed equipment tracking documentation, daily work schedules, and performed plant tours to gain reasonable assurance that actual plant configuration matched the assessed configuration. Additionally, the inspectors verified that risk management actions for both planned and/or emergent work were consistent with those described in procedure IP-PSH-2, "Integrated Work Schedule Risk Management." Documents reviewed are listed in the Attachment.

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

- Planned maintenance on 9X13A72 output breaker while utilizing 1G13A72 output breaker for full output power from the site to the grid (July 25 to August 2, 2007);
- Planned maintenance associated with work on the emergency offsite electrical power backfeed capabilities (July 30 to 31, 2007);
- Planned maintenance on the technical support center inverter and battery (August 25 to 27, 2007);
- Planned maintenance on fire suppression system strainer NFS44 (September 7, 2007);
- Planned maintenance on the "A" EDG (September 17 to 19, 2007); and
- Unplanned maintenance on the "A" motor driven AFW pump due to suction piping voiding. (September 21, 2007).

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - Seven samples)

a. Inspection Scope

The inspectors reviewed operability evaluations and/or 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

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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 also reviewed the following operability evaluations to determine if system operability was properly justified in accordance with CNG-NL-1.01-1003, “Conduct of Operability Determinations.” Documents reviewed are listed in the Attachment.

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

- CR 2006-4360, Vacuum breakers 9640E and 9640G may render SAFW inoperable;
- CR 2007-2855, Adverse trend in OTDT setpoint performance;
- CR 2007-4695, PORV nitrogen accumulator relief valves set pressure too high;
- CR 2007-4733, Bus 14 transformer cooling fan failure (1 of 3 failed);
- CR 2007-5020, 1G13A72 breaker aux switches not making contact (linkage adjustment needed);
- CR 2007-5022, Significant temperature gradient between circuit breaker 9X13A72 A phase, B phase, and C phase tanks; and
- CR 2007-5311, Technical support center diesel fuel oil results outside acceptance criteria for particulate material.

b. Findings

Introduction. The inspectors identified a green, self-revealing finding of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” when Ginna failed to correct a condition adverse to quality associated with SAFW room cooler head gasket installation. Specifically, in September 2006, Ginna failed to correct head gasket installation deficiencies associated with the ‘C’ SAFW room cooler as evidenced by leakage in June 2007.

Description. In September 2006, a pressure transient during restoration from service water (SW) motor operated valve (MOV) testing caused a leak to develop from a head gasket seal on the ‘C’ SAFW pump cooler. The resulting SW leakage from the cooler head gasket was sufficient to cause ‘C’ SAFW pump inoperability and unavailability due to water being sprayed on the local pump controller. Ginna determined that while not desired, the pressure transient was within design basis for the cooler and the head gasket should not have leaked. Ginna determined the gasket wear indications combined with current maintenance procedures allowed inadequate torque to be applied to the head gasket seal. In addition, Ginna discovered that the gasket installed had not been the vendor recommended gasket material. Ginna completed corrective actions that included a procedure revision to specify torque values in procedure M11.34.4, “Replacement of Gasket on A or B Cooling Units Coils for C or D Standby Auxiliary Feedwater Pumps,” Revision 11, and installation of a vendor recommended gasket.

In June 2007, another gasket leak developed on the cooler following restoration from SW MOV testing when a pressure transient occurred in the SW system. This event caused ‘C’ SAFW pump inoperability based upon TS requirements associated with current room temperatures at that time of year. Ginna determined that inadequate

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torque during gasket installation had occurred during the repair in September 2006, and the correct gasket installation procedure, M11.34.4, was not used for the gasket replacement. Ginna determined that based on the SAFW cooler system conditions, a more appropriate gasket material should have been used based on additional vendor information that was available during September 2006. Ginna also failed to ensure that station personnel consider past site experience associated with SW MOV restoration to minimize unnecessary pressure pulses that are known to exist when restoring from SW MOV testing.

The inspectors determined the performance issue was that Ginna did not correct gasket installation issues during the September 2006 repair. Ginna documented the apparent cause for the events in CR 2007-4536 including associated corrective actions to determine methods to minimize or prevent the pressure transient being seen during restoration from SW MOV testing. Additionally, Ginna issued CR 2007-4590 documenting ineffective corrective actions taken for the September 2006 repair.

Analysis. The finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, inadequate gasket installation on the SAFW cooler adversely affects the reliability and availability of the SAFW system. The inspectors evaluated the significance of this finding using SDP Phase 1 of IMC 0609, Appendix A. The inspectors determined that the finding was of very low safety significance (Green) because the finding is not a design or qualification deficiency, did not represent a loss of a safety function, and did not screen as potentially risk significant due to external events.

This finding has a cross-cutting aspect in the area of problem identification and resolution because Ginna did not implement appropriate corrective actions for SAFW cooler head gasket installation issues. (P.1.d per IMC 0305)

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that measures be established to assure conditions adverse to quality are promptly identified and corrected. Contrary to the above, Ginna did not correct a condition adverse to quality in that gasket installation for 'C' SAFW cooler was not performed adequately in September 2006 as evidenced by leakage in June 2007. Because this issue is of very low safety significance and has been entered into Ginna's corrective action program (CR 2007-4590/4591/4536), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy.

**(NCV 05000244/2007004-02, Failure to correct 'C' SAFW room cooler head gasket leakage.)**



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

The inspectors observed portions of post-maintenance testing (PMT) activities in the field to determine whether the tests were performed in accordance with approved procedures. The inspectors assessed the test's adequacy by comparing the test methodology to the scope of maintenance work performed. In addition, the inspectors evaluated the test acceptance criteria to verify that the tested components satisfied the applicable design and licensing bases and TS requirements. The inspectors reviewed the recorded test data to determine whether the acceptance criteria were satisfied. Documents reviewed are listed in the Attachment. The following PMT activities were reviewed:

- WO 20704254, Troubleshooting and Repair of Annunciator Panels, from a failure that resulted in declaration of an Unusual Event (July 4, 2007);
- WO 20704473, Perform Maintenance on 52/9X13A72 Output Breaker (August 2, 2007);
- PT-12.5, Technical Support Center Emergency Diesel Generator Test, to verify operability following maintenance to restore fuel oil quality in the TSC DG fuel oil storage tank (August 22, 2007);
- PT 2.7.1, Service Water Pump Test, following maintenance under WO 20705134, "A" SW Pump in Alert Range (August 30, 2007); and
- RSSP-2.3A, Diesel Generator "A" Trip Testing, following an extensive maintenance window planned for overhaul of the EDG "A". (September 20, 2007).

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - Eight 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, that no equipment preconditioning activities occurred, and that acceptance criteria had been met. Documents reviewed are listed in the Attachment.

- PT-12.2, Emergency Diesel Generator 'B' (July 31, 2007)
- PT-2.2Q, Residual Heat Removal System – Quarterly (August 2, 2007)
- PT-2.8Q, Component Cooling Water Pump Quarterly Testing (August 2, 2007)
- PT-12.1, Emergency Diesel Generator 'A' (August 20, 2007)
- PT-2.7.1, Service Water Pumps (August 28, 2007)
- PT-2.11, Fire Valves Quarterly Surveillance, Containment (September 12, 2007)
- CPI-LVL-2044, Calibration of Containment Sump A (September 20, 2007)

Enclosure

- S-12.4, Reactor Coolant System (RCS) Leakage Surveillance Record Instructions (September 18, 2007)

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23 - One sample)

a. Inspection Scope

The inspectors reviewed temporary plant modification 2007-0016, 'B' EDG exhaust manifold, to determine whether the temporary change adversely affected system availability or adversely affected a function important to plant safety. The inspectors reviewed the associated system design bases, including the UFSAR and TS, and assessed the adequacy of the safety determination screening and evaluation. The inspectors also assessed configuration control of the temporary 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. The inspectors reviewed the post-installation test results to verify whether the actual impact of the temporary change had been adequately demonstrated by the test. The temporary modification was reviewed by the inspectors in the field to verify it was installed in conformance with the instructions contained in procedure IP-DES-3, "Temporary Modifications." Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

**Cornerstone: Emergency Preparedness**

1EP6 Drill Evaluation (71114.06 - One sample)

a. Inspection Scope

On August 7, 2007, the inspectors observed a licensed operator simulator scenario, FRP1-05, "Pressurized Thermal Shock," that included a limited test of Ginna's emergency response plan. The inspectors verified that emergency classification declarations and notifications were completed in accordance with 10 CFR Part 50.72, 10 CFR Part 50 Appendix E, and emergency plan implementing procedures.

b. Findings

No findings of significance were identified.

## 2. RADIATION SAFETY

### Cornerstone: Occupational Radiation Safety

#### 2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03 - Nine samples)

##### a. Inspection Scope

During the period July 23 to 27, 2007, the inspectors performed the following activities to evaluate the operability and accuracy of radiation monitoring instrumentation and the adequacy of the respiratory protection program relative to maintaining and issuing breathing apparatus (SCBA). Implementation of these programs was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and Ginna's procedures.

The inspectors reviewed the UFSAR to identify area, process, and emergency monitors that are installed at Ginna for the protection of workers, and reviewed the current calibration records for selected instrumentation, including the spent fuel pool area monitor (R-5), the letdown line area monitor (R-9), and the nuclear sampling room area monitor (R-33).

The inspectors selected hand-held radiation instruments, air monitors, contamination monitors, and electronic dosimeters currently in use in the plant and reviewed the calibration records for these instruments. Included in this review were the calibration records for selected electronic dosimeters (DMC-2000), radiation survey instruments (RO-20, ASP1/NRD, FH40G-L/FHZ-612), a gas flow proportional counter (Tennelec S5E), contamination survey instruments (RM-14s, RM-25, SAM 9), count room scalers (BC-4, MS-3), and air samplers (AMS-4, Gilair 5).

The inspectors reviewed the maintenance records, safety interlock checks, and current calibration source activity/dose rate determinations for the Shepard Model 89, Model 28, and Model 142-10 instrument calibrators.

The inspectors evaluated Ginna's program for assuring quality in the radiation monitoring instrumentation and respiratory protection programs by reviewing a departmental self-assessment (SA 2007-000056), two audit reports (RPP-05-01-G, FPP-07-01-G), a Quality and Performance Assessment Quarterly Report for the 2<sup>nd</sup> quarter of 2007. Inspectors reviewed 24 CRs related to technician worker errors, radiation instrumentation, self-contained breathing apparatus (SCBA), and the monitoring of plant radiation levels to determine if problems were identified in a timely manner and appropriate corrective actions were taken to resolve the related issues.

There were no incidents of personnel internal exposure resulting in a committed effective dose equivalent (CEDE) > 50mrem that would require an in-depth evaluation of whole body counting instrumentation and bioassay techniques.

Enclosure

The inspectors verified calibration due dates and observed a technician performing source checks on a variety of instruments including portable radiation survey instruments (RO-20, ASP1/NRD, FH40G-L/FHZ-612), a gas flow proportional counter (Tennelec S5E), contamination survey instruments (RM-14s, RM-25, SAM 9), count room scalers (BC-4, MS-3), and personal contamination monitors (PCM-1, PM-7).

The inspectors reviewed surveillance records for 11 SCBAs staged for use in the control room, RCA access location, and the radwaste office building. The inspectors observed the technician perform an inspection of six units staged for use. The inspectors also observed two auxiliary operators perform an inspection of a fire brigade SCBA. The inspectors observed an auxiliary operator fill three SCBA air bottles from the air compressor unit. The sample results for breathing air used to refill the SCBA tanks were reviewed to confirm that air quality met CGA-G-7.1-1997 Grade E standards.

The inspectors evaluated the adequacy of the respiratory protection program regarding the issuance of SCBAs to workers. Training and qualification records were reviewed for licensed operators, radiation protection technicians, and fire brigade members required to use SCBAs in the event of an emergency.

b. Findings

No findings of significance were identified.

**Cornerstone: Public Radiation Safety**

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01 - One sample)

a. Inspection Scope

During the period July 23 to 27, 2007, the inspectors conducted the following activities to verify that the station was properly maintaining the gaseous and liquid effluent processing systems to ensure that radiological releases were properly mitigated, monitored, and evaluated with respect to public exposure. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20 and 50, TS, the Off-Site Dose Calculation Manual (ODCM), and station procedures.

The inspectors reviewed the validation and verification results for the radiological gaseous and liquid effluent dose calculation software (RETSDAS, Version 3) used for off-site dose assessment to ensure that the software currently in use provides accurate dose projections.

b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification (71151 – Seven samples)

###### .1 Cornerstones: Mitigating Systems

###### 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. Changes to the MSPI basis document were reviewed. The inspectors also reviewed out-of-service logs, operating logs, and maintenance rule information to determine the accuracy and completeness of the reported unavailability data. Operating data from July 2006 to June 2007 were reviewed to complete this inspection. The MSPIs reviewed included:

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

###### b. Findings

No findings of significance were identified.

###### .2 Cornerstones: Barrier Integrity

###### a. Inspection Scope

The inspectors reviewed Ginna's operations logs, RCS leakage and chemistry surveillance records, and PI data to compare the data reported by the PI. The inspectors used the guidance provided in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 4, to assess the accuracy of Ginna's collection and reporting of the RCS leak rate and RCS specific activity PI data. The inspectors also observed the surveillance activity that determines the RCS identified leakage rate. PI data reviewed for the RCS specific activity encompassed the period from March 2006 until August 2007. PI data reviewed for the RCS leak rate covered the period of April 2006 to July 2007.

###### b. Findings

No findings of significance were identified.

#### 4OA2 Identification and Resolution of Problems

##### Continuous Review

###### a. Inspection Scope

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

###### b. Findings and Observations

No findings of significance were identified.

#### 4OA3 Event Follow-up (71153 – Two samples)

##### .1 Power Decrease Due to Steam Leak on Moisture Separator Reheater Drain Line

###### a. Inspection Scope

On July 1, 2007, reactor power was reduced to approximately 33 percent when auxiliary operators noticed steam leaking from a fitting on a drain line from the 2A moisture separator reheater (MSR). The power reduction was necessary to allow the non-safety related MSR to be removed from service to facilitate repair activities. Inspection of the suspect fitting, a pipe plug that had been welded into an instrument port, revealed that the leak developed in an area of the weld bead that had been undercut by post-weld grinding activities that may have occurred in the mid 1990s.

The resident inspectors responded to the plant upon notification of the steam leak and observed portions of the repair activities. The inspectors also reviewed control room logs following the event and procedures operations personnel used to decrease reactor plant power.

###### b. Findings

No findings of significance were identified.

##### .2 Unusual Event Declaration for Loss of Four Control Room Annunciator Panels

###### a. Inspection Scope

On July 4, 2007, shortly after commencing a planned down power to correct a control valve issue on the main turbine, Ginna experienced a failure of main control board annunciator panels A, B, C, and D, at 1:58 a.m. In accordance with emergency action level 7.3.1, "Unplanned loss of an annunciator panel for greater than 15 minutes," an Unusual Event (UE) was declared. The load reduction was terminated at 98 percent and

Enclosure

Ginna personnel were called in to provide technical, planning and supervisory oversight. An investigation of the problem revealed the failure was caused by a blown resistor in an annunciator card that provided a common input to all four annunciator panels. The defective card was replaced and the panels were tested satisfactorily. The annunciator panels were restored to operability at 3:42 p.m. on July 4, 2007.

The resident inspectors responded to the site to evaluate Ginna's actions taken in response to the event. The inspectors reviewed control room performance and maintenance efforts throughout the event and kept Region I personnel informed on the progress made by Ginna personnel to resolve the issue. The inspectors assessed Ginna's actions against NRC emergency preparedness regulations and Ginna's emergency procedures. In addition, the inspectors verified that appropriate compensatory measures were in place to monitor parameters in the control room and the plant. The inspectors also verified that the plant was maintained in a stable condition and actions were in place to minimize the possibility of a plant transient. Regional personnel monitored the event in that Region I entered the Monitoring Mode per the NRC emergency plan at 12:15 p.m. and exited the monitoring mode at 5:15 p.m.

#### 40A6 Meetings, Including Exit

##### .1 Regional Administrator Site Visit

On July 6, 2007, a site visit was conducted by Mr. S. Collins, regional administrator for Region I. During Mr. Collins' visit, he toured the plant and met with Constellation managers.

##### .2 Resident Inspector's Quarterly Exit Meeting Summary

On October 10, 2007, the resident inspectors presented the inspection results to Mr. John Carlin and other members of his staff, who acknowledged the findings. The inspectors verified that none of the material examined during the inspection is considered proprietary in nature.

#### 40A7 Licensee-identified Violations

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee personnel

J. Carlin	Vice President, Ginna
D. Blankenship	Manager, Radiation Protection
D. Dean	Assistant Operations Manager (Shift)
M. Giacini	Scheduling Manager
E. Hedderman	Chemistry Supervisor
D. Holm	Plant Manager
S. Kennedy	Emergency Preparedness Manager
J. Pacher	Manager Nuclear Engineering Services
B. Weaver	Nuclear Safety and Licensing Manager
J. Yoe	Manager of Operations

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

Opened and Closed

05000244/2007004-01	NCV	Failure to correctly calibrate lead and lag timing modules for the OTDT reactor protection trip channels
05000244/2007004-02	NCV	Failure to correct 'C' SAFW room cooler head gasket leakage

**LIST OF DOCUMENTS REVIEWED**

**Section 1R01: Adverse Weather Protection**

Condition Reports

2007-000678  
2007-001002  
2007-003507  
2007-003797

Procedures

IP-REL-7	Seasonal Readiness Program, Rev. 1
M-1306.1	Winterizing Inspection Program, Rev. 21
O-22	Cold Weather Walkdown Procedure, Rev. 3

Work Orders

20700214	DG Wintering, Verify Anti-Freeze Protection
20700223	Wintering Inspection, Unit Heaters



20700226 Wintering Inspection Program for Piping Insulation  
20700202 Perform Wintering Inspection of Heat Trace

**Section 1R04: Equipment Alignment**

Documents

Auxiliary Feedwater System Health Report  
UFSAR Section 10.5.1, Auxiliary Feedwater Systems  
TS Basis B3.7.5, Auxiliary Feedwater System

Drawings

33013-1239 Diesel Generator – B  
33013-1237 Auxiliary Feedwater P&ID  
33013-1238 Standby Auxiliary Feedwater P&ID  
33013-2285 Motor Driven and Turbine Driven Auxiliary Feedwater Pumps Lube Oil Skid

Procedures

S-30.4 Auxiliary Feedwater Valve and Breaker Configuration  
T-41A Alignment of Auxiliary Feedwater System Prior to Power Operation  
ER-AFW.1 Alternate Water Supply to the AFW Pumps, Rev. 29  
FR-H.L Response to Loss of Secondary Heat Sink, Rev. 34  
ATT-5.1 Attachment Standby Auxiliary Feedwater, Rev. 8

Condition Reports

2006-4046  
2007-4879  
2007-5131  
2006-2709  
2006-5797  
2005-1787

**Section 1R05: Fire Protection**

Drawings

21488-0100 Fire, Smoke, and Pressure Barriers Sheet 3  
21488-0100 Fire, Smoke, and Pressure Barriers Sheet 5  
21488-0122 Charging Pump Room Fire Area Boundaries  
21488-0100 Fire Smoke and Pressure Barriers  
21488-0120 Intermediate Building Clean Side  
33013-2541 Fire Response Plan  
33013-2545 Fire Response Plan, Intermediate Floor El. 253' 3"

Documents

Plant Fire Hazards Analysis, Rev. 4b  
Fire Response Plan 4.0, Auxiliary Building Basement  
Fire Response Plan 11.0, Intermediate Building Clean Side Basement

**Section 1R11: Licensed Operator Regualification**

Documents

FRP1-05      Pressurized Thermal Shock Exam Scenario

Condition Reports

2007-5599

**Section 1R12: Maintenance Effectiveness**

Work Orders

20605544      Set Lead and Lag Times for Channel 3 of OT Delta T  
20702688      Delta T Setpoints

Condition Reports

2006-6170	2007-5636
2007-2021	2007-5747
2007-2735	2007-6239
2007-2812	2007-6259
2007-2855	2007-6383
2007-2949	2007-6475
2007-4695	2007-6478

Documents

IP-MAI-8, Conduct of Electrical and Controls Maintenance, Rev 00000  
Drawing CD2, Sheet 1: Interconnection Wiring Diagram R1 Rack Reactor Protection System  
TS Bases: Reactor Trip System Instrumentation (Section B 3.3.1)  
Position Paper on Calibration Review for Ginna OTDT Lead Lag Modules, May 6, 2007  
Operability Determination, 2007-2021, Rev. 0  
Operability Determination, 2007-2021, Rev. 1  
Operability Determination, 2007-2735  
Operability Determination, 2007-2812  
CR 2007-2855 (Apparent Cause Evaluation)  
Justification for Past Operability for Non-conservative Lead/Lag Time Constants.

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

Work Orders

20704473      Perform Maintenance on 52/9X13A72  
20701232      Perform PM on TSC Battery Charger and Inverter

Condition Reports

2007-5022  
2007-5096  
2007-6013  
2007-6025

Documents

Service Water System Reliability/Optimization Program  
ER-ELEC.3, Emergency Offsite Backfeed via Main and Unit Transformer, Rev. 6

**Section 1R15: Operability Evaluations**

Condition Reports

2007-2021	2007-5022
2007-2812	2007-5311
2007-2949	2007-5420
2007-2735	2007-5496
2007-4695	2007-5651
2007-5020	2007-5689

**Section 1R19: Post Maintenance Testing**

Work Orders

20704473	Perform Maintenance on 52/9X13A72 Output Breaker
20602614	4619 CCW HX A SW Outlet Isolation Valve
20704254	Control Room enters ER-INST.2, Loss of Annunciators

Procedure

RSSP-2.3A Diesel Generator A Trip Testing, Rev. 01601

**Section 1R22: Surveillance Testing**

Procedures

PT-2.2Q	Residual Heat Removal System - Quarterly
PT-12.1	Emergency Diesel Generator 'A'
PT-12.2	Emergency Diesel Generator 'B'
PT-2.7.1	Auxiliary Service Water Pumps
PT-2.8Q	Component Cooling Water Pumps, Quarterly
PT-2.9	Check Valve and Manual Valve Exercising Quarterly Surveillance
PT-2.11	Fire Valves Quarterly Surveillance
S-12.4	RCS Leakage Surveillance Record Instructions, Revision 54

CPI-LVL-2044	Calibration of Containment Sump A
CH-PRI-Sample Room	Sampling in the Nuclear Sample Room
CH-SMP-GRNDWTR	Collection and Analysis of Groundwater Samples

Condition Reports

2007-5463  
2007-6007  
2007-6009  
2007-0883

Drawings

33013-1258 Reactor Coolant Pressurizer (RC) P&ID, Rev. 24  
33013-1260 Reactor Coolant (RC) P&ID, Rev. 25  
33013-1272 Sheet 1 of 2, Waste Disposal-Liquid Reactor Coolant Drain Tank (WD) P&ID,  
Rev. 8

Other

NRC IN 94-46 Non-Conservative Reactor Coolant System Leakage Calculation, dated June 20,  
1994

**Section 1R23: Temporary Plant Modifications**

Document

Temporary Modification Permit 2007-0016, Rev. 0

Procedure

IP-DES-3 Temporary Modifications

Work Order

20604998 Repair Leak on Main Exhaust Flange of 'B' EDG and Re-install Insulation

**Section 2OS3: Radiation Monitoring Instrumentation**

Procedures:

SC-3.16.15.7, Inspection of Self-Contained Breathing Apparatus Scott 4.5, Rev. 25  
RPA-INS-M&TE, Radiation Protection Measurement & Test Equipment Control, Rev. 7  
RP-INS-C-RO20, Calibration of the Eberline RO-20 Survey Meter, Rev. 3  
RP-INS-C-RM25, Calibration of the Eberline RM-25 Survey Meter, Rev. 2  
RP-INS-C-TELESCAN, Calibration of the Xetex Model 330A Telescan, Rev. 3  
RP-INS-C-GILIAN, Calibration of the Gilair 5 Air Sampler, Rev. 3  
RP-INS-O-METERS, Operation of Portable Survey Meters, Rev. 7  
RP-INS-C-ASP1, Calibration of the Eberline ASP-1 Survey Meter, Rev. 3  
RP-JC-DAILY-SRC-CHKS, Daily Instrument Source Checks, Rev. 23  
RP-2717, Calibration and Maintenance of the MGPI DMC 2000S Electronic Dosimeter, Rev. 0  
RP-2706, Irradiation of DLR for Testing, Rev. 0  
CPI-MON-R2/R9, Calibration of Area Monitor Radiation Monitoring System Channels R-2  
through R-9, Rev. 2401  
RPA-QA, Radiation Protection Quality Assurance Program, Rev. 2

Calibration Records:

Shepard Model 142-10 Calibration  
Shepard Model 28 Calibration  
Shepard Model 89 Calibration  
Electronic Dosimeter Calibration (Serial Nos. 23050, 24089)  
AMS-4 (Serial No. 1196)  
ASP-1 (Serial No. 3808)  
HP-380B (Serial No. 254)

BC-4 (Serial No. 1024)  
 FH40G-L (Serial No. 14387)  
 FHZ-612 (Serial No. 564)  
 MS-3 (Serial No. 1192)  
 Gilair 5 (Serial No. 13037, 13039, 14182, 14197, 14174, 202002)  
 ASP1/NRD (Serial No. 3613, 238, 244, 247, 256, 3613, 173)  
 PCM-1C (Serial No. 325, 1223, 278,  
 PM-7 (Serial No. 501, 468)  
 RM-14S (Serial No. 403,432,  
 RM-25 (Serial No. 1025, 1026, 1027, 801)  
 RMS-3 (Serial No. 458)  
 RO-20 (Serial No. 2845, 27682858, 4839, 4841)  
 S5E (Serial No. 76672, 76672)  
 SAM (Serial No. 153)  
 Spent Fuel Pool Area Monitor R-5  
 Letdown Line Area Monitor R-9  
 Nuclear Sample Room Area Monitor R-33

#### Condition Reports

2006-1569	2006-3302
2006-1663	2006-3658
2007-0281	2007-4738
2007-0645	2007-4553
2007-0873	2007-2820
2007-1669	2007-3540
2007-3036	2007-1653
2007-3171	2007-0282
2007-3245	2007-1654
2007-3311	2007-2037
2007-3321	2007-4001
2007-0638	2007-3540

SCBA No. : 0127008, 29100068, 19010014, 19900069, 29100065, 19300072, 29100070,  
 0127006, 0127003, 19800051, 0127014

#### Miscellaneous Records & Reports:

Self-Assessment 2007-000056, Internal/External Dosimetry & RP Instrument Calibrations  
 2<sup>nd</sup> Quarter 2007 Quality & Performance Assessment Report  
 Audit Report RPP-05-01-G Radiation Protection  
 Audit Report FPP-07-01-G Fire Protection  
 Mask Qualification List  
 Determination of the Effectiveness of PM-7s at Detecting Internal Contamination  
 Passive Monitoring for Internal Contamination at Ginna  
 Radiation Monitoring System Health Report, 2<sup>nd</sup> Quarter 2007

#### **Section 40A1: Performance Indicator Verification**

Condition Reports

2007-5664  
2007-0883  
2007-4503  
2007-4504  
2007-4517

Procedures

S-12.4, RCS Leakage Surveillance Record Instructions, Rev. 54  
CH-PRI-Sample Room, Sampling in the Nuclear Sampling Room

Drawings

33013-1258 Reactor Coolant Pressurizer (RC) P&ID, Rev. 24  
33013-1260 Reactor Coolant (RC) P&ID, Rev. 25  
33013-1272 Sheet 1 of 2, Waste Disposal-Liquid Reactor Coolant Drain Tank (WD) P&ID,  
Rev. 8

Other

NRC IN 94-46 Non-Conservative Reactor Coolant System Leakage Calculation  
NEI 99-02 Regulatory Assessment Performance Indicator Guideline, Revision 4

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

Procedures

AP-TURB.5 Rapid Load Reduction

**LIST OF ACRONYMS**

ADAMS	Agency-Wide Documents Access and Management System
AFW	Auxiliary Feedwater
AR	Action Report
CAP	Corrective Action Program
CEDE	Committed Effective Dose Equivalent
COLR	Core Operating Limits Report
CR	Condition Report
EDG	Emergency Diesel Generator
IMC	Inspection Manual Chapter
MSPI	Mitigating Systems Performance Index
MOV	Motor Operated Valve
MSR	Moisture Separator Reheater
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Off-Site Dose Calculation Manual
OTDT	Over Temperature Delta T
P&ID	Piping & Instrument Drawings
PARS	Publicly Available Records
PI	Performance Indicator
PMT	Post-Maintenance Testing
PORV	Power Operated Relief Valve
RCA	Radiological Controlled Area
RCS	Reactor Coolant System
RTP	Rated Thermal Power
SAFW	Standby Auxiliary Feedwater
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SSC	System, Structure, or Component
SW	Service Water
TS	Technical Specifications
UE	Unusual Event
UFSAR	Updated Final Safety Analysis Report