

## Dresden 3

### 2Q/2005 Plant Inspection Findings

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#### Initiating Events

**Significance:**  Nov 12, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

##### **Unexpected Control Rod Motion During Surveillance Testing**

On November 12, 2004, a performance deficiency was self-revealed when operators were performing surveillance procedure DOS 500-07, "Reactor Mode Switch in Shutdown Functional and Scram Auxiliary Functions Valve Operability Test," Revision 21. The operators manually scrambled the plant with the expectation of no rod movement with the reactor in Mode 5. Ten control rods moved after the mode switch was taken to shutdown. The surveillance test procedure had a prerequisite, Step E.2.a, that stated, "If fuel is in the reactor vessel, then verify all control rods are fully inserted or control rods are removed per DOP 300-18." Not all the control rods were fully inserted because some had been replaced and were in the process of being vented. The venting procedure opened the 3-0305-101 and 3-0305-102 valves. These were the control rod piston inlet and outlet valves. The open position of these valves allowed a flow path that caused the rods to insert when the scram signal was inserted. The crew knew that the valves were open but did not understand that the equipment lineup would cause the control rods to insert. The operating crew did not understand and therefore did not meet the procedure prerequisite. The primary cause of this violation was related to the cross-cutting area of Human Performance.

The finding was greater than minor because if left uncorrected the failure to adhere to surveillance test prerequisites could become a more significant safety concern. The inspectors completed a Phase 1 significance determination of this issue using IMC 0609, "Significance Determination Process," Appendix G, Check List 7, dated May 25, 2004. The three areas listed in the checklist that would require a Phase 2 or 3 analysis, and therefore indicate a more significant issue, were not applicable to this finding. Therefore, the inspectors concluded that the finding was of very low safety significance. Operations personnel were temporarily removed from duties, all control rod drive blades involved and adjacent fuel were inspected using cameras, hydraulic control units for the control rod drives were walked down to verify valve positions, and all operations personnel were briefed on this event. This issue was a Non-Cited Violation of Technical Specification 5.4.1, which required the implementation of written surveillance procedures for the control rod drive system. (Section 1R22)

Inspection Report# : [2004013\(pdf\)](#)

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#### Mitigating Systems

**Significance:**  Jun 29, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

##### **Isolation Condenser Time Delay Relays Exceed TS Value**

On September 29, 2004, a performance deficiency involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, was identified by the inspectors. The licensee had implemented inadequate corrective actions for a deficient condition quality that occurred on September 6, 1996, to prevent recurrence of a similar deficient condition that occurred on September 29, 2004. Both events involved the failure of safety related time delay relays to meet acceptance criteria due to the use of a stopwatch as a tool for calibration of safety related equipment. The primary cause of this finding was related to the cross-cutting issue of problem identification and resolution.

The finding was greater than minor because it impacted the mitigating system cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events and because it affected the reliability of a safety related component. As a result of the 2004 event, the licensee initiated issue report 258172, created an action item to review the root cause of the event, revised the isolation condenser initiation time delay relay calibration procedure to require the use of a strip chart recorder, and created an action item to evaluate the extent of condition. The finding was of very low safety significance because the isolation condenser system did not lose the ability to perform its safety function and all other mitigating systems were available.

Inspection Report# : [2005008\(pdf\)](#)

**Significance:**  Apr 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

##### **Safe Shutdown Procedure Failed to Specify Correct Number of Turns for Opening Valve**

Green. A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B requirements.

The licensee failed to specify the correct number of turns in a hot shutdown procedure for partially opening a valve relied upon to mitigate a fire. The incorrect number of turns specified in the procedure could have caused a significant delay in performance of safe shutdown actions in the event of a fire. Once identified, the licensee entered the finding into their corrective action program to revise the affected procedures.

This finding was more than minor because the procedural error could have caused a significant delay in the performance of safe shutdown actions in the event of a fire. The issue was of very low safety significance because the licensee's analysis showed that sufficient margin remained for the performance of the safe shutdown actions. The finding was a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, which required procedures affecting quality to be of a type appropriate to the circumstances. (Section 1R05.5b)

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Jan 05, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Performance Deficiency While Performing Surveillance Procedure DIS 700-02, "APRM/RBM [average power range monitor/rod block monitor] Flow Instrumentation Total Drive Flow Adjustment," Revision 16**

On January 5, 2005, a performance deficiency involving a Non-Cited Violation of Technical Specification 5.4.1 was self revealed when instrument maintenance technicians were performing Dresden Instrument Surveillance 700-02, "APRM/RBM [average power range monitor/rod block monitor] Flow Instrumentation Total Drive Flow Adjustment," Revision 16. The technicians misadjusted the recirculation flow signal to the reactor protection system which required entry into Technical Specification 3.3.1.1 Limiting Condition for Operation A.1 and C.1 for Average Power Range Monitor Channels 1, 2, and 3 Flow Bias Trips. The instrument maintenance technicians were using the averaging function of a Fluke 189 digital multi-meter. The technicians had not been trained on how to use the function and the procedure did not provide instructions on how to use the multi-meter. The mis-use of the averaging function resulted in adjusting the recirculation flow converter signal too high.

The finding was greater than minor because it impacted the Mitigating System Cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events and because it affected the procedure quality of a surveillance test procedure. The finding was of very low safety significance because it impacted the reactor protection system for a time period of less than 1 minute. The surveillance test procedure was changed to include instructions on how to use the averaging function of a digital multi-meter and the instrument maintenance technicians were briefed on this event and trained on how to use the averaging function of the digital multi-meter. (Section 1R22)  
Inspection Report# : [2005003\(pdf\)](#)

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**Significance:** Dec 11, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Modification to the Unit 3 Core Spray Piping**

On December 11, 2004, a performance deficiency involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI and Criterion III was identified by the inspectors. The licensee failed to perform post-modification testing and to assure critical aspects of the core spray modification installation, which included obtaining gap measurement for mechanical joints, verifying the capability of the tooling to produce the required surface finishes on pre-fabricated components, and verifying that the pre-fabricated components were properly machined, met the leakage analysis specifications.

The finding was greater than minor because it affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, specifically the design control attribute. The finding was of very low safety significance because the licensee was able to demonstrate, with the assistance of General Electric, that there was reasonable assurance that the modification was installed properly. The licensee planned to revise CC-AA-107, "Configuration Change Acceptance Testing Criteria," and/or CC-AA-107-1001, "Post Modification Acceptance Testing." The procedure change would provide that the substitution for post modification testing would ensure quality at least equivalent to that specified in the original design bases. In addition, the licensee planned to confirm that the installed core spray modification had been installed with a level of quality equivalent to the original design basis.

Inspection Report# : [2005008\(pdf\)](#)

**G**

**Significance:** Nov 13, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to Adequately Ensure That a Contract Worker Followed Station Standards While Working in an Area Flagged with a Protected Pathway Sign**

A self revealed finding of very low safety significance was identified involving a Non-Cited Violation of Technical Specification 5.4.1. On November 13, 2004, a licensee contracted worker failed to follow station procedures and standards and ignored protected pathway equipment signs. This error resulted in the temporary loss of power to station safety related systems. The worker was performing electrical work, when he inadvertently operated the bus 39 to bus 38 crosstie breaker, causing it to trip. Work was stopped, power was restored back to station loads in less than 1 hour, and the worker was counseled. By the end of the report period the licensee had not completed their Apparent Cause Evaluation to further discuss corrective actions. The primary cause of this violation was related to the cross-cutting area of Human Performance.

This finding was greater than minor because if maintenance personnel continued to perform unrestrained work within protected pathway boundaries it would become a more significant safety concern. The finding was of very low safety significance because the operators rapidly restored power to station loads, other mitigating systems were available, and the total exposure time was short. (Section 1R20.1.(2))

Inspection Report# : [2004013\(pdf\)](#)

**G**

**Significance:** Oct 08, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Source of Make-up Water**

A finding of very low significance was identified by the inspectors on June 5, 2004, involving a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The abnormal operating procedure instructions for response to external flooding, and surveillance test procedure for the diesel driven pump necessary to provide make-up to the isolation condenser for response to external flooding, were not adequate for the circumstances. The licensee planned to change the surveillance test procedure and perform a full flow test of the pump in the near future. The licensee planned to review the abnormal operating procedure and revise the procedure as appropriate.

This finding was more than minor because it affected the equipment performance and procedure quality attributes of the mitigating systems cornerstone, and affected the cornerstone objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The issue was of very low safety significance based on the low initiating event probability, and because of the slow onset of the flooding and the reduced decay heat in the reactor core at the time recovery actions would be necessary, the licensee would be able to reasonably perform recovery actions that would prevent core damage.

Inspection Report# : [2004010\(pdf\)](#)

**G**

**Significance:** Oct 08, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Prevent Recurrence of Inoperable Condenser Low Vacuum Reactor Protection System Switches**

A finding of very low significance was identified on July 1, 2004, by the inspectors involving a Non-Cited Violation of Technical Specification 3.3.1.1. The licensee failed to take adequate corrective actions to prevent recurrence of inoperable condenser low vacuum reactor protection system switches, failed to recognize the switches were inoperable, and failed to enter the appropriate Technical Specification Limiting Condition for Operation when the 3C and 2A turbine main condenser low vacuum reactor protection system scram channels were inoperable. The primary cause of the violation was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because it affected the mitigating systems cornerstone objective by affecting the reliability of the reactor protection system. The finding was determined to be of very low safety significance (Green) because one inoperable channel would not prevent the reactor to scram on low condenser vacuum. Corrective actions by the licensee included installing temporary vent valves on the 3C and 2A sensing lines, enhancing operations training materials, revising the operations's procedure, and performing internal and external condenser walkdowns during the next outage on Unit 2 and Unit 3.

Inspection Report# : [2004010\(pdf\)](#)

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## **Barrier Integrity**

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**Significance:** Feb 08, 2005

Identified By: NRC

Item Type: FIN Finding

#### **Failure of the Refuel Floor Damper & Design Deficiency with the Standby Gas Treatment System**

On February 8, 2005, a performance deficiency was identified by the inspectors. The licensee failed to identify the failure of the refuel floor damper in the reactor building ventilation system in a timely manner which resulted in the late discovery of a design deficiency with the standby gas treatment system. The standby gas treatment system used reactor building ventilation ductwork before directing air flow to the standby gas treatment filters. The refuel floor damper would throttle down, per design, to ensure a local negative differential pressure in the reactor water cleanup heat exchanger rooms with respect to the refuel floor. As a result, air flow to the standby gas treatment system was significantly restricted and affected the standby gas treatment recovery time for the entire secondary containment. The damper failed prior to 2003, masking the design deficiency, and was unnoticed until February 2005. Also, inadequate inspections of the dampers in the reactor building ventilation system during operation of the standby gas treatment system contributed to the late discovery of this design issue. The primary cause of this finding was related to the cross-cutting issue of problem identification and resolution.

The finding was greater than minor because, if left uncorrected, the failure to identify deficient plant equipment would become a more significant safety concern because important systems could be rendered inoperable and because it impacted the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. In addressing this issue, the licensee gagged each unit's refuel floor damper open to 80 percent to ensure adequate air flow to the

standby gas treatment system. The finding was of very low safety significance because the standby gas treatment system was always able to restore secondary containment differential pressure within the Technical Specifications allowed outage time of four hours.

Inspection Report# : [2005008\(pdf\)](#)

**G**

**Significance:** Nov 05, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Electricians Removed the 3d Drywell Cooler Breaker While it Was Tagged Out-of-service in the Racked-to-test Position**

On November 5, 2004, a performance deficiency was self-revealed when electrical maintenance personnel removed the 3 B drywell cooler breaker, that was tagged out-of-service in the racked to test position, to perform a preventive maintenance task. During the performance of Unit 3 Division 1 undervoltage testing, alarm E-4, "DW [drywell] Cooler Blower Trip," on panel 923-5, was received in the control room. A non-licensed operator was dispatched to the breaker cubicle and found the cubicle empty. Electrical maintenance personnel had removed the breaker to perform a preventive maintenance task that was scheduled to be performed after the completion of undervoltage testing. The primary cause of this violation was related to the cross-cutting area of Human Performance.

The finding was greater than minor because if left uncorrected the failure to adhere to clearance order tag requirements and the failure to be aware of plant equipment status prior to re-alignment or removal could become a more significant safety concern. The inspectors completed a Phase 1 significance determination of this issue using IMC 0609, "Significance Determination Process," Appendix G, Check List 7, dated May 25, 2004. The three areas listed in the checklist that would require a Phase 2 or 3 analysis were not applicable to this finding, therefore, the inspectors concluded that the finding was of very low safety significance. The electricians were temporarily removed from duties and counseled, and all electrical maintenance department personnel were briefed on this event. This issue was a Non-Cited Violation of Technical Specification 5.4.1 which required the implementation of written procedures for the control of locking and tagging of plant equipment. (Section 1R20.1.(1))

Inspection Report# : [2004013\(pdf\)](#)

**G**

**Significance:** Oct 08, 2004

Identified By: NRC

Item Type: FIN Finding

**The Licensee Did Not Control Tools and Equipment Staged to Install a Temporary Modification to Keep the Control Room Emergency Ventilation System Dampers Open in the Event of an Accident**

A finding of very low safety significance was identified on August 3, 2004, by the inspectors during the walkdown of a corrective action for a previous event. The licensee had an abnormal operating procedure requirement to have tools and equipment staged to install a temporary modification to keep the control room emergency ventilation system dampers open in the event of an accident. The equipment necessary to install the temporary modification was in various stages of disarray. Some equipment was not labeled and some necessary tools were missing. The licensee identified a number of corrective actions including properly packaging the necessary tools and equipment, revising procedures, and initiating a training request to ensure operations personnel are properly trained in the use of the tools and equipment.

The finding was more than minor because it affected the Barrier Integrity Cornerstone attributes of configuration control and the cornerstone objective of protecting persons in the control room from radionuclide releases caused by accidents or events. The issue was of very low safety significance due to it only impacting the radiological barrier function of the control room emergency ventilation system. This was not a violation of regulatory requirements.

Inspection Report# : [2004010\(pdf\)](#)

**G**

**Significance:** Oct 08, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**The Licensee Did Not Move the Reactor Building Ventilation System Into the Maintenance Rule (a)(1) Category**

A finding of very low safety significance was identified by the inspectors involving a Non-Cited Violation of 10 CFR 50.65, "Maintenance Rule," requirements. The licensee failed to identify that the number of functional failures for the reactor building ventilation system had exceeded the established performance criteria and did not move the reactor building ventilation system into the a(1) category. Once identified, the reactor building ventilation system was moved into the a(1) category on October 8, 2004. The licensee had not yet determined system goals or established corrective actions by the close of the inspection period. The primary cause of the violation was related to the cross-cutting area of Problem Identification and Resolution in that functional failures of the system were not properly entered into the corrective action program.

This issue was more than minor because it involved the design control and barrier performance attributes of the barrier integrity cornerstone; and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The issue was of very low safety significance because the licensee was still able to maintain secondary containment.

Inspection Report# : [2004010\(pdf\)](#)

**G**

**Significance:** Oct 08, 2004

Identified By: Self Disclosing  
Item Type: NCV NonCited Violation

### **The Licensee Failed to Correctly Restore the Control Room Emergency Ventilation System to Operable Status Following Maintenance**

A self-revealed finding of very low safety significance involving a Non-Cited Violation of Technical Specification 3.7.4 was identified on April 28, 2004. The licensee failed to correctly restore the control room emergency ventilation system to operable status following maintenance. This left the control room emergency ventilation system inoperable for greater than its Technical Specification allowed outage time. This finding was self-revealed when the system did not operate properly several days later during a routine system realignment. As corrective action, the licensee revised a procedure to give better guidance on how to remove the temporary modification.

The issue was more than minor because it affected the Barrier Integrity Cornerstone attributes of design and configuration control and the cornerstone objective of protecting persons in the control room from radionuclide releases caused by accidents or events. The issue was of very low safety significance due to the short duration of the condition of the system.

Inspection Report# : [2004010\(pdf\)](#)

**G**

**Significance:** Aug 18, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Adequately Perform an Operability Evaluation**

A finding was identified by the inspectors involving the failure to adequately perform an operability evaluation. This failure was a Non Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control." On November 13, 2003, the licensee identified in Engineering Evaluation EC34593 that 8 inch diameter 150 lb flanges were installed on the main steam relief valve discharge lines on each unit since construction. The engineering evaluation stated that 300 lb flanges were required. Operability Evaluation 03-013, "Electromatic Relief Valve (ERV) Discharge Piping Flanges," stated that the discharge flanges were operable and no further actions were required. The inspectors reviewed the operability evaluation on August 18, 2004. The inspectors identified that the licensee's evaluation demonstrated that the stresses on the flanges exceeded the Code allowable values, but the licensee's evaluation did not state this fact. The operability evaluation was closed with no specific action required to return the flanges to their design specifications. The primary cause of this violation was related to the cross-cutting area of Human Performance.

The finding was greater than minor because if left uncorrected the failure to perform adequate operability evaluations could become a more significant safety concern. If the inspectors had not intervened the licensee would not have taken action to bring the relief valve discharges flanges up to Code requirements. As corrective action, the licensee re-performed the evaluation and determined that the flanges were operable, but degraded. The licensee planned further evaluation to make a successful case for Code Committee approval or replace the flanges during the next refueling outage for both Units 2 and 3. To correct the problems with operability evaluations, the licensee had previously implemented a Technical Rigor program. This finding had very low safety significance because the flanges were determined to be operable. (Section 1R15)  
Inspection Report# : [2004013\(pdf\)](#)

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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**

[Physical Protection](#) information not publicly available.

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## **Miscellaneous**

Last modified : August 24, 2005