

Ginna

1Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Sep 26, 2008

Identified By: NRC

Item Type: FIN Finding

Untimely Corrective Actions Associated With the 'C' Instrument Air Compressor

The inspectors identified a finding of very low safety significance for Ginna's failure to take timely corrective actions to address repetitive failures of the 'C' instrument air compressor (IAC). The 'C' IAC had a history of tripping on high blow-off pressure since 2000 including at least 5 trips since May 2006. Ginna determined that the cause of the trips was due to back leakage through the IAC discharge check valve and/or master control panel design deficiencies. Although a design upgrade was considered several times since 2002, each upgrade of the 'C' IAC was subsequently cancelled. Following the latest trip on September 9, 2008, Ginna declared the 'C' IAC inoperable until the completion of the master controller upgrade later this year. Ginna entered this issue into their CAP for resolution.

This finding is more than minor because it is associated with the equipment performance attribute of the Initiating Events cornerstone and affects the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, unnecessary transients on the instrument air header increased the likelihood of a loss of instrument air. A loss of instrument air would cause the main steam isolation valves to close and result in a reactor trip. The inspectors determined that the finding was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available, or increase the likelihood of a fire or internal/external flood. This finding has a cross-cutting aspect in the area of problem identification and resolution in that Ginna did not periodically trend and assess information associated with the 'C' IAC trips to identify programmatic and common cause problems. (P.1.b)

Inspection Report# : [2008010](#) (*pdf*)

Significance:  Sep 26, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for Testing Reactor Trip Breakers

The inspectors identified a self-revealing non-cited violation of Technical Specification 5.4.1.a, "Procedures," for Ginna's failure to establish and maintain an adequate procedure for testing the reactor trip breakers. This resulted in the inadvertent isolation of letdown while restoring from reactor trip breaker testing and the subsequent lifting of pressurizer power operated relief valves (PORVs). At the time of the test, the reactor plant was shutdown and the pressurizer was water solid. With letdown flow isolated and the charging system in manual operation, pressurizer pressure increased above the low temperature overpressure protection set point which caused the PORVs to actuate. Ginna determined that the procedure did not provide adequate guidance for the restoration of the simulated pressurizer level following completion of the test. Ginna entered this issue into their corrective action program for resolution. Planned corrective actions included upgrades to the reactor trip breaker test procedures and a review of instrument and control procedures.

This finding is more than minor because it is associated with the procedure quality attribute of the Initiating Event cornerstone and affects the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown operations. Specifically, the inadvertent lifts of PORVs could lead to a loss of reactor coolant system inventory and pressure control. This finding was of very low safety significance because Ginna maintained adequate mitigation capability for the current plant state and the event was not considered a loss of control condition. This finding has a cross-cutting aspect in the area of problem identification and resolution

because Ginna did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, corrective actions following a similar issue were not completed (and compensatory actions were not in place) in a timely manner which could have prevented this event. (P.1.d)

Inspection Report# : [2008010](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correctly Implement Reactor Coolant Heat-up Procedure

The inspectors identified a self-revealing NCV of Technical Specification 5.4.1.a when control room operators closed the inlet and outlet Residual Heat Removal (RHR) system isolation valves while conducting a plant heat-up with the 'A' reactor coolant system loop inoperable. This was contrary to procedural requirements which require operators to verify that two reactor coolant system loops are operable and at least one is operating prior to isolating the RHR system. Several minutes after isolating the RHR system, the control room operators recognized they were not complying with the procedure, and restored power to the RHR isolation valves. The time that the RHR system was isolated from the reactor coolant system was 15 minutes.

This finding was determined to be of very low safety significance (Green) using Phase 1, Appendix G, Attachment 1, Checklist 4 of IMC 0609. This finding was of very low safety significance because the finding did not increase the likelihood of a loss of RCS inventory, degrade the ability of Ginna to terminate a leak path or add RCS inventory when needed, nor degrade the ability to recover RHR. This finding has a crosscutting aspect in the area of human performance because operators did not adhere to the procedural requirements prior to removing the RHR system from service (H.4.b per IMC 0305).

Inspection Report# : [2008003](#) (*pdf*)

Mitigating Systems

Significance: TBD Mar 31, 2009

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Properly Lubricate Governor Linkage

The inspectors identified an AV of Technical Specification 5.4.1.a, "Procedures," for the failure of the licensee to implement an effective preventive maintenance (PM) program for the turbine-driven auxiliary feedwater (TDAFW) pump governor linkage. Specifically, procedure M-11.5C, "AFW Pump Minor Mechanical Inspection and Maintenance," Revision 29, which includes steps for cleaning and lubricating the TDAFW pump governor linkages, was not properly implemented. The cleaning and lubrication steps were inappropriately deleted during the work planning process for the PM scheduled on the TDAFW system. As a result, the governor linkages were not lubricated during the March 2008 maintenance period, which directly contributed to the failure of the TDAFW pump as demonstrated by testing performed on December 2, 2008. Ginna's planned corrective actions include increased frequency of testing to validate the identified root cause and appropriate resolution, upgrades to the maintenance procedure for disassembly and lubrication of bearing wear surfaces and linkages, and guidance on the type of lubricant to use. In addition, corrective actions include enhancements to the scope of minor maintenance requirements on the TDAFW pump to ensure that the linkage cleaning and lubrication is not missed, and establishing a 9-year periodicity to rebuild the governor and associated linkages.

The inspectors determined that this finding is more than minor because it is associated

with the procedure quality attribute of the Mitigating Systems Cornerstone and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to perform adequate maintenance resulted in the inoperability of the TDAFW pump. This finding was assessed using IMC 0609 and preliminarily determined to be White based on a Phase 3 analysis with a total (internal and external contributions) calculated conditional core damage frequency (CCDF) of 8.8E-6. This finding has a cross-cutting aspect in the area of human performance because Ginna did not establish appropriate controls to assess how changes to the TDAFW PM program would impact operation of the TDAFW system (H.3.b per IMC 0305).

Inspection Report# : [2009002](#) (*pdf*)

G

Significance: Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

Inadequate Risk Management Results in Loss of Normal Control Room Annunciators

A Green self-revealing finding was identified on February 5, 2009, when Ginna failed to review applicable internal operating experience and implement compensatory actions to minimize the consequences associated with replacement of the annunciator cards, in accordance with CNG-OP-4.01-1000, "Integrated Risk Management," Revision 00200. Specifically, CNG-OP-4.01-1000, requires work activities that are considered medium risk to have contingency plans based in part on operating experience. As a result, when the power supplies were inadvertently de-energized, restoration of the alarm panels was delayed until recovery work instructions were prepared and implemented. Ginna's corrective actions include adding a trouble shooting plan to work packages for annunciators that depicts how to restore failed annunciators, revising CNGOP-4.01-1000, to incorporate a checklist of equipment important to the emergency plan in the screening section of the risk process, and having an senior reactor operator review the final weekly schedule for maintenance that could possibly impact equipment used by the emergency plan.

This finding is more than minor because it is associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. When the annunciator panels were deenergized, the ability of operators to identify and respond to off-normal plant conditions was degraded. Using Phase 1 of IMC 0609, Appendix A, the inspectors determined that the finding was of low safety significance (Green), because the finding did not represent a loss of system safety function; did not represent an actual loss of safety function of a single train for greater than its Tech Spec allowed outage time; did not represent an actual loss of safety function of one or more non-Tech Spec trains of equipment designated as risk-significant per 10CFR50.65, for greater than 24 hours; and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of human performance because Ginna personnel did not appropriately plan work activities by incorporating risk insights and the need for planned contingencies, compensatory actions and abort criteria, which directly contributed to the loss of power to the control board annunciator panels and declaration of an UE (H.3.a per IMC 0305).

Inspection Report# : [2009002](#) (*pdf*)

G

Significance: Dec 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Meet Minimum Shift Manning Requirements Due to Inattentiveness

An NRC-identified NCV of Technical Specification 5.4.1.a, "Procedures," was identified on November 21, 2008, when minimum shift staffing decreased below the requirements contained in procedure ND-OPS, "Operations," because a Ginna auxiliary operator (AO) was inattentive. The individual of concern was assigned the shift role of "primary AO" and was responsible for performing rounds in the auxiliary building, as well as valve manipulations to support plant testing/operation. Further, he was one of the five members of the site fire brigade. Ginna's immediate corrective action consisted of relieving the AO of his duties, and in accordance with Ginna's policy, subjecting the AO to a for-cause fitness for duty drug test. Shift staffing was restored to the full complement outlined in ND-OPS within one hour, when an additional AO arrived on-site.

This finding is more than minor, because it could reasonably be viewed as a precursor to a significant event. Specifically, while inattentive, the AO may not have been able to respond to a plant event which reduces the effectiveness of event mitigation. This finding has been reviewed by NRC management in accordance with IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," and was determined to be of very low safety significance (Green) because staffing for the operating shift and fire brigade was restored to a full complement within one hour after the AO was relieved, and because no initiating events occurred during that time. This finding has a cross-cutting aspect in the area of human performance because the AO did not implement effective actions to remain fit for duty (H.4.a per IMC 0305).

Inspection Report# : [2008005](#) (*pdf*)

Barrier Integrity

Significance:  Nov 21, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

B.5.b Phase 2 and 3 Mitigating Strategy

This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

Emergency Preparedness

Significance:  Sep 29, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure Adherence Resulting in a Loss of Normal Control Room Communications

A self-revealing NCV of Technical Specification 5.4.1.a, "Procedures," was identified on August 28, 2008, when Ginna technicians failed to adequately implement CME-38-01-BYCTSC, "Solid State Controls, 500 Amp Battery Charger Maintenance for BYCTSC" which resulted in a loss of power to communications equipment for the control room and subsequent declaration of an Unusual Event (UE). Ginna entered this issue into their corrective action program for resolution.

This finding is more than minor because it is associated with the facilities and equipment performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of ensuring that Ginna was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors determined that the finding was of very low safety significance (Green) using IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," in that it was associated with an actual

event classified as an Unusual Event, the loss of communication was for a short period of time, and compensatory measures were implemented. This finding has a cross-cutting aspect in the area of human performance because Ginna personnel failed to correctly implement expected human performance tools which directly contributed to the loss of power to the control room communications systems and declaration of a UE (H.4.a per IMC 0305).

Inspection Report# : [2008004](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Timely ERO Augmentation of On-shift Staff

The inspectors identified an NRC-identified NCV of 10 CFR 50.47(b)(2) for failure of Ginna's process for maintaining timely augmentation of on-shift staff. Ginna's nuclear emergency response plan (NERP) states that the survey team member position will be staffed by six individuals reporting onsite within one hour of the declaration of an ALERT or higher classification. Results from testing the off-hours notification of the response organization for the four quarters, starting in June 2007 through March 2008, indicated that fewer than six individuals would have responded for the survey team member position within one hour of event declaration. Plant management entered the issue into their corrective action program and took appropriate immediate corrective actions following identification of the issue by the inspectors.

This finding is more than minor because it is associated with the emergency response organization (ERO) performance attribute and affected the objective of the Emergency Preparedness cornerstone to ensure timely augmentation of on-shift staff. In accordance with the Emergency Preparedness Significance Determination Process, this finding is of very low safety significance because the failure to comply with 10 CFR 50.47(b)(2) was a planning standard problem, but not a planning standard functional failure. The inspectors determined that this finding has a crosscutting aspect in the area of problem identification and resolution because Ginna did not take appropriate corrective actions to qualify more individuals for the survey team position in 2007 (P.1.d per IMC 0305).

Inspection Report# : [2008003](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Effective Occupational Exposure Control

The inspectors identified a self-revealing finding of very low safety significance associated with occupational exposure control. During the planned refueling outage, Ginna did not effectively manage its radioactive source term and work activities to prevent unnecessary occupational exposure to workers during 'B' sump strainer modification and steam generator inspections. Specifically, the collective occupational radiation dose received by individuals for these two activities exceeded the planned or intended dose that Ginna determined was as low as is reasonably achievable (ALARA) for the work activities.

This finding is more than minor because each of the two work activities exceeded their initial estimates by more than 50 percent and each accumulated more than five person-rem, as described in Appendix E of IMC 0612, example (6.b). Additionally, the finding affected the program and process attribute of the Occupational Radiation Safety cornerstone to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding is of very low safety significance because the 3-year rolling average exposure for Ginna was less than 135 person-rem. This finding has a crosscutting aspect in the area of human performance work control because Ginna did not effectively coordinate work activities to incorporate actions to address the impact of changes to the work scope or activity that were appropriate under the circumstances (H.3.b

per IMC 0305).

Inspection Report# : [2008003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

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