May 4, 2005

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

SUBJECT: R. E. GINNA NUCLEAR POWER PLANT- NRC INTEGRATED INSPECTION REPORT 05000244/2005002

Dear Mrs. Korsnick:

On March 31, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your R. E. Ginna facility. The enclosed integrated inspection report (IR) documents the inspection findings, which were discussed on April 20, 2005 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 NRC-identified findings of very low safety significance (Green). One of these findings was determined to involve a violation of NRC requirements. However, because of its very low safety significance, and because it was entered into your corrective action program, the NRC is treating this issue as non-cited violation (NCV), consistent with Section VI.A of the NRC Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this IR, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at Ginna.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document management system (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

Enclosure: Inspection Report 05000244/2005002
w/ Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-244
License No:	DPR-18
Report No:	05000244/2005002
Licensee:	Constellation Energy, R.E. Ginna Nuclear Power Plant, LLC
Facility:	R. E. Ginna Nuclear Power Plant
Location:	1503 Lake Road Ontario, New York 14519
Dates:	January 1, 2005 - March 31, 2005
Inspectors:	K. Kolaczyk, Senior Resident Inspector M. Marshfield, Resident Inspector H. Balian, Operations Engineer S. Chaudhary, Senior Reactor Engineer S. Dennis, Senior Operations Engineer J. McFadden, Health Physicist M. Patel, Reactor Engineer
Approved by:	James M. Trapp, Chief Projects Branch 1 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000244/2005-002; 01/01/2005 - 03/31/2005; R. E. Ginna Nuclear Power Plant; Access Control to Radiologically Significant Areas, Cross-Cutting Areas.

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

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a finding that Ginna personnel have failed to implement effective corrective actions for conditions adverse to quality associated with component mispositioning events. Numerous mispositioning events have occurred over the past year and efforts to correct the deficiency have been ongoing since the last quarter of 2004. While many of the events have been minor in nature, two of the events which occurred this quarter had the potential to impact the acceptable operating environment for safety significant equipment. Specifically, the isolation valves on a relay room air conditioner service water strainer were found out-of-position rendering the cooler inoperable, and the battery room air conditioning unit power switch was found in the off position rendering it inoperable.

  This finding is greater than minor because if left uncorrected the condition would become a more significant safety concern. The finding was determined to be of very low safety significance (Green) in accordance with Phase 1 of the SDP because it was not a design or qualification deficiency, did not represent a loss of a safety system, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding is a cross-cutting issue in the problem identification and resolution area with a causal factor of effectiveness of corrective actions. (Section 4OA2)

Cornerstone: Occupational Radiation Safety

- Green. The inspector identified a self-revealing, non-cited violation of Technical Specification (TS) 5.4.1.a, because a radiation work permit was not adequate for controlling the manual cleaning of highly-contaminated equipment. This resulted in a worker receiving an unintended uptake of radioactive material. The radiation work permit failed to provide adequate precautionary instructions to work on highly contaminated equipment and to prevent the generation and uptake of airborne radioactivity.

This violation is more than minor because the manual cleaning of a highly-contaminated insert without the use of respiratory protection could have resulted in a significant uptake of radioactive material and affected the radiation Occupational Radiation Safety Cornerstone's objective to ensure the adequate protection of the workers' health and safety from exposure to radiation from radioactive material. The violation is of very low safety significance because it did not involve an overexposure, did not constitute a substantial potential for an overexposure, and did not compromise the ability to assess dose. (Section 2OS1)

B. Licensee-Identified Violation

None.

REPORT DETAILS

Summary of Plant Status

Ginna began the period at full power. On February 16, 2005, a protective reactor trip occurred from 100 percent power when the main turbine tripped. The turbine trip signal was received from the anticipated-transient-without-scram (ATWS) mitigation signal actuation circuitry (AMSAC) when it sensed a loss of feedwater flow with reactor power greater than 40 percent. Feedwater was lost when both the "A" and "B" feedwater regulating valves closed because two 13-volt dc power supplies in the advanced digital feedwater control system (ADFACS) failed. Following maintenance activities, the plant was restarted on February 18. The plant reached full power on February 19, and remained there until March 13, when a power coastdown period was entered due to fuel depletion. On March 20, the plant was taken off-line to commence a planned refueling outage.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 - 2 samples, Impending Weather)

b. Inspection Scope

On January 7, 2005, the Ginna site experienced freezing rain and windy conditions. As a precautionary measure, control room operators transferred offsite power to the 767 line in the event the 751 line was de-energized because of a weather-induced fault. During the inclement weather, the inspectors verified that Ginna implemented the applicable guidance contained in procedures ER-SC.1 "Adverse Weather Plan" and EPIP 1-17, "Planning for Adverse Weather."

During the week of January 23, 2005, the Ginna site experienced unseasonably cold weather with daytime high temperatures in the low single digits. On January 25 and 26, the inspectors toured areas of the plant that contained equipment and systems that were susceptible to cold temperatures. Areas of focus were the intake structure, auxiliary building, and the standby auxiliary feedwater pump room. During the tour, the inspectors verified that temperatures in those rooms did not decrease below the values outlined in the plant Updated Final Safety Analysis Report (UFSAR).

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04Q - 4 samples)

a. Inspection Scope

The inspectors used plant technical specifications, Ginna operating procedures, plant piping and instrument drawings (P&ID), and the UFSAR as guidance for conducting partial system walkdowns. The inspection reviewed the alignment of system valves and

electrical breakers to ensure proper in-service or standby configurations as described in plant procedures and drawings. During the walkdown, the inspectors evaluated material conditions and general housekeeping of the system and adjacent spaces. The inspectors also verified that operations personnel were following plant technical specifications (TS). The following plant system alignments were reviewed:

- On January 18, 2005, the inspectors completed a walkdown of the "B" diesel generator when the "A" diesel generator was out-of-service for surveillance activities. The condition of the "B" diesel generator was examined because of its high risk-significance.

- On February 3, 2005, the inspectors completed a walkdown of the "B" boric acid transfer train during a scheduled outage of the "A" boric acid transfer train. The status of the train was examined because of its high risk-significance. The "B" train of the boric acid transfer train was meeting the second train requirement of Technical Requirement 3.1.1, Boron Injection System.

- On February 13, 2005, the inspectors completed a walkdown of the "A" residual heat removal train during a scheduled outage of the "B" residual heat removal train. The status of the train was examined because of its high risk-significance while the opposite train was out-of-service for extended maintenance. The "A" train of the residual heat removal system was fulfilling the requirement for one train of operable emergency core cooling systems (ECCS) in Technical Specification 3.5.2, ECCS - Modes 1,2, and 3, while maintenance was performed on the "B" RHR pump during the 72-hour limiting condition for operation (LCO) allowed in Ginna's TS.

- On February 16, 2005, the inspectors completed a walkdown of the "B" residual heat removal train during a scheduled outage of the "A" residual heat removal train. The status of the train was examined because of its high risk-significance, while the opposite train was out-of-service for extended maintenance. The "B" train of the residual heat removal system was fulfilling the requirement for one train of operable emergency core cooling systems (ECCS) in Technical Specification 3.5.2, ECCS - Modes 1,2, and 3, while maintenance was performed on the "A" RHR pump during the 72-hour limiting condition for operation (LCO) allowed in Ginna's TS.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q - 8 samples)

a. Inspection Scope

Using the Ginna fire protection program documents as a guide, the inspectors performed walkdowns of the following fire areas to determine if there was adequate

control of transient combustibles and ignition sources. The material condition of fire protection systems, equipment and features, and the material condition of fire barriers were also inspected against industry standards. In addition, the passive fire protection features were inspected, including the ventilation system fire dampers, structural steel fire proofing, and electrical penetration seals. The following plant areas were inspected:

- Intermediate Building north side operating floor
- Relay Room
- Control Room
- Service Building water treatment room
- Turbine Building feed pump room
- Intermediate Building south sub-basement
- Intermediate Building south - operating floor
- Intermediate Building south - top floor

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample, External)

a. Inspection Scope

To evaluate Ginna's external flood protection measures, the inspectors reviewed the Ginna UFSAR, plant procedures ER-SC.1, "Adverse Weather Plan," plant procedure ER-SC.2, "High Water Flood Plan," plant drawings, and completed the following activities:

- Walked down Ginna procedure ER-SC.2, Revision Number 6, (High Water (Flood) Plan),
- Walked down ER-D/G.2, Revision Number 15 (Alternate Cooling for Emergency D/Gs),
- Inspected the screenhouse, the emergency diesel generator enclosures and the control room air handling room,
- Interviewed engineers responsible for structures, fire protection, and flood protection.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07 - 1 sample)

a. Inspection Scope

To evaluate Ginna's heat sink performance monitoring program, the inspectors reviewed the UFSAR description of the containment recirculating fan coolers (CRFC) and completed the following activities:

- Compared Ginna's CRFC performance monitoring program against NRC Generic Letter 89-13 (Service Water System Problems Affecting Safety-Related Equipment) and EPRI NP-7552 (Heat Exchanger Performance Monitoring Guidelines) for conformance to these guidance documents.
- Compared CRFC work activities to Ginna's Service Water System Reliability Optimization Program (SWSROP) for conformance to Ginna's CRFC performance monitoring plan.
- Reviewed design analysis DA-ME-98-081, CRFC A, B, C, and D Thermal Performance Test Data Reduction, Fouling, and Uncertainty Analysis and Justification of 54-Month Cleaning Interval, for historical background.
- Reviewed the most recently completed CRFC clean and inspect work packages to evaluate the as-found condition of each CRFC.
- Reviewed weekly readings of CRFC service water outlet flow rate and inlet pressure for the period December 2003 to March 2005 for evidence of degradation.
- Developed and reviewed trends from data recorded pursuant to PT-60.9, Service Water to Containment HVAC Flow/Differential Pressure Measurement.
- Developed and reviewed data recorded pursuant to PT-2.3.1Q, Post Accident Charcoal Filter Dampers - Quarterly, for evidence of degrading air flow rate through each CRFC.
- Interviewed the service water system engineer and thermal performance engineer to determine what current CRFC performance issues existed.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11 - 2 samples, Annual and Quarterly)

1. Quarterly Review

b. Inspection Scope

On January 26, 2005, the inspectors observed a licensed operator simulator scenario that was part of the annual licensed operator requalification exam. The test observed was scenario FRS12-03, "ATWS." 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.”

c. Findings

No findings of significance were identified.

2. Annual Review

a. Inspection Scope

The following inspection activities were performed using NUREG-1021, Rev. 8, "Operator Licensing Examination Standards for Power Reactors,” Inspection Procedure Attachment 71111.11, "Licensed Operator Requalification Program,” and NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP),” as acceptance criteria, 10 CFR 55.46 Simulator Rule (sampling basis).

The inspectors reviewed documentation of operating history since the last requalification program inspection. The inspectors also discussed facility operating events with the resident staff. Documents reviewed included NRC inspection reports and Ginna station action reports (ARs) to ensure that operational events were not indicative of possible training deficiencies.

The inspectors also verified that requalification training schedule changes were made, specifically to address events, and a sample of seven training records were also reviewed to verify completion of this training.

The inspectors reviewed all biennial comprehensive written exams administered during the training cycle to Senior Reactor Operator (SRO) and Reactor Operators (RO). In addition, the inspectors reviewed four sets of scenarios and Job Performance Measures (JPMs) administered during this current exam cycle to ensure the quality of these exams met or exceeded the criteria established in the examination standards (NUREG 1021) and 10 CFR 55.59.

The inspectors observed the administration of operating examinations to one operating crew. The operating examination consisted of three simulator scenarios and one set of five job performance measures administered to each individual.

For the Ginna plant referenced simulator, the inspectors observed simulator performance during the conduct of the examinations, reviewed simulator performance tests (e.g., steady state performance tests, selected transient tests, selected scenario based tests, normal plant evolution tests, and core performance tests), and simulator deficiency reports to verify compliance with the requirements of 10 CFR 55.46. The following types of tests and data were reviewed:

- Manual Reactor Trip
- Trip of Feedwater Pumps
- Simultaneous Closure of Both MSIVs
- Single Reactor Coolant Pump (RCP) Trip
- Main Turbine Trip
- Maximum Size Reactor Coolant System (RCS) with Loss of All Offsite Power
- Maximum Unisolable Main Steam Line Rupture
- Turbine Stop Valve Failure
- Nuclear Instrumentation System Tests
- Loss of Offsite Power

Additionally, in regard to simulator fidelity, the inspectors reviewed the completion status of AR No. 2004-1654, dated June 23, 2004, and Technical Staff Request (TSR) 2004-0070, dated June 24, 2004, which identified the need to update the simulator best estimate transient data. The AR and TSR were written to ensure that the requirements of ANSI/ANS-3.5-1985, "Nuclear Power Plant Simulators For Use In Operator Training," previously committed to by Ginna, would continue to be met when the new simulator core model is installed in the last half of 2005.

Conformance with operator license conditions was verified by reviewing the following records:

- Attendance records for the most recent training cycle.
- Five medical records (3 SRO; 2 RO), and confirmed all records were complete that restrictions noted by the doctor were reflected on the individual's license and that the exams were given within 24 months.
- Proficiency watch-standing and reactivation records. A sample of six licensed operator watch-standing documentation was reviewed for the current and prior quarter to verify currency and conformance with the requirements of 10 CFR 55.

Remediation training records for the training cycle were reviewed by assessing two instances of evaluation failures, which included one operating exam individual failure and one individual written exam failure.

In regard to the Ginna training department's feedback system, the inspectors interviewed instructors, training/operations management personnel, and licensed operators for feedback regarding the implementation of the licensed operator requalification program to ensure the requalification program was meeting their needs and responsive to their noted deficiencies/recommended changes. In addition, recent modifications to the boric acid control system were reviewed to ensure that they were adequately addressed in the requalification training program.

On February 22, 2005, the inspectors conducted an in-office review of requalification exam results. These results included the annual operating and written exams. The inspection assessed whether pass rates were consistent with the guidance of NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The inspectors verified that:

- Crew failure rate on the dynamic simulator was less than 20%. (Failure rate was 0%)
- Individual failure rate on the dynamic simulator test was less than or equal to 20%. (Failure rate was 0%)
- Individual failure rate on the walk-through test (JPMs) was less than or equal to 20%. (Failure rate was 3%)
- Individual failure rate on the comprehensive biennial written exam was less than or equal to 20%. (Failure rate was 3%)
- More than 75% of the individuals passed all portions of the exam (94% of the individuals passed all portions of the exam).

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12 - 2 samples)

a. Inspection Scope

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

- Cracks have developed in sections of the north concrete block wall of the Auxiliary Building adjacent to the spent fuel pool. How this deficiency was dispositioned in the Ginna structure monitoring program was reviewed.

- A crack in the floor of the screenhouse basement was observed at the start of the refueling outage. Response to this issue and the subsequent resolution of the structural integrity of the screenhouse was reviewed.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 5 samples)

a. Inspection Scope

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

- Troubleshooting and repair of the Channel #1 average coolant temperature channel, following an instrument failure on January 3, 2005.

- Troubleshooting and corrective maintenance performed on the auxiliary building crane conducted on February 9, 2005, and the potential effects the work could have on the spent fuel pool cooling system.

- Planned maintenance on the "B" RHR pump conducted February 16 -18, 2005.

- Emergent work and troubleshooting of the "A" boric acid storage pump following replacement of the pump February 10, 2005.

- Troubleshooting and repair of valve 9309 throughout the week of March 14, 2005. The valve was stuck in the shut position and needed to be opened to allow degassing of the pressurizer steam space prior to the outage.

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Non-routine Evolutions and Events (71111.14 - 3 samples)

1. Possible Frazil Ice Event

a. Inspection Scope

On January 26, 2005, screenhouse inlet water bay level began to decrease. At the time of the event, the plant was not experiencing the normal conditions that would cause frazil ice to occur (calm wind, lake surface conditions and single-digit air temperatures). On this day, the wind was blowing at 20 mph. Prior to the event, there was significant rubble-type ice built up on the lake shore.

Operators were alerted to the event when an unexplained/unanticipated six-inch decrease in screenhouse level occurred as indicated on the plant process computer system. In response, the operators entered ER-SC.3, "Low Screenhouse Water Level." The procedurally-directed actions were adequate to correct the lowering level, and within six hours the operators were able to exit the procedure.

The inspector responded to the control room to review the operator logs and actions. Computer printouts of the responses were also reviewed. Discussion with the operators revealed that contrary to past experience at Ginna with frazil ice, no ice was observed on the traveling screens until after the actions were taken to control level. Additionally, the ice observed did not have the qualities typically associated with frazil ice. Rather, the ice observed in the intake bay was composed of roughly pineapple-sized chunks.

Subsequent to this event, screenhouse level decreased on two other occasions, with similar conditions. On both occasions, operators were able to correct the condition by implementing the actions outlined in ER-SC.3.

b. Findings

No findings of significance were identified.

2. Spent Fuel Pool Foreign Material Event

a. Inspection Scope

On January 27, 2005, during spent fuel pool (SFP) handling evolutions to prepare for the 2005 refueling outage, a ball lock pin was dropped into the spent fuel pool. Further, operators believed that in addition to the lock pin, an electric outlet cover may have been snapped off of a pool-side electric outlet by the motion of the fuel handling bridge.

The inspector responded to the SFP at the time of the event to discuss the event with the operators. Plans to search the pool were reviewed with the plant refueling engineer and the search was observed by the inspectors. The ball lock pin was recovered easily as its drop location had been observed by the operators. Despite an extensive search of the spent fuel pool, the possible dropped electric outlet cover was not found.

b. Findings

No findings of significance were identified.

3. Unplanned Reactor Trip

a. Inspection Scope

On February 16, 2005 at 9:12 p.m. the reactor automatically tripped from 100% power when the main turbine tripped. The turbine trip signal was received from the ATWS

mitigation signal actuation circuitry (AMSAC) when it sensed a loss of feedwater flow with reactor power greater than 40%. Feedwater was lost when both the “A” and “B” feedwater regulating valves closed because two 13-volt dc power supplies in the advanced digital feedwater control system (ADFACS) failed.

The inspector was notified of the reactor trip by Ginna station personnel at approximately 9:50 p.m. and responded to the site. While in the control room, the inspector discussed the event with control room operators, and walked down the control room panels to verify that plant parameters were within expected ranges. The plant computer sequence of events printout was reviewed and compared to plant data collected from plant logs to verify proper system response.

A preliminary Ginna investigation determined the 13-volt dc power supplies suffered temperature-induced failures, when individual cooling fans attached to the power supplies stopped working. Ginna personnel replaced the power supplies with spare units obtained from the training department.

The reactor was restarted at 6:17 a.m. on February 18, 2005, and placed onto the grid at 4:06 p.m. Full power was reached on February 19, 2005. The inspectors monitored portions of the reactor startup and power ascension.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 4 samples)

a. Inspection Scope

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

- Action Report (AR) 2005-0195 “Periodic Tendon Grease Test - ASTM D-974 Not Performed in 2001 Under PT-27.2"
- AR 2005-0242,” ‘A’ and ‘B’ Spent Fuel Pool Heat Exchangers Operating at Flows Beyond FSAR Designs”
- AR 2005-0132, “Status of ‘A’ Condensate Pump Motor”
- AR 2005-0537, “‘A’ Boric Acid Storage Tank Pump Hi Discharge Pressure when Recircing to ‘A’ Boric Acid Storage Tank”

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A - 2 samples)

a. Inspection Scope

The inspectors reviewed plant change request (PCR) 2004-0021, "Turbine Driven Auxiliary Feedwater Pump Alternate Cooling Modification," which was installed in October 2004. The modification installed additional piping and valves to the auxiliary feedwater pump skid which provided the capability for the pump's lube oil system and thrust bearing to be cooled by pump discharge flow. By installing this modification, the steam-driven auxiliary feedwater pump would now be able to operate for an extended time in the event the normal service water cooling flow to the lube cooler and thrust bearing was lost. The review consisted of examining the modification in the field, reviewing the requisite operating procedures, and examining the applicable vendor manual. Further, the inspectors reviewed the associated 50.59 evaluation that was prepared to support installation of the modification.

The inspectors reviewed PCR 2004-0036, "Install Two Backdraft Dampers in Intermediate Building Clean Side Manways," which was completed on January 24, 2005. The modification installed a backdraft damper in each of the two manways located in the basement floor of the "clean side" of the Intermediate Building. The dampers were installed to prevent air from flowing from potentially contaminated areas in the intermediate building to the "clean side" of the Intermediate Building. The inspectors noted such conditions had occurred when the intermediate and auxiliary ventilation systems were not in their normal operating configuration. The review consisted of examining the modification in the field, reviewing the plant UFSAR, and the associated 50.59 evaluation that was prepared to support installation of the modification.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 7 samples)

a. Inspection Scope

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

- Work Order (WO) 20301877, Residual Heat Removal Pump “A”, Pump Wear Ring Replacement and retest with PT 2.2Q, Residual Heat Removal System, Quarterly
- WO 20404688, Radiation Monitor 12A Troubleshoot/Repair Containment Vent SPING and retest with PT 17.5, High Range Effluent Monitors
- WO 20403963, Boric Acid Transfer Pump ‘A’ / Remove, Rebuild, or Replace Pump as Necessary and retest by operationally re-circing the pump to its own Boric Acid Storage Tank
- WO 20403711, Safety Injection Pump 1C2 Breaker PM and retest with PT-2.1Q, Safety Injection System Quarterly Test
- WO 20403201, Spent Fuel Pool Charcoal System Preparation and retest with PT 37.10, Spent Fuel Pit Filter Bank Mass Air Flow Check
- WO 20402660, TSC Emergency Diesel, Annual PM Inspection and retest with PT 12.5, Technical Support Center Emergency Diesel Generator Test
- PCR 2000-0024, Control Room Emergency Air Treatment System Installation and testing for Control Room Air In-leakage in accordance with SM-2000-0024-2.3, Tracer Gas Testing of the Control Room Envelope

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

In February, the inspectors monitored the activities following a trip caused by the failure of both power supplies in the advanced digital feedwater controls system. During the forced outage, the control of plant risk while conducting repairs to the feedwater system and continuing maintenance on the residual heat removal system was reviewed by the inspectors. Operations control of plant conditions was reviewed during the outage and the startup preparations and execution were observed by the inspectors. A containment entry was not conducted as part of this forced outage. These inspection processes constituted one sample of this inspection procedure for a forced outage.

Approximately one month prior to plant shutdown for refueling, the inspectors reviewed the outage plan to verify that Ginna personnel had identified risk-significant activities, and had developed contingency plans to cope with those activities. As part of the preparatory work for the outage, the inspectors reviewed the receipt and inspection of new fuel assemblies and transfer of the assemblies to the spent fuel pool. The inspector also observed troubleshooting and maintenance activities conducted on the auxiliary building crane, which was used to load assemblies into the spent fuel pool.

On March 20, 2005, the inspectors observed control room and auxiliary operators shutdown the plant and perform an overspeed test of the main turbine. Once the reactor had been shutdown, the inspectors entered the containment area to verify Ginna

personnel had identified deficient conditions such as valve packing and mechanical joint leakage.

To enable steam generator eddy current testing to be performed, the reactor plant was placed into a reduced inventory condition. Prior to the plant entering reduced inventory, the inspectors verified that Ginna personnel had the requisite number of loop level and temperature indicating systems, an adequate vent path had been established, and equipment/systems that would be needed in the event reactor inventory had to be rapidly recovered were available. As part of this review, the inspector toured the plant and verified that scaffolding that had been installed to facilitate outage activities in the plant would not affect equipment that was required to support reduced inventory operations. The inspector also interviewed personnel who were installing the steam generator nozzle dams, and verified that they were aware of the correct sequence for dam installation/removal.

Prior to and during fuel movement, the inspectors verified containment integrity had been set in accordance with Ginna procedures. The inspectors also observed a portion of core refueling activities to ensure safe practices had been utilized and procedures followed.

These activities accounted for partial completion of this inspection procedure.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 11 samples)

a. Inspection Scope

The inspectors witnessed the performance and/or reviewed test data for the following eleven surveillance tests that are associated with selected risk-significant systems, structures, and components (SSCs) to verify that TS were followed, and that acceptance criteria were properly specified. The inspectors also verified that proper test conditions were established as specified in the procedures, that no equipment preconditioning activities occurred, and that acceptance criteria had been met.

- PT-12.2, “Emergency Diesel Generator B” (January 18, 2005)
- PT-33B, “B Spent Fuel Pool Pump” (January 19, 2005)
- M-103, “Inspection and Maintenance of Fire Dampers” (February 7, 2005)
- PT-9.1.16, “480 Volt UV- Bus 16" (January 7, 2005)
- RSSP-19, “Diesel Generator ‘A’ - Auto-start Undervoltage Logic Test (March 8, 2005)
- PT-32A, “Reactor Trip Breaker Testing - Train ‘A’” (January 11, 2005)
- M-1306, “Mechanical Friday Checks” (January 7, 2005)
- RSSP-10.3, “Preparation For and Performance of Main Steam Safety Valve Test Using Setpoint Verification Device” (March 19, 2005)

- T-18C, "Turbine Overspeed Trip Test" (March 20, 2005)
- RSSP 2.2, "Diesel Generator Load and Safeguard Sequence Test" (March 21, 2005)
- PTT-23.12B, "Containment Isolation Valve Leak Rate Testing Pressurizer Liquid Sample" (March 31, 2005)

b. Findings

Introduction. The inspectors identified that spent fuel pool cooling system flow through the "A" and "B" spent fuel pool cooling heat exchangers, had exceeded the design values outlined in the Updated Final Safety Analysis Report (UFSAR). The impact of the increase flow on the functionality of the heat exchanger was not determined at the end of the report period.

Description. The spent fuel pool at Ginna is cooled by two independent systems that are designed to maintain the temperature of the spent fuel pool water less than 120 degrees Fahrenheit during normal system operation, and less than 150 degrees during refueling operation. Although independent, the systems are not identical in that the "B" system has twice the heat removal capability of the "A" train. Service water which flows through the shell side of the spent fuel pool heat exchangers serves as the ultimate heat sink for the spent fuel pool cooling system.

While observing Ginna personnel conduct PT-33B , "B Spent Fuel Pool Pump," the inspector noted that prior to the performance of the test, flow through the "B" spent fuel pool heat exchanger was 1300 gallons per minute (gpm) or 100 gpm above the 1200 gpm maximum design flow listed in Table 9.1-4 of the plant UFSAR. Plant personnel indicated that a similar condition has existed on the "A" spent fuel pool cooling heat exchanger, where flow was typically greater than the 550 gpm limit outlined in the plant UFSAR. The excessive flow condition had existed for an extended time.

The inspector reviewed the applicable operating procedures for the Ginna spent fuel pool cooling systems, including procedures S-9X, "Placing Spent Fuel Purification and/or Cooling System B in Service" and S-9C, "Swapping the Spent Fuel Pool Cooling Systems A and B", and noted that the procedures only specify a minimum flow through the heat exchangers. A maximum flow rate was not established. The inspector's observation regarding spent fuel pool heat exchanger flow was documented in Action Report 2005-0242, "A and B Heat Exchangers Operating at Flows Beyond FSAR Designs". An operability assessment prepared in response to the AR concluded that although spent fuel pool cooling flow through the heat exchangers was greater than the UFSAR design limits, this condition did not require immediate action, in part, because recent internal examinations of the heat exchangers have not identified any flow-induced performance issues.

At the close of the report period, Ginna personnel were in the process of contacting the vendor of the heat exchangers to determine if it was acceptable to continue to operate the heat exchangers at the increased flow rates. If the vendor allows the increased flow rates, the plant UFSAR will then be updated to reflect the current method of operation.

If the vendor's analysis concludes that the increased flow is unacceptable, additional action such as reducing the flow to the UFSAR design values may be required. When Ginna completes its determination regarding the acceptability of the increased flow rates, the NRC will review the evaluation and determine the significance of this issue. This issue is unresolved pending inspector assessment of the vendors' conclusions and will be tracked as URI (50-244/2005002-01).

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 - 1 sample)

a. Inspection Scope

On January 26, 2005, the inspectors observed a licensed operator simulator scenario that included a limited test of the Ginna emergency response plan. Scenario FRS12-03, "ATWS," was observed. During the exercise, the inspectors verified that the crew properly classified the event per Emergency Plan Implementing Procedure (EPIP) 1-0, "Ginna Station Event Evaluation and Classification."

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01 - 9 samples)

a. Inspection Scope

The inspector reviewed radiological work activities and practices and procedural implementation during observations and tours of the facilities and inspected procedures, records, and other program documents to evaluate the effectiveness of Ginna's access controls to radiologically significant areas. This inspection activity represents the completion of nine (9) samples relative to this inspection area (i.e., inspection procedure sections 02.01, 02.02.a thru e, and 02.04.a thru c) in partial fulfillment of the biennial inspection requirements.

Inspection Planning (02.01)

The inspector verified that there were no licensee performance indicator events for the occupational exposure cornerstone which required follow-up.

Plant Walkdowns and RWP Reviews (02.02.a thru e)

During this week of inspection with the unit in a refueling outage, the inspector identified exposure-significant work areas within radiation areas, high radiation areas, or airborne radioactivity areas and reviewed associated licensee controls and surveys of these areas to determine if controls in use were acceptable. The exposure-significant work activities included those covered by radiation work permit (RWP) Nos. 051019, 051030, 051034, 051041, 051046, 051048, 051053, 051069, and 051070 (as listed in the List of Documents Reviewed section). The inspector toured inside containment on three separate days and observed ongoing work activities including motor-operated valve testing, reactor coolant pump seal work, valve maintenance, and steam generator nozzle dam removal. The inspector walked down a selected number of work areas or their perimeters with a survey meter to make the determination whether the RWPs, work control instructions, barriers required by technical specifications, procedures, engineering controls, surveys, postings, and use of air sampling were adequate. The inspector also examined the procedure for setting the alarm setpoints for the electronic personal dosimeters, the conformity of these setpoints with radiation survey results, and what actions were required upon an alarm on an electronic personal dosimeter. For the RWPs cited above which had the potential for individual worker internal exposures, the inspector reviewed the adequacy of the engineering and respiratory protection controls which were utilized.

Job-In-Progress Reviews (02.04.a thru c)

During this inspection, the inspector attended pre-job briefings for the “A” steam generator nozzle dam removal and installation of inserts and of manways and for maintenance on charging system check valves. Also, as stated before, the inspector toured inside containment on three separate days and observed ongoing work activities including motor-operated valve testing, reactor coolant pump seal work, valve maintenance, and steam generator nozzle dam removal. The inspector reviewed the RWP requirements and surveys for these activities and observed the actions both of the radiation protection technician, providing job coverage, and of the radiation workers. In each case except as identified in the following findings section, the inspector determined that radiological conditions in the work area were adequately communicated to workers through briefings and postings and verified the adequacy of radiological controls, the application of dosimetry to effectively monitor exposure to personnel, radiation protection job coverage, and contamination controls.

Related Activities

During this inspection week, the inspector observed Radiologically-Controlled Area (RCA) entries and exits being made by radiation workers at the primary RCA access control point to verify compliance with requirements for RCA entry and exit, wearing of record dosimetry, and issuance and use of alarming electronic radiation dosimeters. The inspector toured various elevations in the intermediate, auxiliary, and reactor containment buildings inside the primary RCA to verify the adequacy of the radiological controls which were being implemented. The inspector reviewed and observed work

activities for compliance with the RWP requirements. During these observations and tours, the inspector reviewed, for regulatory compliance, the posting, labeling, barricading, and level of radiological access control for locked high radiation areas (LHRAs), high radiation areas (HRAs), radiation and contamination areas, and radioactive material areas. On March 29 through April 1, the inspector attended the 0630 Health Physics (HP) team leaders' outage shift turnover meetings and, on March 30, attended the 1830 HP team leaders' outage shift turnover meeting.

The inspector performed a selective examination of documents (as listed in the List of Documents Reviewed section) to evaluate the adequacy of radiological controls. The review in this area was against criteria contained in 10 CFR 19.12, 10 CFR 20 (Subparts D, F, G, H, I, and J), technical specifications, and procedures.

b. Findings

Introduction. A Green self-revealing Non-Cited Violation (NCV) was identified for failure to have an adequate radiation work permit procedure in accordance with TS 5.4.1.a, which resulted in a small uptake of radioactive material by a radiation worker.

Description. On March 29, 2005, a radiation worker informed a radiation protection technician that the worker needed to enter the 'A' steam generator platform to clean the manway-stud holes and the manway inserts. Due to a miscommunication, the radiation protection technician thought that the worker was only going to clean the manway stud holes. The worker proceeded to the platform and cleaned the stud holes and the inserts. The stud holes were contaminated at a maximum level of approximately fifty thousand disintegrations per minute per one hundred squared centimeters (50 k dpm/100 cm^2); the pre-job ALARA review (No. 050402) recommended misting the stud holes with deionized water to reduce airborne contamination; the RWP No. 051046 (A&B S/G: Remove and install nozzle dams, clean stud holes, perform final bowl cleanup & inspections) did not address the cleaning of the manway-stud holes in the special instructions. When the manway inserts were removed earlier in the outage, the surveys of the inserts had indicated a maximum reading of 6.6 rads per hour at contact which indicated that they were contaminated to a level at least one hundred times greater than the manway-stud holes.

Neither the pre-job ALARA review nor the RWP addressed any special precautions or instructions for cleaning the inserts which involved mechanical cleaning by hand using abrasive pads/tools. Radiation protection personnel stated that these two cleaning evolutions are normally treated as two separate work activities and that the worker is normally required to wear a powered-air-purifying hood when performing steam-generator-manway-insert cleaning; a hood was not used in this instance; when the worker was exiting the radiologically-controlled area, he alarmed the personnel contamination monitor; an investigation showed that he had facial contamination (1500 net counts per minute), and subsequent whole body counts indicated a committed effective dose equivalent of approximately two millirems.

Analysis. Ginna personnel acknowledged that this was a performance deficiency in that the use of a powered-air-purifying hood when performing insert cleaning was normally required, but this precaution was not enforced in this instance due to a miscommunication. This finding is more than minor in that this manual cleaning of a highly-contaminated insert without the use of respiratory protection could have been a precursor to a significant uptake of radioactive material and because this finding is associated with the occupational radiation safety's attribute of procedures for exposure control and affects the associated cornerstone's objective to ensure the adequate protection of the workers' health and safety from exposure to radiation from radioactive material. This finding did not meet the criteria for traditional enforcement in that the issue did not have actual safety consequences, the potential for impacting the NRC's ability to perform its regulatory function, or willful aspects. Using the occupational radiation safety significance determination process (SDP), the finding did not meet the criteria for an ALARA-planning or work-controls finding, did not involve an overexposure, did not constitute a substantial potential for an overexposure, and did not compromise the ability to assess dose in that this issue was the result of a miscommunication, rather than the failure to recognize a radiologic hazard in the work place. Therefore, the finding is green.

Enforcement. Ginna Technical Specification 5.4.1.a requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Appendix A includes radiation protection procedures, including a procedure for access control to radiation areas including a radiation work permit system for limiting personnel exposure. Contrary to the above, on March 29, 2005, radiation work permit no. 051046 was inadequate for limiting personnel exposure in that it did not provide adequate instructions to prevent a worker from receiving an unintended uptake of radioactive material. Because this failure to provide adequate instruction in a Radiation Work Permit is of very low safety significance and has been entered into the corrective action program (Action Report No. 2005-1413), this violation is being treated as a non-cited violation, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000244/2005002-02, Failure to provide adequate instruction in an RWP to prevent an unintended uptake.

2OS2 ALARA Planning and Controls (71121.02 - 7 samples)

a. Inspection Scope

The inspector reviewed the effectiveness of Ginna's program to maintain occupational radiation exposure as low as is reasonably achievable (ALARA). This inspection activity represents the completion of seven (7) samples relative to this inspection area (i.e., inspection procedure sections 02.01.b, 02.02.a thru c, and 02.04.a.1, a.2*, and b*) in partial fulfillment of the biennial inspection requirements.

Inspection Planning (02.01.b)

The inspector reviewed the refueling outage work scheduled during the inspection period, the associated work activity exposure estimates, and the previous work activity historical data. The inspector selected the following work activities as those most likely to result in the highest personnel collective exposures: movement and staging of equipment and erect scaffolding, "B" Reactor Coolant Pump's (RCP) major pump seal inspection, removal and replacement of insulation for in-service inspections (ISIs), removal and installation of lower head insulation and performance of lower head inspection, removal and installation of nozzle dams and cleaning of stud holes on "A" & "B" S/Gs, performance of "A" Steam Generator (S/G) upper internal inspections and foreign material exclusion (FME) recovery, removal/installation of hand-hole covers and performance of camera inspection on "A" and "B" S/Gs, and reactor head disassembly including ducts, missile shield, and cables.

Radiological Work Planning (02.02.a thru c)

The inspector obtained from Ginna personnel, a list of work activities ranked by actual/estimated exposure that were in progress, and selected several work activities of highest exposure significance. The inspector examined the ALARA work activity evaluations, exposure estimates, and exposure mitigation requirements. The inspector determined that Ginna had established procedures, engineering, and work controls based on sound radiation protection principles, to achieve occupational exposures that were ALARA. The inspector determined that Ginna had reasonably grouped the radiological work into work activities, based on historical precedence, industry norms, and/or special circumstances. The inspector compared the results achieved (dose rate reductions, person-rem used) with the intended dose established in Ginna's ALARA planning for these work activities. The inspector examined the reasons for any inconsistencies between intended and actual work activity doses.

Job Site Inspections and ALARA Control (02.04.a.1,a.2*, and b*)

Based on scheduled work activities and associated exposure estimates, the inspector selected several work activities in radiation areas, airborne radioactivity areas, or high radiation areas for observation, as specified previously in this section. The inspector concentrated on work activities that presented the greatest radiological risk to workers. The inspector evaluated Ginna's use of ALARA controls for these work activities by performing the following: evaluation of Ginna's use of engineering controls to achieve dose reductions, determination if workers were utilizing the low dose waiting areas and were effective in maintaining their doses ALARA, and review of exposures of individuals from selected work groups.

Related Activities

The inspector performed a selective examination of documents (as listed in the List of Documents Reviewed section) for regulatory compliance and for adequacy of control of radiation exposure. The review was against criteria contained in 10 CFR 20.1101

(radiation protection programs), 10 CFR 20.1701 (use of process or other engineering controls), and procedures.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspector reviewed the program for health physics instrumentation to determine the accuracy and operability of the instrumentation. This inspection activity represents the completion of two (2) samples relative to this inspection area (i.e., inspection procedure sections 02.04.b and c) in partial fulfillment of the biennial inspection requirements.

Problem Identification and Resolution (02.04.b and c)

The inspector reviewed corrective action program reports related to exposure-significant radiological incidents that involved radiation monitoring instrument deficiencies since the last inspection in this area. The inspector discussed the following activities with radiation protection personnel and reviewed documents to determine if the following activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk: problem identification, characterization, tracking, disposition, evaluation, identification of repetitive problems, and identification and implementation of corrective actions. The inspector also reviewed Ginna's self-assessment activities to determine if they were identifying and addressing radiation monitoring instrument deficiencies.

Related Activities

The inspector performed a selective examination of documents (as listed in the List of Documents Reviewed section) for regulatory compliance and adequacy in this area. The review was against criteria contained in 10 CFR 20.1501, 10 CFR 20 Subpart H, technical specifications, and procedures.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

1. Initiating Events Cornerstone (71151 - 3 samples)

a. Inspection Scope

Using the criteria specified in Nuclear Energy Institute (NEI) 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 2, the inspectors verified the completeness and accuracy of the following performance indicator data for unplanned scrams per 7,000 critical hours, scrams with loss of normal heat removal, and unplanned power changes per 7,000 critical hours for calendar year 2003. To verify the accuracy of the data, the inspector reviewed monthly operating reports, NRC inspection reports, and licensee event reports issued during calender year 2004.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

2. Resident Office 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 corrective action program. This review was accomplished by reviewing paper copies of each condition report, periodically attending daily screening meetings, and reviewing Ginna’s computerized database.

b. Findings

Introduction. The inspectors identified a green finding in that Ginna personnel have not taken adequate corrective actions to reduce the occurrence of plant mispositioning events. This failure is contrary to the intent of Ginna’s Corrective Action Program interface procedure, IP-CAP-1, Abnormal Condition Tracking Initiation or Notification (ACTION) Report, which requires “ . . . . that Conditions Adverse to Quality (CAQ), such as failures, malfunctions, deficiencies, deviations, defective material and equipment and nonconformances are promptly identified and corrected.”

Description. As part of the ongoing review of Ginna’s corrective action process in late 2004, the inspectors noted several mispositioning and procedural compliance events had occurred. In November 2004, battery disconnect switches in the diesel fire pump control panel were found in the wrong position rendering the pump inoperable for seven

days. Despite a thorough investigation, which included the consideration of tampering, Ginna personnel could not determine why the switches were not in the correct position. In December 2004, a fire system loop header valve was found out-of-position as a result of a procedural adherence failure and an inadequate independent verification by operations department personnel. Although the mispositioned valve did not render the fire system inoperable, system configuration control was lost. Both of these events were determined to be minor.

During the first quarter of calendar year 2005, despite the implementation of corrective actions, the trend continued with additional mispositioning events by maintenance and operations personnel. Two specific events involved safety significant equipment which supports the operability of safety-related equipment. Specifically, the battery room air conditioning system was found secured when it should have been operating, and a strainer for one of two relay room air conditioning units was found isolated. Both mispositionings rendered the cooling systems inoperable, and could have impacted the proper functioning of safety-related equipment in the rooms cooled by the units if the events had occurred during hot weather conditions. Both of these events were identified during colder weather, and were quickly corrected, thereby minimizing the impact on safety-related systems. These mispositioning events illustrated that Ginna management had not implemented effective corrective action to adequately resolve this issue.

Subsequent to these events and efforts by Ginna management to focus the workforce on procedural adherence and attention to detail, there were additional minor mispositioning and operator error events. In one case, a failure to properly shutdown and isolate a condensate pump by operations personnel to facilitate maintenance activities resulted in damage to an expansion joint on the pump suction requiring on-line repairs. In another event, maintenance workers did not properly read a work package, and as a result, performed maintenance on an incorrect pump in the plant accident sampling system (PASS), which had not been electrically isolated.

To reduce the number of mispositioning events, Ginna management has reemphasized the need for the workforce to follow procedures, and to request procedure changes in the event that procedural guidance is not specific enough to prevent the potential for operator errors to occur. The inspectors concluded that some of performance-related issues may be attributed to the fact that Ginna procedures, particularly in the maintenance area, do not have concise guidance. For example, as documented in NRC Inspection Report 50-244/2004003, in June 2004, Ginna personnel determined the mechanical seal for the dc lubricating oil pump for the turbine driven auxiliary feedwater (TDAFW) pump was incorrectly installed, in part, because the applicable maintenance procedure did not contain adequate detailed guidance

Analysis. The performance deficiency associated with this finding is the ongoing adverse trend of component mispositioning events, which constitute a challenge to safety systems integrity, and the inability of Ginna to take appropriate and timely corrective actions to reverse this trend. This performance is contrary to the intent of the Ginna Corrective Action Program, Interface Procedure, IP-CAP-1, which requires ". . . . that Conditions Adverse to Quality (CAQ), such as failures, malfunction, deficiencies,

deviations, defective material and equipment and nonconformances are promptly identified and corrected."

This finding is greater than minor because if left uncorrected the condition would become a more significant safety concern. The finding was determined to be of very low safety significance (Green) in accordance with Phase 1 of the SDP because it was not a design or qualification deficiency, did not represent a loss of a safety system, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding is a cross-cutting issue in the problem identification and resolution area with a causal factor of effectiveness of corrective actions. FIN 05000244/2005002-03, Failure to Implement Effective Corrective Actions Associated with Component Mispositioning Events.

Enforcement. No violation of regulatory requirements occurred. Although two air conditioning systems were rendered inoperable by the mispositioning events, because these events occurred during the winter, the ambient air temperature in the rooms that were cooled by these systems did not increase above design limits. Consequently, there was no impact on safety-significant systems as a result of these mispositioning events.

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

a. Inspection Scope

The inspector selected four issues identified in the corrective action program (CAP) for detailed review (Action Report Nos. 2004-0131, 2004-0448, 2005-0594, and 2005-1413). The first three issues were associated with proper air flow into radiologically-controlled areas and the fourth issue dealt with a miscommunication between a radiation worker and a radiation protection technician which led to an uptake by the radiation worker. The documented reports for the issues were reviewed to ensure that the full extent of the issues were identified, appropriate evaluations were performed, and appropriate corrective actions were specified and prioritized.

b. Findings

No findings of significance were identified.

3. Identification and Resolution of Problems - Concrete Liner Leakage (71152 - 1 sample)

a. Inspection Scope

The reactor cavity liner has leaked at Ginna for several years when it is flooded with borated water to facilitate refueling activities. The leakage was all collected in the

normal radioactive liquid waste collection system. The two issues selected for P&IR review and followup were: 1) leakage through reactor cavity liner, and 2) the effect of the leakage on the containment basement moisture barrier. The scope of the review included an assessment of Ginna's actions to assess the significance of the leakage, and verify that Ginna had developed a comprehensive and accurate identification of the problem in a timely manner commensurate with the significance of the problem. Further; the inspector examined Ginna's of extent of condition review for generic implications, common cause failures and follow-up actions. The review was especially focused on examining Ginna's follow-up corrective actions, and reviewed the long term effects of the borated water leakage on the serviceability of the concrete wall and affected components.

b. Findings

No findings of significance were identified.

4. Cross-Reference to PI&R Finding Documented Elsewhere

Section 2OA2.1 describes a finding for the failure to implement adequate corrective actions to prevent mispositioning events. The cross-cutting area of effectiveness of corrective actions has been assigned to this finding. (Section 4OA2)

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

1. (Closed) LER 05000244/2004002-00, Consolidated Rod Storage canister Placed in Incorrect Storage Location

On December 13, 2004, while preparing the core offload plan, Ginna personnel identified that three consolidated rod storage canisters were mis-classified when returned to the spent fuel pool in the mid '80's. Subsequent fuel pool consolidation evolutions in February, 2001, had moved other fuel assemblies adjacent to the mis-classified canisters. When the canisters were classified correctly in December 2004, Ginna refueling personnel determined that one cannister was in violation of Improved Technical Specification (ITS) Limiting Condition for Operability (LCO) 3.7.13 and ITS LCO 4.3.1.1(d). Actions were immediately implemented to restore the storage of spent fuel to an acceptable configuration. Additional corrective actions included revising the procedure for fuel and core component movement with a note stating that all consolidated fuel canisters are classified as "A2" based on the contained fuel assemblies, and that categorization will not change in the future as the assemblies have decayed for greater than the longest interval in the ITS curves (20 years). No new findings were identified in the inspector's review. This finding constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. Ginna documented this finding in AR 2004-3291. This LER is closed.

4OA6 Meetings, Including Exit

On April 20, 2005, the resident inspectors presented the inspection results to Ms. M. Korsnick and other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

S. Adams	Manager of Operations
B. Flynn	Special Projects Manager Ginna Station
E. Groh	Assistant Operations Manager (Shift)
T. Harding	Senior Licensing Engineer
K. Holmes	Technician, Radiation Protection
J. Hoover	Senior Licensed Instructor
J. Hotchkiss	Mechanical Maintenance Manager
P. Landers	Senior Licensed Instructor
F. Macuiska	Director Human Performance
T. Marlow	Plant Manager
N. Meaker	Acting Director Operations Training
J. Pacher	Primary Systems and Reactor Engineering Manager
R. Ploof	Scheduling Manager
J. Smith	Manager, Ginna Maintenance
W. Thomson	Manager, Radiation Protection
R. Whalen	Manager Nuclear Engineering Services
G. Wrobel	Nuclear Safety and Licensing Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000244/2005002-01	URI	Assess the significance of spent fuel pool flow through the heat exchangers exceeding the values listed in the UFSAR. (Section 1R22)

Opened and Closed

05000244/2005002-02	NCV	Failure to provide adequate instruction in an RWP to prevent an unintended uptake (Section 1OS2)
05000244/2005002-03	FIN	Failure to Implement Effective Corrective Actions Associated with Component Mispositioning Events (Section 4OA2)

Closed

05000244/2004002-00	LER	Consolidated Rod Storage Canister Placed in Incorrect Storage Location (Section 4OA3)

Discussed

NONE

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Action Reports

2005-0365, Auxiliary Building Tornado Dampers Open

Procedures

ER-SC.1, Adverse Weather Plan
EPIP 1-17, Planning for Adverse Weather

Section 1R04: Equipment Alignment

Manuals

Updated Final Safety Analysis Report
Plant Technical Specifications

Piping and Instrumentation Diagram (P&ID)

Drawing #33013-1266, Auxiliary Building Chemical and Volume Control System Boric Acid
Drawing #33013-1247, Auxiliary Coolant Residual Heat Removal

Technical Requirements

TR 3.1.1, Boron Injection Systems - Modes 1, 2, 3, and 4

Technical Specifications

TS 3.5.2, ECCS - Modes 1,2, and 3

Section 1R05: Fire Protection

Procedures

Fire Response Plan 2.0, Service Building and Water Treatment Room
Fire Response Plan 6.0, Control Building and Relay Room
Fire Response Plan 9.0, Intermediate Building Controlled Side Operating Floor

Manuals

Ginna Fire Hazards Analysis Report
Fire Damper Manual

Drawings

P&ID 21488-0100 Fire Smoke and Pressure Barriers Plan View Elevation 271'
P&ID 21488-0100 Fire Smoke and Pressure Barriers Plan View Elevation 253'-6"

Action Reports

AR 2005-0145, Relay Room Floor Drains

Section 1R06: Flood Protection Measures

Drawings

Drawing 21488-118, Rev. 4, Fire Barrier General Arrangement Screen House Basement East Wall Patio Level Floor EL.- 243'-6".
Drawing 33013-1885, Sheet 2 of 2, Rev.34, Circulating Water P&ID
Drawing 33013-2142, Rev. 4, Plant Arrangement Screen House Plan-EL. 212'-6" & EL. 243'-6"
Drawing 33013-2143, Rev. 4, Plant Arrangement Screen House Plan-Above EL. 253'-6"
Drawing 33013-2144, Rev. 4, Plant Arrangement Screen House Roof Plan & Sections

Documents

R. E. Ginna Updated Final Safety Analysis, Section 2.4, Hydrologic Engineering
R. E. Ginna Updated Final Safety Analysis, Section 3.4, Water Level (Flood) Design
R. E. Ginna Updated Final Safety Analysis, Section 10.6.2.9, Flooding Protection
R. E. Ginna Updated Final Safety Analysis, Section 13.5.2.2.3, High Water or Flood Emergency Plan

Procedures

ER-SC.2, Revision No. 6, High Water (Flood) Plan
ER-D/G.2, Revision No. 15, Alternate Cooling for Emergency D/Gs
SC-3.15.15, Revision No. 81, Emergency Fire Equipment Inventory and Inspection

Section 1R07: Heat Sink Performance

Drawings

Drawing 33013-1250, Sheet 3 of 3, Rev. 27, Station Service Cooling Water Safety Related
Drawing 33013-1863, Rev. 18, Containment HVAC Systems - Containment Recirculating and Cooling System, Post Accident Charcoal Filters.

Documents

R. E. Ginna Updated Final Safety Analysis, Section 6.2.2, Containment Heat Removal Systems
R. E. Ginna Updated Final Safety Analysis, Section 7.3.2, Air Coolers
R. E. Ginna Updated Final Safety Analysis, Section 9.4.1, Containment Recirculation Cooling and Filtration System.
IP-REL-3, Rev. 3, Service Water System Reliability Optimization Program

Ginna Commitment Action Item 10392, Unique ID 871449, Develop Acceptance Criteria Bases for PT-60.9.
Recorded measurements of Service Water differential pressure across each Containment Recirculating Fan Cooler taken pursuant to PT-60.9 for the dates March 2005, October 2003, April 2002, October 2000, and April 1999.
Performance Monitoring recorded quarterly air flow rate and water flow rate measurements for each Containment Air Recirculating Fan from January 1996 to Present.
Operations weekly readings of Service Water outlet flow rate and inlet pressure for each Containment Recirculating Fan Cooler from October 2004 to Present and a sample of the readings dating back to December 2003.
Ginna System Walkdown Checklist for Containment HVAC, Inside Containment from Ginna's 1997 refueling outage.
Closeout comments for workorders 20202834, 20202835, 20101393 and 20101394 documenting the as-found condition of each Containment Recirculating Fan Cooler for the most recent clean and inspect activity.
DA-ME-98-081, Rev. 0, CRFC A, B, C, and D Thermal Performance Test Data Reduction, Fouling and Uncertainty Analysis And Justification of 54 Month Cleaning Interval.

Procedures

PT-60.9, Revision No. 3, Service Water to Containment HVAC Flow/Differential Pressure Measurement.
PT-2.3.1Q, Revision No. 16, Post Accident Charcoal Filter Dampers - Quarterly
O-6.1, Revision No. 17, Auxiliary Operator Rounds and Log Sheets.

Section 1R11: Licensed Operator Requalification

Documents:

Ginna Simulator Test Plan 2003 through 2006
Simulator Discrepancy Report (SDR) #2004-030, Load swings following load reduction
Simulator vs. Plant, Differences Report, Cycle 04-07
Simulator Modification Notice 05-1
Evaluation of Plant Event, dated 8/24/2003, Loss of Grid, 100% load rejection, Reactor trip
Simulator Related Action Request Lists (in progress and closed), dated March 27, 2005
Action Request #2004-1654, June 23, 2004, Update simulator best estimate transient data
Technical Staff Request #2004-0070, June 23, 2004, Best estimate transient data
Training Program Report Cards - January to December 2004
Operator Medical Self-Assessment #2003-0049, May 12, 2004
SRO and RO Simulator Performance Summary Sheets - 2005 Annual Exam
Requalification Test Summary Sheet - 05-01
Exam Scenarios - ECA1112-02, ES3123-04, and FRH1-01
Job Performance Measures - JC004.005, JC063.001, JC012.007, JR012.003, JR062.016
SRO and RO Annual Written Exams - weeks one through six.
Action Requests (simulator related), 2004-0686, 2004-3208, 2004-3237
Employee Physicals Report - February 14, 2005
GSS-1.1, Rev. 9 (DRAFT), Simulator Modification
IP-TQS-3, Rev. 4, Operator and Fire Brigade Physicals
OTG-2.2, Rev. 36, Simulator Examination Instructions

OTG-2.5, Rev. 9 and 10, Exam Failure Review Process
OTG-2.8, Rev. 11, NRC Exam Security
OTG-9.1, Rev. 4, Operator Physicals Tracking and Scheduling
OTG-10.0, Rev. 3, License Activation
SDR #2004-059, Condensate Booster Pump response
SDR #2005-012, Axial Flux response
SM-2004-056, Simulator Modification Scope Document for Boric Acid Totalizer Replacement
TR-C.5.2, Rev. 29, License Operator Requalification Program
TR-5.5.1, Rev. 21, Plant Change Evaluation

Section 1R12: Maintenance Rule Implementation

Action Reports

2005-0332, Loose Facade in West End of Transformer Yard

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Drawings

Drawing #33013-1247, Auxiliary Coolant Residual Heat Removal

Evaluations

PSA Evaluation Request 2004-0023

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

Action Reports

2004-3500, Trip of “A” CRDM Cooling Fan and Fire Alarm In Intermediate Building
2005-0348, Spent Fuel Pool Receptacle Cover FME Concern
2005-0349, Entry Into ER-SC-3, Low Screenhouse Water Level
2005-0357, FME Blocking Flow Hole on SFP Cell C32
2005-0358, Ball Lock Pin was Ejected into Spent Fuel Pool

Section 1R15: Operability Evaluations

Action Reports

2005-019, Periodic Tendon Grease Test - ASTM D-974 Not Performed in 2001 Under PT-27.2"

Section 1R17: Permanent Plant Modifications

Procedures

PT-16Q-T, Steam Driven Auxiliary Feedwater Pump Quarterly

Plant Modifications

PCR 2004-0021, Turbine Driven Auxiliary Feedwater Pump Alternate Cooling Modification
PCR 2004-0033, Install Two New Back Draft Dampers in the Intermediate Building Cleanside Man ways.

Section 1R19: Post Maintenance Testing

Work Orders

WO 20403201, Spent Fuel and Decon Pit Exhaust System - Swap to Charcoal Mode to Support Refueling Activities during Outage

Equipment Test Documents

PT 37.10, Spent Fuel Pit Filter Bank Mass Air Flow Check

Section 1R20: Outage Activities

Procedures

O-2.1, Plant Shutdown
O-2.3, Draining the Reactor Coolant System to Less Than 84" but More Than 64"
O-2.3.1, Draining and Operation at Reduced Inventory of the Reactor Coolant System

Section 1R22: Surveillance Testing

Procedures

PT-33B, B Spent Fuel Pool Pump
PT-12.2, Emergency Diesel Generator B
RSSP-10.3,Preparation For and Performance of Main Steam Safety Valve Test Using Setpoint Verification Device
T-18C, Turbine Overspeed Trip Test
PTT-23.12B, Containment Isolation Valve Leak Rate Testing Pressurizer Liquid Sample
Manuals

Technical Requirements Manual
Updated Final Safety Analysis Report

Drawings

33013-1248, Spent Fuel Pool Cooling

Action Reports

2005-0242, “A” and “B” Spent Fuel Pool Heat Exchanger Operating at Points Beyond FSAR Designs

Section 2OS1: Access Control to Radiologically Significant Areas

Procedures

IP-PSH-2, Integrated work schedule risk management
A-1, Radiation Control Manual
A-1.3, Restricted area entry and exit
A-1.8, Radiation Work Permits
RPA-PREJOB RP pre-job brief and turnover guidelines
RP-JC-JOB COVERAGE, Job coverage
RP-SUR-S/G-INITIAL Initial radiological survey of steam generator channel heads
Exposure report for current TLD-badged personnel as of March 28, 2005
Internal dose calculations for two workers on March 2, 2004
Station 2005 personnel contamination log
Radiation Protection Program On-going self-assessment 2004 annual report dated March 8, 2005

Section 2OS2, ALARA Planning and Controls:

Documents

A-1.6.1
ALARA job reviews
A-1.8
Radiation Work Permits
RP-ALA-REVIEW
ALARA job review preparation
Pre-job and in-progress ALARA review Nos:
050061 (RWP 051019, Move and stage equipment and erect scaffolding)
050068 (RWP 051041, 'B' RCP major pump seal inspection)
050093 (RWP 051034, Remove and replace insulation for ISI inspections)
050202 (RWPs 051030 and 051069, Remove/install lower head insulation and perform lower head inspection)
050402 (RWP 051046, Remove and install nozzle dams and clean stud holes on 'A' & 'B' S/Gs)
050407 (RWP 051048, Perform 'A' S/G upper internal inspections and FME recovery, and RWP 051070 Remove/install hand-hole covers and perform camera inspection on 'A' and 'B' S/Gs)
050601 (RWP 051053, Reactor head disassembly including ducts, missile shield, and cables)
Station 2005 ALARA review tracking numbers
Station 2004 ALARA summary

Section 2OS3, Radiation Monitoring Instrumentation and Protective Equipment:

Procedures

RPA-INS-M&TE, Rev. 7, Radiation protection measurement and test equipment control
RP-JC-AIR SAMPLE, Rev. 13, Operation of portable air sampling equipment
RP-JC-DAILY-SRC-CHKS, Rev. 22, Daily instrument source checks
RP-SUR-REL, Rev. 9, Unconditional release of material from restricted areas

Drawings

Service building HVAC systems, controlled access exhaust system, and air handling Unit C
Auxiliary/intermediate building HVAC systems, intermediate building exhaust system, spent fuel and decon pit exhaust system, and main auxiliary building exhaust system
Auxiliary/intermediate building HVAC systems and auxiliary and intermediate building air systems

Section 4OA1: Performance Indicator Verification

Documents

Performance Indicator Report Calender Year

Section 4OA2: Identification and Resolution of Problems

Action Reports

2005-0216, OE 19826 and OE 19834 Should be Evaluated for Applicability to Ginna Station
2005-0279, Relay Room A/C Unit Control Switch Found in the Off Position
2005-0344, Trash Basket in Spent Fuel Pool Nozzle Broke
2005-0299, Relay Room A/C Unit B Service Water Valves 4761L and 4761J Found Closed
2005-0281, Alarm on Relay Room B A/C Unit
1999-0302
1999-0474
2000-0744
2000-1436
2003-2505
2003-2606.

Plant Change Reports (PCR)

PCR 2001-0013, rev. 0, and rev. 1;
PCR 2001-0015, rev. 0, and rev. 1;
PCR 2004-0048, TSR -98-080 & WO # 19802436.

Section 4OA3: Event Follow-up

Action Reports

2004-3291, Misclassified Consolidated Canister Results in ITS LCO 3.7.13 Violation
2004-3299, Plant Support for Moving Fuel Assemblies in Spent Fuel Pool

LER

2004-002, Consolidated Rod Storage Canister Placed in Incorrect Storage Location

LIST OF ACRONYMS

ACTION	Abnormal Condition Tracking Initiation Or Notification
ADAMS	Agency-Wide Documents Access and Management System
ALARA	As Low As Reasonably Achievable
AR	Action Report
CAP	Corrective Action Program
CFR	Code of Federal Regulation
DPM	Disintegrations Per Minute
FME	Foreign Material Exclusion
HP	Health Physics
HRA	High Radiation Area
ISI	In Service Inspection
JPM	Job Performance Measure
LHRA	Locked High Radiation Area
NCV	Non-Cited Violation
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records
PCR	Plant Change Request
RCA	Radiologically Controlled Area
RCP	Reactor Coolant Pump
RCP	Reactor Coolant Pump
RO	Reactor Operator
RO	Reactor Operator
RWP	Radiation Work Permit
S/G	Steam Generator
SDP	Significance Determination Process
SDP	Significance Determination Process
SDR	Simulator Discrepancy Report
SFP	Spent Fuel Pool
SRO	Senior Reactor Operator
TS	Technical Specification
TSR	Technical Staff Request