

Clinton

2Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET SURVEILLANCE TESTING REQUIREMENT FOR REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES

The inspectors identified a finding of very low safety significance (Green) with an associated Non Cited Violation of Technical Specification Surveillance Requirement (TSSR) 3.4.6.1. The licensee failed to correctly incorporate the required test pressure limits of the TSSR into the surveillance test procedure and subsequently tested multiple reactor coolant system (RCS) pressure isolation valves (PIVs) at pressures greater than the maximum test pressure of 1025 pounds-per-square-inch gage, invalidating the testing. The licensee performed a risk assessment of the missed surveillance in accordance with TSSR 3.0.3, which determined that completion of the surveillance could be delayed up to the 24 month surveillance interval without a significant increase in plant risk. The licensee also completed an operability evaluation for the TS nonconformance and concluded that there was reasonable assurance that the affected RCS PIVs were operable based on engineering judgment.

The finding was of more than minor significance because it affected the Initiating Events Cornerstone and was associated with the Procedure Quality attribute. Specifically, the licensee did not correctly incorporate the required test pressure limits of TSSR 3.4.6.1 into the surveillance test procedure. This resulted in testing multiple RCS PIVs at pressures greater than the maximum test pressure of 1025 psig. The finding was determined to be a licensee performance deficiency of very low safety significance because the finding would not result in exceeding the TS limit for RCS leakage and would not have likely affected mitigation systems resulting in a loss of safety function. The inspectors concluded that because the licensee's missed opportunity to correct the test pressure discrepancy in its surveillance test procedure occurred in January 2005 and no other more recent opportunities reasonably existed to identify and correct the problem, this issue would not be reflective of current licensee performance and no cross-cutting aspect was identified.

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

Significance:  Jun 03, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM EFFECTIVENESS REVIEW.

The inspectors identified a finding of very low safety significance with an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The licensee failed to perform an effectiveness review (EFR) to ensure that corrective actions (CAs) taken to prevent recurrence of a significant condition adverse to quality were actually effective to preclude repetition. The licensee entered this violation into its corrective action program as ARs 1221616, 1221661, and 1223806 to investigate the cause and to identify appropriate CAs.

The finding was of more than minor significance because it was similar to Example 4a in IMC 0612, "Power Inspection Reports," Appendix E, "Examples of Minor Issues," in that, the licensee routinely failed to perform EFR evaluations on similar CAs related to significant conditions adverse to quality. The finding was a licensee performance deficiency of very low safety significance due to answering 'no' to all questions under the Initiating Events Cornerstone column of IMC 0609 Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings." The inspectors concluded that this finding affected the cross-cutting aspect of problem identification and resolution. Specifically, the licensee failed to thoroughly evaluate problems to include conducting EFRs of CAs to ensure that problems were resolved. [IMC 0310 P.1(c)]

Inspection Report# : [2011008](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL TRANSIENT COMBUSTIBLE MATERIALS IN ACCORDANCE WITH FIRE PROTECTION PROGRAM.

The inspectors identified a finding of very low safety significance with an associated non-cited violation of the Clinton Power Station Unit 1 Operating License (NPF 62, Section 2.F). The licensee failed to implement the Fire Protection Program in accordance with program requirements by failing to follow approved Fire Protection Program procedures for the control of transient combustible materials. The licensee promptly removed the transient combustible materials found by the inspectors and initiated compensatory measures.

The inspectors concluded that this finding could be reasonably viewed as a precursor to a significant event (i.e., a fire affecting more than one train of safe shutdown equipment). Specifically, the presence of transient combustible materials in a combustible free zone could reasonably result in degradation of the fire protection defense in depth elements in place to prevent fires from starting and mitigate the consequences of fires. In addition, based on review of Example 4k in IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," the issue would not be considered to be of minor significance because the identified transient combustibles were found in a combustible free zone required for separation of redundant trains. The finding was of very low safety significance because the items found in the combustible free zone would not be considered transient combustibles of significance as defined in IMC 0609, Appendix F, "Fire Protection Significance Determination Process," Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," and, therefore, the issue was assigned a "low degradation" rating. The inspectors concluded that this finding affected the cross cutting area of human performance. Although a pre-job briefing was not required by the licensee's procedure for the work activity, job site conditions and a discussion that the work was within a Transient Combustible Free Zone (TCFZ) was not included in the briefing. In addition, the workers' 2 Minute Drill performed at the job site did not identify that work activities were within a TCFZ. Therefore, the inspectors concluded that the licensee's work practices which support human performance were less than effective (IMC 0301 H.4(a)).

Inspection Report# : [2011002](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL TRANSIENT COMBUSTIBLE MATERIALS IN ACCORDANCE WITH FIRE PROTECTION PROGRAM.

The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of the Clinton Power Station Unit 1 Operating License (NPF-62, Section 2.F). The licensee failed to implement the Fire Protection Program in accordance with program requirements by failing to follow approved Fire Protection Program procedures for the control of transient combustible materials. The licensee promptly removed the transient combustible materials found by the inspectors.

The inspectors concluded that this finding could be reasonably viewed as a precursor to a significant event (i.e., a fire affecting more than one train of safe shutdown equipment). Specifically, the presence of transient combustible materials in a combustible free zone could reasonably result in degradation of the fire protection defense-in-depth elements in place to prevent fires from starting and mitigate the consequences of fires. In addition, based on review of Example 4k in IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," the issue would not be considered to be of minor significance because the identified transient combustibles were found in a combustible free zone required for separation of redundant trains. The finding was of very low safety significance because the items found in the combustible free zone would not be considered transient combustibles of significance as defined in IMC 0609, Appendix F, "Fire Protection Significance Determination Process," Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," and, therefore, the issue was assigned a "low degradation" rating. The inspectors concluded that this finding affected the cross-cutting area of human performance. Specifically, the licensee failed to recognize that moving a bullet-resistant container (BRC) was an infrequent activity and, as such, a pre-job briefing should have been performed and was not. In addition, a questioning attitude was not cultivated by the licensee once the correct location of the BRC wash challenged such that

security staff proceeded in the face of uncertainty. Therefore, the inspectors concluded that the licensee's work practices that support human performance were less than effective. (IMC 0305 H.4(a))
Inspection Report# : [2010005](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

DEFICIENCIES WITH RCIC ROOM HEAT-UP ANALYSES

The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance for the failure to include all of the applicable heat loads in the reactor core isolation cooling (RCIC) room heat up calculation and not having a calculation of record for the RCIC room heat up under a station blackout (SBO) scenario. The licensee entered this issue into the corrective action program and performed preliminary calculations to verify that the issues did not exceed any design limits.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as very low safety significance because the licensee determined the RCIC room cooler was capable of removing the additional heat load; and RCIC room temperature remained within the design limits without the room cooler during a SBO scenario. The inspectors determined that this finding did not represent current licensee performance and no cross-cutting aspect was assigned.

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

Significance:  Jun 03, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN A QUALITY RECORD AS EVIDENCE OF AN ACTIVITY AFFECTING QUALITY OF SAFETY-RELATED EQUIPMENT DUE TO INAPPROPRIATE CORRECTIVE ACTIONS

The inspectors identified a finding of very low safety significance with an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records." Specifically, the licensee failed to maintain a quality record documenting a nondestructive examination (NDE) of a safety-related spreader beam lifting device. After losing the original NDE report, the licensee's corrective action (CA) was to recreate the report from memory and maintain the recreated report as the quality record. Upon review and questioning from the NRC, the licensee was able to locate the missing NDE report in the records archive. This issue was entered into the licensee's CAP as AR1223723.

The inspectors determined the finding was more than minor because, if left uncorrected, failure to maintain a quality record as evidence of an activity affecting quality of safety related equipment due to inappropriate disposition of CAs pertaining to missing/lost quality records could become a more significant safety concern. This finding was of very low safety significance because this finding did not represent an actual loss of any safety function of the Mitigation Systems. The inspectors concluded that this finding affected the cross-cutting aspect of Problem Identification and Resolution. Specifically, the licensee did not take appropriate corrective actions to address a lost quality record.

Inspection Report# : [2011008](#) (*pdf*)

Significance:  Jun 03, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ACCOUNT FOR CABLE RESISTANCE IN OPERABILITY DETERMINATIONS.

The inspectors identified a finding of very low safety significance with an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," related to calculational errors found in the licensee's operability

determination. Specifically, on four separate operability determinations, the licensee failed to account for the cable resistance when determining the maximum allowable contact resistance associated with the second level undervoltage (UV) relays for the 4.16 kV Buses. The licensee entered this violation into its corrective action program as Action Requests 1226340 and 1224313 and performed a preliminary calculation which determined that the error reduced the available margin in the circuit resistance but did not change the overall conclusions for the past operability calls made for the four different occasions.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of design control and adversely affected the cornerstone objective of ensuring availability and reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because the licensee was able to demonstrate that the operability calls that were previously made relating to the second level UV relays were still valid and acceptable. The inspectors concluded that this finding affected the cross-cutting aspect of human performance. Specifically, the licensee failed to use conservative assumptions in decision making related to immediate operability determinations of conditions adverse to quality. [IMC 0310 H.1(b)]

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE FIRE DOOR WAS CLOSED AND LATCHED

A finding of very low safety significance and associated NCV of Clinton Power Station Unit 1 Operating License NPF-62, Section 2.F was identified by the inspectors for the licensee's failure to ensure fire doors were closed and latched. Specifically, during a walkdown of fire area CB-1e "737' General Access Area," fire door 1DR1-432 located between fire area CB-1e and D-6 "Emergency Diesel 2 Room," was found unlatched/not fully closed. The door was a 3-hour fire rated door credited for fire barrier between the two fire areas. Site personnel closed the door when it was found open and the door remained fully closed when challenged. The issue was entered into the licensee corrective action program as AR 01187906.

The inspectors determined that this finding was more than minor because the finding affected the Mitigating Systems cornerstone attributes of protection against external factors (Fire) and affected the cornerstone objective of ensuring the capability of the system to respond to events to prevent undesirable consequences. This finding was of very low safety significance (Green) based on answering "Yes" to Question 7 of Task 1.3.2. of Appendix F of IMC 0609. The inspectors did not identify a cross-cutting aspect associated with this finding because the underlining cause of unlatched door was indeterminate during the inspection.

Inspection Report# : [2011009](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET SURVEILLANCE TESTING REQUIREMENT FOR HYDROGEN IGNITERS IN ACCESSIBLE AREAS OF THE PRIMARY CONTAINMENT AND DRYWELL.

The inspectors identified a finding of very low safety significance with an associated non-cited violation of Technical Specification Surveillance Requirement (TSSR) 3.6.3.2.4. The licensee failed to verify that each required hydrogen igniter in accessible areas of the Primary Containment and Drywell develops a surface temperature of greater than or equal to 1700 degrees Fahrenheit (°F) every 24 months. The licensee performed a risk assessment of the missed surveillance in accordance with TSSR 3.0.3, which determined that completion of the surveillance could be delayed up to the 24 month surveillance interval without a significant increase in plant risk. The licensee also completed an operability evaluation for the TS nonconformance and concluded that there was reasonable assurance that the affected hydrogen igniters were operable based on the results of surveillance testing to measure voltage/current draw.

The finding was of more than minor significance because it was associated with the Human Performance attribute for the Containment and adversely affected the Barrier Integrity 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 correctly evaluate a change to perform the surveillance test with the unit at power beginning in March 2002. It was not recognized that TSSR 3.6.3.2.4 would not be met for accessible hydrogen igniters in the Drywell and 755' Elevation Steam Tunnel when performing the test with the unit at power and the licensee incorrectly believed that performance of the current/voltage surveillance test procedure for inaccessible igniters was an appropriate substitute, contrary to existing procedural guidance. The finding was a licensee performance deficiency of very low safety significance because it did not involve an actual reduction in the function of hydrogen igniters in the Primary Containment and Drywell. The inspectors concluded that because the scheduling change to perform the surveillance with the unit at power took place prior to surveillance testing beginning in March 2002, it did not necessarily reflect current licensee performance and no cross-cutting aspect was identified.

Inspection Report# : [2011002](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE TESTING CONTROLS TO PERFORM SURVEILLANCE TESTING OF HYDROGEN IGNITERS IN THE PRIMARY CONTAINMENT AND DRYWELL.

The inspectors identified a finding of very low safety significance with an associated non-cited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control." The licensee failed to establish a test program adequate to assure testing of hydrogen igniters in accessible areas of the Primary Containment and Drywell pursuant to TSSR 3.6.3.2.4. The licensee entered this violation into its corrective action program to investigate the cause and to identify appropriate corrective actions.

The finding was of more than minor significance because it was associated with the Procedure Quality attribute for the Containment and adversely affected the Barrier Integrity Cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding was a licensee performance deficiency of very low safety significance because it did not involve an actual reduction in the function of hydrogen igniters in the Primary Containment and Drywell. The inspectors concluded that this finding affected the cross-cutting aspect of human performance. Specifically, adequate licensee resources involving personnel and procedures did not support successful human performance. CPS 9867.05 was not appropriate to the circumstances because it contained errors and did not provide adequate testing controls for the performance of the surveillance test (IMC 0310 H.2(c)).

Inspection Report# : [2011002](#) (pdf)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO PERFORM PREVENTATIVE MAINTENANCE OF DIVISION 1 SELF TEST SYSTEM (STS) POWER SUPPLY RESULTS IN SPURIOUS REPOSITIONING OF SAFETY RELATED VALVES.

A finding of very low safety significance was self-revealed on August 24, 2010, when the Reactor Water Cleanup (RT) System return line outboard primary containment isolation valve went closed. Many other unintended valve repositioning events occurred from August 25 through August 26, 2010. The licensee failed to perform preventative maintenance on the Division 1 Self Test System (STS) safety-related 5 Volt (V) power supply. As a result, a degraded voltage condition existed in the test circuit, which was identified as the cause for the above valve repositioning events. As a corrective action, the licensee has since installed a temporary plant modification of dual 5 V power supplies for all four divisions of the STS. No violation of regulatory requirements was identified.

The finding was of more than minor significance because the failure to perform preventative maintenance on critical components, if left uncorrected, would potentially lead to a more significant safety concern. This finding was of very low safety significance based on answering "no" to each of the Phase 1 screening questions identified in the

Containment Barrier column of Table 4a in Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings." The inspectors concluded that this finding affected the cross-cutting area of human performance. Specifically, in the area of resources the licensee did not adequately maintain long term plant safety by the maintenance of design margins, minimizing preventative maintenance deferrals, and ensuring maintenance and engineering backlogs which are low enough to support safety. (IMC 0310 H.2(a))
Inspection Report# : [2010005](#) (pdf)

Emergency Preparedness

Significance: SL-IV Jun 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

CHANGES TO EAL BASIS DECREASED THE EFFECTIVENESS OF THE PLAN WITHOUT PRIOR NRC APPROVAL (TRADITIONAL ENFORCEMENT PORTION)

The inspector identified a finding of very low safety significance involving a Severity Level IV NCV of 10 CFR 50.54 (q) for failing to obtain prior approval for an emergency plan change which decreased the effectiveness of the plan. Specifically, the licensee modified the Emergency Action Level (EAL) Basis in EAL HU6, Revision 12, which indefinitely extended the start of the 15 minute emergency classification clock beyond a credible notification that a fire is occurring or indication of a valid fire detection system alarm. This change decreased the effectiveness of the emergency plan by reducing the capability to perform a risk significant planning function in a timely manner.

The violation affected the NRC's ability to perform its regulatory function because it involved implementing a change that decreased the effectiveness of the emergency plan without NRC approval. Therefore, this issue was evaluated using Traditional Enforcement. The NRC determined that a Severity Level IV violation was appropriate due to the reduction of the capability to perform a risk significant planning standard function in a timely manner. The licensee entered this issue into its corrective action program and revised the EAL basis to restore compliance.

The related performance deficiency is tracked as item 2010-502-02.

Inspection Report# : [2010502](#) (pdf)

Significance:  Jun 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

CHANGES TO EAL BASIS DECREASED THE EFFECTIVENESS OF THE PLAN WITHOUT PRIOR NRC APPROVAL (PERFORMANCE DEFICIENCY PORTION)

The inspector identified a finding of very low safety significance involving a Severity Level IV NCV of 10 CFR 50.54 (q) for failing to obtain prior approval for an emergency plan change which decreased the effectiveness of the plan. Specifically, the licensee modified the Emergency Action Level (EAL) Basis in EAL HU6, Revision 12, which indefinitely extended the start of the 15 minute emergency classification clock beyond a credible notification that a fire is occurring or indication of a valid fire detection system alarm. This change decreased the effectiveness of the emergency plan by reducing the capability to perform a risk significant planning function in a timely manner.

The finding was more than minor using IMC 0612, because it is associated with the emergency preparedness cornerstone attribute of procedure quality for EAL and emergency plan changes, and it adversely affected the cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Therefore, the performance deficiency was a finding. Using IMC 0609, Appendix B, the inspector determined that the finding had a very low safety significance because the finding is a failure to comply with 10 CFR 50.54(q) involving the risk significant planning standard 50.47(b)(4), which, in this case, met the example of a Green finding because it involved one Unusual Event classification (EAL HU6).

The associated traditional enforcement is tracked as item 2010-502-01.

Inspection Report# : [2010502](#) (pdf)

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 : October 14, 2011