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Dresden 2 – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Jun 30, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Maintain Configuration Control in the Unit 2 Containment Pressure Suppression System

A finding of very low safety significance and associated non-cited violation of Technical Specification (TS) 5.4.1, "Procedures", was self-revealed on May 26, 2017, for the licensee's failure to maintain configuration control in the Unit 2 containment pressure suppression system. Specifically, the licensee failed to maintain the instrument air stop valve to the actuator for the Unit 2 torus vent, air operated valve (AOV) 2-1601-60, open with the reactor mode switch in Run (Mode 1) and reactor power approximately 100 percent rated thermal power (RTP).

The inspectors determined that the licensee's failure to maintain configuration control of the Unit 2 containment pressure suppression system was contrary to procedures for the emergency depressurization of containment with the reactor in Mode 1 and was a performance deficiency. The inspectors determined that the performance deficiency was more than minor, and thus a finding, in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the mitigating systems cornerstone attribute of configuration control with regards to the plant's operating equipment alignment while affecting the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined that a Detailed Risk Evaluation was required to be performed based on answering "Yes" to the Mitigating Systems screening question A.4 in IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2. The result of the detailed risk evaluation was a finding of very low safety significance (Green). This finding has a cross-cutting aspect of Resolution in the area of Problem Identification and Resolution because the licensee did not implement appropriate robust barriers to prevent bumping of the 2-1601-60SV in response to previous corrective actions 511878-02 and 2414608-16. Specifically, an identical maintenance induced bumping event resulted in the instrument air stop valve to the Unit 3 torus main vent AOV 3-1601-60 being unintentionally repositioned closed in November 2014. Licensee corrective actions from that event addressed

restraining potentially vulnerable valves prior to maintenance activities as well reassessing which ball valves required permanent robust barrier installation. [P.3]

Inspection Report# : 2017002 (*pdf*)

Significance:  Mar 31, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correct a Condition Adverse to Quality Associated with EDG Single Largest Load Rejection Surveillance Testing

The NRC identified a finding of very low safety significance and associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to correct a condition adverse to quality, originally identified in Issue Report (IR) 2501498, associated with instructions and acceptance criteria in the emergency diesel generator (EDG) surveillance procedures to ensure that the single largest load rejection test bounded the power demand of the largest load in accordance with Technical Specification Surveillance Requirement (TSSR) 3.8.1.10. Specifically, the failure to correct a condition adverse

to quality associated with the inadequate performance of TSSR 3.8.1.10 required an operability determination and engineering assessment to ensure continued operability of the site's three EDGs.

The performance deficiency was determined to be more than minor, and thus a finding, in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the Mitigating Systems cornerstone attribute of Procedure Quality and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). The inspectors applied IMC 0609, Attachment 4, "Initial Characterization of Findings," issued October 7, 2016, to this finding. The inspectors answered "No" to all questions within Table 3, "Significance Determination Process Appendix Router," and transitioned to IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012. The inspectors answered "No" to all questions in Exhibit 2, "Mitigating Systems Screening Questions, Section A: Mitigating SSCs and Functionality." Therefore, the finding was screened as very low safety significance. The inspectors concluded that the cause of the finding involved a cross-cutting component in the area

of Human Performance, Documentation, in that the licensee did not create and maintain complete, accurate and up-to-date documentation. Specifically, the licensee utilized surveillance procedures (DOS 6600-03, 04 and 05) which did not ensure that design post-accident conditions were met during testing. In addition, the licensee created Corrective Action Program (CAP) actions, to make procedure changes to operations surveillance DOS 6600-12 to establish bounding conditions for TSSR 3.8.1.10, that were never incorporated. [H.7]

Inspection Report# : 2017001 (*pdf*)

Significance:  Mar 02, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate Pre-Fire Plans

The inspectors identified a finding of very-low safety significance and associated NCV of license conditions 2.E and 3.G for Units 2 and 3, respectively for the licensee's failure to include the correct information in pre-fire plans. Specifically, the licensee failed to provide the location of compressed flammable gas cylinders and included them in the Hazards in Area section of the pre-fire plans for two fire areas as required by Procedure OP-AA-201-008, "Pre-Fire Plan Manual." The licensee entered the issue into their Corrective Action Program and updated the pre-fire plans to contain the correct information.

The inspectors determined that the performance deficiency was more-than-minor because the lack of information in the

pre-fire plans regarding the hazards in the area could complicate firefighting activities by the fire brigade and could either increase the likelihood of a larger fire event or the severity of the fire. The finding was of very-low safety significance because it was associated with pre-fire plans and because the fire brigade members receive extensive training to deal with unexpected contingencies. The finding did not have a cross-cutting aspect associated with it because it was not representative of current performance as the licensee last updated the pre-fire plans in 2010.
Inspection Report# : 2017007 (*pdf*)

Significance:  Mar 02, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate Procedure Steps to Ensure Proper Valve Rotation for Cold Shutdown Repair

The inspectors identified a finding of very-low safety significance and associated NCV of Technical Specification 5.4.1.c for the licensee's failure to have appropriate written procedures covering the Fire Protection Program for cold shutdown repairs. Specifically, Procedure DSSP 0200-T8 included inadequate repair instructions for three motor operated valves (MOVs) that if implemented as written could result in the valve rotating in undesired safe shutdown position, caused damage to MOVs and prevented manipulating the valve to the desire position and caused a delay in reaching cold shutdown condition. The licensee entered the issue into their Corrective Action Program, revised DSSP 0200-T8 and corrected the cable designations at the Motor Control Center for these MOVs for proper connection and phase rotation.

The inspectors determined that the performance deficiency was more-than-minor because the inadequate instruction in the repair procedure could have delayed reaching cold shutdown in the event of a fire and added unnecessary burden for operations personnel during an already challenging fire event. The finding was of very-low safety significance per Task 1.3.1 of IMC 0609, Appendix F, because it only affected the ability to reach and maintain cold shutdown conditions. The finding did not have a cross-cutting aspect associated with it because it was not representative of current performance.

Inspection Report# : 2017007 (*pdf*)

Significance:  Sep 30, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Assess Scope Changes to Corrective Maintenance Activities Affecting Safety-Related Structures, Systems, and Components (SSC)

A finding of very low safety significance and associated NCV of TS 5.4.1.a, "Procedures," was self-revealed for the licensee's failure to maintain maintenance procedures appropriate for the circumstances that could affect performance of safety related equipment. Specifically, procedures MA-AA-716-010, "Maintenance Planning," Revision 20 and DAP 15-18, "Work Order Supplemental Information and Lessons Learned," Revision 17 did not ensure that scope revisions in support of corrective maintenance activities performed on high pressure coolant injection (HPCI) piping in 2013 were properly reviewed and evaluated for technical adequacy directly resulting in a through-wall steam leak on the Unit 2 HPCI inlet drain pot drain piping and safety system inoperability in May 2016. Immediate corrective actions included the replacement of the failed piping section, a determination of the extent of condition of susceptible piping to include the scheduling of a replacement work window, and changes to the maintenance planning procedures requiring engineering scope determination and oversight of scope changes for safety related corrective maintenance.

The performance deficiency was determined to be more than minor, and thus a finding, in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the Mitigating Systems Cornerstone Attribute of Procedure Quality and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Specifically, the failure to ensure work planning procedures controlled the process of major revisions to

corrective maintenance activities ensuring adequate engineering reviewing and assessment resulted in continued degradation and ultimate failure of the Unit 2 HPCI inlet drain pot drain piping. The inspectors applied IMC 0609, Attachment 4, "Initial Characterization of Findings," issued June 19, 2012, to this finding. The inspectors answered "No" to all questions within Table 3, "Significance Determination Process Appendix Router," and transitioned to IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," June 19, 2012. The inspectors answered "No" to all questions in Exhibit 2, "Mitigating Systems Screening Questions." Therefore, the finding was screened as very low safety significance (Green). This finding has a cross cutting aspect in the area of Problem Identification and Resolution, Evaluation, because the licensee failed to thoroughly evaluate corrective maintenance scope changes to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, the licensee incorrectly removed scope without engineering evaluation for adequacy from the Unit 2 HPCI inlet drain pot drain line corrective maintenance following a through wall leak in 2012. Piping that was identified as part of the extent of condition of the failure in 2012, was removed from the scope of corrective maintenance activities due to maintenance personnel short falls. This specific piping failed in May of 2016 resulting in the loss of the HPCI system safety function. [P.2]
Inspection Report# : 2016003 (*pdf*)

Significance:  Jul 01, 2016

Identified By: NRC

Item Type: FIN Finding

Main Steam Acoustic Safety/Relief Valve Monitoring Channel Calibration Not Performed

The inspectors identified a finding of very-low safety significance for the failure to perform a 24-month channel calibration of the Regulatory Guide 1.97 safety/relief valve acoustic monitoring system in accordance with the Technical Requirements Manual. Specifically, the licensee failed to perform a channel calibration, where the channel calibration shall encompass all devices in the channel required for channel operability and the channel functional test. The performance deficiency was determined to be more-than-minor because the finding was associated with the Mitigating System's cornerstone attribute of Procedure Quality and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to maintain the acoustic safety/relief valve position indicators instrumentation in accordance with the Technical Requirements Manual. The performance deficiency affected the design or qualification of a mitigating system, structure or component; however, the system, structure or component maintained its functionality based on successful completion of channel functionality checks. Since the system, structure or component remained functional, the inspectors screened the finding as having very low safety significance (Green). The inspectors did not identify a cross cutting aspect associated with this finding because the finding was not representative of the licensee's current performance.

Inspection Report# : 2016009 (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Secondary Containment Inoperability Due to Lapse in Procedure Use and Adherence

A self-revealed finding of very low safety significance (Green) and associated NCV of Technical Specification (TS) 5.4.1, "Procedures," occurred on November 8, 2016, due to the licensee's failure to follow procedures designed to ensure secondary containment integrity, when reactor building (RB) pressure relative to the outside environment was less than 0.25 inches water column (in WC) vacuum as required by TS 3.6.4.1, "Secondary Containment." Specifically, work group personnel did not communicate to operations regarding degraded sealing surfaces on the RB Equipment Access outer door as required by procedure DAP 13-03, "Unit 2

Reactor Building Trackway Interlock Door Access Control," therefore when standby gas treatment (SBGT) started as a part of a planned surveillance test, vacuum lowered, rendering secondary containment inoperable.

The performance deficiency was determined to be more than minor, and thus a finding, in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the Barrier Integrity Cornerstone Attribute of Human Performance and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (secondary containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the drop in secondary containment differential pressure to less than 0.25 in WC vacuum, resulted in a loss of secondary containment and failure of its safety function as specified by TS 3.6.4.1 and Updated Final Safety Analysis Report (UFSAR) section 6.2.3. The inspectors applied IMC 0609, Attachment 4, "Initial Characterization of Findings," issued October 7, 2016, to this finding. The inspectors answered "No" to all questions within Table 3, "Significance Determination Process Appendix Router," and transitioned to IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012. The inspectors reviewed the Barrier Integrity Screening Questions in Appendix A, Exhibit 3 and answered "Yes" to question C.1. As a result, the finding was determined to have very low safety significance (Green). This finding has a cross cutting aspect in the area of Problem Identification and Resolution, Identification, because individuals failed to identify issues completely, accurately, and in a timely manner in accordance with the program. Specifically, the licensee did not report a condition adverse to quality with regards to degraded seals on the RB equipment access outer door to operations as required by procedure DAP 13-03, therefore not ensuring secondary containment integrity. [P.1]

Inspection Report# : 2017001 (*pdf*)

Emergency Preparedness Occupational Radiation Safety

Significance: G Dec 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Comply With Radiation Work Permit Requirements Resulting In Unplanned Dose Rate Alarms

A finding of very-low safety significance, and an associated Non-Cited Violation (NCV) of Technical Specification 5.4.1 was self-revealed when workers violated a radiation work permit (RWP) by entering an area that was outside of the scope of the original RWP brief without obtaining a required appropriate brief, resulting in these workers receiving unplanned electronic dosimeter dose rate alarms. These workers immediately exited the area and reported the event to the radiation protection staff. The licensee entered these issues as two separate events into their CAP as Issue Reports (IR) 02735594 and IR 02735651.

The inspectors determined that the performance deficiency was more than minor in accordance with Inspection Manual Chapter 0612, Appendix B, because the finding impacted the program and process attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, worker entry into areas beyond the RWP briefing could lead to unintended dose. The finding was determined to be of very-low safety significance (Green) in accordance with Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, because: (1) it did not involve as-low-as-reasonably-achievable planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The inspectors concluded that the cause of the finding involved a cross-cutting component in the human performance area of challenging the unknown because the individual did not stop when faced with an uncertain condition. Risks were not evaluated and managed before proceeding [H.11].

Inspection Report# : 2016004 (*pdf*)

Public Radiation Safety Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : August 03, 2017

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