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**Duke Power**

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October 5, 2000

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

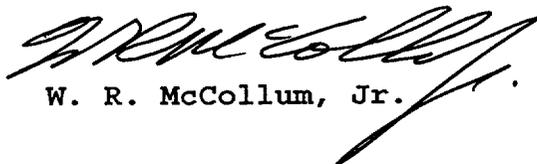
Subject: Oconee Nuclear Station  
Docket Nos. 50-269,-270, -287  
Licensee Event Report 269/2000-04, Revision 0  
Problem Investigation Process No.: O-00-3229

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 269/2000-04, Revision 0, concerning an NRC interpretation that Duke Energy was not in compliance with Technical Specification Surveillance Requirement (SR) 3.8.1.9.a. This SR verifies achievement of rated frequency and voltage during start-up of Keowee Hydro Station, the emergency power source for Oconee.

This report is being submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B) "any operation or condition prohibited by the plants Technical Specifications." This event is considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



W. R. McCollum, Jr.

Attachment

IE22

Document Control Desk

Date: October 5, 2000

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cc: Mr. Luis A. Reyes  
Administrator, Region II  
U.S. Nuclear Regulatory Commission  
61 Forsyth Street, S. W., Suite 23T85  
Atlanta, GA 30303

Mr. D. E. LaBarge  
U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation  
Washington, D.C. 20555

Mr. M. C. Shannon  
NRC Senior Resident Inspector  
Oconee Nuclear Station

INPO (via E-mail)

**LICENSEE EVENT REPORT (LER)**

(See reverse for required number of digits/characters for each block)

**APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001**  
Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

<b>FACILITY NAME (1)</b> Oconee Nuclear Station, Unit 1	<b>DOCKET NUMBER (2)</b> 05000 - 269	<b>PAGE (3)</b> 1 OF 6
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**TITLE (4)**  
Non-compliance with Surveillance Interpretation Due to Miscommunication

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
09	06	00	2000	- 04	- 00	10	05	00	Unit 2	05000 - 270
									Unit 3	05000 - 287

<b>OPERATING MODE (9)</b> 1	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</b>									
<b>POWER LEVEL (10)</b> 100%	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(x)						
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	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iv)	OTHER Specify in Abstract below or in NRC Form 366A						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)							
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)								

**LICENSEE CONTACT FOR THIS LER (12)**

<b>NAME</b> L.E. Nicholson, Regulatory Compliance Manager	<b>TELEPHONE NUMBER (Include Area Code)</b> (864) 885-3292
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**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>				<b>EXPECTED SUBMISSION DATE (15)</b>	<b>MONTH</b>	<b>DAY</b>	<b>YEAR</b>
<b>YES</b> (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	<b>NO</b>	<input type="checkbox"/>				

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)**

On 9-6-2000, all three Oconee units were operating at 100% power. At approximately 1430 hours, the Nuclear Regulatory Commission (NRC) informed Duke Energy (Duke), by conference call, of an NRC interpretation that Duke was not in compliance with Technical Specification (TS) Surveillance Requirement (SR) 3.8.1.9.a. This SR verifies achievement of rated frequency and voltage during start-up of Keowee Hydro Station, the emergency power source for Oconee. Because the interpretation invalidated the existing test method and because the system was not designed to meet requirements of the NRC interpretation, Duke requested and received relief under a Notice of Enforcement Discretion (NOED). Verbal approval was granted at 1525 hours. A written confirmation was approved on 9-8-2000. Duke will submit a TS revision by 4-5-2001, to resolve the issue.

During conversion to "Improved Technical Specifications" (ITS) the SR wording was changed "for consistency with the ISTS Writer's Guide and ITS conventions." Duke did not consider this a technical change to impose a new requirement when ITS became effective on 3-27-99. The implementing procedure was revised but did not meet the subsequent NRC interpretation. The root cause is miscommunication. This event is considered to have no significance with respect to the health and safety of the public.

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**TEXT** (If more space is required, use additional copies of NRC Form 366A) (17)

EVALUATION:

BACKGROUND

This event is reportable per 10CFR 50.73(a)(2)(i)(B) "any operation or condition prohibited by the plants Technical Specifications."

At Oconee Nuclear Station, Keowee Hydro (KH) Station [EIIS:EK] serves the emergency power function typically performed by diesel generators at other nuclear stations. KH consists of two hydroelectric turbine/generator units and associated support equipment and auxiliaries.

In the initial Oconee Customized Technical Specifications (CTS) (circa 1973), surveillance requirement (SR) 4.6.2 required "Annually, the Keowee Hydro units will be started using the emergency start circuits in each control room to verify that each hydro unit and associated equipment is available to carry load within 25 seconds of a simulated requirement for engineered safety features."

The test method for meeting this SR measured the elapsed time from initiating an emergency start until the KH Unit (KHU) being tested reached rated speed and voltage.

Between 1973 and September 1998, this SR underwent several minor changes. On 9-4-1998, the NRC approved a CTS change that relocated the SR to 3.7.1.11 and required Oconee to:

"Verify each Keowee Hydro Unit can:... 2) Attain rated speed and voltage within 23 seconds of an emergency start initiate..."

Prior to this event, Units 1, 2, and 3 were operating at 100% power with no safety systems or components out of service that would have contributed to this event.

EVENT DESCRIPTION

During 1997, Oconee initiated a conversion from CTS to Improved Technical Specifications (ITS). In a letter dated 10-28-1998, Oconee submitted Supplement 4 of the proposed ITS conversion.

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The SR was renumbered as SR 3.8.1.9.a and reworded such that turbine speed was replaced by electrical frequency, which is proportional to turbine speed, and the term "rated" was replaced with acceptance limits. Upper and lower limits for both frequency and voltage were specified within the SR.

Duke documentation of the change and the SER issued by the NRC indicate that these were editorial, text, and format changes for consistency with the ISTS Writer's Guide and ITS conventions. Specifically this requirement was not listed in the SER "Matrix of More Restrictive Changes", indicating that it was not reviewed as being more restrictive than the prior requirement approved 9-4-1998.

On 12-16-1998, the NRC approved Amendment 300 to convert Oconee from CTS to ITS. ITS was implemented on 3-27-1999.

The implementing test procedure for SR 3.8.1.9.a was revised to address the lower limits on voltage and frequency. However, Duke still considered that the limits on voltage and frequency stated in the SR provide the band that the KHU must initially achieve within 23 seconds following an emergency start. Due to the design of the hydro units, the KHU achieves these bands within the required 23 seconds, then temporarily exceeds the bands before returning to operation within these bands at a time beyond 23 seconds. Based on prior testing, this overshoot condition exists for approximately nine seconds. Because Duke did not consider the new wording as a technical change, the procedure change did not impose the upper limits as acceptance criteria on the overshoot expected during the emergency start transient.

During routine NRC inspection, the NRC Resident Inspector challenged the way the test procedure applied the upper voltage and frequency limits associated with SR 3.8.1.9.a.

Subsequently, an ITS change submittal was made on 7-27-2000. This submittal requested that the surveillance be revised to require that, during "an actual or simulated emergency start, each KHU auto starts and:

- a. Accelerates to frequency  $\geq 53.992$  Hz and voltage  $\geq 12.42$  k/V in  $\leq 23$  seconds;"

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During the review of this latest submittal, it became apparent that the NRC reviewers also had a significant difference of opinion from the Duke interpretation of the existing specification.

On 8-5-2000, at 1300 hours, a conference call was initiated to discuss the difference of opinion. At approximately 1430 hours, the NRC staff notified Duke personnel of their official interpretation of the SR. The NRC staff interpreted that the ITS wording change described in both the Duke submittal and the NRC SER as an editorial change had, in fact, resulted in a more restrictive technical change in the SR. The NRC staff interpreted the ITS SR to mean that the voltage and frequency had to enter and remain within the frequency and voltage acceptance ranges within the 23 second acceptance criterion.

Given the NRC interpretation of the upper voltage and frequency limits associated with the requirements of SR 3.8.1.9.a, and the overshoot characteristics of the KHUs, this SR cannot be met. As a result, Oconee declared both KHUs inoperable at 1440 hours. All three Oconee Units entered ITS 3.8.1, Condition I. Part of the required action for this condition requires that both Stand-by Busses were energized from Lee Steam Station within 1 hour of entry. This action had actually been performed at 1242 hours, as a contingency due to the subject of conference call.

With both KHUs inoperable, ITS would require shutdown of all three Oconee units within 24 hours. Duke requested a waiver of the requirement to meet the upper voltage and frequency limits associated with SR 3.8.1.9.a to prevent an undesirable three Oconee unit shutdown. Duke requested and received relief under a Notice of Enforcement Discretion (NOED). Verbal approval was granted at 1525 hours. Duke submitted a written request for the NOED, including an interim ITS change. The NRC approved a written confirmation of the NOED on 9-8-2000.

**CAUSAL FACTORS**

The root cause of this event is miscommunication. A difference in interpretation between the NRC and Duke was not identified and communicated during the ITS conversion review and approval process.

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When the ITS conversion was made, this change was described as an administrative editorial change. Specifically, it was not listed as a more restrictive change in the NRC SER which addressed the ITS conversion.

As stated above, when the issue was addressed directly by the NRC on 8-5-2000, the NRC staff applied the upper voltage and frequency limits associated with SR 3.8.1.9.a in such a manner that the ITS change was a more restrictive technical change.

**CORRECTIVE ACTIONS**

Immediate:

1. Duke verbally requested and received relief via a NOED.

Subsequent:

1. Compensatory measures included briefing Operations Shift Managers on the overshoot issue and adding appropriate guidance to the Shift Manager turnover sheet.
2. Duke submitted an interim ITS change to document the relief granted by the NOED.

Planned:

1. In accordance with a condition of the NOED, Duke will submit, by 4-5-2001, appropriate changes to the SR to address the concerns of the NRC staff.

Planned corrective action 1 is considered a NRC Commitment item. There are no other NRC Commitment items contained in this LER.

**SAFETY ANALYSIS**

The current issue is considered a matter of interpretation rather than a technical problem. The current mode of operation is consistent with the way the KHUs have been operated since initial licensing. The KHUs successfully met the same surveillance criteria that had been in effect up until the ITS conversion.

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Even though the KHUs will overshoot the voltage and frequency limits of the SR during the start-up, these parameters come back into the acceptance range within approximately 9 seconds. Monthly testing confirms that the KHUs operate at steady state within these voltage and frequency limits. Special testing performed in 1997 indicates that the KHUs can perform all required safety functions with this mode of operation. Therefore, Duke considers that the KHUs remained capable of performing their safety function throughout the period from implementation of ITS until the present and this event did not involve a Safety System Functional Failure.

In the written confirmation of the NOED, the NRC concurred that there is no increase in risk associated with this event. Therefore, there was no actual impact on the health and safety of the public due to this event.

**ADDITIONAL INFORMATION**

Reportable events for the last three years were reviewed. No events were due to similar interpretation or communication issues. Therefore, this event is considered non-recurring.

There were no releases of radioactive materials, radiation exposures or personnel injuries associated with this event.

This event is not considered reportable under the Equipment Performance and Information Exchange (EPIX) program.