



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II**
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

January 26, 2012

Mr. Preston Gillespie
Site Vice President
Duke Energy Carolinas, LLC
Oconee Nuclear Station
7800 Rochester Highway
Seneca, SC 29672

**SUBJECT: OCONEE NUCLEAR STATION – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000269/2011008, 05000270/2011008,
AND 05000287/2011008, AND NOTICE OF VIOLATION**

Dear Mr. Gillespie:

On December 16, 2011, the U. S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution biennial inspection at your Oconee Nuclear Station (ONS) Units 1, 2, and 3. The enclosed inspection report documents the inspection results which were discussed on December 16, 2011, with you and other members of your management staff.

The inspection examined activities conducted under your license as they relate to problem identification and resolution and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of plant equipment and activities, and interviews with personnel.

The inspectors identified one Green finding, as discussed below, and some weaknesses, including minor performance deficiencies, associated with the performance of the corrective action program (CAP) in the areas of problem identification, problem evaluation, adequacy and timeliness of corrective actions, and use of operating experience. However, based on the inspection sample, the inspection team concluded that the implementation of the CAP and overall performance related to identifying, evaluating, and resolving problems at ONS was generally adequate.

One NRC-identified finding of very low safety significance (Green) was identified during this inspection. This finding was determined to involve a violation of NRC requirements. The violation is being cited in the enclosed Notice of Violation (NOV) in accordance with the NRC Enforcement Policy because the NRC determined that ONS personnel failed to restore full compliance for a non-cited violation (NCV) issued in NRC inspection report 05000269/2010004, 05000270/2010004, 05000287/2010004. Specifically, ONS personnel failed to promptly identify and correct the condition adverse to quality discussed in the NCV for Units 1, 2, and 3 in order to fully address the condition and restore compliance with NRC regulations. The current Enforcement Policy is included on the NRC's Web site at (<http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>).

Duke Energy Carolinas, LLC, is required to respond to this letter following the instructions specified in the enclosed NOV. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Should you have any questions concerning this letter, please contact Mr. George Hopper at 404-997-4645.

Sincerely,

/RA/

Richard P. Croteau, Director
Division of Reactor Projects

Docket No. 50-269, 50-270, 50-287
License No. DPR-38, DPR-47, DPR-55

Enclosures: Enclosure 1 – Notice of Violation
Enclosure 2 – Problem Identification and Resolution Inspection Report
05000269/2011008, 05000270/2011008, 05000287/2011008
w/Attachment: Supplemental Information

cc w/encl: see Page 4

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cc w/encl: see Page 4

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Letter to Preston Gillespie from Richard P. Croteau dated January 26, 2012

SUBJECT: OCONEE NUCLEAR STATION – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000269/2011008, 05000270/2011008,
AND 05000287/2011008, AND NOTICE OF VIOLATION

Distribution w/encl:

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NOTICE OF VIOLATION

Duke Energy Carolinas, LLC
Oconee Nuclear Station
Units 1, 2, and 3

Docket No.: 50-269, 50-270, 50-287
License No.: DPR-38, DPR-47, DPR-55

During an inspection completed on December 16, 2011, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is set forth below:

- A. 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, requires in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, and non-conformances are promptly identified and corrected.

10 CFR 50.49(f) requires that each item of electric equipment important to safety shall be qualified by one of the following methods: (1) Testing an identical item of equipment under identical conditions or under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable, (2) Testing a similar item of equipment with a supporting analysis to show that the equipment to be qualified is acceptable, (3) Experience with identical or similar equipment under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable, or (4) Analysis in combination with partial type test data that supports the analytical assumptions and conclusions.

Contrary to the above, from October to November 2010 (Unit 3 refueling outage), from April to June 2011 (Unit 1 refueling outage), and in November 2011 (Unit 2 refueling outage), the licensee failed to establish measures to assure that a condition adverse to quality, identified by the NRC in NCV 2010004-03, was promptly identified and corrected. Specifically, the licensee missed reasonable opportunities during each Unit's refueling outage to confirm the population of Limitorque actuators that were potentially installed in an unqualified configuration in order to properly assess the extent of the non-conforming condition discussed in NCV 2010004-03 and take appropriate corrective actions. Consequently, an unknown population of Limitorque actuators in Units 1, 2, and 3 remained in a configuration that was not qualified in accordance with one of the methods described in 10 CFR 50.49(f).

This violation is associated with a Green Significance Determination Process finding.

Pursuant to the provisions of 10 CFR 2.201, Duke Energy Carolinas, LLC, is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will

Enclosure 1

be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 26th day of January 2012

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-269, 50-270, 50-287

License No.: DPR-38, DPR-47, DPR-55

Report No.: 05000269/2011008, 05000270/2011008,
05000287/2011008

Licensee: Duke Energy Carolinas, LLC

Facility: Oconee Nuclear Station (ONS)

Location: Seneca, SC

Dates: November 28 – December 16, 2011

Inspectors: J. Rivera-Ortiz, Sr. Reactor Inspector (Team Leader)
A. Sabisch, Sr. Resident Inspector (Oconee Station)
C. Fletcher, Sr. Reactor Inspector
J. Hamman, Reactor Inspector
K. Miller, Resident Inspector (Watts Bar Plant)
K. Ellis, Resident Inspector (Oconee Station)
G. Ottenberg, Resident Inspector (Oconee Station)

Approved by: Richard Croteau, Director
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000269/2011008, 05000270/2011008, 05000287/2011008; November 28 – December 16, 2011; Oconee Nuclear Station; Biennial Inspection of Problem Identification and Resolution.

This report covers a team inspection conducted by three regional and four resident inspectors in accordance with NRC Inspection Procedure 71152, "Problem Identification and Resolution." The inspectors identified one non-escalated cited violation of very low safety significance for the licensee's failure to promptly identify and correct a condition adverse to quality from a previous non-cited violation (NCV), resulting in the licensee's failure to restore compliance with NRC regulations. The significance of most findings is indicated by its color (Green, White, Yellow, Red) using the process in Inspector Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)." The cross-cutting aspects were determined using IMC 0310, "Components within the Cross Cutting Areas." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Identification and Resolution of Problems

The inspectors concluded that, in general, problems were properly identified, prioritized, evaluated, and corrected. The licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the number of issues entered into the Problem Investigation Program (PIP) during the review period and the low safety significance of deficiencies identified by the NRC that had not been previously identified by the licensee. In addition to the open trend discussed in NRC Inspection Report 2011003 associated with inconsistent initiation of PIPs and describing plant issues in sufficient detail and clarity, the inspectors identified various observations, including performance deficiencies of minor significance, where plant issues were not adequately identified in the CAP via PIP documents. Generally, prioritization and evaluation of issues, formal root cause evaluations for significant problems, and corrective actions specified for problems were consistent with licensee CAP procedures. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner. However, the inspectors identified some weaknesses in the problem evaluation and corrective action areas, including a finding of very low safety significance and multiple minor performance deficiencies, where the licensee either failed or experienced challenges to meet their CAP procedure requirements and guidelines.

The inspectors determined that overall, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. The inspectors identified one observation in this assessment area concerning the licensee's process to follow-up regulatory issues. Operating Experience (OE) usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, plant operations, and cause evaluations. However, the inspectors identified some weaknesses in the effectiveness of the licensee's OE program.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

Cornerstone: Mitigating Systems

- Green. The NRC identified a non-escalated cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" for the licensee's failure to promptly identify and correct a condition adverse to quality in Units 1, 2, and 3, which resulted in failure to restore compliance with 10 CFR 50.49(f). The condition adverse to quality involved the installation of Limitorque valve actuators in a configuration that was not supported by the vendor's environmental qualification (EQ) testing or engineering analysis. The licensee implemented immediate actions to address the functionality concern on the affected valves by installing drains to prevent excessive accumulation of condensate that could impact the valves' safety function.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affects 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). Specifically, the licensee failed to promptly address an EQ non-conforming condition to ensure the availability, reliability, and capability of five LPI system valves in Unit 1 and Unit 3 that are credited for the mitigation of initiating events. The inspectors used Inspector Manual Chapter 0609, Significance Determination Process, Attachment 4, Phase 1, to evaluate the significance of this finding and determined that it was of very low safety significance (Green) because the finding was a qualification deficiency confirmed not to result in loss of operability or functionality. The performance deficiency was directly related to the cross-cutting area of Problem Identification of Resolution under the Problem Evaluation aspect of the Corrective Action Program component because the licensee did not thoroughly evaluate the problem which resulted in the failure to promptly identify and correct a condition adverse to quality. [P.1(c)] (Section 4OA2(a)(3))

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution (PI&R)

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed the licensee's CAP procedures which described the administrative process for initiating and resolving problems primarily through the use of PIPs. The inspectors toured plant areas, including selected risk-significant systems to verify that problems were being properly identified and PIPs were initiated. The inspectors also attended daily plant status meetings, station management CAP daily meetings, and work request/work order (WR/WO) prioritization meetings to assess the licensee's threshold to initiate PIPs for identified plant problems. Additionally, the inspectors reviewed health reports, operator logs, and corrective maintenance work orders for selected risk-significant systems to verify that known system issues were entered into the CAP via PIPs.

In order to assess the licensee's prioritization of PIPs that were generated during this inspection, the inspectors attended PIP prioritization meetings conducted by the Centralized Screening Team from the Performance Improvement organization to verify that prioritization and other considerations such as reportability, operability, and Maintenance Rule evaluations were performed in accordance with corporate procedure NSD-208, "Problem Investigation Program."

The inspectors reviewed a sample of PIPs initiated since the last biennial PI&R inspection (August 2009) to verify that problems already entered into the CAP were properly evaluated and corrective actions were adequate to address the cause(s) of the identified problems. The PIP sample included plant issues requiring apparent cause or root cause evaluations and plant issues that did not require a cause evaluation to be corrected. In order to ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the inspectors selected a representative number of PIPs that were assigned to the major plant departments, including operations, maintenance, engineering, health physics, emergency preparedness, and security. The inspectors also selected a sample of PIPs initiated to address NRC identified non-cited violations and licensee identified violations issued since the last PI&R. The sample also included a focused review of PIPs for three risk-significant systems: High Pressure Injection (HPI) System, Keowee Hydro Station, and the Protected Service Water System which was under construction at the time of the inspection. The focused review included a five year review of corrective actions for applicable age-dependent issues in the HPI and Keowee Hydro Station systems.

The inspectors reviewed the selected PIP sample against the performance attributes listed in NRC inspection procedure IP 71152, Table 1. The inspectors conducted a detailed review to assess the adequacy of the root cause and apparent cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the PIPs and the guidance in licensee procedure NSD-208 and NSD-212, "Cause Analysis." The inspectors assessed if the licensee had adequately determined the cause(s) of the identified problems, and had adequately addressed operability, the need to formally report the condition to the NRC, common cause determination, Maintenance Rule implementation (10 CFR 50.65), generic implications, extent of condition, extent of cause, and the evaluation of operating experience to determine if the condition could have been prevented through the use of OE. The inspectors also verified that corrective actions to prevent recurrence addressed the root cause(s) identified in the cause analysis of PIPs involving significant conditions adverse to quality. Where possible, the inspectors independently verified that the corrective actions were implemented as intended.

The inspectors also performed a review of corrective actions for control room deficiencies to ensure that control room issues were identified, evaluated, and corrected in accordance with the licensee's CAP procedures.

Documents critically reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues

The inspectors determined that, in general, the licensee was identifying problems and entering them into the CAP for resolution either via PIPs or WRs/WOs. Generally, plant problems were identified and corrective actions implemented in a timely manner. The inspectors determined that the requirements for initiating PIPs, as described in licensee corporate procedure NSD-208, provided an adequate threshold for entering issues into the CAP. These conclusions were based on the type of problems entered into the CAP as PIPs and the expectations delineated in procedure NSD-208, which stated that: "everyone is responsible for having a low threshold for identifying issues potentially impacting nuclear safety or quality, personnel safety, compliance with regulations... Actively look for problems and report issues through timely PIP initiation." In addition, the inspectors' walk-downs of plant areas and accessible portions of the selected risk-significant systems did not result in safety significant deficiencies that were not already identified in the CAP. However, the NRC is currently monitoring the effectiveness of licensee's corrective actions to address an open trend discussed in NRC Inspection Report 2011003 associated with inconsistent initiation of PIPs and describing plant issues in sufficient detail and clarity to allow an adequate problem evaluation and appropriate corrective actions to be developed.

The inspectors identified the following observations, including performance deficiencies of minor significance, where plant issues were not adequately identified in the CAP via PIP documents.

Enclosure 2

- The inspectors identified that no formal guidance or mechanism existed in the CAP to ensure that PIPs were generated for plant issues that were initially identified in work requests. The inspectors also noted that there was no specific group with the responsibility to screen WRs/WOs to ensure plant issues have been entered into the CAP as a PIP in order to have potential impact on operability or functionality identified in a timely manner. Based on discussions with licensee management, the inspectors identified that there is a management expectation that a PIP shall be initiated for any equipment related WR. However, this expectation was not formally described in the CAP procedures. Even though a high rate of PIP initiation was observed at the ONS for equipment-related issues, the CAP process was still vulnerable to miss the entry of a condition adverse to quality into the problem investigation program.

For example, the inspectors conducted a review of a sample of WRs generated during the review period and identified several WRs that did not have a PIP referenced, but corresponding PIPs were able to be identified after further review. The inspectors also identified a number of equipment related issues that were initially captured in WRs but were not entered into the PIP for additional evaluation and resolution. The inspectors confirmed that none of the equipment related issues represented operability or functionality concerns for risk significant equipment. The licensee initiated PIP O-11-12204 in response to this issue.

- The inspectors identified during a walk-down of the Protected Service Water (PSW) building that a portable heating system had been out of service for an extended period the night before the walk-down. The inspectors identified that this condition was not captured in the PIP process as required by NSD-208. The inspectors also noted that no records were available to confirm that compensatory measures were in place to ensure the building temperature did not exceed the minimum limit for the building. The PSW building was a new safety-related building under construction considered, at the time, to be a Class B storage facility with specific temperature limits to meet quality assurance requirements. The failure to capture this issue in the PIP process was a performance deficiency of minor significance since the issue had no impact on plant safety. The licensee initiated PIP 11-14594 in response to this issue.
- The inspectors identified during the review of Autologs for the Keowee Hydro Units that two issues, one associated with the Unit 2 shear pin failure actuation alarm and the other associated with a Godiva gasoline powered backup fire pump battery, were not captured in the PIP process as required by NSD-208. The failure to capture these issues in the PIP process was a performance deficiency of minor significance since these issues had no impact on plant safety. The licensee initiated PIPs O-11-14613 and O-11-14677 in response to this issue.

Prioritization and Evaluation of Issues

Based on the review of selected PIPs, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the PIP significance level guidance in NSD-208. The inspectors determined that consideration of important problem evaluation attributes such as reportability, operability, functionality, and Maintenance Rule evaluations was consistent with NSD-208.

The inspectors determined that station personnel had conducted root cause and apparent cause evaluations in compliance with the licensee's CAP procedures and assigned cause determinations were appropriate, considering the significance of the issues being evaluated. A variety of formal causal analysis techniques were used depending on the type and complexity of the issue, consistent with NSD-212.

However, the inspectors identified the following examples where the evaluation of problems did not fully meet the guidance in procedures NSD-208 and NSD-212 to address the conditions adverse to quality described in the PIPs.

- As discussed in the Findings section of this inspection report, the inspectors identified a finding associated with the licensee's failure to promptly identify and correct a condition adverse to quality associated with the environmental qualification of Limitorque valve actuators. The inspectors determined that this performance deficiency reflected a weakness in the quality and rigor of the licensee's effort to evaluate the problem, in that the licensee had not fully addressed the environmental qualification concern after reasonable opportunities were available to ensure compliance with environmental qualification regulations. This issue was dispositioned in accordance with IMC-0612, IMC-0609, and the NRC Enforcement Policy in section 4OA2(a)(3) of this report.
- PIP O-11-3285 was initiated, in part, to address NCV 2011003-01 issued by the NRC in an integrated inspection report. This NCV was issued for inadequate design verification of the natural phenomenon barrier system (NPBS) borated water storage tank (BWST)/standby shutdown facility (SSF) Trench Foundation. As required by NDS-208, NRC findings or violations should be entered into the PIP program as a significance level 3 PIPs. However, the inspectors identified that a significance level 3 PIP was not initiated to address the NCV. The failure to reevaluate the significance level of the original PIP or to initiate a new significance level 3 PIP to capture the NCV was a performance deficiency of minor significance since the issue had no impact on plant safety and did not adversely affect any ROP cornerstone objectives. The licensee initiated PIP O-11-14525 in response to this issue.
- PIP O-11-06055 was generated to address a condition adverse to quality associated with the improper control of a Security Contingency document marked as Safeguards. The inspectors identified that this PIP did not have a Priority 2 Action Item to correct the condition, as required by NSD-208 for a PIP of significance level 3. The failure to assign a Priority 2 Action Item, as required by NSD-208, was a

performance deficiency of minor significance since the issue had no impact on plant safety and did not adversely affect any ROP cornerstone objectives. The licensee initiated PIP O-11-14943 in response to this issue.

Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that overall, corrective actions for plant issues documented in PIPs were generally timely, commensurate with the safety significance of the issues, and effective. The inspectors noted that in general, conditions adverse to quality were corrected. For significant conditions adverse to quality, corrective actions were developed to directly address the cause(s) and prevent recurrence. Effectiveness reviews for corrective actions to prevent recurrence (CAPRs) were conducted to ensure corrective actions were properly implemented and significant conditions adverse to quality had not recurred.

The inspectors identified the following observations where the corrective actions did not fully meet the guidance in procedures NSD-208 and NSD-212 to address the condition(s) described in the PIPs. These issues were screened in accordance with IMC -0612, Appendix B, "Issue Screening," and were determined to be of minor significance and not subject to enforcement action in accordance with the NRC's Enforcement Policy.

- The root cause evaluation for the NRC White finding discussed in NRC inspection report 2010-008 (PIP O-10-01213) identified that conservative decision making with safety as an overriding priority was one of the root causes for the issue. The finding was issued for the licensee's failure to identify and correct a condition adverse to quality involving foreign material on the Unit 2 and 3 SSF letdown line filters. The inspectors identified that no interim CAPRs were developed for the conservative decision making root cause once the root cause evaluation was completed. Procedure NSD-212 recommended that interim CAPRs may be needed in some cases to prevent recurrence of a similar condition. The team also identified that since the completion of the root cause, the NRC has issued two NCVs with a cross cutting aspect in conservative decision making (H.1.(b)). While all the CAPRs developed for the SSF letdown line finding had not been fully implemented at the time of this inspection, the inspectors determined that the recurrence of performance deficiencies with conservative decision making as a contributing cause could be an indicator that adequate interim CAPRs were not in place to address the root causes of this issue. The licensee initiated PIP O-11-15151 in response to this issue.
- The team identified that several vendor procurement issues were documented in PIPs during the review period. These issues related to vendors supplying components for the ongoing modification of the PSW System. The team noted that the CAP has been generally effective in correcting the individual conditions adverse to quality documented in each PIP. However, the inspectors noted that the overriding theme of PSW vendor issues had not been effectively addressed as demonstrated by the recurrence of vendor procurement problems. The inspectors

determined that none of the procurement issues had adversely affected plant safety. The licensee initiated PIP O-11-14859 in response to this issue.

- The inspectors identified two examples where the licensee did not meet the expectations in CAP procedure NSD-208 for the implementation of timely corrective actions. Procedure NSD-208 stated that a root cause evaluation will have a completion timeline of 45 days and corrective action due dates shall be established commensurate with the significance of the issue. While the licensee took prompt action to address the immediate safety concerns and the extension of root cause evaluation due dates was allowed by the licensee's CAP procedures, the inspectors determined that some risk significant issues were not fully addressed within the timeliness expectations in the CAP procedures. Particularly, the delay in the completion of some root cause evaluations resulted in the deferred implementation of CAPRs. For example, the root cause evaluation for the NRC White finding on the SSF letdown line filters was completed approximately 10 months after the issue was identified. The inspectors found that, at the time of this inspection, not all the CAPRs had been fully implemented. Furthermore, a licensee's self-assessment of this issue dated 11/30/2011 (PIP O-11-14502) identified that some CAPRs did not contain sufficient objective evidence of sustainability. Similarly, the root cause evaluation to address NRC finding 2011004-01, associated with the failure of letdown line containment isolation valve HP-5 ten months prior to this inspection, was not completed pending final approval from the Corrective Action Review Board (CARB). Consequently, the implementation of CAPRs was also deferred until final approval of the root cause evaluation. The licensee initiated PIP O-11-15152 in response to this issue.
- The inspectors performed a timeliness review of Licensee Event Reports (LERs) required pursuant 10 CFR 50.73 and identified that the licensee experienced challenges to submit LERs containing the full description of the event, its root cause(s) and proposed corrective actions within the required 60 days. In most cases, the licensee submitted an abstract prior to the 60 day clock expiring, and then supplemented the original abstract with a full LER at a later date. The licensee initiated various PIPs to address this issue; however, the inspectors identified that the corrective actions did not seem to effectively drive changes to improve the timeliness of root cause evaluations and completeness of LERs. The licensee initiated PIP O-11-15139 in response to this issue.

(3) Findings

Introduction: The NRC identified a Green non-escalated cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" for the licensee's failure to promptly identify and correct a condition adverse to quality in Units 1, 2, and 3, which resulted in failure to restore compliance with 10 CFR 50.49(f). The condition adverse to quality involved the installation of Limitorque valve actuators in a configuration that was not supported by the vendor's EQ testing or engineering analysis.

Description: 10 CFR Part 50.49(f) describes four methods in which each item of electrical equipment important to safety shall be qualified. The methods consist of a combination of testing of identical or similar components with supporting engineering analysis. Additionally, 10 CFR Part 50, Appendix B, Criterion XVI states that measures shall be established to assure that conditions adverse to quality, such as non-conformances, are promptly identified and corrected.

NRC inspection report 05000269/2010004, 05000270/2010004, and 05000287/2010004 for Oconee Nuclear Station documented a non-cited violation of 10 CFR 50.49(f) (NCV 2010004-03), in part, for the licensee's failure meet the environmental qualification requirements for two Limitorque motor operated valve actuators. Specifically, the inspectors identified that two Limitorque valve actuators in Unit 3, 3HP EV 0026 and 3HP EV 0410, were installed with the limit switch compartment (LSC) oriented vertical down. The Limitorque Environmental Qualification Test Report (Report B0058) indicated that this type of actuator was tested with the LSC oriented in the vertical up position and with T-drains installed on the motor to equalize pressure and drain the condensation resulting from the gradual cooling following a High Energy Line Break (HELB) scenario. The inspectors identified that the licensee did not have a supporting analysis to demonstrate the acceptability of LSCs oriented in a vertical down position without T-drains.

As evidenced by test data from the Limitorque Environmental Qualification Test Report, the accumulation of condensation in the LSC could cause limit switches to fail, cause electrical shorts, or lead to erratic operation. However, the licensee did not fully consider the information in the vendor test report to recognize that condensate accumulation within a LSC compartment oriented in a vertical down position and without drainage was a credible failure mechanism during a design basis accident (DBA). Additionally, the licensee's EQ maintenance Manual (EQMM) 1393.01-A02-00, Section 5.1.3, stated that LSCs may be fitted with T-drains to permit their installation in a vertical down position.

On October 28, 2010, and in response to NCV 2010004-03, the licensee performed an Immediate Determination of Operability (IDO) (PIP O-10-08395) and identified a population of valves in Unit 1, 2, and 3 that could potentially be installed in a vertical down configuration. The systems potentially affected were High Pressure Injection, Low Pressure Injection, Reactor Coolant, Component Cooling, Feedwater, Reactor Building Spray, Low Pressure Service Water, Liquid Waste Disposal, Gaseous Waste Disposal, Purge, and Core Flood. The valves listed in the IDO were declared operable but in a degraded non-conforming condition.

In September 2011 the licensee completed an evaluation which reduced the list of potentially affected valves identified in the IDO using the criterion of which valves were susceptible to long term exposure to HELB environment and were required to operate later in the mitigation of a DBA. The licensee determined that condensate accumulation in the LSC would not challenge the operation of those Limitorque actuators that are only required to operate early in the mitigation of a DBA.

In November 2011 during the Unit 2 refueling outage, the licensee performed a walk-down to confirm LSC orientation and install T-drains on the potentially affected valves for Unit 2. The walk-down identified that Low Pressure Injection (LPI) System valves 2LP-1, 2LP-2, and 2LP-103 represented a functionality concern based on the screening criterion employed in the evaluation completed in September 2011. However, similar walk-downs were not performed in Units 1 and 3 because the licensee missed opportunities to confirm the orientation of the potentially affected LSCs during the most recent outages for Unit 3 (October 23-November 21, 2010) and Unit 1 (April 2-June 9, 2011).

On December 14, 2011, the licensee identified a total of five Limitorque actuators in Unit 1 and Unit 3 LPI Systems that were susceptible to fail due to condensate accumulation in the LSC under long term exposure to HELB conditions (Valves 1LP-1, 1LP-2, 3LP-1, 3LP-2, and 3LP-104). These five valves performed the same functions as the Unit 2 valves that were addressed during the Unit 2 outage in November 2011. Reactor Coolant System/LPI Isolation valves 1LP-1 and 3LP-1 as well as LPI Hot Leg Suction Isolation valves 1LP-2 and 3LP-2 are credited for the mitigation of a Large Break LOCA event. Post-LOCA Boron Dilution Isolation Valve 3LP-104 is credited for the mitigation of Small Break LOCA, Large Break LOCA, and Rod Ejection Accident (REA) events, where the reactor containment atmosphere is also considered a harsh environment. The licensee took immediate actions to perform reactor building entries on both Units 1 and 3 to install T-drains in the affected valves. The licensee performed an engineering evaluation for 3LP-104 because a T-drain could not be immediately installed due to the valve location. There was no Technical Specifications or Selected Licensing Commitments associated with valve 3LP-104. In addition, the normal post LOCA boron dilution flowpath on Unit 3 was considered unavailable until next outage because 3LP-104 was inaccessible.

Even though the licensee took actions to identify the population of Limitorque actuators with immediate operability/functionality concerns due to condensate accumulation in the LSC under long term exposure to HELB conditions, the licensee did not fully address the non-conforming condition identified in NCV 2010004-03. Specifically, the licensee did not have supporting documentation to demonstrate that Limitorque actuators in Units 1, 2, and 3 installed in a configuration different from the orientation originally tested by the vendor (i.e. LSC in the vertical down position and without drainage) were in compliance with the EQ requirements in 10 CFR 50.49. Additionally, the licensee had not fully characterized the scope of actuators that were affected by the non-conforming condition in Unit 1 and Unit 3 when the licensee conducted a refueling outage in these Units. Unit 1 and 3 refueling outages presented reasonable opportunities to walk-down the potentially affected systems to assess the extent of the condition and initiate corrective actions to ensure that all applicable Limitorque actuators were qualified. Consequently, an unknown population of Limitorque actuators in Unit 1, 2, and 3 remained in an unqualified configuration for an extended period without an adequate technical justification. Therefore, the inspectors determined that the licensee's corrective actions to address NCV 2010004-03 failed to fully address the non-conforming condition in the NCV and restore compliance with NRC regulations when reasonable opportunities were available to promptly identify and correct the problem.

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Analysis: The failure to promptly identify and correct a condition adverse to quality in Units 1, 2, and 3 associated with the EQ of Limitorque actuators detailed in NCV 2010004-03, in accordance with 10 CFR 50, Appendix B, Criterion XVI, was a performance deficiency. This performance deficiency is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affects 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). Specifically, the licensee failed to promptly address an EQ non-conforming condition to ensure the availability, reliability, and capability of two LPI system valves in Unit 1 and three LPI system valves in Unit 3 LPI systems that are credited for the mitigation of initiating events such as LOCA and REA. Additionally, the licensee missed reasonable opportunities and did not have supporting documentation to ensure that all Limitorque actuators installed in a configuration different from the orientation originally tested by the vendor (i.e. LSC in the vertical down position and without drainage) were in compliance with the EQ requirements in 10 CFR 50.49(f).

The inspectors used Inspector Manual Chapter 0609, Significance Determination Process, Attachment 4, Phase 1, and determined that the finding was of very low safety significance (Green) because it was a qualification deficiency confirmed not to result on loss of operability or functionality. The performance deficiency was directly related to the cross-cutting area of Problem Identification of Resolution under the Problem Evaluation aspect of the Corrective Action Program component because the licensee did not thoroughly evaluate the problem which resulted in the failure to promptly identify and correct a condition adverse to quality. [P.1(c)]

Enforcement: 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, requires in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, and non-conformances are promptly identified and corrected.

10 CFR 50.49(f) requires that each item of electric equipment important to safety shall be qualified by one of the following methods: (1) Testing an identical item of equipment under identical conditions or under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable, (2) Testing a similar item of equipment with a supporting analysis to show that the equipment to be qualified is acceptable, (3) Experience with identical or similar equipment under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable, or (4) Analysis in combination with partial type test data that supports the analytical assumptions and conclusions.

Contrary to the above, from October to November 2010 (Unit 3 refueling outage), from April to June 2011 (Unit 1 refueling outage), and in November 2011 (Unit 2 refueling outage), the licensee failed to establish measures to assure that a condition adverse to quality, identified by the NRC in NCV 2010004-03, was promptly identified and corrected. Specifically, the licensee missed reasonable opportunities during each Unit's

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refueling outage to confirm the population of Limitorque actuators that were potentially installed in an unqualified configuration in order to properly assess the extent of the non-conforming condition discussed in NCV 2010004-03 and take appropriate corrective actions. Consequently, an unknown population of Limitorque actuators in Units 1, 2, and 3 remained in a configuration that was not qualified in accordance one of the methods described in 10 CFR 50.49(f).

Because the violation was of very low safety significance and the NRC determined that the licensee failed to restore compliance for NCV 2010004-03, this violation is being treated as a notice of violation (NOV) consistent with section 3.1.2 of the NRC Enforcement Policy and is identified as VIO 2011008-001, "Failure to Promptly Identify and Correct a Condition Adverse to Quality Involving the Environmental Qualification of Limitorque Valve Actuators." This violation was entered into the licensee's corrective action program as PIP O-11-15055.

b. Assessment of the Use of Operating Experience (OE)

(1) Inspection Scope

The inspectors reviewed licensee procedure NSD-204, "Operating Experience Program Description," reviewed the licensee's operating experience database, and interviewed the OE Coordinator as well as end-users in Engineering, Maintenance and Operations, to assess the effectiveness of the licensee's process for incorporating internal and external operating experience information into plant processes and activities. In addition, the inspectors selected a sample of operating experience documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.), which had been issued since August 2009 to verify whether the licensee had appropriately evaluated each notification for applicability to Oconee Nuclear Station, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on interviews with the OE coordinator and a review of documentation related to review of operating experience issues, the inspectors determined that the licensee was generally effective in processing and incorporating OE at the station. The licensee's screening of external OE for applicability was performed at the corporate level and those OE documents deemed applicable to Oconee were assigned to the station through the CAP for additional review. However, the inspectors determined that this practice had the potential to screen out OE information that could provide useful information to the station departments. Some examples of OE that may have been applicable to Oconee were classified as "not applicable" due to criteria such as being from a different Nuclear Steam Supply System vendor or pertaining to a system not found at the Oconee site.

The inspectors also identified that the station submitted information regarding internal events via Nuclear Network on a regular basis and had released approximately 100

reports since the last PI&R inspection. Interviews with system engineers and maintenance personnel identified that station personnel made frequent use of subject matter experts within the Duke fleet as well as contacts at other plants, owners groups or vendors to obtain information that could be used in addressing equipment issues or improving performance of systems and components.

In addition, operating experience reviews were conducted for all apparent cause and root cause evaluations as required by licensee procedure NSD-212. The inspectors noted that the use of OE was only required when conducting Root Cause or Apparent Cause Evaluations. For lower-level equipment-related issues, industry OE was not always used in the assessment of these issues and development of potentially beneficial corrective actions. In addition, the inspectors identified the following observations where the evaluation of OE did not fully address the operating experience information provided and the expectations in NSD-204 were not fully met. Because these examples did not represent a failure to meet a requirement and did not adversely affect any ROP cornerstone objectives, the inspectors determined the issues are not subject to enforcement action in accordance with the NRC's Enforcement Policy.

- While OE was being utilized by some station personnel through the use of the CAP, the inspectors identified that there was limited use of industry equipment-specific databases such as the Nuclear Plant Reliability Data System (NPRDS), and the Equipment Performance Information Exchange (EPIX). These systems could be used in the investigation of equipment failures, adjustment of preventive maintenance and inspection schedules, development of work instructions, troubleshooting guidance, and modification packages or incorporation of external OE into pre-job briefing packages. The inspectors noted that experienced members of the licensee staff were familiar with these databases and used them to address issues both proactively and reactively; however, this was not done consistently across the ONS organization. During interviews and reviews of completed PIPs the inspectors identified that a knowledge weakness existed among less experienced plant staff members as to what OE information is available and how to best utilize it. The licensee initiated PIP O-11-15153 in response to this issue
- The inspectors identified some examples where corrective actions to address NRC Information Notices (IN) did not fully address the operating experience information provided.
 - IN 2009-21 was issued to communicate relevant information concerning the medical examination of licensed operators. The inspectors identified that the corrective actions to address this IN did not clearly describe the actions taken to capture the applicable lessons learned provided in this OE communication. The licensee initiated PIP O-11-14938 in response to this issue.
 - IN 2009-22 was issued to communicate relevant information concerning several industry human performance errors associated with outage activities. The inspectors identified that the corrective actions to address this IN did not clearly

describe the actions taken to capture the applicable lessons learned provided by this OE communication. The licensee initiated PIP O-11-15142 in response to this issue.

- The inspectors identified that, during the review period, three out of the 28 root cause evaluations completed (PIPs O-10-2649, O-10-8137, and O-11-7081) found that industry or in-house OE was not effectively used to prevent problems and contributed to the cause of the issues. The inspectors determined that the results of these root causes were potentially an indicator of a programmatic weakness. The licensee initiated PIP O-11-15153 in response to this issue.

(3) Findings

No findings were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and self-criticism of the licensee's audits and self assessments, and to verify that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure NSD-607, "Self Assessments, Benchmarking, and Observations."

(2) Assessment

The inspectors determined that, in general, the scope of assessments and audits were consistent with the requirements in NSD-607. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the inspectors' independent review. The inspectors verified that PIPs were created to document all areas for improvement and findings resulting from the self-assessments, and verified that actions had been initiated consistent with those recommendations.

The inspectors identified that no self-evaluation process or mechanism existed to verify that appropriate and effective corrective actions had been taken to address regulatory issues. While the PIP process was the official vehicle to resolve conditions adverse to quality, including regulatory issues such as NCVs and licensee identified violations, the inspectors found that no formal mechanism existed to confirm that appropriate corrective actions had been established to restore compliance with NRC regulations and address the underlying issues. The licensee initiated PIP O-11-15155 in response to this issue.

(3) Findings

No findings were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team randomly interviewed on-site workers regarding their knowledge of the corrective action program at Oconee Nuclear Station and their willingness to write PIPs or raise safety concerns. During technical discussions with members of the plant staff, the inspectors conducted interviews to develop a general perspective of the safety-conscious work environment at the site. The interviews were also conducted to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors reviewed the licensee's Employee Concerns Program (ECP) and interviewed the ECP consultant. Additionally, the inspectors reviewed a sample of completed ECP reports to verify that concerns were being properly reviewed and identified deficiencies were being resolved and entered into the CAP when appropriate. Finally, the inspectors reviewed the last Safety Culture Survey to verify that the results related to Safety-Conscious Work Environment were consistent with the inspectors' assessment.

(2) Assessment

Based on the interviews conducted and the PIPs reviewed, the inspectors determined that licensee management emphasized the need for all employees to identify and report problems using the appropriate methods established within the administrative programs, including the CAP and ECP. These methods were readily accessible to all employees. Based on discussions with a sample of plant employees from various departments, the inspectors determined that employees felt free to raise issues, and that management encouraged employees to place issues into the CAP for resolution. The inspectors did not identify any reluctance on the part of the licensee staff to report safety concerns.

(3) Findings

No findings were identified.

e. Assessment of Corrective Actions to Address the Substantive Cross Cutting Issue on Human Performance

(1) Inspection Scope

The inspectors reviewed the licensee's progress toward the implementation of corrective actions to address the substantive cross-cutting issue (SCCI) identified in the NRC Annual Assessment Letter for the period of January 1, 2010, through December 31, 2010. In that letter, the NRC identified a cross-cutting theme in the Work Practices component of the Human Performance cross-cutting area (H.4.(b)). The SCCI was subsequently held open in NRC Mid-Cycle Performance Review Letter for the period January – July 2011 in order to give the licensee time to develop and schedule a

corrective action plan. This PI&R inspection was the first opportunity outside of the Resident Inspectors' reviews to assess the licensee's actions to address the open SCCI.

The inspectors conducted a detailed review of the licensee's common cause analysis (PIP O-11-00751) related to the open SCCI to assess the adequacy of the licensee's evaluation of the problems identified. The inspectors reviewed the evaluation against the guidance in licensee procedure NSD-212 and the performance attributes of NRC Inspection Procedure 71152. The inspectors assessed whether or not the licensee had adequately determined the cause(s) of identified problems and had developed adequate corrective actions. The inspectors also reviewed a sample of completed corrective actions to independently verify that the corrective actions were implemented as intended.

(2) Assessment

The team determined that in general, corrective actions for the SCCI were appropriate to address the common causes identified in the licensee's evaluation of PIP O-11-00751, initiated on January 24, 2011. The common cause evaluation's goal was to identify performance weaknesses and develop the necessary corrective actions. The common cause evaluation included the four PIPs addressing the NRC violations and an additional number of PIPs where the cause was also associated with procedure adherence. The common cause team reviewed each PIP and performed an analysis of this data using industry human behavior engineering model guidelines to determine commonalities. The common cause evaluation determined that standards and expectations were conflicting, confusing, numerous, and were implemented and reinforced inconsistently. In addition, there was a lack of knowledge with regard to administrative procedures that were expected to be utilized for plant performance. The evaluation also determined that there was a lack of consistent oversight and reinforcement of standards and expectations. The inadequate knowledge and oversight led to a failure to consistently execute tasks, procedures, or programs. The licensee developed 38 corrective actions to improve personnel compliance with procedures. In most cases, the problem was associated with use and adherence to administrative procedures. As a result, a Human Performance Initiative was in progress to address procedural compliance across the Duke fleet. The team noted that some corrective actions are still open and there has not been sufficient time to measure the effectiveness of the completed corrective actions.

(3) Findings

No findings were identified.

4OA6 Exit

Exit Meeting Summary

On December 16, 2011, the inspectors presented the preliminary inspection results to Mr. Preston Gillespie, Site Vice President, and other members of licensee management.

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The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:

B. Norris, Performance Improvement Manager
E. Burchfield, Operations Superintendent
K. Alter, Regulatory Compliance Manager
P. Gillespie, Site Vice-President
S. Batson, Station Manager
T. Patterson, Nuclear Safety Assurance Manager
T. Ray, Engineering Manager

LIST OF REPORT ITEMS

Opened

05000269,-270,-287/2011008-01	VIO	Failure to Promptly Identify and Correct a Condition Adverse to Quality Involving the Environmental Qualification of Limitorque Valve Actuators (Section 4OA2(a)(3))
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Opened and Closed

None

Closed

None

DOCUMENTS REVIEWED

Procedures

Duke Energy Employee Concerns Process, Rev 0
EDM 210, Engineering Responsibilities for the Maintenance Rule, Rev. 23
EDM-203: Equipment Reliability Health Monitoring, Assessing/Reporting and Action Planning, Rev. 2
EM 4.16, Duke Energy Oconee Nuclear Station, Engineering Guidance for Resolving Operable but Degraded/Non-Conforming Items (OBDN), Rev. 5
INOP-550, Supplier Performance Monitoring, Revision 2
NSD 120, Equipment Reliability, Rev. 3
NSD 125, Performance Improvement, Rev. 4
NSD 201, Reporting Requirements, Rev. 21 (Table A-3)
NSD 202, Reportability, Rev. 22

Attachment

NSD 203, Operability/Functionality, Rev. 23
 NSD 204, Operating Experience Program (OEP) Description, Rev. 11
 NSD 208, Problem Investigation Program, Rev. 32 and 33
 NSD 212, Cause Analysis, Rev. 21
 NSD 223, PIP Trending Program, Rev. 7
 NSD 310, Requirements for the Maintenance Rule, Rev. 10
 NSD-607, Self Assessments, Benchmarking, and Observations, Rev. 14 & 15
 NSD-608, Nuclear Safety Culture Monitoring Program, Rev. 0
 RPG 3.2, OMP Conditional Release Process (QA Condition Equipment and Items), Rev. 2
 RPG 3.4, Inspection and Maintenance of QA-1 PSW Equipment (Pre-OCG Acceptance), Rev. 2
 SCD 311, QA Inspection and Testing, Rev. 10
 WPM 601, On-Line Management, 02/01/11

Problem Investigation Program Reports (PIPs)

O-10-01213	O-10-01169	O-10-09636	O-11-07277
O-10-07675	O-10-01213	O-10-10176	O-11-08854
O-10-08295	O-10-01269	O-10-10402	O-11-08958
O-11-08854	O-10-01371	O-10-10975	O-11-09953
O-11-10672	O-10-01503	O-11-00181	O-11-10672
O-11-12029	O-10-01674	O-11-00642	O-11-10764
O-11-15055	O-10-01680	O-11-00751	O-11-10959
O-00-01029	O-10-02440	O-11-01009	O-11-11240
O-04-01588	O-10-02633	O-11-01203	O-11-11373
O-04-04360	O-10-02980	O-11-01215	O-11-11489
O-05-01344	O-10-03406	O-11-01226	O-11-11966
O-07-04298	O-10-03882	O-11-01321	O-11-12029
O-07-04902	O-10-04238	O-11-01371	O-11-12239
O-08-04976	O-10-05151	O-11-01384	O-11-12731
O-08-06321	O-10-05561	O-11-01665	O-11-13013
O-09-01994	O-10-06174	O-11-02023	O-11-14340
O-09-05128	O-10-06409	O-11-02084	O-11-14516
O-09-05213	O-10-06479	O-11-02427	O-11-14613
O-09-05609	O-10-06515	O-11-02473	O-11-14677
O-09-05983	O-10-06846	O-11-02564	O-11-14710
O-09-06257	O-10-07357	O-11-02603	O-11-14711
O-09-06670	O-10-07414	O-11-02631	O-11-15055
O-09-07153	O-10-07422	O-11-03285	O-11-15132
O-09-09388	O-10-07675	O-11-03388	O-97-03824
O-09-09389	O-10-08137	O-11-03485	O-97-04247
O-10-00904	O-10-08295	O-11-05291	
O-10-00952	O-10-08395	O-11-06055	
O-10-01071	O-10-08984	O-11-06925	

PIP Documents resulting from this Inspection

O-11-12204

O-11-14438

O-11-14452

Attachment

O-11-14502	O-11-14859	O-11-15132
O-11-14516	O-11-14909	O-11-15139
O-11-14525	O-11-14938	O-11-15140
O-11-14538	O-11-14939	O-11-15142
O-11-14573	O-11-14943	O-11-15151
O-11-14594	O-11-14945	O-11-15152
O-11-14608	O-11-14947	O-11-15153
O-11-14613	O-11-14949	O-11-15155
O-11-14677	O-11-14970	O-11-15172
O-11-14710	O-11-15055	
O-11-14711	O-11-15107	

Self-Assessments

Independent Nuclear Oversight Audit 10-03, Oconee Corrective Action Program Audit,
03/18/2010

Independent Nuclear Oversight Audit 11-08, INOS Audit 2011 Oconee Design Control Audit,
02/23/11

Independent Nuclear Oversight Audit 11-103, INOS Audit 2011 Oconee Emergency Planning
Performance Review, 02/08/11

Oconee Safety Culture Assessment 2010, February 2, 2011

Oconee Self-Assessment Schedule 2010

Oconee Self-Assessment Schedule 2011

Self-Assessment O-MNT-SA-11-02, Foreign Material Exclusion Assessment, 09/07/11

Self-Assessment ONP-09-SA-01, RCS Drain-down Inventory Control, 08/20/09

Work Orders

01025258	01040578	01043457	01968536
01028351	01040596	01044347	01975834
01036517	01040715	01044348	01975835
01036766	01040716	01044684	01976722
01036976	01040862	01045275	01983676
01037154	01041737	01045404	01990081
01037894	01041765	01045557	01990082
01038380	01042002	01045704	01991282
01038526	01042005	01045771	01994465
01038905	01042144	01045854	01994613
01038919	01042149	01047002	02000715
01039023	01042769	01047320	02002668
01039094	01042891	01048501	02013125
01039335	01042899	01048543	02013163
01039861	01043155	01897717	08815018
01040223	01043317	01959708	09041902
01040255	01043321	01959709	

Operating Experience Documents

Daily OE Review of Site and Industry Issues for 10/10/2011 and 10/12/2011

G-09-00924

G-09-01016

G-10-00111

G-10-00135

G-10-00261

G-10-00539

G-10-01013

G-10-01167

G-11-00327

O-09-06962

O-09-06994

O-10-02649

O-10-08137

O-11-07081

OEDB Items 12/20/2010 – 11/30/2011

Operating Experience Data Base (OEDB) 11-058827

SCWP Core Team Review Meeting, 12/01/2011

Other Documents

Calculation: Catawba, McGuire, and Oconee Nuclear Stations, Environmental Qualification (EQ) Evaluation of Limitorque MOV Actuator Installed Orientations, DPC-1381.05-00-0049

Drawing OC-PNS-HPI-18a, High Pressure Injection System

Drawing OFD-101A-1.1, High Pressure Injection System

Drawing OFD-101A-1.2, High Pressure Injection System

Drawing OFD-101A-1.3, High Pressure Injection System

Drawing OFD-101A-1.4, High Pressure Injection System

Duke Nuclear In-processing Traveler for 11/14/2011

Duke Nuclear Network Posting OE29726, Unauthorized Personnel Modifying Records in Controlled Database

Duke Power Work Process Manual: Section 401, Rev. 13

EC 102620, Add Note to DWG to Allow Isolation of FDWPT Pressure Switches

High Pressure Injection System (PNS-HPI) Lesson Plan, Rev. 28

Licensee Event Report 270/2010-01, Problem Investigation Process No. O-10-5561, Revision 1, August 2, 2011

Licensee Event Report 270/2010-01, Problem Investigation Process No. O-10-5561, Revision 0, August 2, 2011

Oconee AutoLog Database August 2009 – November 2011

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Oconee Nuclear Station Event Code Table

Oconee Nuclear Station Letter to NRR regarding Tornado/HELB Mitigation Strategies and Regulatory Commitments, July 29, 2011
Oconee Unit 1, 2, & 3, HPI System Health Report (7/1/2011-9/30/2011)
ONS Nuclear Safety Excellence Plan (NSEP), 12/13/10
Performance Improvement ONS Nuclear Safety Culture Monitoring Program Meeting Agenda 2011 4th Quarter, November 30, 2011
PIP and CAP Meeting Agenda Nov 28-Dec 1, 2011 and Dec 12-15, 2011
Root Cause Analysis Report for Incorrect Failure Mode and Operability Determination Related to Failure of 1HP-5 to Close (PIP O-11-8854), Rev. 0, 0 PIP O-11-8854
Sargent & Lundy LLC Performance Improvement Process 2009-1505
VS11165, Procurement Quality Supplier Surveillance Report, 12/01/11EC 102620, Add Note to DWG to Allow Isolation of FDWPT Pressure Switches
Work Request 01048784