Waterford 3
4Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Mar 24, 2003
Identified By: NRC
Item Type: FIN Finding
Failure to Implement Vendor Recommendations
A self-revealing finding was identified for the failure to maintain and operate main generator seal oil backup differential pressure regulating Valve SO-308 in accordance with vendor recommendations. This condition resulted in a turbine trip and subsequent reactor power cutback on February 14, 2003. This self-revealing finding is greater than minor because it resulted in a perturbation in plant stability resulting in a reactor power cutback, similar to example 4.b in Appendix E of Manual Chapter 0612. The finding is of very low safety significance because, although it caused a plant transient, it did not increase the likelihood of a primary or secondary system loss-of-coolant accident initiator, did not contribute to the loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood (Section 4OA3).

Inspection Report# : 2003004*(pdf)*

Mitigating Systems

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Ineffective Corrective Actions to Prevent Recurrence of Voiding Conditions
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to establish adequate corrective actions to prevent recurrence of voiding conditions affecting the operability of the low pressure safety injection system following shutdown cooling operations. This finding is greater than minor because it affected the mitigating system objective to ensure the reliability and availability of the low pressure safety injection system to respond to an initiating event. The problem if left uncorrected would become a more significant safety concern. The significance of this finding was determined to be of very low safety significance because low pressure safety injection Train B was inoperable for less than the Technical Specification allowed outage time and Train A was determined to be degraded but operable in accordance with Generic Letter 91-18 guidance.

Inspection Report# : 2003007*(pdf)*

Significance: TBD Dec 31, 2003
Identified By: Self Disclosing
Item Type: AV Apparent Violation
Failure to establish appropriate instructions and implement those instructions
A self-revealing apparent violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and

Drawings," was identified for the failure to establish appropriate instructions and accomplish those instructions for installation of a fuel line for Train A emergency diesel generator in May 2003. This failure resulted in uneven and excessive scoring of the tubing that ultimately led to a complete 360 degree failure of the fuel supply line on September 29, 2003, during a monthly surveillance test. This finding is unresolved pending completion of a significance determination. The finding was greater than minor because it directly impacted the availability and reliability of an emergency diesel generator which is used to mitigate the loss of AC power to the respective safety related bus. The finding was determined to have a potential safety significance greater than very low significance because the failure resulted in an actual loss of the safety function of the Train A emergency diesel generator for an extended period of time.

Inspection Report# : 2003007*(pdf)*

Significance: G Sep 22, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Station Blackout Coping Analysis
The inspectors identified a noncited violation of 10 CFR 50.63 for the failure to maintain a station blackout coping analysis that adequately encompassed plant conditions prescribed by the station blackout recovery emergency operating procedure. This resulted in the failure to evaluate for a reactor coolant system cooldown to a 400 F cold leg temperature, as prescribed by procedure, since the coping analysis assumed the reactor coolant system cold leg would be maintained at 545 F during station blackout conditions.
This finding is greater than minor because it affected the reactor safety mitigating system cornerstone objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences. The significance of the finding was determined to be of very low safety significance because the deficiency was confirmed not to result in loss of the capability to cope with a station blackout per Generic Letter 91-18 guidance.

Inspection Report# : 2003006*(pdf)*

Significance: G Sep 22, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control of the Diesel Generator Starting Air System
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to translate into specifications, procedures, and instructions design criteria for the diesel generator air start system. This resulted in the failure to maintain each diesel generator air receiver capable of starting the diesel engine five times. This finding is greater than minor because it affected the reactor safety mitigating system cornerstone objective due to the degradation of the design basis capability of the starting air system. The significance of the finding was determined to be of very low safety significance because the deficiency did not represent an actual loss of the starting air system safety function per Generic Letter 91-18 guidance. Additionally, surveillance testing has demonstrated the capability of each diesel generator to start within the required 10 seconds.

Inspection Report# : 2003006*(pdf)*

Significance: G Sep 22, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control of Overcurrent Relay

A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" was identified for the failure to maintain design control of an overcurrent relay. This resulted in the failure to maintain normally open contact gap distances in accordance with vendor specifications. This design control deficiency was determined to be the most probable cause for loss of power to a safety related bus on July 24 and July 27, 2003. The finding is greater than minor because it affected the reactor safety mitigating system corner stone and if left uncorrected the finding could become a more significant safety concern. The significance of the finding was determined to be of very low safety significance because the deficiency did not result in the loss of safety-related equipment for greater than its Technical Specification allowed outage time.

Inspection Report# : 2003006*(pdf)*

Significance: G Aug 19, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to test certain emergency diesel generator "B" mini-sequencer contacts.
The identified a violation of TS 6.8.1.f for failure to establish a procedure that implements a procedure to functionally test certain electrical circuits on the EDG mini-sequencer, which is relied upon for achieving shutdown in the event of a fire requiring control room evacuation and remote shutdown. Upon failure of this portion of the sequencer, automatic sequencing of certain components required for safe shutdown would be lost.
Inspection Report# : 2003011*(pdf)*

Significance: G Aug 19, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate emergency lighting for supporting operator actions.
The team identified that the licensee had not provided sufficient emergency lighting for a safe shutdown of the plant follwoing a fire and evacuation of the control room.
Inspection Report# : 2003011*(pdf)*

Significance: G Aug 19, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate corrective actions for deficiencies associated with the emergency lighting system.
Two examples:

1. The licensee failed to complete actions to correct aconditions adverse to fire protection, in that, they inappropriately cancelled a full-field verification test of their emergency lightting system.

2. The licensee failed to correct a deficiency in their methodology for determining if the emergency lighting system met the 10 CFR 50.65, Section (a)(1), maintenance rule goals.
Inspection Report# : 2003011*(pdf)*

Barrier Integrity

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Test Controls of MSIVs
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Section XI, "Test Control," for the failure to establish adequate test controls for leak testing main steam isolation Valves 1 and 2. This performance deficiency contributed to both valves being declared inoperable due to system leaks creating a low pressure condition in the valve actuating systems. This finding is more than minor because it affected the Barrier Integrity Cornerstone objective of providing reasonable assurance of the functionality of containment. The finding was only of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment, it did not result in an actual open pathway affecting the physical integrity of reactor containment, and the main steam isolation valves were inoperable for less time than the allowed Technical Specification outage time.

Inspection Report# : 2003007*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Ineffective Corrective Actions to Prevent Recurrence of PWSCC of Alloy 600 Material
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to implement effective corrective actions resulting in recurrences of pressure boundary leakage due to primary water stress corrosion cracking of Alloy 600 reactor coolant system nozzles. This finding was greater than minor because it affected the reactor safety barrier integrity cornerstone objective for providing reasonable assurance that the physical design barriers protect the public from radionuclide releases caused by accidents or events. Using NRC Manual Chapter 0609 Significance determination process Phase 1 Screening Worksheet this performance deficiency affected the reactor coolant system barrier function requiring a Phase 2 analysis. The results of the Phase 2 and 3 analysis determined that this finding was of very low safety significance based on the cracks being axial in nature (does not contribute substantially to a loss of coolant accident) and the leaks resulted in a build up of only minor boric acid residue indicative of only trace amounts of through wall leakage. The leak rates identified were well within the capacity of a single charging pump.

Inspection Report# : 2003007*(pdf)*

Significance: G Sep 22, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control of Switchgear Ventilation System
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to maintain design control of the switchgear ventilation system. This resulted in a potential common mode failure of safety related Dampers SVS-101 and SVS-102, due to loss of the nonsafety-related instrument air system. The finding is greater than minor because if left uncorrected the finding could become a more significant safety concern. The significance of the finding, which is under the Barrier Integrity cornerstone, was determined to be of very low safety significance because the finding only represented a degradation of the radiological barrier function provided for the control room.

Inspection Report# : 2003006*(pdf)*

Significance: G Jan 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Ineffective Corrective Actions Resulting from Inadequate Evaluations of Extent of Condition
Three examples (one in barrier integrity) associated with failures to adequately evaluate the extent of conditions adverse to quality were identified. The failure to promptly identify and correct these degraded conditions was a violation of 10 CFR Part 50, Appendix B, Criterion XVI (Section 4OA2.b). The barrier integrity example included:

The licensee failed to promptly identify and correct a degraded condition resulting in exceeding the rated thermal power limit from February 1995 to March 2002. This condition, identified by the licensee in March 2002, introduced non-conservative excore neutron detector calibration errors which affected the high linear power level, high logarithmic power level, high local power density, and low departure from nucleate boiling ratio, reactor protection trip functions.

The failure to promptly identify and correct the overpower condition was determined to be a violation of the facility operating License NPF-38 and 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. This finding is greater than minor because it affected four reactor trip functions in a non-conservative manner, thus, potentially impacting the barrier cornerstone integrity. The finding is of very low safety significance since it was determined that the accident analysis, Chapter 15 of the Final Safety Analysis Report, bounded the non-conservative trip functions. This finding is also of very low safety significance since actual fuel barrier integrity was never challenged during the overpower condition.
Inspection Report# : 2002005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Oct 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Barricade a High Radiation Area
The inspector identified a noncited violation of Technical Specification 6.12.1 because Entergy failed to barricade a high radiation area. Specifically, on October 27, 2003, the inspector observed that the high radiation area rope barricading the regenitive heat exchanger room was stretched across the entrance way at a height of approximately 79 inches, which would not obstruct the entry of station workers. General area radiation levels within the room were as high as 420 millirem per hour. The finding is in Entergy's corrective action program as Condition Report CR-WF3-2003-03164. The finding is greater than minor because it affected the Occupational Radiation Safety cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation and the finding is associated with the cornerstone attribute (Program & Process). The finding involved an individual's potential for unplanned or unintended dose. When processed through the Occupational Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because the finding was not associated with ALARA planning or work controls, there was no overexposure or a substantial potential for overexposure, and the ability to assess dose was not compromised.

Inspection Report# : 2003007*(pdf)*

Significance: G Apr 25, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Violation of Technical Specification 6.8.1.a required radiation work permit requirement
The team identified a noncited violation of Technical Specification 6.8.1.a because the licensee failed to follow radiation work permit requirements. Specifically, on April 21, 2003, operations personnel entered into an unsurveyed radiologically restricted area in an overhead area in the reactor auxiliary building without first contacting radiation protection personnel prior to entry. This finding is greater than minor because it was associated with one of the Occupational Radiation Safety Cornerstone attributes (exposure/contamination control) and the finding affected the associated cornerstone objective (to ensure the adequate protection of public health and safety from exposure to radiation from radioactive material). The team processed the violation through the Occupational Radiation Protection Significance Determination Process because the occurrence involved potential doses (resulting from actions or conditions contrary to licensee procedures) which could have been significantly greater as a result of a single minor, reasonable alteration of the circumstances. However, because the violation was not an as low as is reasonably achievable (ALARA) finding, there was no personnel overexposure, there was no substantial potential for personnel overexposure, and the finding did not compromise the licensee's ability to assess dose, the violation had no more than very low safety significance.

Inspection Report# : 2003008*(pdf)*

Public Radiation Safety

Significance: G Apr 25, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Violaton of 10 CFR 71.5 for failure to placard a transport vehicle containing hazardous material
The team identified a self-revealing noncited violation of 10 CFR 71.5 because the licensee failed to placard a transport vehicle containing hazardous material. On June 5, 2002, the licensee was informed by letter from the recipient that Radioactive Material Shipment 02-3047 arrived at it's destination with no radioactive placards on the transport vehicle as required for radioactive material labeled as Radioactive Yellow III. This finding is greater than minor because it was associated with one of the Public Radiation Safety Cornerstone attributes (transportation program) and the finding affected the associated cornerstone objective (to ensure the adequate protection of public health and safety from exposure to radiation materials released into the public domain). The team processed the violation through the Public Radiation Safety Significance Determination Process because the finding involved an occurrence in the licensee's radioactive material transportation program that is contrary to NRC and DOT regulations. The finding was a radioactive material control issue that involved transportation. However, it did not exceed radiation limits, involve a breach of package during transit, involve a Certificate of Compliance issue, involve a low level burial ground nonconformance, and involve a failure to make notifications or provide emergency information; therefore, the violation had no more than very low safety significance.

Inspection Report# : 2003008*(pdf)*

Physical Protection

Significance: N/A Jul 15, 2003
Identified By: NRC
Item Type: FIN Finding
Verification of Compliance With Interim Compensatory Measures Order
On February 25, 2002, the NRC imposed by Order, Interim Compensatory Measures to enhance physical security. The inspectors determined that, overall, the licensee appropriately incorporated the Interim Compensatory Measures into the site protective strategy and access authorization program; developed and implemented relevant procedures; ensured that the emergency plan could be implemented; and established and effectively coordinated interface agreements with offsite organizations.
Inspection Report# : 2003002*(pdf)*

Miscellaneous

Last modified : March 02, 2004