

# Ginna

## 1Q/2012 Plant Inspection Findings

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### Initiating Events

**Significance:**  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Manage Risk of Reactor Protection System Channel 2 Calibrations**

The inspectors identified a Green non-cited violation of 10 CFR 50.65, "Maintenance Rule," paragraph (a)(4), when Ginna did not adequately manage an increase in risk when initiating the reactor protection system channel 2 calibration procedure which resulted in an underestimation of the risk, and several required risk management tools were not implemented by Ginna operations staff as required. Ginna took immediate corrective actions of stopping work and notifying the shift manager, work week coordinator, and the risk analyst. This finding was entered into Ginna's corrective action program (CR-2011-7071).

This finding is more than minor because the overall elevated plant risk would put the plant into a higher licensee-established risk category and required additional risk management actions per plant procedures. This finding is associated with the human performance attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors determined this finding is of very low safety significance because the incremental core damage probability deficit was less than 1.0E-6.

This finding has a cross-cutting aspect in the area of human performance, work control, in that Ginna did not plan and coordinate work activities consistent with nuclear safety. Specifically, Ginna management was not fully apprised of plant conditions prior to making the actual risk change and before continuing with channel 2 calibration work (H.3 (b) per IMC 0310).

Inspection Report# : [2011005](#) (*pdf*)

**Significance:**  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Inadequate Oversight Resulting In Inadvertent Partial Safety Injection Actuation**

A self-revealing NCV of technical specification (TS) 5.4.1.a, "Procedures," was identified when Ginna personnel did not correctly perform procedure STP-O-R-2.2, "Diesel Generator Load and Safeguard Sequence Test," Revision 00500 during the refueling outage with the plant in Mode 5. This resulted in a partial safety injection (SI) actuation, including the automatic start of the 'B' emergency diesel generator and an associated service water pump. Ginna's corrective actions included immediately returning all equipment to its pretest position, performing a crew stand down and crew clock reset, ensuring each test had a clearly identified test supervisor, and that each test supervisor re-brief the crew if there was a break in the test, if test results were unexpected, or if any part of the test needed to be re-performed. Additionally, Ginna provided training to operation's personnel and verified that procedure STP-O-R-2.2 was adequate.

This finding is more than minor because it is associated with the human performance attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Additionally, the inspectors determined that more than minor example 4.b of IMC 0612, Appendix E, was similar because control room operators caused a partial SI actuation. The inspectors determined that this finding was of very low safety significance (Green) using IMC 0609, Appendix G, "Shutdown Operations SDP." Specifically, Ginna maintained adequate mitigation capability for a Pressurized-Water Reactor during cold shutdown operation with the reactor coolant system (RCS) closed and steam generators available for decay heat removal.

This finding has a cross-cutting aspect in the area of human performance, work practices, in that Ginna failed to ensure adequate supervisory and management oversight of the diesel generator load and safeguard sequence test such that nuclear safety was supported. Specifically, operations personnel failed to adequately supervise the diesel generator load and safeguard sequence test, and as a result, an SI partial actuation occurred during testing (H.4(c) of IMC 0310).

Inspection Report# : [2011003](#) (pdf)

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## Mitigating Systems

**Significance:**  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Inadequate Corrective Action on Human Performance Issues Results in Two Trains of Auxiliary Feedwater Inoperable**

A self-revealing NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for Ginna's failure to implement adequate compensatory corrective actions associated with a series of human performance issues and valve mispositioning events. The corrective actions were inadequate in that Ginna failed to prevent an improperly tagged closed auxiliary feedwater (AFW) valve which resulted in two trains of AFW inoperable. Corrective actions included compensatory actions which required 100 percent peer checks on all tagout applications, a separate pre-job brief for the independent verification of tagouts, and for a senior reactor operator to observe the independent verification portion of the tagout process. This finding was entered into Ginna's corrective action program (CR-2012-0294).

This finding is more than minor because it is associated with the human performance attribute of the Mitigating Systems cornerstone, and it adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined this finding is of very low safety significance because it was not a design or qualification deficiency, did not involve an actual loss of safety function for greater than its technical specification allowed outage time, 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 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, Ginna did not implement appropriate compensatory actions to address a weakness in procedure use and adherence by operations personnel [P.1(d)].

Inspection Report# : [2012002](#) (pdf)

**Significance:**  Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Inadequate Maintenance Performance Resulted in the Failure to Properly Tighten Turbine-Driven Auxiliary Feedwater System Threaded Connections**

A self-revealing non-cited violation of technical specification (TS) 5.4.1.a, "Procedures," was identified for Ginna's failure to properly tighten turbine-driven auxiliary feedwater (TDAFW) system threaded connections. Specifically, the performance of procedure MMP-GM011-00012, "AFW Pump Turbine Major Mechanical Inspection and Mechanical Overspeed Trip Testing," Revision 00200, did not ensure that low pressure trip switch mount threaded connections remained tight. Consequently, high turbine outboard bearing vibrations were noted, and the TDAFW system was declared inoperable. Corrective actions included additional testing and inspection to ensure that no bearing damage had occurred, revising applicable portions of the TDAFW system maintenance procedures, and providing additional guidance for mechanical maintenance and planning personnel. This finding was entered into Ginna's corrective action program (CR-2011-8098).

This finding is more than minor because it is similar to Inspection Manual Chapter (IMC) 0612, Appendix E, Example 3.j., regarding a reasonable doubt on the operability of the system. The performance deficiency is associated with the Mitigating Systems cornerstone attribute of equipment performance (reliability, availability) and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors evaluated this finding using Phase 1, "Initial Screening and Characterization" worksheet of Attachment 4 to IMC 0609. The inspectors determined this finding was not a design or qualification deficiency, did not involve an actual loss of safety function for greater than its TS allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Therefore, the inspectors determined this finding to be of very low safety significance.

This finding has a cross-cutting aspect in the area of human performance, work control, in that Ginna failed to plan and coordinate work activities, consistent with nuclear safety. Specifically, the work planning aspects, including the TDAFW system maintenance procedure, did not incorporate the risk insights associated with skill of the trade to ensure that the threaded connections remained tight [H.3 (a)].

Inspection Report# : [2011005](#) (pdf)

**Significance:**  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Promptly Identify and Correct a Condition Adverse to Quality with the 'B' Main Steam Isolation Valve**

The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for Ginna's failure to promptly identify and correct a condition adverse to quality. Specifically, Ginna did not promptly identify and correct a deenergized control power channel for the 'B' main steam isolation valve (MSIV) caused by a loose fuse clip. Corrective actions included forming an incident response team, visually inspecting all fuse clips where the plastic fuse blanks were used since April 2011, identifying potentially loose fuse clips, repairing any loose clips identified, ensuring operators know how to properly use the plastic fuse blanks to prevent fuse clip damage, and requiring electrical maintenance support to verify the integrity of the fuse clip/fuse connection after removal of the plastic fuse blank and reinsertion of the fuse.

This finding is more than minor because the performance deficiency is associated with the Mitigating Systems cornerstone attribute of equipment performance (reliability, availability) and adversely affected the cornerstone objective of ensuring availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined this finding was not a design or qualification deficiency, did not involve an actual loss of safety function for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Therefore, the inspectors determined the finding to be of very low safety significance. The finding has a cross-cutting aspect in the area of Problem Identification and Resolution, corrective action program, because Ginna did not thoroughly evaluate the problem such that the resolution addressed the cause and extent of condition. Specifically, Ginna did not adequately evaluate the loss of position indicating lights on the 'B' MSIV to ensure that the correct cause was identified.

Inspection Report# : [2011004](#) (pdf)

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## Barrier Integrity

**Significance:**  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

**Inadequate Procedure for Fuel Transfer Flange Installation**

A self-revealing NCV of TS 5.4.1.a, "Procedures," was identified when Ginna personnel did not correctly establish procedure RF-401, "Fuel Transfer Blind Flange Removal and Installation," Revision 0, by not ensuring that the procedure contained sufficient guidance to ensure that the flange bolts were properly tightened. The bolts were not

tightened which resulted in an increase in the containment leakage rate. Ginna's corrective actions included revising the procedure to include torque specifications.

This finding is more than minor because it is associated with the barrier performance attribute of the Barrier Integrity cornerstone and affects the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, RCS, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors determined that this finding is of very low safety significance (Green) using IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The finding did not represent a degradation of the radiological barrier function provided for the control room, or auxiliary building, or spent fuel pool; the finding did not represent a degradation of the barrier function of the control room against smoke or a toxic atmosphere; the finding did not represent an actual open pathway in the physical integrity of reactor containment (valves, airlocks, containment isolation system (logic and instrumentation) and heat removal components; and the finding did not involve an actual reduction in function of hydrogen ignitors in the reactor containment. Specifically, although the finding resulted in an increase in the containment leak rate, it did not represent an actual open pathway in the physical integrity of reactor containment.

This finding had a cross-cutting aspect in the area of human performance, resources, in that the fuel transfer blind flange installation procedure was not complete, accurate and up-to-date. Specifically, the procedure did not contain sufficient installation guidance to ensure that the flange bolts were properly tightened (H.2(c) per IMC 0310).  
Inspection Report# : [2011003](#) (*pdf*)

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

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## 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.

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## Miscellaneous

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