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ASLAB

Docket No. 50-334

Mr. J. J. Carey, Vice President
Duquesne Light Company
Nuclear Division
Post Office Box 4
Shippingport, Pennsylvania 15077

Dear Mr. Carey:

The Commission has issued the enclosed Amendment No. 54 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated June 3, 1982.

The amendment changes the Technical Specifications on station batteries to meet the requirements of IEEE Standard 450-1980 and Standard Technical Specifications.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

ORIGINAL SIGNED

Peter S. Tam, Project Manager
Operating Reactors Branch #1
Division of Licensing

Enclosures:

- 1. Amendment No. 54 to DPR-66
- 2. Safety Evaluation
- 3. Notice of Issuance

cc w/enclosures:
See next page

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Mr. J. J. Carey
Duquesne Light Company

cc: Mr. H. P. Williams
Station Superintendent
Duquesne Light Company
Beaver Valley Power Station
Post Office Box 4
Shippingport, Pennsylvania 15077

Mr. T. D. Jones, Manager
Nuclear Operations
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

B. F. Jones Memorial Library
663 Franklin Avenue
Aliquippa, Pennsylvania 15001

Gerald Charnoff, Esquire
Jay E. Silberg, Esquire
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N.W.
Washington, D.C. 20036

Karin Carter, Esquire
Special Assistant Attorney General
Bureau of Administrative Enforcement
5th Floor, Executive House
Harrisburg, Pennsylvania 17120

Marvin Fein
Utility Counsel
City of Pittsburgh
313 City-County Building
Pittsburgh, Pennsylvania 15219

Mr. John A. Levin
Public Utility Commission
P.O. Box 3265
Harrisburg, Pennsylvania 17120

Irwin A. Popowsky, Esquire
Office of Consumer Advocate
1425 Strawberry Square
Harrisburg, Pennsylvania 17120

Resident Inspector
U. S. Nuclear Regulatory Commission
Post Office Box 298
Shippingport, Pennsylvania 15077

Department of Environmental
Resources
ATTN: Director, Office of
Radiological Health
Post Office Box 2063
Harrisburg, Pennsylvania 17105

Mr. Thomas J. Czerpah
Mayor of the Burrough of
Shippingport
P.O. Box 26
Shippingport, Pennsylvania 15077

Pennsylvania Power Company
Ray E. Sempler
One E. Washington Street
New Castle, Pennsylvania 16103

Ohio Environmental Protection Agency
Division of Planning
Environmental Assessment Section
P.O. Box 1049
Columbus, Ohio 43216

Office of the Governor
State of West Virginia
Charleston, West Virginia 25305

Charles A. Thomas, Esquire
Thomas and Thomas
212 Locust Street
Box 999
Harrisburg, Pennsylvania 17108

Ronald C. Haynes
Regional Administrator - Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

Mr. J. J. Carey
Duquesne Light Company

cc: Regional Radiation Representatives
EPA Region III
Curtis Building - 6th Floor
Philadelphia, Pennsylvania 19106

Governor's Office of State Planning
and Development
ATTN: Coordinator, Pennsylvania
State Clearinghouse
P.O. Box 1323
Harrisburg, Pennsylvania 17120

Mr. Lawrence Barker
Commissioner, Department of Labor
State Capitol Complex
Building Six, Room 451
Charleston, West Virginia 25305

Dr. Clark Hansbarger
Director
Health Department
Building Three, Room 206
Charleston, West Virginia 25305

Mr. Kenny Grada
Supervisor of Licensing
Beaver Valley Power Station
Duquesne Light Company
P.O. Box 4
Shippingport, PA 15077



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

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-334

BEAVER VALLEY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the licensees) dated June 3, 1982, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

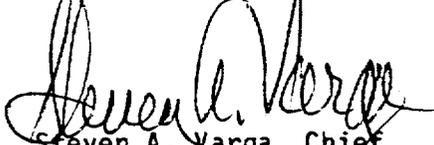
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 54, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 27, 1982

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ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Revise Appendix A as follows:

Remove Pages

3/4 8-8

3/4 8-9

Insert Pages

3/4 8-8

3/4 8-9

3/4 8-9a

B3/4 8-1

B3/4 8-2

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.3 The following D.C. bus trains shall be energized and OPERABLE:

TRAIN "A" (orange) consisting of 125-volt D.C. busses No. 1-1 & 1-3, 125-volt D.C. battery banks 1-1 & 1-3 & chargers 1-1 & 1-3.

TRAIN "B" (purple) consisting of 125-volt D.C. busses No. 1-2 & 1-4, 125-volt D.C. battery banks 1-2 & 1-4 and chargers 1-2 & 1-4

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one of the required battery banks inoperable, restore the inoperable battery bank to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one of the required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery bank by performing Surveillance Requirement 4.8.2.3.2.a.1 within one hour, and at least once per 8 hours thereafter. If any Category A limit in Table 3.8-1 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 1. The parameters in Table 3.8-1 meet the Category A limits, and
 2. The total battery terminal voltage is greater than or equal to 127.8 - volts on float charge.

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 -volts, or battery overcharge with battery terminal voltage above 150 -volts, by verifying that:
 - 1. The parameters in Table 3.8-1 meet the Category B limits.
 - 2. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohms, and
 - 3. The average electrolyte temperature of every tenth cell of connected cells is above (60°F).
- c. At least once per 18 months by verifying that:
 - 1. The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration,
 - 2. The cell-to-cell and terminal connections are clean, tight, and coated with anti-corrosion material.
 - 3. The resistance of each cell-to-cell and terminal connection is less than or equal to 150×10^{-6} ohms; and
 - 4. The battery charger will supply at least (100) amperes at 140 -volts for at least (4) hours.
- d. At least once per 18 months, during shutdown, by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual or simulated emergency loads for the 2-hour design duty cycle when the battery is subjected to a battery service test.
- e. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. Once per 60 month interval, this performance discharge test may be performed in lieu of the battery service test.
- f. At least once per 18 months, during shutdown, performance discharge tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

TABLE 3.8-1

BATTERY SURVEILLANCE REQUIREMENTS

Parameter	CATEGORY A ⁽¹⁾		CATEGORY B ⁽²⁾	
	Limits for each designated pilot cell	Limits for each connected cell	Allowable ⁽³⁾ value for each connected cell	
Electrolyte Level	>Minimum level indication mark, and < ¼" above maximum level indication mark	>Minimum level indication mark, and < ¼" above maximum level indication mark	Above top of plates, and not overflowing	
Float Voltage	≥ 2.13 volts	≥ 2.13 volts ^(c)	> 2.07 volts	
Specific Gravity ^(a)	≥ 1.200 ^(b)	≥ 1.195	Not more than .020 below the average of all connected cells	
		Average of all connected cells > 1.205	Average of all connected cells ≥ 1.195 ^(b)	

(a) Corrected for electrolyte temperature and level.

(b) Or battery charging current is less than (2) amps when on charge.

(c) Corrected for average electrolyte temperature.

(1) For any Category A parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that within 24 hours all the Category B measurements are taken and found to be within their allowable values, and provided all Category A and B parameter(s) are restored to within limits within the next 6 days.

(2) For any Category B parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that the Category B parameters are within their allowable values and provided the Category B parameter(s) are restored to within limits within 7 days.

(3) Any Category B parameter not within its allowable value indicates an inoperable battery.

Numbers in parentheses assume a manufacturer's recommended full charge specific gravity of 1.215.

BASES

3/4.8.1, 3/4.8.2

A.C. SOURCES, D.C. SOURCES AND ONSITE POWER

DISTRIBUTION SYSTEMS

The OPERABILITY of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criterion 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the safety analyses and are based upon maintaining at least one redundant set of onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

The Surveillance Requirement for demonstrating the OPERABILITY of the Station batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 3.8-1 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and .015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than .020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than .010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

BASES

A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

Operation with a battery cell's parameter outside the normal limit but within the allowable value specified in Table 3.8-1 is permitted for up to 7 days. During this 7 day period: (1) the allowable values for electrolyte level ensures no physical damage to the plates with an adequate electron transfer capability; (2) the allowable value for the average specific gravity of all the cells, not more than .020 below the manufacturer's recommended full charge specific gravity, ensures that the decrease in rating will be less than the safety margin provided in sizing; (3) the allowable value for an individual cell's specific gravity, ensures that an individual cell's specific gravity will not be more than .040 below the manufacturer's full charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; and (4) the allowable value for an individual cell's float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. DPR-66

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

BEAVER VALLEY POWER STATION, UNIT NO. 1

DOCKET NO. 50-334

Introduction

In a letter dated June 3, 1982 Duquesne Light requested a change in Beaver Valley Technical Specifications Sections 3.8.2.3, 4.8.3.2 and Bases 3/4.8.1 and 3/4.8.2 for station batteries. These changes are intended as an update to meet the requirements of IEEE Standard 450-1980 and Standard Technical Specifications.

Evaluation

The June 3, 1982 submittal did not explicitly follow the above requirements. As the result of a telephone conversation between NRC staff and Duquesne Light Company on July 2, 1982, an agreement was reached to add item 4.8.2.3.2(b)(2) (the surveillance for battery terminal corrosion or resistance check) and change item 4.8.2.3.2(f) (surveillance requirement for performance discharge test of battery capacity on any battery that shows sign of degradation).

The proposed Technical Specification for station batteries will meet the requirements of the Standard Technical Specifications (STS) and IEEE Standard 450-1980 except for item 4.8.2.3.2(f) which requires that a performance discharge test of battery capacity be performed annually on any battery that shows signs of degradation. The licensee has proposed to perform this test on an 18 months interval during plant shutdown rather than as stated in the STS. Performance of this test requires that the battery and battery charger be isolated from the DC system. To accomplish this test at any time other than during a normal plant shutdown would place the plant in a limiting condition of operation and result in an unscheduled plant shutdown.

NRR Office Letter No. 38 (Procedures for Revision to Technical Specifications enclosure 3, item 2) states that standard technical specifications may be used as guidance for technical specification changes requested on operating reactors but will not be used to impose new requirements. The proposed battery test periodicity is the same frequency that exists in the present

Beaver Valley Technical Specifications. Imposing the new requirement to conduct an annual performance discharge test on a battery that shows signs of degradation would require an unscheduled plant shutdown and unnecessarily restrict plant availability without a significant increase in plant safety. We concur with the technical specification changes proposed by Duquesne Light Company. The proposed changes meet the requirements of STS and IEEE Standard 450-1980 as stated above and, therefore, are acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: July 27, 1982

Principal Contributor:
R. Prevatte

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-334DUQUESNE LIGHT COMPANYOHIO EDISON COMPANYPENNSYLVANIA POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 54 to Facility Operating License No. DPR-66 issued to Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the licensees), which revised Technical Specifications for operation of the Beaver Valley Power Station, Unit No. 1 (the facility) located in Beaver County, Pennsylvania. The amendment is effective as of the date of issuance.

The amendment changes the Technical Specifications on station batteries to meet the requirements of IEEE Standard 450-1980 and Standard Technical Specifications

The application for amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since this amendment does not involve a significant hazards consideration.

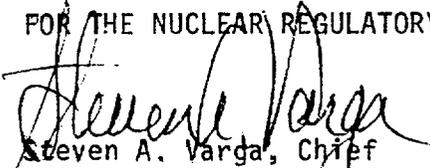
The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

- 2 -

For further details with respect to this action, see (1) the application for amendment dated June 3, 1982, (2) Amendment No. 54 to License No. DPR-66 and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the B. F. Jones Memorial Library, 663 Franklin Avenue, Aliquippa, Pennsylvania 15001. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 27th day of July, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing