Indian Point 3
2Q/2015 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 24, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Correct a Degraded Condition of Fire Protection System Solenoid Valve SOV-230-1
Green. The inspectors identified a Green NCV of Condition 2.H of the Indian Point Unit 3 Facility Operating License DPR-64, "Fire Protection Program," for failure to promptly identify, report, and correct a condition adverse to fire protection. Specifically, solenoid valve (SOV)-230-1, associated with the deluge valve for the 32 main transformer (MT), was documented to have opened during its 2-year deluge activation tests on April 7, 2011, April 2, 2013, and March 24, 2015, but did not close as designed after the deluge system actuated. This condition was not corrected, and recurred on May 9, 2015, when the deluge system actuated in response to a fire on the 31 MT. Entergy entered this issue into the corrective action program (CAP) (condition report (CR)-IP3-2015-02921), and determined a clogged orifice in the SOV pressure switch prevented the SOV from de-energizing and going closed.

The performance deficiency was determined to be more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, water intrusion into the switchgear room can challenge the reliability of the safety-related electrical equipment required to respond to a reactor transient. The inspectors screened the finding for significance using the screening questions in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems," and Exhibit 4, "External Events," and determined that this performance deficiency required a Detailed Risk Evaluation because the potential existed for enough water leakage into the switchgear room to cause a loss of all safety-related power and station blackout (SBO) condition. The Detailed Risk Evaluation determined that this finding was of very low safety significance (Green) with an estimated increase in core damage frequency in the low E-7 per reactor year range (an increase of 1 in 10 million reactor years). The inspectors determined the finding had a cross-cutting aspect in the Human Performance cross-cutting area, "Challenge the Unknown," because Entergy did not stop and fully explore an uncertain condition with SOV-230-1 when it failed to closed on three occasions since April 2011. Entergy replaced the SOV, but did not determine that the cause was a clogged pressure switch orifice until after the May 9, 2015, 31 MT fire event. [H.11] (Section 2.c)

Inspection Report# : 2015010 *(pdf)*

Significance: G Feb 18, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Analysis of Safety Injection Make-up Capability
The team identified a finding of very low safety significance, involving a non-cited violation of Indian Point Units 2

and 3 Facility Operating Licenses Conditions 2.K and 2.H, respectively, for failure to implement and maintain in effect all provisions of the approved Fire Protection Program. Specifically, Entergy revised the safe shutdown (SSD) methodology to use the safety injection system as a credited reactor coolant system make up source, but the thermo hydraulic analysis used to validate the revised method was not consistent with the SSD analysis or with the operating procedures. Entergy entered this issue into its corrective action program and revised the thermo-hydraulic analysis prior to the end of this inspection to demonstrate the adequacy of the new methodology.

This finding was more than minor because it was similar to Example 3.k of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," and was associated with the Protection Against External Factors (e.g., Fire) attribute of the Mitigating Systems Cornerstone and affected the objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The team performed a Phase 1 Significance Determination Process (SDP) screening, in accordance with IMC 0609, Appendix F, "Fire Protection SDP." This finding affected the post-fire SSD category, and was determined to have a low degradation rating because a subsequent analysis verified that safety injection was sufficient to maintain the reactor coolant system sub-cooled. This finding had a cross-cutting aspect in the area of Human Performance, Documentation, because Entergy did not maintain complete, accurate, and up to date documentation used as critical design inputs for a thermo-hydraulic analysis.
Inspection Report# : 2014011 *(pdf)*

Significance: G Feb 18, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Fire Barrier Analysis
The team identified a finding of very low safety significance, involving a non-cited violation of Indian Point Unit 3 Facility Operating License Condition 2.H, for failure to implement and maintain in effect all provisions of the approved Fire Protection Program. Specifically, Entergy evaluated a new fire barrier and determined that it provided adequate separation between redundant safe shutdown (SSD) trains within the same fire area, but the barrier did not satisfy regulatory requirements, and was not included in the barrier surveillance program. Entergy performed a more detailed barrier evaluation prior to the end of this inspection and created a new fire area using the guidance in Generic Letter 86-10, "Implementation of Fire Protection Requirements." Entergy entered this issue into its corrective action program and re-evaluated the barrier prior to the end of this inspection to verify its adequacy to withstand the hazards in the area, revised the combustible control program for adjacent areas, and added it to the barrier surveillance program.

This finding was more than minor because, if left uncorrected, it could have become a more significant safety issue because combustible loading or barrier integrity may not have been adequately maintained in the future, and was associated with the Protection Against External Factors (e.g., Fire) attribute of the Mitigating Systems Cornerstone and affected the objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The team performed a Phase 1 Signifiicance Determination Process (SDP) screening, in accordance with NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection SDP." This finding affected the post-fire SSD category, and screened to very low safety significance. The team determined that it did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event because the fire barrier was not degraded during the inspection period and no postulated fires were identified that could breach the new fire barrier. This finding had a cross-cutting aspect in the area of Human Performance, Design Margins.
Inspection Report# : 2014011 *(pdf)*

Significance: G Feb 18, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation

Inadequate Post-Fire Safe Shutdown Procedure
The team identified a finding of very low safety significance, involving a non-cited violation of Indian Point Unit 3 Facility Operating License Condition 2.H, for failure to implement and maintain in effect all provisions of the approved Fire Protection Program. Specifically, Entergy did not ensure that design changes which revised the safe shutdown (SSD) methodology were adequately translated into operating procedures. Entergy entered this issue into its corrective action program and revised its operating procedures and associated SSD methodology prior to the end of this inspection.

This finding was more than minor because it was associated with the Protection Against External Factors (e.g., Fire) attribute of the Mitigating Systems Cornerstone and affected the objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The team performed a Phase 2 Significance Determination Process (SDP) analysis, in accordance with NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection SDP." This finding affected the post-fire SSD category, and screened to very low safety significance. The team determined that this issue did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event because no credible fire scenario was identified that could result in a loss of the credited make-up flow path. This finding had a cross-cutting aspect in the area of Human Performance, Design Margins.
Inspection Report# : 2014011 *(pdf)*

Significance: G Feb 18, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Alternative Post-Fire Safe Shutdown Procedure
The team identified a finding of very low safety significance, involving a non-cited violation of Indian Point Unit 3 Facility Operating License Condition 2.H, for failure to implement and maintain in effect all provisions of the approved Fire Protection Program. Specifically, Entergy did not have an adequate post-fire operating procedure for its alternative shutdown capability to ensure that post-fire safe shutdown (SSD) equipment was isolated from the effects of fire in Appendix R, Section III.G.3, fire areas. Entergy entered this issue into its corrective action program and revised its operating procedures prior to the end of this inspection.

This finding was more than minor because it was similar to Example 3.k of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," and was associated with the Protection Against External Factors (e.g., Fire) attribute of the Mitigating Systems Cornerstone and affected the objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The team performed a Phase 3 Significance Determination Process (SDP) analysis, in accordance with NRC IMC 0609, Appendix F, "Fire Protection SDP." This finding affected the post-fire SSD category, and screened to very low safety significance. The team determined that this issue was of very low safety significance because of the low frequency of a fire, a negligible chance of control room evacuation, and the low chance of core damage associated with those fire areas where a fire could damage the charging system and make it unavailable. This finding did not have a cross-cutting aspect because it was a legacy issue and was considered to not be indicative of current licensee performance.
Inspection Report# : 2014011 *(pdf)*

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: FIN Finding
Licensed Operator Requalification Remedial Exam Standard Adherence
The inspectors identified a Green finding (FIN) because Entergy did not adhere to their procedural standards for generating remedial written exams. Entergy failed to follow the guidance as stated in their procedure EN-TQ-201-03, “Systematic Approach to Training,” Section 5.4, regarding remedial exam construction when an operator was retested

on April 25, 2013.

The inspectors determined that Entergy's failure to adhere to their remedial examination standards in EN-TQ-201-03 was a performance deficiency. The inspectors determined that the finding was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the finding affected the quality and level of difficulty of the remedial quiz which potentially impacted Entergy's ability to appropriately evaluate the licensed operator. The inspectors determined that this issue had a cross-cutting aspect in Human Performance, Procedure Adherence, because Entergy did not follow their procedural standards for generating remedial written exams.

Inspection Report# : 2014005 *(pdf)*

Significance: N/A Dec 31, 2014
Identified By: Licensee
Item Type: AV Apparent Violation
Incomplete and Inaccurate Medical Information Provided by the Licensee Which Impacted an Operator's License Renewal
Entergy identified two AVs of NRC requirements related to Entergy not notifying the NRC within 30 days of a change in a licensed reactor operator's (RO's) medical condition and to providing information to the NRC pertaining to renewing a RO license that was not complete and accurate in all material respects. Specifically, Entergy identified an AV of Title 10 of the Code of Federal Regulations (10 CFR) 50.74, "Notification of Change in Operator or Senior Operator Status," for Entergy's failure to notify the NRC within 30 days after learning, on October 25, 2012, that a Unit 3 RO had a permanent disability or illness (sleep apnea). Entergy also did not request an amended license with a condition to account for the medical issue, resulting in the RO performing licensed duties without a properly restricted license. Additionally, Entergy identified an AV of 10 CFR 50.9, "Completeness and Accuracy of Information," pertaining to Entergy's failure to provide information to the NRC in the RO's license renewal application in that it did not specify that the RO had a medical condition (sleep apnea) that required a restriction [for use of a continuous positive airway pressure (CPAP)]. The NRC, in turn, issued a license renewal that did not contain the necessary restriction. Compliance was restored on July 7, 2014, when Entergy submitted a letter to the NRC with a Form 396 indicating the new restriction for the use of a CPAP machine. On August 14, 2014, the NRC issued a license amendment with the new restriction. These issues were entered into Entergy's corrective action program (CAP) as condition report (CR)-IP3-2014-1416 and CR-IP2-2014-4202.

The inspectors determined that Entergy's failure to report a change in a licensed operator's permanent medical condition to the NRC and subsequently provide complete and accurate information to the NRC was a performance deficiency that was within their ability to foresee and correct and should have been prevented. The inspectors determined that traditional enforcement applies, as the issue impacted the NRC's ability to perform its regulatory function. The inspectors screened the issue using Section 6.4.c.4(b) of the NRC Enforcement Policy and preliminarily determined that these AVs meet the definition of a Severity Level III violation because Entergy failed to report a condition that would have required the addition of a license restriction within the required timeframe and, again, for the RO's license renewal. No associated Reactor Oversight Process finding was identified and no cross-cutting aspect was assigned. These issues constitute AVs in accordance with the NRC's Enforcement Policy, and the final significance will be dispositioned in future correspondence. Because the significance determination of this issue is not complete, it is identified as TBD.

Inspection Report# : 2014005 *(pdf)*

Significance: G Jul 20, 2012
Identified By: NRC

Item Type: VIO Violation
Failure to Protect Safe Shutdown Equipment from the Effects of Fire
The inspectors identified a finding of very low safety significance (Green), involving a cited violation of Indian Point Unit 3 Operating License Condition 2.H to implement and maintain all aspects of the approved fire protection program. Specifically, ENO failed to protect required post-fire safe shutdown components and cabling to ensure one of the redundant trains of equipment remained free from fire damage as required by 10 CFR Part 50, Appendix R, Section lll.G.2. In lieu of protecting a redundant safe shutdown train, ENO utilized unapproved operator manual actions to mitigate component malfunctions or spurious operations caused by postulated single fire-induced circuit faults. ENO submitted an exemption request (M1090760993) on March 6, 2009, in which it sought exemption from requirements of Paragraph lll.G.2, to permit the use of OMAs upon which it had been relying for safe-shutdown in a number of fire areas. However, several OMAs within the exemption request were denied because ENO failed to demonstrate that the OMAs were feasible and reliable, or to appropriately evaluate fire protection defense-in-depth. ENO's performance deficiency delayed achieving full compliance with fire protection regulations and adversely affected post-fire safe shutdown. ENO has ntered this issue into the corrective program for resolution. The inspectors found the manual actions in addition to roving fire watches in all affected areas to be reasonable interim compensatory measures pending final resolution by ENO.

ENO's failure to protect components credited for post-fire safe shutdown from fire damage caused by single spurious actuation is considered a performance deficiency. The performance deficiency was more than minor because it affected the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to an external event to prevent undesirable consequences in the event of a fire. Specifically, the use of operator manual actions during postfire safe shutdown is not as reliable as normal systems operation which could be utilized had the requirements of 10 CFR 50, Appendix R, Section lll.G.2 been met and, therefore, prevented fire damage to credited components and/or cables. The inspectors used IMC 0609, Appendix F, Fire Protection Significance Determination Process, Phase 1 and a Senior Reactor Analyst conducted a Phase 3 evaluation, to determine that this finding was of very low safety significance (Green). This finding does not have a cross cutting aspect because the performance deficiency occurred greater than three years ago when the exemption request was submitted to the NRC on March 6, 2009, and is not indicative of current licensee performance.
Inspection Report# : 2012008 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : August 07, 2015