

JAN 30 1985

DMB-D16

Docket No. 50-346

DISTRIBUTION

Docket File

Mr. Richard P. Crouse
Vice President, Nuclear
Toledo Edison Company
Edison Plaza - Stop 712
300 Madison Avenue
Toledo, Ohio 43652

NRC PDR
L PDR
ORB#4 Rdg
DEisenhut
OELD
EJordan
PMcKee
JPartlow

ACRS-10
RIngram
Ade Agazio
Gray File
EBlackwood
HOrnstein
NRomney

Dear Mr. Crouse:

Subject: Reactor Trip Breaker's Preventative Maintenance Program;
Items 4.2.1 and 4.2.2 Generic Letter 83-28

By letter dated November 7, 1983 (No. 1000) Toledo Edison Company provided partial response to the information requested in Generic Letter 83-28. We have reviewed your response with respect to items 4.2.1 and 4.2.2. Based on our review, we find that additional information is required for us to continue our review. The information required is contained in the attachment to this letter. Please provide your response no later than March 1, 1985.

The information requested affects fewer than 10 respondents. Therefore, OMB clearance under P.L. 96-511.

Sincerely,

*ORIGINAL SIGNED BY
JOHN F. STOLZ*

John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

ORB#4:DL *Ad*
Ade Agazio;cf
1/30/85

ORB#4:DL
JStolz
1/30/85



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
January 30, 1985

Docket No. 50-346

Mr. Richard P. Crouse
Vice President, Nuclear
Toledo Edison Company
Edison Plaza - Stop 712
300 Madison Avenue
Toledo, Ohio 43652

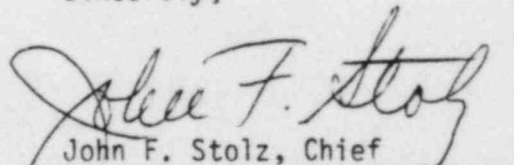
Dear Mr. Crouse:

Subject: Reactor Trip Breaker's Preventative Maintenance Program;
Items 4.2.1 and 4.2.2 Generic Letter 83-28

By letter dated November 7, 1983 (No. 1000) Toledo Edison Company provided partial response to the information requested in Generic Letter 83-28. We have reviewed your response with respect to items 4.2.1 and 4.2.2. Based on our review, we find that additional information is required for us to continue our review. The information required is contained in the attachment to this letter. Please provide your response no later than March 1, 1985.

The information requested affects fewer than 10 respondents. Therefore, OMB clearance under P.L. 96-511.

Sincerely,


John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

Toledo Edison Company

cc w/enclosure(s):

Mr. Donald H. Hauser, Esq.
The Cleveland Electric
Illuminating Company
P. O. Box 5000
Cleveland, Ohio 44101

Gerald Charnoff, Esq.
Shaw, Pittman, Potts
and Trowbridge
1800 M Street, N.W.
Washington, D. C. 20036

Paul M. Smart, Esq.
Fuller & Henry
300 Madison Avenue
P. O. Box 2088
Toledo, Ohio 43603

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
7910 Woodmont Avenue, Suite 220
Bethesda, Maryland 20814

President, Board of County
Commissioners of Ottawa County
Port Clinton, Ohio 43452

Attorney General
Department of Attorney General
30 East Broad Street
Columbus, Ohio 43215

Harold Kohn, Staff Scientist
Power Siting Commission
361 East Broad Street
Columbus, Ohio 43216

Mr. James G. Keppler, Regional Administrator
U. S. Nuclear Regulatory Commission, Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Robert F. Peters
Manager, Nuclear Licensing
Toledo Edison Company
Edison Plaza
300 Madison Avenue
Toledo, Ohio 43652

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
5503 N. State Route 2
Oak Harbor, Ohio 43449

Regional Radiation Representative
EPA Region V
230 South Dearborn Street
Chicago, Illinois 60604

Ohio Department of Health
ATTN: Radiological Health
Program Director
P. O. Box 118
Columbus, Ohio 43216

James W. Harris, Director (Addressee Only)
Division of Power Generation
Ohio Department of Industrial Relations
2323 West 5th Avenue
P. O. Box 825
Columbus, Ohio 43216

DAVIS-BESSE UNIT 1
REQUEST FOR ADDITIONAL INFORMATION
GL 83-28, ITEMS 4.2.1 AND 4.2.2, TASK A6814

INTRODUCTION

The Toledo Edison Company, the licensee for Davis-Besse Unit 1, submitted their response to Generic Letter 83-28 on November 7, 1983. That response has been reviewed with respect to Items 4.2.1 and 4.2.2 of the Generic Letter. The licensee's response was not sufficiently detailed to permit an evaluation of the adequacy of the periodic maintenance and trending programs for the breakers. The following additional information is required to evaluate compliance with Items 4.2.1 and 4.2.2.

1. Item 4.2.1 - Periodic Maintenance Program for Reactor Trip Breakers.

1.1 Criteria for Evaluating Compliance with Item 4.2.1

The Davis-Besse Unit 1 Reactor Trip System utilizes General Electric AK-2A circuit breakers. The primary criteria for an acceptable maintenance program for this breaker are contained in Maintenance Instruction GEI-50299EI*, "Power Circuit Breakers, Types AK-2/2A-15, AK-2/3/2A/3A-25, AKU-2/3/2A/3A-25," and Service Advice 9.3S and 9.20, by General Electric. The NRC Staff, Equipment Qualification Branch, has reviewed these items and endorsed the maintenance program they describe. More specifically, the criteria used to evaluate compliance include those items in the General Electric instructions and advisories that relate to the safety function of the breaker, supplemented by those measures that must be taken to accumulate data for trending. The acceptable maintenance activity interval is six months.

1.2 Issues Relating to Item 4.2.1

The licensee response states that preventative maintenance on the Reactor Trip Breakers is performed at "every refueling cycle or as necessary to ensure the design performance of the breakers." Periodic maintenance and surveillance are conducted in accordance with their procedures MP 1405.05 and ST 5030.20, respectively. The referenced procedures were not included with the submittal.

The Davis-Besse Unit 1 periodic maintenance program for the reactor trip breakers should include, on a six month basis:

1. Verification of breaker cleanliness and insulation structure; all foreign materials, such as paint, dust, or oil, should be removed to prevent electrical breakdown between points of different potential;
2. Verification of breaker physical condition, including wiring insulation and termination, all retaining rings, pole bases, arc quencher, stationary and movable contacts, and tightness of nuts and bolts;
3. Verification of proper manual operation of the breaker, including checks for excessive friction, trip bar freedom, latch engagement, operating mechanism alignment and freedom, and undervoltage trip (UVT) device armature freedom;
4. Verification of the optimum freedom of the armature as specified in General Electric Service Advice 175-9.3S, item #S1;
5. Verification of proper trip latch engagement as specified in Service Advice 175-9.3S, item #S2;
6. Verification of undervoltage pick-up setting, as specified in Service Advice 175-9.3S, item #S3, and dropout voltage;
7. Verification that the trip torque required on the trip shaft is less than 1.5 pound-inches, as specified in Service Advice 175-9.3S, Item #S4; "Before" and "After" maintenance torque values should be recorded;
8. Verification of positive tripping by checking the adjustment between the UVT device and trip paddle as specified in Service Advice 175-9.3S, item #S5;
9. Verification of proper trip response time as specified in Service Advice 175-9.3S, item #S6;
10. Lubrication of trip shaft and latch roller bearings with Mobil 28 lubricant;
11. Shunt Trip Attachment (STA) operation verification;
12. Examination and cleaning of breaker enclosure;
13. Functional test of the breaker prior to returning it to service.

The licensee is to confirm that the periodic maintenance program includes these 13 items at the specified interval or commit to their inclusion and provide a date by which they will be included.

2. Item 4.2.2 - Trending of Reactor Trip Breaker Parameters to Forecast Degradation of Operability.

2.1 Criteria for Evaluating Compliance with Items 4.2.2

Four parameters have been identified as trendable and are included in the criteria for evaluation. These are (1) undervoltage trip attachment dropout voltage, (2) trip torque, (3) breaker response time for undervoltage trip, and (4) breaker insulation resistance.

2.2 Issues Relating to Item 4.2.2

The licensee submittal states that the licensee "has participated in and supports the activities of the B&W Owners Group for a Reactor Trip Breaker (RTB) Reliability Monitoring Program." The B&W Owners Group response to GL 83-28, dated November 4, 1983, proposes "monitoring of critical performance parameters (particularly response time)" to identify the need for maintenance or replacement of breakers. It is not clear whether the response time is for a shunt or undervoltage trip.

The licensee is to commit to inclusion of trip torque, breaker response time and dropout voltage for undervoltage trip and breaker insulation resistance as trending parameters. The licensee should also identify the organization which will perform trend analysis, how often the analysis will be performed and how the information derived from the analysis will be used to affect periodic maintenance.