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SUBJECT: Forwards updated variable sheet for Variable E-17 to rev 2 of RG 1.97.Three new Type D,Category 1 variables have been added to variables list.Mods which implement variables D-35, D-36 & D-37 will be implemented in end-of-cycle 16,17 & 18.

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Vice President

May 7, 1998

U.S. Nuclear Regulatory Commission
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Washington, DC 20555

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Regulatory Guide 1.97 Variables Addendum

In a letter to the staff dated September 28, 1984, Duke Energy Corporation (Duke) submitted a response to Regulatory Guide 1.97 as addressed in Supplement 1 of NUREG-0737. In this response, there is a Comparison of Plant-Specific Variables with Regulatory Guide 1.97, Revision 2. On page 5-76 of this comparison, the loop accuracy for Variable E-17, Atmospheric Stability, is stated to be at least +/- 0.15 °C. Based on the results of recent loop accuracy calculations which were performed to a more rigorous methodology for this variable, Duke has determined that the accuracy is +/- 0.22 °C. An updated variable sheet for Variable E-17 is attached. This variable sheet identifies the updated accuracy and associated justification.

In addition, Duke has added three new Type D, Category 2 variables to the Regulatory Guide 1.97 variables list. These variables have been added in support of the Oconee Service Water System upgrade project as described in a Duke letter to the staff dated August 28, 1997, and as approved by an NRC Safety Evaluation Report dated April 24, 1998. These three variables are:

D-35	Essential Siphon Vacuum Tank Pressure (Vacuum)
D-36	Essential Siphon Vacuum Tank Water Level
D-37	Siphon Seal Water Flow to Essential Siphon Vacuum Pumps

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The comparison of plant specific variables sheets for these three new variables are also attached.

The modifications which implement variables D-35, D-36, and D-37 will be implemented in the Unit 2 End-of-Cycle 16 (U2EOC16), U1EOC18, and U3EOC17 refueling outages. These refueling outages are scheduled for completion in May 1998, October 1998, and May 1999, respectively.

If there are any questions, please call David Nix at (864) 885-3634.

Very truly yours,

W. R. McCollum, Jr.
Oconee Site Vice President

Attachments

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Mr. D. E. Labarge
ONRR, Project Manager

Mr. M. Batavia
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Attachment

Revised and New Regulatory Guide 1.97 Variable Sheets

D-35	Variable:	Essential Siphon Vacuum Tank Pressure (Vacuum)
	Range:	-30 In Hg to 0 In Hg
	Category:	2
	Existing Design:	The instrumentation for this variable provides continuous display of Essential Siphon Vacuum (ESV)Tank Pressure. One instrument channel is provided for each train of ESV tank. The ESV system on a per unit basis consists of three pumps and two tanks. Each train consists of one tank and one pump. The third ESV pump serves as an in-place spare pump which can be aligned to either train. The instrumentation provides control room indication of tank vacuum from -30 In Hg to 0 In Hg. The instrumentation is seismically qualified in accordance with the Oconee licensing basis as specified in the Oconee UFSAR and Duke Power Seismic Design Criteria (OCSD-0193.01-00-0001). The instrumentation is located in the ESV building which is considered a Mild Environment. The installed equipment meets the requirements of RG 1.97 Type D, Category 2 nuclear safety related (QA-1) instrumentation as described in Section 5.5.
	Compliance:	The range and the qualification requirements of the ESV Tank instrumentation is in compliance with the recommendations of RG 1.97, Rev. 2 for Type D variables. This variable monitors the Essential Siphon Vacuum Tanks for operation to provide information to indicate the operation of the system in the event it is needed to mitigate the consequences of the design basis accident (LOCA/LOOP).
	Display:	Two channels indicated (one per tank) Two computer alarms (one per tank) Two annunciator alarms (one per tank)
	Position:	The instrumentation is in compliance with Duke Power interpretations and commitments under RG 1.97, Rev. 2. The instrumentation is adequate for its intended monitoring function.
	Implementation Schedule:	Implementation of the above instrumentation is proposed as part of the Oconee Service Water Project implementation schedule. Oconee Unit 2 instrumentation will be installed during EOC16. Unit 3 installation will occur during EOC17 and Unit 1 installation will follow in EOC18.

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D-36	Variable:	Essential Siphon Vacuum Tank Water Level
	Range:	0 to 24 Inches
	Category:	2
	Existing Design:	The instrumentation for this variable provides continuous local display of Essential Siphon Vacuum Tank Water level. One instrument is provided on each train of ESV tank. The level gage is physically located on the tank. The ESV system for each unit consists of three full capacity pumps and two tanks. Each train consists of one tank and one pump. The instrumentation provides local indication of any accumulated water in the ESV Tanks. Manual action is then taken to drain the tanks. The instrumentation is located in the ESV building which is considered a Mild Environment. The instrumentation is seismically qualified in accordance with the Oconee licensing basis as specified in the Oconee UFSAR and Duke Power Seismic Design Criteria (OCSD-0193.01-00-0001).
	Compliance:	The range and the qualification requirements of the ESV Tank instrumentation is in compliance with the recommendations of RG 1.97, Rev. 2 for Type D variables. This variable monitors the Essential Siphon Vacuum Tanks for operation to provide local indication regarding the operation of the system in the event it is needed for continued post accident mitigation of the consequences of the design basis accident (LOCA/LOOP).
	Display:	One channel per tank, locally indicated
	Position:	The instrumentation is in compliance with Duke Power interpretations and commitments under RG 1.97, Rev. 2. The instrumentation is adequate for its intended monitoring function.
	Implementation Schedule:	Implementation of the above instrumentation is proposed as part of the Oconee Service Water Project implementation schedule. Oconee Unit 2 instrumentation will be installed during EOC16. Unit 3 installation will occur during EOC17 and Unit 1 installation will follow in EOC18.

D-37	Variable:	Siphon Seal Water Flow to Essential Siphon Vacuum Pumps
	Range:	0 to 15 Gallons per Minute (GPM)
	Category:	2
	Existing Design:	The instrumentation for this variable provides continuous local display of Siphon Seal Water (SSW) flow to the Essential Siphon Vacuum pumps as well as a signal to the plant computer for display in the control room. One instrument is provided on each SSW supply to an ESV pump. There are three ESV pumps per unit. A total of nine instruments are provided for the nine ESV pumps. A flow gage is physically located near the ESV pumps on the transmitter while a bargraph indicator is located on a local panel. The ESV system consists of three pumps and two tanks. Each ESV train consists of one tank and one pump. The third pump is an installed spare. The instrumentation is seismically qualified in accordance with the Oconee licensing basis as specified in the Oconee UFSAR and Duke Power Seismic Design Criteria (OCSD-0193.01-00-0001). The instrumentation is located in a Mild Environment. The installed equipment meets the requirements of RG 1.97 Type D, Category 2 nuclear safety related (QA-1) instrumentation as described in Section 5.5.
	Compliance:	The range and the qualification requirements of the SSW flow to ESV pumps instrumentation is in compliance with the recommendations of RG 1.97, Rev. 2 for Type D variables. This variable monitors the Siphon Seal Water flow to the Essential Siphon Vacuum Pumps to provide information relative to the operation of the ESV system in the event it is needed for continued post accident mitigation of the consequences of the design basis accident (LOCA/LOOP).
	Display:	One computer alarm (per pump) One channel locally indicated per pump
	Position:	The instrumentation is in compliance with Duke Power interpretations and commitments under RG 1.97, Rev. 2. The instrumentation is adequate for its intended monitoring function.
	Implementation Schedule:	Implementation of the above instrumentation is proposed as part of the Oconee Service Water Project implementation schedule. Oconee Unit 2 instrumentation will be installed during EOC16. Unit 3 installation will occur during EOC17 and Unit 1 installation will follow in EOC18.

E-17	Variable:	Atmospheric Stability
	Range:	-5° to 10° C (±O.15°C accuracy) per 50 meter interval
	Category:	3
	Existing Design:	The indicated range for atmospheric stability is -4° to 8° C for a 44.7 meter interval. Loop accuracy is ±0.22° C .
	Compliance:	Range and Accuracy are not in compliance with RG 1.97, Rev. 2 recommendations
	Display:	One computer point One channel recorded
	Position:	The range of the installed instrument is adequate for Oconee site meteorological conditions. The accuracy of the installed instrumentation is adequate for meeting Oconee site meterological conditions. Duke has determined that this instrumentation meets the requirements of RG 1.97, Rev. 2 with respect to analogous ranges for alternative stability estimation and release assessment.
	Implementation Schedule:	Not Applicable.