June 11, 1997

Mr. John K. Wood
Vice President - Nuclear, Davis-Besse
Centerior Service Company
c/o Toledo Edison Company
Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION, LICENSE AMENDMENT REQUESTS 95-27, 95-24, AND 96-14 RELATED TO INSTRUMENTATION TECHNICAL SPECIFICATIONS (TAC NOS. M97441, M97902, AND M98520, RESPECTIVELY)

Dear Mr. Wood:

By letters dated December 11, 1996, January 30 and April 18, 1997, you submitted license amendment requests (LAR) 95-27, 95-24, and 96-14, respectively, related to instrumentation Technical Specifications for the Davis-Besse Nuclear Power Station. The NRC staff is currently reviewing these requests and has determined that additional information is necessary to complete the review process.

The NRC staff would like to meet with your staff to discuss these requests, particularly the instrument drift study and setpoint analysis described in LAR 96-14. The enclosed questions have been posed by the NRC staff to provide guidance for your preparation for this meeting. Please have your staff contact me at (301) 415-1390 to arrange this meeting.

Sincerely,

Original signed by:

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No 50-346

Enclosure: Request for Additional Information

cc w/encl: See next page

130112

DISTRIBUTION:

Docket File	OGC
PUBLIC	ACRS
PD3-3 R/F	JRoe
EAdensam (EGA1)	
GMarcus	
GGrant, RIII	

DFO1

DOCUMENT NAME: G:\DAVISBES\DB98520.RAI

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	LA:PD3-3	E	PM:PD3-3	E	BC:HICB	E
NAME	CBoyle CJB		AHansen AGH		JWermiel	
DATE	6/9/97		6/10/97		6/11/97	

OFFICIAL RECORD COPY

June 11, 1997

Mr. John K. Wood
Vice President - Nuclear, Davis-Besse
Centerior Service Company
c/o Toledo Edison Company
Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION, LICENSE AMENDMENT REQUESTS 95-27, 95-24, AND 96-14 RELATED TO INSTRUMENTATION TECHNICAL SPECIFICATIONS (TAC NOS. M97441, M97902, AND M98520, RESPECTIVELY)

Dear Mr. Wood:

By letters dated December 11, 1996, January 30 and April 18, 1997, you submitted license amendment requests (LAR) 95-27, 95-24, and 96-14, respectively, related to instrumentation Technical Specifications for the Davis-Besse Nuclear Power Station. The NRC staff is currently reviewing these requests and has determined that additional information is necessary to complete the review process.

The NRC staff would like to meet with your staff to discuss these requests, particularly the instrument drift study and setpoint analysis described in LAR 96-14. The enclosed questions have been posed by the NRC staff to provide guidance for your preparation for this meeting. Please have your staff contact me at (301) 415-1390 to arrange this meeting.

Sincerely,

Original signed by:

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-346

Enclosure: Request for Additional Information

cc w/encl: See next page

DISTRIBUTION:

Docket File	OGC
PUBLIC	ACRS
PD3-3 R/F	JRoe
EAdensam (EGA1)	
GMarcus	
GGrant, RIII	

DOCUMENT NAME: G:\DAVISBES\DB98520.RAI

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	LA:PD3-3	E	PM:PD3-3	E	BC:HICB	E
NAME	CBoyle CJB		AHansen AGH		JWermiel	
DATE	6/19/97		6/10/97		6/11/97	

OFFICIAL RECORD COPY

John K. Wood
Toledo Edison Company

cc:
Mary E. O'Reilly
Centerior Energy Corporation
300 Madison Avenue
Toledo, Ohio 43652

James L. Freels
Manager - Regulatory Affairs
Toledo Edison Company
Davis-Besse Nuclear Power Station
5501 North State - Route 2
Oak Harbor, Ohio 43449-9760

Gerald Charnoff, Esq.
Shaw, Pittman, Potts
and Trowbridge
2300 N Street, N.W.
Washington, D.C. 20037

Regional Administrator
U.S. NRC, Region III
801 Warrenville Road
Lisle, Illinois 60523-4351

Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
1700 Rockville Pike, Suite 525
Rockville, Maryland 20852

Resident Inspector
U. S. Nuclear Regulatory Commission
5503 North State Route 2
Oak Harbor, Ohio 43449

James H. Lash, Plant Manager
Toledo Edison Company
Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, Ohio 43449-9760

Donna Owens, Director
Ohio Department of Commerce
Division of Industrial Compliance
Bureau of Operations and Maintenance
6606 Tussing Road
P.O. Box 4009
Reynoldsburg, Ohio 43068-9009

Robert E. Owen, Chief
Bureau of Radiological Health
Service
Ohio Department of Health
P. O. Box 118
Columbus, Ohio 43266-0118

James R. Williams
Chief of Staff
Ohio Emergency Management Agency
2855 West Dublin Granville Road
Columbus, Ohio 43235-2206

Roy P. Lessy, Jr., Esq.
Andrew G. Berg, Esq.
Akin, Gump, Strauss, Hauer
& Feld, L.L.P.
1333 New Hampshire Ave., NW, Ste. 400
Washington, D.C. 20036

Ohio Environmental Protection Agency
DERR--Compliance Unit
ATTN: Zack A. Clayton
P. O. Box 1049
Columbus, Ohio 43266-0149

State of Ohio
Public Utilities Commission
180 East Broad Street
Columbus, Ohio 43266-0573

Attorney General
Department of Attorney
30 East Broad Street
Columbus, Ohio 43216

President, Board of County
Commissioner of Ottawa County
Port Clinton, Ohio 43252

REQUEST FOR ADDITIONAL INFORMATION REGARDING

LICENSE AMENDMENT REQUESTS (LARs) 95-27, 95-24, AND 96-14

DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1

(1) Please provide a discussion of the instrument setpoint methodology, including the following items:

a. Framatome document for instrument string error;

b. Allowable value calculation, especially the use of two allowable values for the same parameter; and

c. Conformance to Regulatory Guide 1.105.

(2) Please provide details on the acceptability of the instrument drift exceeding the design basis/reference uncertainty during an 18-month fuel cycle, and how this will be controlled during a 24-month fuel cycle.

(3) Since some of the instruments will be calibrated at 18-month intervals, calibration for these instruments will have to be done on-line. Discuss the procedural aspects of the on-line calibration, especially addressing any effects on plant safety as well as potential plant transients and/or trips.

(4) When a sensor requires calibration, the calibration uses at least seven readings along the instrument span. Since these points are not independent, the same calibration check is repeated. Thus, it appears that the number of points used in some statistical analyses was significantly inflated. Any analysis that uses more than one point from each instrument at each calibration check is not valid. For example, in LAR 95-24, testing normality (Attachment 6) uses 154 readings when there are only 22 sensor tests conducted. Please discuss.

(5) Charts with duplicate readings (such as Attachment 8) are not printed clearly. Two readings at the same calibration interval could represent different sensors or repetitions of the same sensor. Please clarify.

(6) The use of time since last calibration for the purpose of predicting drift appears to be inappropriate. Such analysis ignores sensor tests that "failed" (that is, required recalibration) at some intermediate step, and so projects an over-optimistic view of the instrument drift. The inclusion of time since last calibration could confuse the reader. Please address this issue.

(7) Even if drift is time-independent, the uncertainty associated with the drift is time-dependent. Attachments 8, 9, and 17 show that as the time between tests increases, so does the spread of the data. Please address this issue.

(8) Two tests were used for normality. The first is the W test (for $n \leq 50$) or the D' test (for $n > 50$). The second uses "bins" to stratify the data.

Whereas the first test is objective, the second test appears to be arbitrary (it depends on how the bins are defined) and insensitive to departure from normality.

The use of both tests is a concern. If the two tests agree, then the second test is redundant. However, if the two tests do not agree, then the binning method should be discarded. When the results conflict, the "bin" method is relied on. Please discuss.

(9) On page 7 of Attachment 1, Item (e) states that the analysis uses the F test to check the homogeneity of variances. The proposed test compares the variance associated with a long calibration interval to that of the shortest interval. However, other variances may also need comparison. For example, Attachment 8 suggests that the variance at 18 months is higher that the variance at 19 months. Therefore, it appears that a comparison against 18 months (rather than the longest calibration interval) is warranted. Perhaps the largest and smallest variances should be compared. Also, a multiple-variance test, such as Bartlett's test for homogeneity of variances, ought to be considered. Please address these issues.

(10) The results of the F test are not reported. Please discuss.

(11) Variances for different calibration intervals do not appear to be alike. Conservatively, the higher variance, rather than the "pooled" standard deviation, ought to be used. Even then, it appears that the extrapolation to 30 months is not appropriate. Please explain.

(12) Some of the sensors were tested immediately after being put in service (readings at or near 0 months). Please explain the rationale for these tests.

(13) Please be prepared to provide a step-by-step review of a sample data calculation for at least one sensor during the proposed meeting.