

## UNITED STATES NUCLEAR REGULATORY COMMISSION

REGION III 2443 WARRENVILLE ROAD, SUITE 210 LISLE, IL 60532-4352

February 11, 2011

EA-11-014

Mr. Michael J. Pacilio Senior Vice President, Exelon Generation Company, LLC President and Chief Nuclear Officer (CNO), Exelon Nuclear 4300 Winfield Road Warrenville IL 60555

## SUBJECT: BYRON STATION, UNIT 2, NRC FOLLOW-UP INSPECTION REPORT 05000455/2011011; PRELIMINARY WHITE FINDING

Dear Mr. Pacilio:

This letter refers to the follow-up inspection conducted from January 1 to February 7, 2010, at your Byron Station, Unit 2. The purpose of the inspection was to evaluate the facts and circumstances surrounding the November 17, 2010, emergency shutdown of the Unit 2 Train "A" (2A) diesel generator. The enclosed report presents the results of this inspection, which were discussed on February 7, 2011, with the Mr. T. Tulon, and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions in your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

The enclosed report documents one self-revealed finding that was preliminarily determined to have low to moderate safety significance (White). This finding was assessed based on the best available information, including influential assumptions, using the applicable Significance Determination Process. As documented in Section 1R12 of this report, the 2A diesel generator was required to be shut down during routine monthly surveillance testing on November 17, 2010, when a flange connection on the upper lube oil cooler failed, resulting in a significant oil leak. The 2A diesel generator was declared inoperable as required by your Technical Specifications. The lube oil cooler was subsequently repaired, and the 2A diesel generator was successfully tested and returned to service.

An actual loss of safety function of one train of emergency alternating current power for more than the Technical Specification allowable outage time was identified when it was determined that the condition that led to this failure originated from maintenance that was completed on January 17, 2010. Because the redundant 2B diesel generator was not affected, the finding did not involve a complete loss of the safety function of the emergency alternating current power system.

Based on the results of this inspection, one apparent violation of NRC requirements was identified and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy, which can be found at the NRC's Web site at <a href="http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html">http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html</a>. Because the NRC has not made a final determination in this matter, no Notice of Violation is being issued for this inspection finding at this time. In addition, please be advised that the number and characterization of apparent violations may change as a result of further NRC review.

In accordance with Inspection Manual Chapter (IMC) 0609, 'Significance Determination Process," we intend to complete our evaluation using the best available information and issue our final determination of safety significance within 90 days of the date of this letter. The significance determination process encourages an open dialogue between the NRC staff and the licensee; however, the dialogue should not impact the timeliness of the staffs final determination.

Before the NRC makes its enforcement decision, we are providing you an opportunity to: (1) attend a Regulatory Conference where you can present to the NRC your perspective on the facts and assumptions the NRC used to arrive at the finding and assess its significance, or (2) submit your position on the finding to the NRC in writing. If you request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. The NRC will also issue a press release to announce the conference. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of your receipt of this letter. If you decline to request a Regulatory Conference or submit a written response, you relinquish your right to appeal the final Significance Determination Process determination; in that by not doing either, you fail to meet the appeal requirements stated in the Prerequisite and Limitation Sections of Attachment 2 of IMC 0609.

Please contact Eric Duncan at (630) 829-9620 within 10 days of the date of this letter to notify the NRC of your intended response. If we have not heard from you within 10 days, we will continue with our significance determination and enforcement decision. You will be advised by a separate correspondence of the results of our deliberations on this matter.

M. Pacilio

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a> (the Public Electronic Reading Room).

Sincerely,

#### /**RA**/

Steven West, Director Division of Reactor Projects

Docket No. 50-455; License No. NPF-66;

- Enclosure: Inspection Report 05000455/2011011; w/Attachment: Supplemental Information
- cc w/encl: Distribution via ListServ

# U.S. NUCLEAR REGULATORY COMMISSION

## **REGION III**

Docket No: License No:	50-455 NPF-66
Report No:	05000455/2011011
Licensee:	Exelon Generation Company, LLC
Facility:	Byron Station, Unit 2
Location:	Byron, IL
Dates:	January 1 through February 7, 2011
Inspectors:	<ul><li>B. Bartlett, Senior Resident Inspector</li><li>J. Robbins, Resident Inspector</li><li>N. Valos, Senior Reactor Analyst</li></ul>
Approved by:	E. Duncan, Chief Branch 3 Division of Reactor Projects

### SUMMARY OF FINDINGS

IR 05000455/2011011, 01/1/2011–02/07/2011; Byron Station, Unit 2; Follow-up Inspection of Self-Revealing Failure of the Unit 2 Train A Diesel Generator; Maintenance Effectiveness

This report covers an approximate 1-month period of inspection by the resident inspectors and a senior reactor analyst. One self-revealed Preliminary White finding was identified by the inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Assigned cross-cutting aspects were determined using Inspection Manual Chapter (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," Revision 4, dated December 2006.

## A. NRC-Identified and Self-Revealed Findings

### **Cornerstone: Mitigating Systems**

<u>Preliminary White</u>. A preliminary finding of low to moderate safety significance (White) and an apparent violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when the 2A Diesel Generator (D/G) was required to be shutdown during routine monthly surveillance testing on November 17, 2010, when a flange connection on a spool piece connected to the upper lube oil cooler failed, resulting in a significant oil leak. The cause of the failure was that Work Order 1206254, "Clean Tube Side of Lube Oil Coolers," did not contain appropriate acceptance criteria to ensure proper reassembly of the spool piece for the upper lube oil cooler following maintenance on January 17, 2010. Specifically, the work order package did not contain a final torque verification to ensure that the spool piece flange bolts were torqued to required values, which resulted in the leak. The licensee entered this issue into the correction action program as Issue Report (IR) 1141591, properly re-installed the spool piece, and returned the 2A D/G to service on November 21, 2010.

The inspectors determined that this finding was more than minor, because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone and impacted the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. The NRC assessed this finding through a Phase 3 Risk Evaluation of the Significance Determination Process and made a preliminary determination that it was an issue of low to moderate safety significance (White). The cause of this finding was related to the Work Practices component of the Human Performance cross-cutting area since licensee personnel proceeded in the face of uncertainty or unexpected circumstances during the upper lube oil cooler maintenance activity (H.4(a)). (Section 1R12)

## B. <u>Licensee-Identified Violations</u>

None

## **REPORT DETAILS**

### 1. REACTOR SAFETY

### Cornerstone: Mitigating Systems

### 1R12 Maintenance Effectiveness (71111.12)

### .1 Self Revealing Failure of the 2A Diesel Generator Upper Lube Oil Cooler

#### a. Inspection Scope

The inspectors reviewed the circumstances surrounding the November 17, 2010, emergency shutdown of the 2A diesel generator (D/G) that was required during routine monthly surveillance testing when a flange connection on a spool piece connected to the upper lube oil cooler failed, resulting in a significant oil leak.

b. Findings

Introduction: A preliminary finding of low to moderate safety significance (White) and an associated apparent violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed on November 17, 2010, when the 2A D/G was required to be shut down during routine monthly surveillance testing when a flange connection on a spool piece connected to the upper lube oil cooler failed, resulting in a significant oil leak. The cause of the failure was that Work Order 1206254, "Clean Tube Side of Lube Oil Coolers," did not contain appropriate acceptance criteria to ensure proper reassembly of the spool piece for the upper lube oil cooler during maintenance on January 17, 2010.

<u>Description</u>: On January 17, 2010, the 2A D/G was returned to service following the repair of a leaking tube inside the upper lube oil cooler. This activity included the removal and re-installation of a non-standard spool piece that was connected to the cooler. During post-maintenance testing immediately following the maintenance and monthly Technical Specification (TS)-required surveillance testing after the D/G was returned to service, the D/G performed as expected, without oil or water leaking from the upper lube oil heat exchanger, until November 17, 2010. During this interval, the D/G was started and run 15 times.

On November 17, 2010, the 2A D/G was being run to fulfill a routine surveillance requirement when an equipment operator observed a significant oil leak from a flanged spool piece connection to the upper lube oil cooler. The D/G was shut down and the licensee initiated a prompt investigation. The licensee's investigation determined that 3 of 16 bolts that provided clamping force to the spool piece connection that failed were loose. The remaining bolts were determined to have torque values between 25 and 90 foot-pounds, although required torque values were between 104.5 and 115 foot-pounds. The licensee concluded that the reduced clamping force was the cause of the flange connection failure that resulted in the significant oil leak. Furthermore, since maintenance affecting this flange connection had not been scheduled or initiated following maintenance activities on January 17, 2010, this condition was related to the maintenance that took place at that time.

The licensee's apparent cause evaluation determined that although the upper lube oil cooler spool piece that was being re-installed was of a non-standard configuration, licensee personnel proceeded to close out the work package without re-checking the torque of the bolts tightened first. This action was not procedurally required, but industry experience has demonstrated that when connections in multiple dimensions are connected, they can impact those connections that were completed first. The apparent cause evaluation also reviewed previous work packages and determined that although these packages, including Work Order 1206254, "Clean Tube Side of Lube Oil Coolers," that was used to perform the upper lube oil cooler maintenance, directed the sequential reattachment of connections, a final torque verification was not prescribed. The licensee determined that the installation and torguing of subsequent connections, that were in different planes, had impacted the previously torqued connections. The impact was exacerbated by a difference in the angle between the flange faces, which caused a moment force on the bolts that were first installed. This resulted in an inadequate torque value and therefore reduced clamping force for the associated flange located at the stationary head/shell connection point that failed, resulting in the significant oil leak.

As part of the licensee's immediate corrective actions, the flange connections were resurfaced to properly align the flange faces and enable proper reassembly, the spool piece was re-installed with a final torque verification for the flange bolts, and the 2A D/G was re-tested and returned to service on November 21, 2010. The licensee also planned to implement a routine preventative maintenance task to re-verify that flange bolts were within required torque specifications.

The inspectors performed independent assessments of the licensee's apparent cause evaluation report, completed work orders, and selected issued reports (IRs). The inspectors determined the licensee's evaluation was reasonable and reached an appropriate conclusion including the extent of condition.

An actual loss of safety function of one train of emergency alternating current (AC) power for more than the TS allowable outage time was identified. However, because the redundant 2B diesel generator was not affected, the finding did not involve a complete loss of the safety function of the emergency AC power system. This finding only affected the 2A D/G because: (1) only the 2A D/G upper lube oil cooler had work performed that required the removal and re-installation of the spool piece and the remaining lube oil coolers were in their original configurations; and (2) the remaining D/G lube oil coolers had their spool piece bolt torque values measured and all were found to be within specification. No additional deficiencies were identified as a result of the licensee's extent of condition review.

<u>Analysis</u>: The inspectors determined that the failure to perform a final torque verification for the completed reassembly of the 2A D/G upper lube oil cooler spool piece during maintenance on January 17, 2010, that resulted in a significant oil leak on November 17, 2010, was a performance deficiency. The inspectors determined that this issue was more than minor, because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone and impacted the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences.

The cause of this finding was related to the Work Practices component of the Human Performance cross-cutting area since licensee personnel proceeded in the face of uncertainty or unexpected circumstances during the upper lube oil cooler reassembly (H.4(a)). Specifically, the upper lube oil cooler spool piece that was being re-installed was of a non-standard configuration, which resulted in a side moment force to the flange first tightened. In addition, the flange faces were not properly aligned and this should have been visible to the maintenance crew. The maintenance crew proceeded to close out the work package without re-verifying the bolted connection final torque values. This flange was subsequently re-surfaced as part of the licensee's repair efforts following the November 17, 2010, upper lube oil cooler failure to ensure adequate fit-up.

## Phase 1 Screening Logic

The inspectors evaluated the finding in accordance with Inspection Manual Chapter (IMC) 0609, Significance Determination Process, Attachment 4, "Phase 1–Initial Screening" dated January 10, 2008. The inspectors selected Core Decay Heat Removal Degraded from the Mitigating Systems Cornerstone column of Table 2 due to the statement found in the TS Bases for TS 3.8.1 that the AC sources are required to be Operable in Modes 1, 2, 3, and 4 to ensure that adequate core cooling is provided..in the event of a postulated Design Basis Accident. The inspectors also used this statement to conclude that the inoperability of the 2A D/G degraded the Mitigating Systems cornerstone. Therefore, a SDP Phase 2 analysis was required since the finding represented an actual loss of a safety function of a single train (2A D/G) for greater than its TS allowed outage time.

### Phase 2 Risk Evaluation

For the Phase 2 SDP evaluation, the inspectors used an exposure time of greater than 30 days as the actual time was 229 days (as discussed in the Phase 3 Risk Evaluation section below). The dominant sequences involved a loss of offsite power with a failure of auxiliary feedwater (AFW), with a failure of either high pressure recirculation or a failure of feed and bleed through the pressurizer power-operated relief valves (PORVs). No recovery credit was assumed. Using the pre-solved worksheets, the significance of the 2A D/G unavailability (fail-to-run) was Yellow. Using the Phase 2 notebook, the significance was also Yellow based on the counting rule (i.e., three-'9' sequences, six-'8' sequences, one-'7' sequence, and two-'6' sequences, resulted in one-'5' sequence).

#### Phase 3 Risk Evaluation

To evaluate whether the Phase 2 SDP evaluation was conservative, a Phase 3 SDP evaluation was performed. The Senior Reactor Analyst (SRA) used the Standardized Plant Analysis Risk (SPAR) Model, Revision 8.16, for Byron Nuclear Power Station to perform the analysis.

1) SPAR Model Modifications

The Byron SPAR model was modified (1) to account for an AFW system crosstie modification that allowed the motor-driven AFW pump of one unit to supply AFW to the other unit motor-driven AFW header, and (2) to account for an improved success criteria for feed and bleed scenarios to one-of-two pressurizer PORVs

instead of two-of-two pressurizer PORVs with a centrifugal charging pump running.

An additional modification to the SPAR model was performed to allow the crediting of 2A D/G run times of less than the mission time of 24 hours for various time blocks during the exposure time. Post-processing rule changes were made to the SPAR model regarding recovery of offsite AC power to account for the extra time available to recover offsite AC power until the 2A D/G failed (i.e., credit was given for the running time of the 2A D/G prior to failure).

2) Exposure Time

The exposure time was calculated in accordance with Section 2.4 of Volume 1 of the Risk Assessment Standardization Project (RASP) Manual, which stated that the exposure time starts at the time when the component no longer has the capability to run for the mission time (24 hours). Also, in accordance with Section 2.1 of Volume 1 of the RASP Manual, the time during shutdown should not be included in the exposure time, unless the component and/or system was required by TSs to be available during shutdown.

Based on the run-times of the 2A D/G following the maintenance outage in January 2010, the SRA concluded that the 2A D/G would not have failed for at least 24 hours before March 24, 2010. Therefore, prior to this date, no additional risk impact was assumed. Following the 2A D/G run on March 24, 2010, the 2A D/G no longer had the capability to run for 24 hours. Therefore, the exposure time started on March 24, 2010. The 2A D/G was returned to service following the completion of repairs on November 21, 2010.

Since Unit 2 was in Cold Shutdown (Mode 5) or Refueling (Mode 6) from April 19 through May 2, 2010, and the 2A D/G was not required to be available during this period (13 days), the exposure time excluded this period from the risk evaluation.

Therefore, the following calculated exposure times were applicable:

- The total exposure time was 229 days.
- The exposure time with Unit 2 above the Residual Heat Removal (RHR) shutdown cooling condition was 224 days.
- The exposure time when Unit 2 was on RHR shutdown cooling was 5 days.

## **Conclusion**

The total estimated change in core damage frequency was calculated with the assumptions described above and included contributions from both internal events (2.8E-6/year) and external events (8.0E-8/year). Therefore, the NRC preliminarily determined that the overall change in core damage frequency was 2.9E-6/year, which represented a finding of low to moderate safety significance (White).

### Enforcement

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," states, in part, that instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. Work Order 1206254, "Clean Tube Side of Lube Oil Coolers," dated January 10, 2010, was a quality document that the licensee used to perform maintenance on the safety-related 2A D/G upper lube oil cooler. TS 3.8.1.b limiting condition for operation requires two D/Gs to be operable and capable of supplying the onsite Class 1E AC Electrical Power Distribution System during Modes 1 through 4. Action Statement 3.8.1.B.5 requires, in part, that, if one D/G is inoperable, then it must be restored to operable within 14 days and 3.8.1.G requires, in part, that if the required action for 3.8.1.B.5 was not met, then the plant was to be in Mode 3 within 6 hours and Mode 5 within 36 hours.

An Apparent Violation (AV) of 10 CFR Part 50, Criterion V, "Instructions, Procedures, and Drawings," has been identified as it appears that Work Order 1206254 did not contain appropriate quantitative acceptance criteria to ensure that the spool piece for the 2A D/G upper lube oil cooler was properly reassembled prior to returning the 2A D/G to service on January 17, 2010. Specifically, Work Order 1206254 apparently did not contain a final torque verification to ensure that the 2A D/G upper lube oil cooler spool piece connections were torqued to required specifications. As a result, an inadequately torqued spool piece flange connection to the upper lube oil cooler went undetected and subsequently the 2A D/G was identified as being inoperable on November 17, 2010, due to a flange connection failure. The 2A D/G was inoperable since January 17, 2010, and, because the licensee was not aware of the inoperability, the allowed outage time in action statement 3.8.1.B.5 of 14 days was exceeded and the conditions of 3.8.1.G were not followed. The licensee documented this condition in its corrective action program as IR 1141591 and took corrective actions to repair the flange connection.

(AV 05000455/2011011-01; Self-Revealing Failure of the 2A Diesel Generator Upper Lube Oil Cooler)

#### 4OA6 Management Meetings

#### .1 Exit Meeting Summary

On February 7, 2011, the inspectors presented the inspection results to Mr. T. Tulon and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

### SUPPLEMENTAL INFORMATION

## **KEY POINTS OF CONTACT**

### <u>Licensee</u>

- T. Tulon, Site Vice President
- B. Adams, Plant Manager
- C. Wilson, Acting Nuclear Oversight Manager
- D. Gudger, Regulatory Assurance Manager
- B. Youman, Operations Manager
- J. Bottomley, Outage Manager
- B. Spahr, Maintenance Director

## <u>NRC</u>

E. Duncan, Chief, Reactor Project Branch 3

## LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

### <u>Opened</u>

05000455/2011011-01 AV

Self-Revealing Failure of the 2A Diesel Generator Upper Lube Oil Cooler

Closed

None

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

- AD-AA-101-02; Conduct of Maintenance Manual, Revision 1
- A listing of 2A D/G Run Times Since Upper Lube Oil Cooler Head Installation; January 17, 2010 through November 17, 2010
- CC-AA-204; VETIP Authorization Form: Product Bulletin for CPK Series Heat Exchangers, Revision 2
- MA-AA-716-010; WO 1387717-Perform Weld Repairs on A D/G Lube Oil Upper Cooler, Revision 16
- WO 1206254; Clean Tube Side of Lube Oil Upper Coolers, December 10, 2009
- WO 1387717 01; MM 2A D/G Emergency Stopped Due to Oil Leak, November 17, 2010
- WO 1387717 02; Clean Tube Side of Lube Oil Coolers, OPS Visual Exam PMT, November 18, 2010
- WO 1387717 03; Clean Tube Side of Lube Oil Coolers Strainer 2DG02MA, November 18, 2010
- WO 1387717 04; Clean Tube Side of Lube Oil Coolers Strainer 2DG03MA, November 18, 2010
- WO 1387717 06; Add Crankcase Oil as Required to 2A D/G, November 18, 2010
- WO 1387717 07; MM FLNG Repairs HX Stationary End Tube Bundle Gasket Surface, November 18, 2010
- WO 1387717 09; Replace Upper Lube Oil Cooler Tube Bundle, November 18, 2010
- WO 1387717 10; 2A D/G Lube Oil Upper Coolers, November 21, 2010
- WO 1387717 11; Pressure Test New Upper Lube Oil Cooler Tube Bundle, November 19, 2010
- WO 1387717; Clean Tube Side of Lube Oil Coolers, December 10, 2010
- WO 1387939 01; Check the Torque on the 2B D/G Upper/Lower Lube Oil Cooler, November 17, 2010
- WO 1393985 01; Proof Torque 1B D/G Lower Lube Oil Cooler Stationary Head Bolts, December 14, 2010
- WO 1393989; Proof Torque 1B D/G Upper Lube Oil Cooler Stationary Head Bolts, December 14, 2010
- WO 1393999; Proof Torque 1A D/G Lower Lube Oil Cooler Stationary Head Bolts, December 14, 2010
- WO 1394004; Proof Torque 1A D/G Upper Lube Oil Cooler Stationary Head Bolts, December 14, 2010
- IR 1141591, 2A D/G Emergency Stopped Due to Oil Leak, November 17, 2010
- IR 1141902; 2B D/G Upper Lube Oil Heat Exchanger Check Bolt Torque/Tightness, November 17, 2010
- IR 1141905; 2B D/G Lower Lube Oil Cooler Check Bolt Torque/Tightness, November 17, 2010
- IR 1149432; 1A D/G Upper Lube Oil Cooler, Need Bolt Torque Checked, December 07, 2010
- IR 1149434; 1A D/G Lower Lube Oil Cooler, Need Bolt Torque Checked, December 07, 2010
- IR 1149436; 1B D/G Upper Lube Oil Cooler, Need Bolt Torque Checked, December 07, 2010
- IR 1149439; 1B D/G Lower Lube Oil Cooler, Need Bolt Torque Checked, December 07, 2010
- Apparent Cause Evaluation, 2A D/G Emergency Stopped Due to Oil Leak

# LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agencywide Document Access Management System
AFW	Auxiliary Feedwater
AV	Apparent Violation
CFR	Code of Federal Regulations
D/G	Diesel Generator
IMC	Inspection Manual Chapter
IR	Issue Report
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records
PORV	Power-Operated Relief Valve
RASP	Risk Assessment Standardization Project
SDP	Significance Determination Process
SPAR	Standardized Plant Analysis Risk
SRA	Senior Reactor Analyst
TS	Technical Specifications

M. Pacilio

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Sincerely,

/**RA**/

Steven West, Director Division of Reactor Projects

Docket No. 50-455; License No. NPF-66;

- Enclosure: Inspection Report 05000455/2011011; w/Attachment: Supplemental Information
- cc w/encl: Distribution via ListServ

## See Previous Concurrence

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Letter to M.Pacilio from S. West dated February 11, 2011.

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