

Indian Point 2

1Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Control Transient Combustibles in Accordance with the Approved Fire Protection Program

The inspectors identified an NCV of the license condition 2.K. when Entergy failed to properly control transient combustibles within the Unit 2 control room envelope in accordance with the approved fire protection program (FPP). The inspectors identified transient combustible material in excess of the specified limits that were unattended and without a transient combustible evaluation (TCE). The inspectors notified Entergy personnel of the deficiency, the transient combustibles were promptly removed, and the issue was entered into the corrective action program (CAP) as condition report (CR)-IP2-2015-1058.

The inspectors determined that the failure to properly control transient combustible material in accordance with the approved FPP was a performance deficiency. This finding was determined to be more than minor because it is associated with the “protection against external factors” attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. In accordance with IMC 0609.04, “Phase 1 – Initial Characterization of Findings,” the inspectors determined that the finding affected the administrative controls for transient combustible materials. The inspectors conducted a Phase 1 SDP screening using IMC 0609, Appendix F, “Fire Protection Significance Determination Process,” and assigned the finding to the “Fire Prevention and Administrative Controls” category; in that, it affected Entergy’s combustible materials control. The finding was determined to be Green, or very low safety significance, after IMC 0609, Appendix F. question 1.3.1, “Is the reactor able to reach and maintain safe shutdown (hot or cold) condition,” was answered “yes.” The inspectors assumed that any fire in the area associated with the combustibles observed would be promptly extinguished using readily available extinguishing equipment and that no safety-related equipment would be disabled. The inspectors determined that this finding had a Human Performance, Procedure Adherence, cross-cutting aspect because Entergy failed to properly control transient combustible material in accordance with the approved FPP when the allowed limits were exceeded without an evaluation.

Inspection Report# : [2015001](#) (*pdf*)

Mitigating Systems

Significance: G Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Untimely Corrective Actions for Degraded Fire Protection Piping Results in Piping Break

The inspectors identified a self-revealing NCV of license condition 2.K. because Entergy did not take adequate corrective actions for degraded fire protection piping in the Unit 1 turbine building. This issue contributed to excessive leakage and failure of a 10-inch high-pressure fire protection spool piece. Depressurization and isolation of

this leak resulted in loss of high-pressure fire water to Unit 2 until compensatory measures could be established after about two hours. Entergy entered this issue into their CAP as CR IP2 2014 6668, repaired the piping section, and is prioritizing repairs to other sections of degraded piping.

This finding is greater than minor because it adversely affected the Mitigating Systems cornerstone objective to ensure the availability and reliability of systems (fire protection system) that provide protection against external events (fire) when all the fire protection pumps were secured to isolate the failed piping. This finding was evaluated using IMC 0609, Appendix F, "Fire Protection Significance Determination Process, question 1.4.7, "Fire Water Supply." It was found to be of very low safety significance because at least 50 percent of the fire water capacity (5500 gpm) remained available when the leak occurred. The inspectors determined that this finding had a cross-cutting aspect in Problem Identification and Resolution, Resolution, because Entergy did not take effective corrective actions to address issues in a timely manner commensurate with their safety significance, resulting in the piping break.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  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:  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: TBD 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:  Sep 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify and Evaluate Degraded Condition of the 22 Station Battery Capacity

The inspectors identified a Green NCV of Title 10 of the Code of Federal Regulations (10 CFR) 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," because Entergy personnel did not adequately implement

procedure EN-OP-104, “Operability Determination Process,” Step 5.5, to assess the operability and degraded condition of the 22 station battery capacity. Specifically, Entergy personnel did not identify the degraded/non-conforming condition or evaluate the condition relative to support functions for Technical Specification (TS) Surveillance Requirement (SR) 3.8.6.6.

The finding was more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, after inspectors questioned the operability determination, the degraded condition was identified and resulted in the 22 station battery being declared OPERABLE but DEGRADED. In accordance with IMC 0609.04, “Initial Characterization of Findings,” and Exhibit 2 of IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power,” issued June 19, 2012, the inspectors determined that the finding was of very low safety significance (Green), because the finding was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. Entergy placed this issue into the corrective action program (CAP) as condition report (CR)-IP2-2014-04825 and performed an immediate operability determination followed by a request for an exigent change in TS requirements. The inspectors assigned a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because Entergy did not thoroughly evaluate the condition of the 22 station battery capacity. Specifically, Entergy did not identify the degraded/non-conforming condition or evaluate the condition relative to support functions for TS SR 3.8.6.6. Inspection Report# : [2014004](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Radiation Exposure ALARA During Refueling Activities

A self-revealing finding (FIN) of very low safety significance (Green) was identified due to Entergy having excessive unintended occupational collective exposure. This resulted from performance deficiencies in planning and work control while performing reactor coolant pump (RCP) work activities during the Unit 2 refueling outage. Inadequate work planning and control resulted in unplanned, unintended collective exposure due to conditions that were reasonably within Entergy’s ability to control and prevent. The work activity performance deficiencies resulted in the collective exposure for these activities increasing from the planned dose of 7.269 person-rem to an actual dose of 13.742 person rem. Entergy entered this issue into their CAP as CR-IP2-2014-02558.

The finding was more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation. Additionally, the performance deficiency was

more than minor based on a similar example (6.i) in Appendix E of IMC 0612; in that, the actual collective dose exceeded 5 person-rem and exceeded the planned, intended dose by more than 50 percent. Entergy placed this issue into the CAP as CR-IP2-2014-02558 and completed a root cause evaluation. The finding had a cross-cutting aspect in the area of Human Performance, Teamwork, in that the work groups did not coordinate activities, which involved job site activities, that adversely impacted radiological safety. Specifically, higher source term due to not delaying the start of work to reduce reactor coolant system (RCS) activity levels following the crud burst and the inability to properly sequence the installation of shielding packages with the work activities resulted in collective exposures that exceeded estimates by greater than 50 percent.

Inspection Report# : [2014004](#) (*pdf*)

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

Significance: N/A Apr 29, 2014

Identified By: Licensee

Item Type: VIO Violation

SL-III Problem - Indian Point Emergency Diesel Generator (EDG) fuel oil storage tank (FOST) and the reserve fuel oil storage tank (RFOST) sample data falsification (EA-13-076)

A. Indian Point Nuclear Generating Unit 2 (IP2) Technical Specifications (TS) 5.5.11 and Indian Point Nuclear Generating Unit 3 (IP3) TS 5.5.12, "Diesel Fuel Oil Testing Program," in part, require verification every 92 days that total particulate concentration of the fuel oil in the onsite and reserve storage tanks is less than or equal to 10 mg/l.

IP2/3 TS 3.8, "Electrical Power Systems," Section 3.8.3, "Diesel Fuel Oil and Starting Air," requires that whenever the total particulate concentration of fuel oil in the fuel oil storage tanks (FOSTs) exceeds the limit, it must be restored within limits within 7 days (30 days for the reserve fuel oil storage tank (RFOST)), otherwise, the associated diesel generators must be immediately declared inoperable.

IP 2/3 TS 3.0.3 states that when a TS Limiting Condition of Operation is not met and the associated Actions are not met, action shall be initiated within 1 hour to place the unit, as applicable, in: MODE 3 within 7 hours, MODE 4 within 13 hours, and MODE 5 within 37 hours.

Contrary to the above, on or about February 2, 2012, Entergy Nuclear Operations (ENO) identified that test results for

a November 18, 2011, fuel oil sample from the IP 22 FOST and for a December 1, 2011, fuel oil sample from the IP RFOST indicated total particulate concentration for both tanks was in excess of the Technical Specification limits of 10 mg/l. Although the total particulate concentration for these systems had not been demonstrated to be within limits within 7 days and 30 days, respectively, ENO did not declare the associated diesel generators inoperable and did not place the units in MODE 3 within 7 hours, MODE 4 within 13 hours, and MODE 5 within 37 hours.

B. 10 CFR 50.73(a)(2)(B) requires the holder of an operating license to, within 60 days after discovery, submit a Licensee Event Report to the NRC for any operation or condition which was prohibited by the plant's Technical Specifications.

IP2 TS 5.5.11/IP3 TS 5.5.12, "Diesel Fuel Oil Testing Program," in part, require verification every 92 days that total particulate concentration of the fuel oil in the onsite and reserve storage tanks is less than or equal to 10 mg/l.

IP2/3 TS 3.8, "Electrical Power Systems," Section 3.8.3, "Diesel Fuel Oil and Starting Air," requires that whenever the total particulate concentration of fuel oil in the reserve fuel oil storage tank (RFOST) exceeds the limit, it must be restored within limits within 30 days, otherwise, the associated diesel generators must be immediately declared inoperable.

IP 2/3 TS 3.0.3 states that when a TS Limiting Condition of Operation is not met and the associated Actions are not met, action shall be initiated within 1 hour to place the unit, as applicable, in: MODE 3 within 7 hours, MODE 4 within 13 hours, and MODE 5 within 37 hours.

TS 5.4, "Procedures," Section 5.4.1, states, in part, that written procedures shall be established, implemented, and maintained covering the applicable requirements and recommendations of Appendix A of Regulatory Guide 1.33, Revision 2 (except as provided in the quality assurance program described or referenced in the Updated FSAR for Unit 2).

RG 1.33, Rev.2, App A recommends chemical and radiochemical control procedures to prescribe the nature and frequency of sampling and analyses. Implementing Procedure EN-CY-101, "Chemistry Activities," includes guidance related to chemistry sampling and analysis. Section 5.5 states that out of specification conditions should be identified and corrective actions initiated as quickly as possible. Implementing Procedure 0-CY-1210, "Organization and Responsibilities of the Chemistry Department," includes guidance related to chemistry sampling and analysis. Step 4.1.4 requires a condition report to be initiated to report any condition exceeding any procedural limits.

Contrary to the above, on or about February 2, 2012, ENO staff identified that, on two occasions: 1) fuel oil sample test results had been received indicating total particulate concentrations that exceeded TS limits of 10 mg/l; 2) the total particulate concentration for these systems had not been returned to within limits within the TS-required timeframe; and 3) the associated diesel generators had not been declared inoperable or the units placed in the appropriate operating modes. However, the ENO staff did not initiate condition reports or otherwise report the condition such that a Licensee Event Report could be written. Specifically the ENO staff identified that: 1) on July 13, 2011, Entergy received an RFOST sample result indicating total particulate concentration of 13.4 mg/l, and the parameter was not restored to within limits until September 2, 2011; and, 2) on December 30, 2011, Entergy received an RFOST sample result indicating total particulate concentration of 13.2 mg/l, and, as of February 5, the parameter had not been restored to within limits. The NRC was not informed via an LER that the plant was operating in a condition prohibited by its TS until August 20, 2012, more than 60 days after discovery by the ENO staff.

These violations are categorized collectively as a SL III problem (Enforcement Policy Example Section 6.1).

Inspection Report# : [2013011](#) (*pdf*)

Last modified : June 16, 2015