

Dresden 3

1Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Review of Unit 2/3 Condensate Storage Tank Overflow Event

A performance deficiency involving a non-cited violation of Technical Specification (TS) 5.4.1, was self revealed on November 20, 2006, when during the Unit 3 hotwell drain down to support Unit 3 startup, operators allowed the 2/3 condensate storage tank (CST) to overflow into the Unit 2 turbine building equipment drain system, which eventually overflowed onto the condensate/condensate booster pump room floor. Corrective actions by the licensee included implementing a standard pre-job brief to address risk and contingencies for this infrequently performed evolution. Additional actions involved revising procedures to include appropriate actions if the 2/3 CST high water level alarm is exceeded and limitations and precautions associated with proper 2/3 CST level, hotwell level, and emergency reject operations.

The finding was considered more than minor because it could be reasonably viewed as a precursor to a significant event. The finding was determined to be of very low safety significance because the event did not affect credited items for shutdown safety. This finding was related to the cross-cutting issue of human performance (resources) because the licensee did not provide complete, accurate and up-to-date procedures to plant personnel.

Inspection Report# : [2006011](#) (*pdf*)

Significance:  Oct 06, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inappropriate Basis in 10 CFR 50.59 Evaluation for Temporary Modification

The inspectors identified a Severity Level IV Non-Cited Violation (NCV) of 10 CFR 50.59 "Changes, Tests, and Experiments," having very low safety significance (Green) for the licensee's failure to perform an adequate safety evaluation review for changes made to the facility per Temporary Modification EC TCCP 354622. Specifically, the licensee failed to appropriately evaluate the installation of a temporary jumper at the Electro-Hydraulic Control (EHC) Card 2-5640-A37 to bypass the function of the "A" Main Steam Pressure Regulator (MSPR). The licensee's 10 CFR 50.59 safety evaluation 2005-01-001 failed to provide a basis as to why the activity which bypassed one of the two MSPRs did not present more than minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety previously evaluated in the Updated Final Safety Analysis Report (UFSAR).

Inspection Report# : [2006012](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform 50.59 Evaluation of Non-Code Conforming Buried HPCI Piping (Section 1R02)

The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.59(d)(1) for the licensee's failure to document an evaluation which provides the basis for the determination that a change, test, or experiment did not require a license amendment. Specifically, the licensee's 10 CFR 50.59 screening failed to provide an evaluation as to why the installation of the high pressure coolant injection (HPCI) suction piping, which did not meet USAS B31.1 Code requirements, did not present more than a minimal increase in the likelihood of occurrence of a malfunction of a Structure,

System, or Component (SSC) important to safety. The licensee entered this issue into the corrective action program and planned to do additional weld metal tensile and bend tests on a remnant piece of the non-conforming HPCI pipe. The licensee intended to perform this testing to demonstrate quality levels equivalent to that prescribed by the USAS B31.1 Code.

Because the issue potentially impacted the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. The finding was determined to be more than minor because the inspectors could not reasonably determine that this change, which adversely affected equipment important to safety, would not have ultimately required NRC approval. The licensee considered the nonconforming replacement pipe operable, based upon satisfactory hydrostatic tests of the installed pipe to demonstrate structural and leakage integrity at the time of installation. The inspectors completed a significance determination of the underlying technical issue using NRC's inspection manual chapter (IMC) 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," dated November 22, 2005, and answered "no" to the Mitigating Systems screening questions in the Phase 1 Screening Worksheet. Based upon this Phase 1 screening, the inspectors concluded that the issue was of very low safety significance (Green). In accordance with the Enforcement Policy, the violation was therefore classified as a Severity Level IV Violation.

Inspection Report# : [2007002](#) (*pdf*)

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Significance: Oct 06, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

EQ Binder Failed to Include Conductor Temperature Rise

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" having very low safety significance (Green) for the licensee's failure to evaluate and include the conductor temperature rise for the 5KV cables for the CS and LPCI pump motors in the Equipment Qualification Binder EQ-04D. The EQ Binder used the cable design limit of 194 degrees F in calculating the qualified life of the 5KV cables instead of the sum of the conductor temperature rise and the ambient temperature, during and post accident, which together exceeded the cable design limit.

Inspection Report# : [2006012](#) (*pdf*)

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Significance: Jun 29, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Standby Liquid Control Valves Installed In The Plant Different than those Assumed in a Design Calculation

On May 5, 2006, the inspectors identified a finding involving a non-cited violation of 10 CFR 50.62 associated with a licensee-identified material condition, and having very low safety significance. The licensee identified that the inputs to a design analysis (DRE01-0066, "Dresden Unit 2 & 3 Standby Liquid Control System Discharge Piping Pressure Drop," Revision 1) were non-conservative. Some of the valves installed in the plant were not the same type of valves assumed to be installed in the design analysis. This ultimately resulted in a change in a design calculation that demonstrated that standby liquid control system relief valves could lift upon system initiation during an anticipated transient without scram (ATWS) event.

The finding was more than minor because it affected the design control attribute of the Mitigating Systems objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because the standby liquid control system could be recovered during an ATWS event. Cycling of the relief valves would not prevent most of the borated solution from being injected into the reactor pressure vessel, and the licensee was able to demonstrate that the reactor remained within the acceptance criteria of their original ATWS analysis even if no boron solution was injected into the reactor pressure vessel while the relief valves lifted. The licensee planned to use a more enriched form of boron so that one pump could be used to meet the 10 CFR 50.62 requirements. This enriched boron would replace the current boron in the storage tanks in the next refueling outages. This issue was a non-cited violation of 10 CFR 50.62.

Inspection Report# : [2006007](#) (*pdf*)

G**Significance:** Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Licensee's Failure to Develop a Pre-fire Plan for Fire Zone 8.2.6.A, Elevation 534'

A performance deficiency involving a non-cited violation of the Dresden Nuclear Power Station Renewed Facility Operating License was identified by the inspectors due to the licensee's failure to develop a pre-fire plan. Specifically, on November 17, 2006, the inspectors identified that the licensee failed to develop a pre-fire plan for Fire Zone 8.2.6.A, elevation 534'. The licensee has since developed a pre-fire plan for the Fire Zone 8.2.6.A, Elevation 534'.

This finding was considered more than minor because it involved the Barrier Integrity attribute of procedural quality for the control room ventilation system because the failure to develop a pre-fire plan for Fire Zone 8.2.6.A could have adversely impacted the fire brigade's ability to fight a fire. The finding was related to the performance of the fire brigade and was not suitable for SDP evaluation. Therefore, the finding was reviewed by NRC management and determined to be of very low safety significance because no safe shutdown equipment was located in this fire zone.

Inspection Report# : [2006011](#) (*pdf*)**G****Significance:** Jun 29, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Perform Procedure Steps in the Proper Sequence by Operations Caused Emergency Safety Feature Systems Actuation

On April 5, 2006, a performance deficiency involving a non-cited violation of TS 5.4.1 was self revealed when an auxiliary nuclear station operator (Aux NSO) and a unit supervisor (US) were performing Dresden Operating Procedure (DOP) 0500-03, "Reactor Protection System Power Supply Operation," Revision 27. The Aux NSO and US did not verify that the area radiation monitor's (ARM) power supply voltage was normal and did not reset all trips on the ARM modules prior to removing an installed jumper which bypassed the trips. This required entry into TS 3.6.4.1 Limiting Condition of Operation, Action A for reactor building low differential pressure. Both operators had been provided with marked up copies of the procedure, and briefed on jumper placement and removal and on the use of concurrent verification prior to the event.

The finding was greater than minor because it impacted the structures, systems, and components attribute of the Barrier Integrity cornerstone objective. The finding was of very low safety significance because it impacted the reactor building differential pressure for a time period of less than 1 hour. As an immediate corrective action, the two individuals were temporarily removed from licensed shift duties. The operations department was tasked to develop a dynamic learning activity for place-keeping and jumper manipulation for all operations personnel, and to create an internal operating experience document to communicate lessons learned. This finding affected the cross-cutting area of human performance (personnel).

Inspection Report# : [2006007](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

G**Significance:** Sep 30, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Satisfy Technical Specification LHRA Access Requirements During Entry Into a Steam Sensitive Area at Power

A self-revealed finding of very low safety significance, and an associated violation of NRC requirements were identified for the failure to satisfy Technical Specification requirements for access into a high radiation area with dose rates in

accessible areas greater than 1000 mrem/hour. As a result, a worker was allowed to enter a steam sensitive area at power that was controlled as a locked high radiation area (LHRA), without adequate recognition of the area radiological conditions and without positive radiological control over the activities within the area. The electronic dosimetry (ED) worn by the worker alarmed when significantly higher than expected dose rates were encountered, resulting in some unnecessary dose to that worker.

The issue was more than minor, because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone, and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The issue represents a finding of very low safety significance because it did not involve ALARA Planning or work controls, there was no overexposure, nor did a substantial potential for an overexposure exist given the radiological conditions in the area and the worker's response to the ED alarm. Also, the licensee's ability to assess worker dose was not compromised. A Non-Cited Violation of TS 5.7.1 was identified for the failure to comply with the requirements for access into a high radiation area with dose rates accessible to personnel greater than 1000 mrem/hour. Corrective actions taken by the licensee included modification to the survey maps for steam sensitive areas, tagging of certain LHRA keys to remind radiation protection staff to coordinate entries into these areas with operations staff, and plans to reevaluate the radiation protection department practices for entry into steam sensitive areas, and in general for entry into high radiation areas with the potential for significant dose rate gradients.

Inspection Report# : [2006010](#) (*pdf*)

Public Radiation Safety

Physical Protection

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

Miscellaneous

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