

Dresden 2

2Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Change In Unit 2 Reactor Water Level Due To A Failure To Follow Procedure

A finding of very low safety significance and associated non-cited violation of Technical Specification 5.4.1 was self-revealed for a Nuclear Station Operator (NSO) failing to follow step G.14.a of procedure DOP 0600-06, "Feedwater Regulating Valve (FWRV) Operation," Revision 39. This resulted in a reduction in Unit 2 reactor water level. The licensee took the following immediate corrective actions. The NSO placed the 2B FWRV in manual and restored reactor water level. The NSO was relieved from duty.

The finding was determined to be more than minor because the finding could be reasonably viewed as a precursor to a significant event. Specifically, the event could have lead to a reactor scram. The inspectors concluded this finding was associated with the Initiating Events Cornerstone. The inspectors evaluated the finding using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of findings," Table, 4a, for the Initiating Events Cornerstone. Since the finding did not contribute to both the likelihood of a reactor scram and the likelihood that mitigation equipment or functions will not be available, the finding screened as Green. This finding had a cross-cutting aspect in the area of human performance, work practices, because the licensee did not ensure the proper use of human error prevention techniques.

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

Mitigating Systems

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Instructions for the Inspection of Safety-related Portions of the Intake Structure

A finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for licensee's failure to establish adequate instructions for inspecting bay 13 and portions of the intake structure surrounding the diesel generator cooling water pumps. Specifically, the procedure that provides guidance for inspecting these structures lacked specific instructions on how to detect and record degradation by erosion and corrosion. The licensee entered this issue into their corrective action program and initiated procedure revisions to provide further direction for capturing the degradation of these structures and related components.

The performance deficiency was determined to be more than minor because if left uncorrected it would have the potential to lead a more significant safety concern. The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, a qualitative assessment of historic surveillance reports found the documented results acceptable. The inspectors determined the cause of this finding did not represent current licensee performance and no cross-cutting aspect was assigned.

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

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Acceptance Criteria for Testing Equipment Relied Upon to Mitigate the Consequences of a Lock and Dam Failure

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” was identified by the inspectors for the licensee’s failure to establish adequate acceptance criteria for testing equipment relied upon to mitigate the consequences of a dam failure. Specifically, the acceptance criteria in DOS 0010-01, “Dresden Dam Failure Equipment Test,” did not consider additional steps required to demonstrate the ability of the screen refuse pumps to deliver water to the safety-related pumps enclosure to support isolation condensers operability. The licensee entered this issue into their corrective action program and initiated procedure revisions to include these additional steps in the procedure’s acceptance criteria.

The performance deficiency was determined to be more than minor because it adversely affected the availability, reliability, and capability of mitigating systems that respond to initiating events to prevent undesirable consequences (i.e., core damage.) The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee estimated that the time it would take to perform the additional steps not included in the procedure’s acceptance criteria was within the time required. The inspectors determined the cause of this finding did not represent current licensee performance and no cross-cutting aspect was assigned.

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

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Instructions for Coping with a Dresden Lock and Dam Failure

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” was identified by the inspectors for the licensee’s failure to establish adequate instructions for coping with the consequences of a dam failure. Specifically, DOA 0010-01, “Dresden Lock and Dam Failure,” lacked controls for the configuration of the associated foreign material exclusion screens and lacked specific instructions on how to shed load off the emergency diesel generators and restore power to the bus associated with equipment relied upon during this event. The licensee entered this issue into their corrective action program and initiated procedure revisions to provide adequate controls on the configuration of the FME screens and to provide further guidance on restoring power to the refuse screen pumps.

The performance deficiency was determined to be more than minor because it adversely affected the availability, reliability, and capability of mitigating systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee estimated that the additional time required to install the inner screens and restore power to the screen refuse pumps was within the required 2-hours. The inspectors determined the cause of this finding did not represent current licensee performance and no cross-cutting aspect was assigned.

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

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Scoping of a Non-Safety-related Pump Into Maintenance Rule

A finding of very low safety significance and associated NCV of 10 CFR Part 50.65(b)(2)(ii), “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” was identified by the inspectors for the licensee’s failure to adequately scope a non-safety-related component relied upon to mitigate an accident. Specifically, the licensee failed to include the screen refuse pumps, non-safety-related pumps credited as a support component for the isolation condensers, safety-related systems, during a dam failure, as part of their maintenance effectiveness program. As a corrective action, the licensee initiated IR1221421, to evaluate the need to include the screen refuse pumps into their maintenance rule program.

The performance deficiency was determined to be more than minor because it adversely affected the availability,

reliability, and capability of mitigating systems that respond to initiating events to prevent undesirable consequences (i.e., core damage.) The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee performed further review of related maintenance and provided reasonable assurance the screen refuse pumps did not experience a complete loss of function. The inspectors determined the cause of this finding did not represent current licensee performance and no cross-cutting aspect was assigned.

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

Significance: G Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Control Room Ventilation Smoke Detector Failure to Perform Post-Maintenance Testing

The inspectors identified a finding of very low safety significance and associated NCV of the Dresden Nuclear Power Station Renewed Facility Operating License for the licensee's failure to perform adequate post-maintenance testing on a smoke detector in the Control Room Ventilation System ductwork. Corrective actions by the licensee included creating an action to determine what happened with the test results and moving the repair of the smoke purge dampers up in the schedule.

Using IMC 0612, Appendix B, "Issue Screening," issued on January 1, 2010, the inspectors determined that this finding was more than minor. The inspectors were unable to resolve the more than minor issue based on the examples in IMC 0612, Appendix E, "Examples of Minor Issues," dated August 11, 2009. The inspectors did, however, determine that the performance deficiency was associated with the Reactor Safety – Mitigating Systems Cornerstone attribute of equipment performance. The failure to perform post-maintenance testing on the smoke detector could impact the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding had a cross-cutting aspect in the area of Work Control because the licensee did not appropriately plan work activities by incorporating the need for planned contingencies. Specifically, when the control room ventilation dampers would not reposition to the smoke purge position, the licensee still had the ability to test the alarms associated with the detector but failed to do so (H.3(a)).

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

Significance: G Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Surveillance Testing on East Turbine Building Vent HVAC Smoke Detectors

The inspectors identified a non-cited violation (NCV) of the Dresden Nuclear Power Station Renewed Facility Operating License having very low safety significance for the licensee's failure to perform adequate testing on four smoke detectors in the east turbine building ventilation system ductwork. This violation was presented to the licensee late in the inspection period and the licensee had not had time to develop corrective actions before the end of the inspection period.

Using Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," issued on January 1, 2010, the inspectors determined that this finding was more than minor. The inspectors were unable to resolve the more than minor issue based on the examples in IMC 0612, Appendix E, "Examples of Minor Issues," dated August 11, 2009. The inspectors did however, determine that the performance deficiency was associated with Reactor Safety – Mitigating Systems cornerstone attribute of equipment performance. The failure to perform post-maintenance testing on the smoke detectors in the control ventilation ductwork could impact the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors completed a Phase 1 significance determination of this issue using IMC 0609, "Significance Determination Process," Appendix A, Attachment 0609.04, dated January 10, 2008. The inspectors determined that the finding affected fire protection defense-in-depth strategies and therefore, per Table 3b, referred to IMC 0609, Appendix F, dated February 28, 2005. The inspectors determined that the Finding Category was Fixed Fire Protection Systems and the inspectors determined that there was a low degree of degradation since the non-functional detectors only detected smoke from a single source and there were no combustibles of concern located near the detectors. Since the degree of degradation was low the issue screened as green. The inspectors determined that this finding has a cross-cutting aspect in the area of Work Control because the licensee did not appropriately plan work activities by incorporating the need for planned contingencies.

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Undocumented Technical Basis for change to EOP ATWS Mitigation Strategy

The inspectors identified a finding of very low safety significance and associated NCV of Dresden Technical Specification 5.4.1, for failing to maintain adequate procedures for implementing the emergency operating procedures (EOP). Specifically, the licensee developed and implemented procedures that altered an EOP mitigation strategy, without establishing and documenting the technical basis for the deviation from the Boiling Water Reactor Owners Group (BWROG) Emergency Procedure Guidelines (EPG). The licensee entered the issue into their corrective action program. Licensee corrective actions included revising three procedures to bring their mitigation strategy into alignment with the BWROG EPG.

This issue was associated with the Procedure Quality attribute of the Mitigating Systems Cornerstone, and is more than minor, in that the licensee implemented an Emergency Operating Procedure mitigation strategy that deviated from the BWROG EPG, without providing adequate technical justification for the deviation, thereby affecting the cornerstone objective of ensuring that the licensee is capable of mitigating the undesirable consequences associated with an Anticipated Transient Without SCRAM (ATWS). The finding was determined to be of very low safety significance because no actual event requiring the use of deficient procedures occurred while the deficient procedures were in effect. The inspectors determined that the finding was not associated with a cross-cutting aspect because the implementation of the non conservative ATWS mitigating actions occurred more than three years ago, and, therefore, was not reflective of current performance.

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

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Robust Indication of Adequate Oil Level in High Pressure Coolant Injection Booster Pump Sight Glasses

The inspectors identified a Non-Cited Violation of Technical Specification 5.4.1 for the licensee's failure to implement the section of the high pressure coolant injection (HPCI) booster pump maintenance procedure that prescribes how to robustly mark the HPCI booster pump sight glasses to indicate the acceptable oil levels for the bearings of the Unit 2 and 3 HPCI booster pumps. Upon being informed of the condition, the licensee verified, using measurements, that the oil level for the bearings was adequate and entered the condition in their corrective action program to provide a more robust indication of the acceptable oil level.

This finding is of greater than minor safety significance because if left uncorrected, it has the potential to lead to a more significant safety concern. Specifically, if a more robust minimum level indication is not used, the wires could slide down the sight glass to the point that they do not prevent operators from allowing the oil level to drop below the minimum acceptable level for the pump to perform its safety function. The finding impacted the Mitigating Systems Cornerstone because it involved degradation of HPCI. It is not greater than Green because it did not result in the loss of operability of the HPCI system. The inspectors determined that this finding has a cross cutting aspect in the area of Problem Identification and Resolution under the component Corrective Action Program because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance and complexity. P.1(d)

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Magnetic Particle Examination on the 3/2/1501-20/20-10 U3 LPCI Support in Accordance with Procedures

A finding of very low safety significance (Green) and associated Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to accomplish activities affecting quality in accordance with procedures. Specifically, the licensee's vendor non-

destructive examination (NDE) examiner failed to perform a magnetic particle (MT) examination in accordance with procedures on the 3/2/1501-20/20-10 Unit 3 low pressure coolant injection support. The licensee initiated corrective action document IR 01135770 to address the issue.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The failure to perform an adequate MT examination could have allowed undetected flaws to remain in service. This finding is of very low safety significance (Green) because the inspectors answered no to all of the characterizations worksheet questions in Table 4a of MC 0609.04. Specifically, no indications were identified when the examination was re-performed. This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee proceeded in the face of uncertainty and unexpected circumstances by continuing to perform the examination after the equipment became damaged. The licensee's examiner also elected to continue after identifying there was material present on the pipe in a location that could interfere with the exam. In addition, due to different circumstances surrounding the exam such as: component location, equipment weight, and environmental conditions, the examiner became tired. Nonetheless, the examiner elected to continue to perform the examination in this condition. H.4(a)

Inspection Report# : [2010005](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify and Correct Test Procedures to Assess the As-Found Trip Setpoint for Pressure Switches that Satisfy Technical Specification Functions

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to assure that conditions adverse to quality associated with pre-conditioning were promptly identified and corrected. The licensee's corrective actions included actions for Engineering to evaluate all the Technical Specification functions that do not have test valves installed on their pressure switches and justify the potential unacceptable preconditioning as acceptable or take other actions as appropriate. The licensee entered this finding into the corrective action program as issue report (IR) 1120159.

The finding was determined to be more than minor because it impacted the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors did not identify any cross-cutting aspect associated with this finding. The inspectors evaluated the finding using IMC 0609, "Significance Determination Process," Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors answered "No" to all questions in the Mitigation System Cornerstone column of Table 4a, "Characterization Worksheet for IE, MS, and BI Cornerstones," therefore, the finding screened as Green (very low safety significance).

Inspection Report# : [2010004](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow TS 5.5.2 Implementing Procedures

The inspectors identified a non-cited violation of Technical Specification (TS) Section 5.5.2, "Primary Coolant Sources Outside Containment," because the licensee was not following procedures which implemented TS 5.5.2. The licensee's corrective actions included: performing Operability Evaluation 11-001; quantifying the leakage from check valve 3-1201-306 three times per week, and repairing the leak on March 10, 2011.

The inspectors determined the finding was more than minor because it was similar to IMC 0612, Appendix E, example 2.h, in that multiple examples were identified where non-licensed operators failed to identify that the leakage was increasing. This resulted in the failure to implement the TS 5.5.2 program. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Barrier Integrity Cornerstone, because portions of the barriers between the primary and secondary containment were degraded. The

inspectors were able to answer “No” to all four questions on Table 4a under the Barrier Integrity Cornerstone. Therefore, the finding was determined to be of very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not ensure supervisory and management oversight of work activities such that nuclear safety was supported. Specifically, non-licensed operators were expected to identify an increase in system leakage without adequate oversight to do so.
Inspection Report# : [2011002](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Installation of Nonconforming Material into a Safety Related System

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XV, “Nonconforming Materials, Parts, or Components” for the installation of a commercially dedicated part for use in a safety-related system which failed testing acceptance criteria on October 6, 2008. The licensee’s corrective actions included replacing the nonconforming material on November 11, 2009. The licensee made procedure changes to clarify the requirements for documentation of the technical justification of accepting discrepancies. The licensee entered this finding into the corrective action program as issue report (IR) 1068559.

The finding was determined to be more than minor because the finding was similar to IMC 0612, Appendix E, Example 5c (dated August 11, 2009). The inspectors determined the finding could be evaluated using IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” Table 4a for the Barrier Integrity Cornerstone. The inspectors answered all four questions in Table 4a, “No,” therefore, the inspection finding screened as having very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance - Decision Making. Specifically, there was a systematic process to ensure that discrepancies identified in the commercial grade dedication process were properly resolved, which was not followed. H.1(a)

Inspection Report# : [2010004](#) (pdf)

Emergency Preparedness

Significance: SL-IV Jun 23, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

(Traditional Enforcement) Changes to EAL Basis Decreased the Effectiveness of the Plan without Prior NRC Approval

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 24, 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.

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

Significance:  Jun 23, 2011

Identified By: NRC

Item Type: FIN Finding

Changes to EAL Basis Decreased the Effectiveness of the Plan without Prior NRC Approval

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 24, 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 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).

Due to the age of this issue, it was not determined to be reflective of current licensee performance and therefore a cross-cutting aspect was not assigned to this finding.

The related traditional enforcement item is tracked as item 2011-502-01.
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