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Dockets Nos. 50-277  
and 50-278

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OCTOBER 24 1980

Mr. Edward G. Bauer, Jr.  
Vice President and General Counsel  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, Pennsylvania 19101

Dear Mr. Bauer:

**SUBJECT: ORDERS FOR MODIFICATION OF LICENSES CONCERNING ENVIRONMENTAL QUALIFICATION OF SAFETY-RELATED ELECTRICAL EQUIPMENT**

Ref. (a) Commission Memorandum and Order of May 23, 1980 (80-CLI-21)  
Ref. (b) Inspection and Enforcement Bulletin Supplement No. 2 to IEB-79-01B, September 30, 1980.

This letter transmits Orders for Modification of Licenses which change the Technical Specifications for Facility Operating Licenses Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station, Units Nos. 2 and 3. This change is a result of Ref. (a) which required the staff to codify the documentation requirements for the qualification of safety-related electrical equipment. A copy of each Order is being filed with the Office of the Federal Register for publication.

The deadline of November 1, 1980 for submittal of the qualification information is not changed by the Orders. Some additional information regarding the file is contained in Ref. (b). Questions regarding the Orders should be directed through your Project Manager.

Sincerely,

Original Signed By

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Licensing

Enclosure:  
Orders for Modification  
of Licenses

cc w/enclosure: See next page

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OFFICE	ORB#4:DL	ORB#4:DL	C-ORB#4:DL	ORB#4:DL	D:DL
SURNAME	RIngram/cb	DVerrelli	RReid	Murray	DEisenhut
DATE	10/2/80	10/2/80	10/2/80	10/2/80	10/2/80



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

October 24, 1980

Dockets Nos. 50-277  
and 50-278

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Vice President and General Counsel  
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The deadline of November 1, 1980 for submittal of the qualification information is not changed by the Orders. Some additional information regarding the file is contained in Ref. (b). Questions regarding the Orders should be directed through your Project Manager.

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Reid".

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Licensing

Enclosure:  
Orders for Modification  
of Licenses

cc w/enclosure: See next page

Philadelphia Electric Company

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October 24, 1980

cc w/enclosure(s):

Eugene J. Bradley  
Philadelphia Electric Company  
Assistant General Counsel  
2301 Market Street  
Philadelphia, Pennsylvania 19101

Troy B. Conner, Jr.  
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Assistant Attorney General  
Department of Natural Resources  
Annapolis, Maryland 21401

Philadelphia Electric Company  
ATTN: Mr. W. T. Ullrich  
Peach Bottom Atomic  
Power Station  
Delta, Pennsylvania 17314

Albert R. Steel, Chairman  
Board of Supervisors  
Peach Bottom Township  
R. D. #1  
Delta, Pennsylvania 17314

Curt Cowgill  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Peach Bottom Atomic Power Station  
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Delta, Pennsylvania 17314

Director, Criteria and Standards  
Division  
Office of Radiation Programs (ANR-460)  
U. S. Environmental Protection Agency  
Washington, D. C. 20460

U. S. Environmental Protection Agency  
Region III Office  
ATTN: EIS COORDINATOR  
Curtis Building (Sixth Floor)  
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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of  
PHILADELPHIA ELECTRIC COMPANY, ET AL }  
(Peach Bottom Atomic Power Station, }  
Unit No. 2) }

Docket No. 50-277

ORDER FOR MODIFICATION OF LICENSE

I.

Philadelphia Electric Company (licensee) and three other co-owners are the holders of Facility Operating License No. DPR-44, which authorizes the operation of the Peach Bottom Atomic Power Station, Unit No. 2, at steady state reactor power levels not in excess of 3293 megawatts thermal (rated power). The facility consists of a boiling water reactor located at the licensee's site in Peach Bottom, York County, Pennsylvania.

II.

On November 4, 1977, the Union of Concerned Scientists (UCS) filed with the Commission a "Petition for Emergency and Remedial Relief." The petition sought action in two areas: fire protection for electrical cables, and environmental qualification of electrical components. By Memorandum and Order dated April 13, 1978 (7 NRC 400), the Commission denied certain aspects of the petition and, with respect to other aspects, ordered the NRC staff to take several related actions. UCS filed a Petition for Reconsideration on May 2, 1978. By Memorandum and Order, dated May 23, 1980, the Commission reaffirmed its April 13, 1978 decision regarding the possible shutdown of operating reactors. However, the Commission's May 23, 1980 decision directed licensees and the NRC staff to undertake certain actions.

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With respect to environmental qualification of safety-related electrical equipment, the Commission determined that the provisions of the two staff documents - the Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines) and NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," December 1979 (copies attached) "form the requirements which licensees and applicants must meet in order to satisfy those aspects of 10 CFR Part 50, Appendix A General Design Criterion (GDC-4), which relate to environmental qualifications of safety-related electrical equipment." The Commission directed, for replacement parts in operating plants, "unless there are sound reasons to the contrary, the 1974 standard in NUREG-0588 will apply." The Commission also directed the staff to complete its review of the information sought from licensees by Bulletin 79-01B<sup>1</sup> and to complete its review of environmental qualification of safety-related electrical equipment in all operating plants, including the publication of Safety Evaluation Reports, by February 1, 1981. The Commission imposed a deadline that, "by no later than June 30, 1982 all safety-related electrical equipment in all operating plants shall be qualified to the DOR Guidelines or NUREG-0588."

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<sup>1</sup> Bulletin 79-01B was not sent to licensees for plants under review as part of the staff's Systematic Evaluation Program. The information sought by Bulletin 79-01B was requested from these licensees by a series of letters and meetings during the months of February and March, 1980.

The Commission requested the staff to, "keep the Commission and the public apprised of any further findings of incomplete environmental qualification of safety-related electrical equipment, along with corrective actions taken or planned," and requested the staff to provide bi-monthly progress reports to the Commission.

The Commission further directed that, "In order to leave no room for doubt on this issue, the staff is to prepare additional Technical Specifications for all operating plants which codify the documentation requirement paragraph of the Guidelines (paragraph 8.0)." The staff was directed to add these documentation requirements to each license after they were approved by the Commission.

The Commission also pointed out that the various deadlines imposed in its Order, "do not excuse a licensee from the obligation to modify or replace inadequate equipment promptly."

### III.

The Commission has approved the Technical Specification provisions set forth in Section IV below which specify documentation requirements and which specifically impose on the licensee the requirement of the Commission's May 23, 1980 Memorandum and Order that by no later than June 30, 1982 all safety-related electrical equipment shall be qualified to the DOR Guidelines or NUREG-0588.

The information developed during the Commission review of the UCS Petition emphasizes the importance of prompt completion of the upgrading of

environmental qualification of safety-related electrical equipment to conform to the DOR Guidelines or NUREG-0588 and of adequate documentation of equipment qualifications. The deadlines set forth in the Commission's Memorandum and Order dated May 23, 1980, assure that such upgrading will be accomplished promptly. In order to assure prompt completion of necessary qualification work or replacement of unqualified components, if necessary, in conformance with the requirements of the Commission's Memorandum and Order dated May 23, 1980, and to provide complete and adequate documentation as promptly as possible, such upgrading and documentation work must commence immediately. Therefore, I have concluded that the public health, safety and interest require this Order for Modification of License to be effective immediately.

#### IV.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's Rules and Regulations in 10 CFR Parts 2 and 50, IT IS ORDERED THAT EFFECTIVE IMMEDIATELY Facility Operating License No. DPR-44 is hereby amended to add the following provisions to the Appendix A Technical Specifications.

- (a) "By no later than June 30, 1982, all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of: Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines); or, NUREG-0588, "Interim Staff Position on Environmental

Qualification of Safety-Related Electrical Equipment," December 1979. Copies of these documents are attached to Order for Modification of License DPR-44 dated October 24, 1980.

- (b) "By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified."

To effectuate the foregoing, appropriate pages for incorporation into the Technical Specifications are attached to this Order.

V.

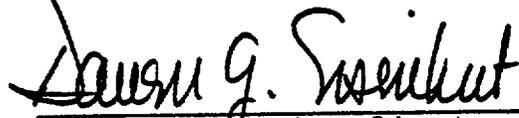
The licensee or any person whose interest may be affected by this Order may request a hearing within 20 days of the date of publication of this Order in the Federal Register. Any request for a hearing will not stay the effective date of this Order. Any request for a hearing shall be addressed to the Director, Office of Nuclear Reactor Regulation, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555. A copy of the request should also be sent to the Executive Legal Director, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, and to Troy B. Conner, Jr., 1747 Pennsylvania Avenue, NW, Washington, DC 20006, attorney for the licensee.

If a hearing is held concerning this Order, the issues to be considered at the hearing shall be:

- a. whether the licensee should be required to have the environmental qualification records referred to in Section IV, above, available at a central location by no later than December 1, 1980; and
- b. whether all safety-related electrical equipment should be qualified as required in Section IV, above, by no later than June 30, 1982.

Operation of the facility on terms consistent with this Order is not stayed by the pendency of any proceedings on the Order.

FOR THE NUCLEAR REGULATORY COMMISSION



Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Effective Date: October 24, 1980.  
Bethesda, Maryland

Attachments:

1. Technical Specification Pages
2. Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors
3. NUREG-0588, Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment.

## 6.10.2 Continued

- d. Records of radiation exposure for all individuals entering radiation control areas.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
- g. Records of training and qualification for current members of the plant staff.
- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the QA Manual, except as described in 6.10.1 above.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the PORC and the OSR Committee.
- l. Records for Environmental Qualification which are covered under the provisions of paragraph 6.16.

6.11 Radiation Protection Program

Procedures for personnel radiation protection shall be prepared consistent with requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 Fire Protection Inspections

- a. An independent fire protection and loss prevention program inspection shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- b. An inspection of the fire protection and loss prevention program shall be performed by a qualified outside fire consultant at least once per 36 months.

PBAPS

6.16 ENVIRONMENTAL QUALIFICATION

a. By no later than June 30, 1982 all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors"(DOR Guidelines); or, NUREG-0588 "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment", December 1979. Copies of these documents are attached to Order for Modification of License DPR-44 dated October 24, 1980.

b. By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of  
PHILADELPHIA ELECTRIC COMPANY, ET AL }  
(Peach Bottom Atomic Power Station, }  
Unit No. 3) }

Docket No. 50-278

ORDER FOR MODIFICATION OF LICENSE

I.

Philadelphia Electric Company (licensee) and three other co-owners are the holders of Facility Operating License No. DPR-56, which authorizes the operation of the Peach Bottom Atomic Power Station, Unit No. 3, at steady state reactor power levels not in excess of 3293 megawatts thermal (rated power). The facility consists of a boiling water reactor located at the licensee's site in Peach Bottom, York County, Pennsylvania.

II.

On November 4, 1977, the Union of Concerned Scientists (UCS) filed with the Commission a "Petition for Emergency and Remedial Relief." The petition sought action in two areas: fire protection for electrical cables, and environmental qualification of electrical components. By Memorandum and Order dated April 13, 1978 (7 NRC 400), the Commission denied certain aspects of the petition and, with respect to other aspects, ordered the NRC staff to take several related actions. UCS filed a Petition for Reconsideration on May 2, 1978. By Memorandum and Order, dated May 23, 1980, the Commission reaffirmed its April 13, 1978 decision regarding the possible shutdown of operating reactors. However, the Commission's May 23, 1980 decision directed licensees and the NRC staff to undertake certain actions.

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- 2 -

With respect to environmental qualification of safety-related electrical equipment, the Commission determined that the provisions of the two staff documents - the Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines) and NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," December 1979 (copies attached) "form the requirements which licensees and applicants must meet in order to satisfy those aspects of 10 CFR Part 50, Appendix A General Design Criterion (GDC-4), which relate to environmental qualifications of safety-related electrical equipment." The Commission directed, for replacement parts in operating plants, "unless there are sound reasons to the contrary, the 1974 standard in NUREG-0588 will apply." The Commission also directed the staff to complete its review of the information sought from licensees by Bulletin 79-01B<sup>1</sup> and to complete its review of environmental qualification of safety-related electrical equipment in all operating plants, including the publication of Safety Evaluation Reports, by February 1, 1981. The Commission imposed a deadline that, "by no later than June 30, 1982 all safety-related electrical equipment in all operating plants shall be qualified to the DOR Guidelines or NUREG-0588."

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The Commission requested the staff to, "keep the Commission and the public apprised of any further findings of incomplete environmental qualification of safety-related electrical equipment, along with corrective actions taken or planned," and requested the staff to provide bi-monthly progress reports to the Commission.

The Commission further directed that, "In order to leave no room for doubt on this issue, the staff is to prepare additional Technical Specifications for all operating plants which codify the documentation requirement paragraph of the Guidelines (paragraph 8.0)." The staff was directed to add these documentation requirements to each license after they were approved by the Commission.

The Commission also pointed out that the various deadlines imposed in its Order, "do not excuse a licensee from the obligation to modify or replace inadequate equipment promptly."

### III.

The Commission has approved the Technical Specification provisions set forth in Section IV below which specify documentation requirements and which specifically impose on the licensee the requirement of the Commission's May 23, 1980 Memorandum and Order that by no later than June 30, 1982 all safety-related electrical equipment shall be qualified to the DOR Guidelines or NUREG-0588.

The information developed during the Commission review of the UCS Petition emphasizes the importance of prompt completion of the upgrading of

environmental qualification of safety-related electrical equipment to conform to the DOR Guidelines or NUREG-0588 and of adequate documentation of equipment qualifications. The deadlines set forth in the Commission's Memorandum and Order dated May 23, 1980, assure that such upgrading will be accomplished promptly. In order to assure prompt completion of necessary qualification work or replacement of unqualified components, if necessary, in conformance with the requirements of the Commission's Memorandum and Order dated May 23, 1980, and to provide complete and adequate documentation as promptly as possible, such upgrading and documentation work must commence immediately. Therefore, I have concluded that the public health, safety and interest require this Order for Modification of License to be effective immediately.

#### IV.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's Rules and Regulations in 10 CFR Parts 2 and 50, IT IS ORDERED THAT EFFECTIVE IMMEDIATELY Facility Operating License No. DPR-56 is hereby amended to add the following provisions to the Appendix A Technical Specifications.

- (a) "By no later than June 30, 1982, all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of: Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines); or, NUREG-0588, "Interim Staff Position on Environmental

Qualification of Safety-Related Electrical Equipment," December 1979. Copies of these documents are attached to Order for Modification of License DPR-56 dated October 24, 1980.

- (b) "By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified."

To effectuate the foregoing, appropriate pages for incorporation into the Technical Specifications are attached to this Order.

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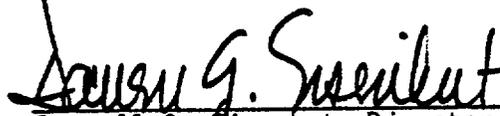
The licensee or any person whose interest may be affected by this Order may request a hearing within 20 days of the date of publication of this Order in the Federal Register. Any request for a hearing will not stay the effective date of this Order. Any request for a hearing shall be addressed to the Director, Office of Nuclear Reactor Regulation, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555. A copy of the request should also be sent to the Executive Legal Director, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, and to Troy B. Conner, Jr., 1747 Pennsylvania Avenue, NW, Washington, DC 20006, attorney for the licensee.

If a hearing is held concerning this Order, the issues to be considered at the hearing shall be:

- a. whether the licensee should be required to have the environmental qualification records referred to in Section IV, above, available at a central location by no later than December 1, 1980; and
- b. whether all safety-related electrical equipment should be qualified as required in Section IV, above, by no later than June 30, 1982.

Operation of the facility on terms consistent with this Order is not stayed by the pendency of any proceedings on the Order.

FOR THE NUCLEAR REGULATORY COMMISSION



Darrell G. Sisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Effective Date: October 24, 1980  
Bethesda, Maryland

Attachments:

1. Technical Specification Pages
2. Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors
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6.10.2 Continued

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- g. Records of training and qualification for current members of the plant staff.
- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the QA Manual, except as described in 6.10.1 above.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the PORC and the OSR Committee.
- l. Records for Environmental Qualification which are covered under the provisions of paragraph 6.16.

6.11 Radiation Protection Program

Procedures for personnel radiation protection shall be prepared consistent with requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 Fire Protection Inspections

- a. An independent fire protection and loss prevention program inspection shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- b. An inspection of the fire protection and loss prevention program shall be performed by a qualified outside fire consultant at least once per 36 months.

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PBAPS

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b. By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.