



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

January 9, 2009

Mr. Tom E. Tynan
Vice President - Vogtle
Southern Nuclear Operating Company, Inc.
Vogtle Electric Generating Plant
7821 River Road
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC SUPPLEMENTAL
INSPECTION REPORT 05000424/2008009 AND 05000425/2008009

Dear Mr. Tynan:

On December 11, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed a supplemental inspection in accordance with Inspection Procedure 95001, Inspection for One or Two White Inputs in a Strategic Performance Area, at your Vogtle Electric Generating Plant, Units 1 and 2. The purpose of the inspection was to examine the circumstances surrounding the White performance indicators reported during the fourth quarter of 2007 for the Unit 1 and Unit 2 Cooling Water Mitigating Systems Performance Index. The enclosed inspection report documents the inspection results, which were discussed on December 11, 2008, with Mr. Todd Youngblood and other members of your staff.

The 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 of your license. The inspector reviewed selected procedures and records and interviewed personnel. Based on the results of this inspection, no findings of significance were identified.

In accordance with the Code of Federal Regulations 10 CFR 2.390 of the NRC's Rules of Practice, a copy of this letter, its enclosures, and your response (if any) 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).

Sincerely,

/RA/

Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos.: 50-424, 50-425
License Nos.: NPF-68 and NPF-81

Enclosure: Inspection Report 05000424/2008009 and 05000425/2008009
w/Attachment: Supplemental Information

cc w/encl: (See next page)

Mr. Tom E. Tynan
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Letter to Tom E. Tynan from Scott M. Shaeffer dated January 9, 2009

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC SUPPLEMENTAL
INSPECTION REPORT 05000424/2008009 AND 05000425/2008009

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-424, 50-425

License Nos.: NPF-68, NPF-81

Report Nos.: 05000424/2008009 and 05000425/2008009

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Electric Generating Plant, Units 1 and 2

Location: Waynesboro, GA 30830

Dates: August 20 - December 11, 2008

Inspector: G. McCoy, Senior Resident Inspector

Approved by: Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000424/2008-009, 05000425/2008-009; August 20, 2008 - December 11, 2008; Vogtle Electric Generating Plant, Units 1 and 2; Supplemental Inspection IP 95001 for a reported White Mitigating Systems Performance Index, Cooling Water System Performance Indicator.

This inspection was conducted by a senior resident inspector. 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.

Cornerstone: Mitigating Systems

The U.S Nuclear Regulatory Commission (NRC) performed this supplemental inspection in accordance with Inspection Procedure 95001 to assess the licensee's evaluation associated with a White Mitigating Systems Performance Indicator, Cooling Water Systems Performance Indicator reported during the fourth quarter of 2007 and later retracted during the first quarter of 2008. The inspector determined that the decision to retract the White performance indicator was supported by the guidance of NEI 99-02, Regulatory Assessment Performance Indicator Guideline.

A. NRC-Identified and Self-Revealing Findings

No significance of findings were identified.

B. Licensee-Identified Violations

None.

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REPORT DETAILS

01 INSPECTION SCOPE

The U.S. Nuclear Regulatory Commission (NRC) performed this supplemental inspection to assess the licensee's evaluation of a White Mitigating System Performance Index (MSPI), Cooling Water Systems Performance Indicator (PI) for Unit 1 and Unit 2. The White PI was reported for Unit 1 for the fourth quarter 2007 and for Unit 2 for the third quarter 2007. Both PIs were re-reported Green during the first quarter 2008. This was based on the licensee re-evaluating their NSCW unavailability which caused the PIs to initially be reported as White. This inspection reviewed this re-evaluation which lead the licensee to revise the previously reported White PIs for both units.

Background

On October 12, 2007, operators took manual control of the Unit 1 train A Nuclear Service Cooling Water (NSCW) tower return valves to calibrate temperature instrument 1T1668. The Shift Supervisor questioned the operability of the 1A NSCW system while the temperature instrument was being calibrated. This issue was documented in condition report (CR) 2007110639. In January 2008, when the licensee was required to submit PI data for the fourth quarter 2007, the licensee conservatively determined that the train A NSCW system was inoperable without the knowledge of the operators and counted the duration the temperature instrument was being calibrated as unavailability time against the Unit 1 MSPI, Cooling Water Systems PI. The licensee reviewed the control room logs and identified that a similar condition had occurred in August 2007 on Unit 2 train B NSCW system. The licensee also counted this duration as unavailability against the Unit 2 MSPI, Cooling Water Systems PI. In conjunction with previous reported unavailability time in the NSCW system, these additional conditions caused the Unit 1 MSPI, Cooling Water Systems PI to cross the Green to White threshold in the fourth quarter of 2007. The Unit 2 MSPI, Cooling Water Systems PI was also reported as White for the fourth quarter of 2007 and retroactively for the third quarter of 2007.

During the first quarter of 2008, the licensee completed a detailed review of these two conditions and determined that in both cases the NSCW Ultimate Heat Sink and the Cooling Water design functions could be met during temperature instrument calibration. The licensee determined the NSCW system remained available in accordance with the guidance of NEI 99-02. Based on this determination, the licensee removed the previously reported unavailability from the PI data for both Unit 1 and Unit 2, reported the PIs as Green for the first quarter of 2008 and retroactively changed the previously reported White PIs to Green starting third quarter of 2007. The NRC has endorsed the guidance of NEI 99-02 for the determination of system availability for PI data reporting purposes. In accordance with this guideline, operator actions can be credited towards system availability if the function can be promptly restored by an operator in the control room, restoration actions are uncomplicated, contained in a written procedure, not require diagnosis or repair, and must be capable of being restored in time to satisfy Probability Risk Assessment (PRA) success criteria. The inspector determined that while the cooling tower was bypassed, plant operating procedure 1350-1, Nuclear Service Cooling Water System Operating Procedure, required the monitoring of NSCW return temperature in the control room and provided actions to be taken if NSCW return temperature limits were exceeded.

Enclosure

The operation of a single switch on the control board in main control room would return cooling to the NSCW cooling loop, even if temperature instrument 1T1668 was out of service. The inspectors determined that the NSCW system could be considered available for MSPI reporting purposes and that the licensee properly reported the PI as Green for the third and fourth quarters of 2007. The inspector noted that the licensee has modified the procedures for taking manual control of the NSCW tower return valves to make this plant condition more evident to the operators by requiring a caution tag be placed on the NSCW cooling tower return valve control switch anytime it is out of the automatic position.

In addition, the inspector reviewed the associated condition reports, reviewed the cause determinations performed, and reviewed the operability determinations. Inspector also interviewed operations and licensing personnel to understand the basis for their decisions.

During this inspection, the inspector questioned the licensee's determination that the NSCW system was operable with the NSCW cooling tower return valves in manual control. The inspector noted that the NSCW system is a support system for the Ultimate Heat Sink, and without the proper operation of the NSCW cooling tower return valves the Ultimate Heat Sink would not be able to accomplish its design function during a design basis accident. The inspector also noted there is no provision in the technical specifications, the USFAR nor the safety evaluations written by the NRC for the NSCW system which evaluates the operation of the system with manual control of the tower return valves without declaring the NSCW system inoperable and entering the TS action Limiting Condition for Operability (LCO). This issue is identified as an unresolved item (URI) 05000424/2008009-01, Technical Specification Operability Of The NSCW System With The Cooling Tower Return Valves In Manual Control.

02 EVALUATION OF INSPECTION REQUIREMENTS

02.01 Problem Identification

- a. Determination of who (i.e., licensee, self-revealing, or NRC) identified the issue and under what conditions.

The potential unavailability of the NSCW system was identified by the licensee when system operability was questioned while temperature instrument 1T1668 was being calibrated.

- b. Determination of how long the issue existed, and prior opportunities for identification.

This issue existed on October 12, 2007, while temperature instrument 1T1668 was being calibrated. A previous case was identified in August 2007 when 2T1669 was being calibrated.

- c. Determination of the plant-specific risk consequences (as applicable) and compliance concerns associated with the issue.

Because of the compensatory actions (monitoring temperature, etc) taken during temperature instrument calibration, the licensee determined that the risk consequences was minimal. No compliance concerns were identified because the licensee properly reported the PI data.

02.02 Root Cause and Extent of Condition Evaluation

Because the NSCW system was determined to be available while the temperature instrument was being calibrated, no cause evaluation was performed by the licensee. The licensee determined that manual operation of NSCW tower return valves during temperature instrument calibration was consistent with other manual actions for this system where sufficient time and methods were provided to ensure the safety function of the system was maintained.

02.03 Corrective Actions

No corrective actions were required or performed by the licensee because the NSCW system was determined to be available. However, the licensee modified plant procedures for taking manual control of the NSCW tower return valves to make this plant condition more evident to the operators by requiring a tag be placed on the NSCW cooling tower return valve control switch anytime it was out of the automatic position. They also modified the plant emergency procedures to verify proper operation of the tower return valves if the control switch needed to be repositioned. These actions were considered to enhance the operators ability to maintain the NSCW system available.

The inspector determined that the licensee properly determined that the NSCW system was available during temperature instrument 1T1668 calibration. The inspector also determined the licensee properly reported the PI as Green for the third and fourth quarters of 2007.

03 **MANAGEMENT MEETINGS**

Exit Meeting Summary

The inspector presented the results of the supplemental inspection to Mr. Todd Youngblood and other members of licensee management and staff on December 11, 2008. The inspector confirmed that no proprietary information was provided or examined during the inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

M. Hickox, Licensing Engineer
J. Stringfellow, Licensing Manager
D. Vineyard, Operations Manager
T. Youngblood, Engineering Manager

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

05000424, 425/2008009-01	URI	Technical Specification Operability Of The NSCW System With The Cooling Tower Return Valves In Manual Control. (Section 01)
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LIST OF DOCUMENTS REVIEWED

Condition Reports

2007110639, 2008100601, 2008100602

Action Items

2007205586, 2007205587, 2007205588, 2007205590, 2008200916, 2008202031, 2008202033, 2008202034, 2008202039, 2008202065,

Procedures

13150-1, Nuclear Service Cooling Water System
24229-1,
19000-C, E-0 Reactor Trip or Safety Injection

Drawings

1X3D-BD-K03A, Elementary Diagram, NSCW System
1X3D-BD-K05U, Elementary Diagram, NSCW System, 1HV1668A
1X3D-BD-K05V, Elementary Diagram, NSCW System, 1HV1668B
1X3D-AA-K02A, Diesel Generator 1A Loading Table
1X4BD133-1, P&ID, NSCW System
1X5DV112, Instrument Loop Diagram, NSCW Cooling Tower Spray and Bypass Valve Control
CX5DT101-71A, Instrument Setpoint List
CX5DT101-40K, Instrument Setpoint List

Miscellaneous

PRB Minutes for Meeting 2008-25
Calculation X4C1202PO3, NSCW System Overpressure Protection
Calculation X4C1202V67, NSCW Overpressure Protection
DOEJ-06-19000 C V29-001, NSCW Spray Restoration from Hard Bypass Evaluation
DC-1202, Design Bases, Nuclear Service Cooling Water System