

# Perry 1

## 3Q/2014 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:** G Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Promptly Correct a Condition Adverse to Quality on Division 2 EDG**

A self-revealed finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR, Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified on May 7, 2014, for the failure to correct a condition adverse to quality. Specifically, the licensee failed to correct a lube oil leak, identified by operations personnel on April 12, 2014, during the monthly run of the Division 2 Emergency Diesel Generator (EDG). As discussed in Condition Report (CR) 2014-06755, the leak was from a Swagelok fitting on the turbocharger supply line and at a rate of less than an ounce per hour. The CR was closed to a work order to complete repairs. On May 7, the next scheduled surveillance run of the Division 2 EDG occurred. The leak had not been repaired and, during the run, became progressively worse resulting in an unplanned (emergency) shutdown of the diesel and the diesel being declared inoperable. The leak was quantified as approximately a gallon per hour at the time of the shutdown (CR 2014-08487). The line was repaired and the diesel was returned to operable status on May 8. The licensee promptly evaluated the other EDGs and determined that a common cause condition did not exist. The failure was caused by fatigue cracking of the Swagelok fitting due to misalignment during installation. A root cause evaluation was conducted by the licensee.

The finding was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance because there was no design deficiency, no actual loss of safety function, and no single train loss of safety function for greater than the Technical Specification (TS)-allowed outage time. This finding has a cross-cutting aspect in the area of problem identification and resolution evaluation, for the failure to thoroughly evaluate the issue and ensure that the resolution addressed the cause and extent of condition when identified in April 2014.

Inspection Report# : [2014003](#) (*pdf*)

**Significance:** G Mar 31, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Inadequate Procedure for Extreme Cold Weather**

A self-revealed finding of very low safety significance (Green) and associated non-cited violation of Technical Specification 5.4.1.a was identified for the licensee's failure to maintain adequate procedures to respond to acts of nature as required by Regulatory Guide 1.33, "Quality Assurance Program Requirements." Specifically, the cold weather procedure did not adequately direct equipment walkdowns and subsequent actions to protect equipment

important to safety from severe weather risks, directly resulting in freezing and breaking of fire protection piping in Unit 2 turbine power complex, elevation 593' level. The piping provides fire protection for Unit 2 startup transformer's deluge system and the three Unit 2 inter-bus transformer deluge systems. The Unit 2 startup transformer is an integral part of one of the two qualified circuits specified in Technical Specification 3.8.1 between the offsite electrical transmission network and the onsite 4160-volt safety-related electrical system. Corrective actions included immediate posting of compensatory actions and warming of the space to prevent further damage to the system until repairs were completed.

The finding was determined to be more than minor because it is associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure did not direct the licensee to take proactive steps to limit the likelihood of extreme cold weather freezing and breaking the fire protection piping located on the Unit 2 turbine power complex elevation 593' level. In Step 1.2 of Inspection Manual Chapter 0609, Appendix F, Attachment 1, "Category of Fire Inspection Finding," the inspectors assigned Category 1.4.2, "Fixed Fire Protection Systems," to the finding and by answering "yes" in Step 1.3 A, "Is the reactor able to reach and maintain safe shutdown (either hot or cold) condition?" the inspectors determined that the finding was of very low safety significance. The finding was determined to have a cross-cutting aspect in the area of human performance, avoid complacency, where individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Specifically, the licensee did not identify that the fire protection deluge valves and piping in the Unit 2 turbine power complex were subject to freezing, even though extreme cold conditions had existed in prior weeks, allowing the licensee ample time for additional walkdowns to ensure that the plant was ready for the extreme cold weather event the first week of January 2014 (H.12).

Inspection Report# : [2014002](#) (pdf)

**Significance:**  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Ensure Required 3-Hour Fire Barriers (Seals) Were In-Place**

The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation of Perry Operating License Condition 2.C(6) for failure to establish a required 3-hour fire barrier as required by design. Specifically, on March 13, 2014, the inspectors identified four incomplete fire barrier seals in ceiling-level penetrations between the Division 1 and Division 2 battery rooms and the adjoining direct current (DC) switchgear rooms, and on March 14 identified the lack of a fire barrier seal in a ceiling-level penetration between the remote shutdown panel room and an adjoining alternating current (AC) switchgear room. The licensee implemented compensatory measures that included hourly fire watches and entered the issues into the corrective action program.

The finding was determined to be more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the lack of a barrier caused the required 3-hour barrier required by design to be non-functional. In Step 1.2 of Inspection Manual Chapter 0609, Appendix F, Attachment 1, "Category of Fire Inspection Finding," the inspectors assigned Category 1.4.3, "Fire Confinement," to the finding, which was determined to be of very low safety significance. For the battery room seals, the inspectors identified a cross-cutting aspect in the area of human performance, work management, where the organization implements a process for planning and controlling, and executing work activities such that nuclear safety is the overriding priority (H.5). Specifically, the licensee did not follow its procedures when the fire seal material was formed in the workshop and then installed in the openings instead of being formed in situ as required by the licensee's procedures (H.5). The inspectors determined there was no cross-cutting aspect associated with the lack of a fire seal in the remote shutdown panel room because it did not reflect current performance.

Inspection Report# : [2014002](#) (pdf)

## Barrier Integrity

**Significance:**  Nov 22, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

### Revised NCV to Appendix B, Criterion V for Rx Vessel Pressure/Temperature Controls

By letter dated September 3, 2014, the NRC stated: We have concluded that a violation of TS 3.4.11 did not occur during the 5 reactor cold startups and 1 cooldown discussed in the inspection report, however, we have concluded that the operation of the reactor outside of the parameters of the analysis involved a violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." Criterion V requires, in part, that activities affecting quality be prescribed by procedures appropriate to the circumstances. Startup and cooldown of the reactor are activities affecting quality and the instructions and procedures used by the operators for these activities, IOI-1, "Cold Startup"; IOI 4, "Shutdown"; and Surveillance Instruction (SVI-)B21-T1176, "RCS Heatup and Cooldown Surveillance," were not appropriate to the circumstances. Specifically, they allowed reactor vessel pressure during the 5 cold startups and 1 cooldown from June 2011 through July 2013 to be less than 0 pounds per square inch gauge, outside of the pressure parameter inputs to the analysis that is the basis for the pressure/temperature limit curves of TS 3.4.11.

The cross-cutting aspect identified in NRC Inspection Report 05000440/2013007 for the previously documented NCV of TS 3.4.11 is appropriate to the Criterion V violation, as is our previous determination of very low safety significance (Green). The performance deficiency was determined to be more than minor because the finding was associated with the area of Routine Operations Performance within the Human Performance attribute of the Barrier Integrity Cornerstone and had the potential to adversely affect the associated cornerstone objective of providing reasonable assurance that a physical design barrier (reactor coolant system) protects the public from radionuclide releases caused by accidents or events. The finding screened as very low safety significance because it was determined that there was no change in risk due to the performance deficiency. This finding has a cross-cutting aspect in the area of human performance, resources. Specifically, complete, accurate, and up-to-date procedures were not available to operators to ensure operations within the requirements of Technical Specification 3.4.11, (H.2(c)).

Inspection Report# : [2013007](#) (pdf)

**Significance:**  Nov 22, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

### FAILURE TO PROMPTLY CORRECT A NON-CONSERVATIVE TECHNICAL SPECIFICATION

The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to promptly correct a non-conservative Technical Specification. Specifically, the inspectors identified on November 14, 2013, that the licensee failed to promptly correct the non-conservative Technical Specification 3.4.11 by not submitting a license amendment request in accordance with NRC Administrative Letter 98-10, which required submittal within 1 year or 1 operating cycle. The licensee had determined Technical Specification 3.4.11, "RCS Pressure and Temperature (P/T) Limits," to be non-conservative on October 16, 2009, and implemented administrative controls as allowed by the Administrative Letter. As of November 14, 2013, the licensee had not submitted the license amendment request, over 4 years and 2 operating cycles after determining the Technical Specification was non-conservative. The licensee entered the finding into the corrective action program as Condition Report CR 2013-18983.

The performance deficiency was determined to be more than minor because the finding was associated with the area

of Routine Operations Procedures within the Procedure Quality attribute of the Barrier Integrity Cornerstone and had the potential to adversely affect the associated cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The finding was screened as very low safety significance because it was determined that operators followed the appropriate reactor coolant system P/T curves even though the Technical Specification was non-conservative.

The finding has a cross-cutting aspect in the area of human performance, decision-making, where licensee decisions demonstrate that nuclear safety is an overriding priority. Specifically, from the time of discovery of the non-conservative technical specification until now, various decisions had been made by the licensee that have delayed the timely submittal of the license amendment request (H.1(c)).

Inspection Report# : [2013007](#) (pdf)

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

**Significance:**  Sep 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **RADIOACTIVE MATERIAL FOUND OFF-SITE AT A SCRAP METAL VENDOR FACILITY**

A self-revealed finding of very low safety significance (Green) and an associated non-cited violation (NCV) of 10 CFR 20.1501 was identified on July 14, 2014, for the failure to conduct surveys that may be necessary for the licensee to comply with the regulations in Part 20 of the Code of Federal Regulations (CFR). The inspectors determined that the licensee did not perform adequate surveys to assure compliance with 10 CFR 20.1802, which requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled area or unrestricted areas and that is not in storage. Specifically, on July 14, licensee surveys of the service air compressor lube oil coolers were not adequate to control licensed material from being unconditionally released from the site. The inspectors determined that this was a performance deficiency, the cause of which was reasonably within the licensee's ability to foresee and correct, and should have been prevented. This finding was not subject to traditional enforcement since the incident did not result in a significant safety consequence, did not impact the NRC's ability to perform its regulatory function, and was not willful. This issue was entered into the licensee's corrective action program as Condition Report (CR) 2014-11729. Licensee corrective actions included intrusive management actions to address individual performance weaknesses, radioactive material control practices, and sharing lessons learned with applicable station staff.

The performance deficiency was determined to be more than minor because it was associated with the Public Radiation Safety Cornerstone attribute for program and process and affected the cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive material released into the public domain. The finding was determined to be of very low safety significance because the finding was not a transportation issue, did not involve radioactive effluents, and did not involve the Radiological Environmental Monitoring Program. This

finding has a cross-cutting aspect in the area of human performance, challenge the unknown, for the radiation protection technician's failure to stop when faced with uncertain conditions and to ensure that risks are evaluated and managed before proceeding

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

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## 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.

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## Miscellaneous

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