McGuire 2
4Q/2007 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Nov 02, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Adequate Corrective Action For A Nonconformance Associated With ECCS Throttle Valves.
The purpose of this letter is to provide you with the Nuclear Regulatory Commission's (NRC's) final significance determination for a finding at Duke Power Company's (Duke) McGuire Nuclear Station (MNS) involving the failure to take adequate corrective actions for an identified nonconformance. This nonconformance involved the discovery that the emergency core cooling system (ECCS) cold leg injection throttle valves had the potential for clogging during high pressure recirculation because their narrow plug-to-seat clearances were smaller than the ECCS sump screen openings. More specifically, Duke's corrective action failed to adequately implement credited inspections of the inside of the ECCS sump. This was evidenced by the 2006 discovery, during an unrelated inspection, of a significant amount of aged yellow duct tape inside the Unit 2 ECCS sump around the suction and guard pipe of both ECCS trains. As documented in our Choice Letter dated September 10, 2007, this finding was assessed under the significance determination process as a preliminary greater than Green issue (i.e., an issue of at least low to moderate safety significance), as well as identified as an apparent violation (AV 05000370/ 2007008-01) of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action.

The NRC has determined that it is not likely that the two HHI throttle valves which are 2.75 turns open would clog to the point of precluding sufficient decay heat removal. As such, it has been concluded that the inspection finding is appropriately characterized in the mitigating systems cornerstone as having very low safety significance (Green). This final significance determination should not be construed as minimizing the importance of maintaining ECCS sump foreign material exclusion. Rather, it reflects how fortuitous it was that the foreign material consisted entirely of soft debris and that MNS has robust ECCS pump and ND heat exchanger designs, as well as the redundancy of both an IHI and HHI system (the latter of which has two of its four throttle valves approximately 2.75 turns open).

Additionally, the finding was also determined to be a violation of NRC requirements, as delineated in the Choice Letter and presented during the regulatory conference (see Enclosure 2). As previously addressed in the Choice Letter, this finding has a cross-cutting aspect of appropriate corrective actions in the area of problem identification and resolution (Inspection Manual Chapter 0305, Section 06.07, P.1.(d)), and is reflective of the importance in properly implementing established engineering processes to ensure plant licensing and design bases are maintained when dispositioning conditions adverse to quality.

Inspection Report# : 2007010 *(pdf)*

Significance: SL-IV Sep 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform a Written Safety Evaluation for a Change to the Facility
The inspectors identified a non-cited violation of 10 CFR 50.59 for removing the approved seismic qualification

methodology (WCAP-8110, supplement 9) from the Updated Final Safety Analysis Report (UFSAR) without performing a written safety evaluation. This issue is in the licensee's corrective action program as PIP M-07-5016. The failure to perform a written safety evaluation for changes made to the facility as described in the UFSAR is more than minor because there was a reasonable likelihood that the change requiring a 10 CFR 50.59 written safety evaluation would require Commission review and approval prior to implementation in accordance with 10 CFR 50.59 (c)(2). This likelihood is based on the November 21, 1974, NRC Safety Evaluation Report for WCAP-8110 Supplement 9, which stated the WCAP is considered an accepted methodology to demonstrate the continued adequacy of ice retention characteristics of the ice baskets when used as a reference for license applications. Removal of this approved methodology from the licensing basis would constitute a change in methodology and would require NRC review and approval. This issue was treated as traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. It was characterized as a severity level IV violation because it was evaluated as not having greater than very low safety significance. (Section 1R15)
Inspection Report# : 2007004 *(pdf)*

Significance: G Feb 09, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Appropriate Corrective Actions for Valve Positioners not Analyzed for Seismic Requirements
The NRC identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the licensee failed to take adequate corrective actions in response to a Green NCV issued for nonconformance with respect to the seismic qualification of positioners on the RN to KC Heat Exchanger flow control valves. This finding is of very low safety significance because the design/qualification deficiency did not result in a loss of function per Regulatory Issue Summary (RIS) 2005-020. The licensee determined that adequate loads existed to prevent damage to both RN pumps if the corresponding flow control valves failed to close. In addition, the RN pump vendor provided documentation to the licensee which indicated that the RN pumps could satisfactorily operate at flow rates below the minimum flow value of 2700 gpm for up to two hours without sustaining damage. This was considered adequate time to detect and respond to the problem. This finding has a cross cutting aspect of timely corrective actions in the area of problem identification and resolution. [P.1.d] (Section 4OA2a.(3))
Inspection Report# : 2007006 *(pdf)*

Barrier Integrity

Emergency Preparedness

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

Significance: SL-IV Sep 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Correct a Condition Adverse toQuality
The inspectors identified a non-cited violation of 10 CFR 72.172 for failing to promptly identify and correct a condition adverse to quality associated with not performing 10 CFR 72.48(c) evaluations on five previous revisions of 10 CFR 72.212 written evaluations for the Independent Spent Fuel Storage Installation (ISFSI). This issue is in the licensee's corrective action program as PIP M-07-4321. This issue is greater than minor because the failure to promptly correct and perform 10 CFR 72.48(c) evaluations on any changes to 10 CFR 72.212 written evaluations had a reasonable likelihood that the changes could require NRC review and approval. This issue was considered as traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. It was characterized as a severity level IV violation because it was evaluated as not having greater than very low safety significance. This finding has a cross-cutting aspect of timely correct action in the area of problem identification and resolution [P.1.d]. (Section 4OA5)
Inspection Report# : 2007004 *(pdf)*

Significance: N/A Feb 09, 2007
Identified By: NRC
Item Type: FIN Finding
McGuire PI&R
The team concluded that, in general, problems were properly identified, evaluated, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution. The team observed several minor plant material condition deficiencies during plant system walkdowns that had gone undetected by licensee personnel. The licensee maintained a low threshold for identifying problems as evidenced by the large number of Problem Investigation Process reports (PIPs) entered annually into the CAP. Generally, the licensee properly prioritized and evaluated issues. For some lower significance issues, investigations lacked thoroughness or the documentation was not sufficient to substantiate conclusions. Formal root cause evaluations for significant problems were thorough and detailed. Corrective actions specified for problems were generally adequate, although some corrective actions were not complete or comprehensive. Audits and self-assessments were effective in identifying deficiencies and areas for improvement in the CAP, and in most cases, corrective actions were developed to address these issues. Operating experience usage was found to be effective and well integrated into the licensee's processes for performing and managing work, and plant operations. Personnel at the site felt free to raise safety concerns to management and use the CAP to resolve.
Inspection Report# : 2007006 *(pdf)*

Last modified : February 04, 2008