Waterford 3
1Q/2011 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Initiating Events
Green. The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” because the licensee did not adequately implement the operability determination process requirements in accordance with EN-OP-104, “Operability Determination Process.” Specifically, the licensee did not monitor a degraded and non-conformance condition associated with the reactor coolant pump N-9000 stage seals as required by EN-OP-104. As a result, the licensee did not perform a new operability determination after assumptions and compensatory measures identified in the original operability determination changed. This also led to compliance issues with technical specifications and missed maintenance rule functional failures. The licensee entered this issue into their corrective action program for resolution as CR-WF3-2011-1965. The immediate corrective actions included revising the operability determination to account for the current configuration. The planned corrective actions included the licensee replacing the degraded reactor coolant pump seals during the next two refueling outages.

The finding is more than minor because it is associated with the equipment performance attribute of the initiating events cornerstone and affects the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the licensee did not frequently and regularly review a degraded and nonconforming condition that had the potential to lead to a small loss of coolant accident. The inspectors evaluated this finding using IMC 0609 Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings.” The inspectors determined that the finding is of very low safety significance (Green) because it is not a design or qualification deficiency, did not represent a loss of a safety function of a system or a single train greater than its technical specification completion time, and did not screen as potentially risk significant due to external events. The finding has a cross-cutting aspect in the corrective action program component of the problem identification and resolution area because the licensee did not thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary. This includes properly classifying, prioritizing, and evaluating for operability and reportability conditions adverse to quality.

Inspection Report# : 2011002 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Conduct Timely Corrective Actions to Replace Degraded Diodes in Safety Related Inverters
A self-revealing non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” occurred because the licensee did not promptly correct a condition adverse to quality that affected static uninterruptible power supply inverters used to power vital and safety related loads. Specifically, the licensee did not conduct timely corrective actions following identification of degraded diodes in static uninterruptible power supplies A and B, respectively. As a result, this led to another failure of the static uninterruptible power supply A. The licensee entered this issue into their corrective action program (CAP) for resolution as CR-WF3-2010-6760. The immediate corrective actions following the additional failure included installation of newly tested diodes from a different batch, new fuses and a new silicon controlled rectifier. The planned corrective actions included implementation of an

increased condition based testing preventive maintenance frequency and a maintenance activity to perform pre-installation testing on all new diodes and rectifiers.

This finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of static uninterruptible power supply inverters that respond to initiating events to prevent undesirable consequences in that these inverters supply power to vital and safety related loads. The inspectors evaluated the significance of this finding using Phase 1 of the IMC 0609, Appendix A, “Significance Determination of Reactor Inspection Findings for At-Power Situations” given the importance of the system and the fact that this condition affects both static uninterruptible power supplies A and B. The inspectors determined that the finding was of very low safety significance (Green) because it is not a design or qualification deficiency, did not represent a loss of a safety function of a system or a single train greater than it Technical Specification allowed outage time, and did not screen as potentially risk significant due to external events. This finding has a crosscutting aspect in the corrective action component of problem identification and resolution area because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : 2010005 *(pdf)*

Significance: G Jun 30, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Conduct Timely Corrective Actions to Replace Faulty Relays
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” occurred because the licensee did not conduct timely corrective actions to preclude repetition of a significant condition adverse to quality that involved Tyco relay replacements. Specifically, the licensee extended the due date of corrective actions to preclude repetition of suspected faulty relays without an adequate justification. As a result, this led to additional relay failures that challenged the reliability of risk significance safety systems. The immediate corrective actions after the additional failures included initiating work requests to replace the faulty relays. The planned corrective actions included an evaluation of the effectiveness and timeliness of the Tyco replacement project. The licensee entered this issue into their corrective action program for resolution as Condition Reports CR WF3 2010 1330 and CR WF3 2010 4199.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating System Cornerstone and affects 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). Specifically, the licensee did not provide an adequate justification to extend corrective actions beyond its original due date such that it could not affect the availability, reliability, and capability of risk significance safety systems. Using NRC Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheets, the finding was determined to have very low safety significance because it is not a design or qualification deficiency, did not represent a loss of a safety function of a system or a single train greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to external events. The finding has a crosscutting aspect in the corrective action component of problem identification and resolution area because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : 2010003 *(pdf)*

Significance: G May 28, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Prevent Repetitive Voiding in the Low Pressure Safety Injection System
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the failure to preclude repetition of a significant condition adverse to quality. Specifically, licensee corrective actions to prevent recurrence of voiding in the low pressure safety injection system were not sufficient to prevent nitrogen voids from challenging system operability. This violation was entered into the licensee’s corrective action program as CR WF3 2010 3050.

The finding is more than minor because, if left uncorrected, the finding would have the potential to become a more significant safety concern (i.e., continued challenges to system operability). Using Manual Chapter 0609.04, “Phase 1 – Initial screening and Characterization of Findings,” the issue screened as having very low safety significance because it: (1) was not a design or qualification deficiency; (2) did not represent a loss of safety function; (3) did not represent an actual loss of a single train of equipment for more than its technical specification allowed outage time; (4) did not represent a loss of risk significant non-technical specification equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding had a crosscutting aspect in the corrective action component of the problem identification and resolution area in that the licensee failed to thoroughly evaluate the problem, such that the resolutions addressed the cause. As a result, the resolutions failed to prevent recurrence of the problem.

Inspection Report# : 2010006 *(pdf)*

Significance: G May 28, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Derive Technical Specifications from Analysis
The team identified a noncited violation of 10 CFR 50.36 (b), “Technical Specifications,” for failure to derive technical specifications from the analyses and evaluation included in the safety analysis report. Specifically, the licensee failed to derive an action statement for Technical Specification 3.7.5 that meets the assumptions included in the Waterford Unit 3 Updated Safety Analysis Report. The Updated Safety Analysis Report evaluation assumes an instantaneous levee failure occurs at a Mississippi River level of +27 feet mean sea level. The inspectors determined that the action statement for Technical Specification 3.7.5, to complete procedures to secure doors and penetrations in 12 hours, was not derived from the evaluation included in the safety analysis report because the actions would take place after the assumed instantaneous levee failure. The licensee entered this condition into the corrective action program as CR WF3 2010 03232. As a short term compensatory measure, the licensee established criteria for taking appropriate action before the Mississippi River level would reach the +27 feet mean sea level safety limit.

The finding is more than minor because, if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. In addition, the performance deficiency adversely affects the Mitigating Systems Cornerstone attribute of external events to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609.04, “Phase 1 – Initial screening and Characterization of Findings,” the finding was of very low safety significance (Green) because it was a nonconforming condition that did not result in complete unavailability of the equipment.

Inspection Report# : 2010006 *(pdf)*

Significance: G May 28, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correct Multiple Conditions Adverse to Quality
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the failure to ensure that conditions adverse to quality are promptly corrected. Specifically, multiple examples of boric acid leaks were identified in the corrective action program where corrective actions had not yet been taken or had been ineffective. At least ten of these active boric acid leaks are five to seven years old.

The failure to promptly correct boric acid leaks is a performance deficiency. The finding is more than minor because, if left uncorrected, the finding could become a more significant safety concern (i.e., potential for damage to carbon steel components or inhibiting the safety-function of others). Using Manual Chapter 0609.04, “Phase 1 – Initial screening and Characterization of Findings,” the issue screened as having very low safety significance because it: (1) was not a design or qualification deficiency; (2) did not represent a loss of safety function; (3) did not represent an actual loss of a single train of equipment for more than its technical specification allowed outage time; (4) did not represent a loss of risk significant non-technical specification equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding had a crosscutting aspect in the

problem identification and resolution, corrective action component in that the licensee failed to effectively correct identified boric acid leaks in a timely manner.

Inspection Report# : 2010006 *(pdf)*

Barrier Integrity

Significance: G Mar 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Barrier Integrity
Green. The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” because the licensee did not conduct required technical specification surveillance testing on equipment in an as-found condition. Specifically, the licensee performed corrective maintenance (preconditioning) on the system to achieve more favorable results, prior to completing the surveillance. The licensee entered this issue into their corrective action program for resolution as CR-WF3-2011-1927. The immediate correction action included the performance of the control room envelop tracer gas test.
The 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 protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee did not properly perform testing on equipment to evaluate barrier performance. The inspectors evaluated this finding using IMC 0609 Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings.” The inspectors determined that the finding is of very low safety significance (Green) because it is not a design or qualification deficiency, did not represent a loss of a safety function of a system or a single train greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to external events. The finding has a cross-cutting aspect in the work control component of the human performance area because the licensee did not appropriately plan work activities by incorporating the need for planned contingencies, compensatory actions, and abort criteria.

Inspection Report# : 2011002 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

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

Last modified : June 07, 2011