

March 12, 1987

Docket No. 50-412

DISTRIBUTION

Docket File

Mr. J. J. Carey, Senior Vice President  
Duquesne Light Company  
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J. Partlow

N. Thompson  
P. Tam  
J. Guillen  
D. Miller  
ACRS (10)  
Tech Branch

Dear Mr. Carey:

Subject: Beaver Valley Power Station, Unit 2 - Transmittal of a Preliminary Draft of the Proposed Low Power License

Enclosed for your review and comment is a preliminary draft of the proposed low power license for the Beaver Valley Power Station, Unit 2. A principal objective of this transmittal is to provide for timely identification of any clarification needed regarding the conditions stated in this license. The enclosures to the license are not included in this transmittal.

We expect that the license conditions for the full power license will be the same as those in this draft low power license, unless a resolution is reached before issuance of the full power license. In addition, there is potential that new license conditions may be added as we attempt to close out SER open and confirmatory issues. Please note that proposed conditions (4) steam generator tube rupture, (8) control room design review, (9) safety parameter display system, and (10) regarding natural circulation, may be eliminated if you provide written commitments to do what these proposed conditions would require.

Please provide your comments by March 25, 1987. If you require any clarification of this matter, please contact the Project Manager, Peter Tam at (301) 492-9409.

The reporting and/or recordkeeping requirements of this letter affect fewer than 10 respondents; therefore OMB clearance is not required under P.L. 96-511.

Sincerely,

*LS*

Lester S. Rubenstein, Director  
PWR Project Directorate #2  
Division of PWR Licensing-A  
Office of Nuclear Reactor Regulation

Enclosure: As stated

cc w/enclosure: See next page

\*See previous concurrence

*Bev for*

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DMiller  
3/ /87

\*PE:PAD#2  
JGuillen:hc  
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PTam *PST*  
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Mr. J. J. Carey  
Duquesne Light Company

Beaver Valley 2 Power Station

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

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DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT 2

FACILITY OPERATING LICENSE

License No. NPF-64

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for license filed by the Duquesne Light Company acting for itself, and Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, (the licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Beaver Valley Power Station, Unit 2, (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-105 and the application, as amended, the provisions of the Act and the regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
  - D. There is reasonable assurance: (i) that the activities authorized by this operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);



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- E. Duquesne Light Company\* is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
  - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Facility Operating License No. NPF-64, is subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
  - I. The receipt, possession and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings regarding this facility and satisfaction of conditions therein imposed, Facility Operating License No. NPF-64 is hereby issued to the Duquesne Light Company and Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, (the licensees) to read as follows:
- A. This license applies to the Reaver Valley Power Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned by Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company and owned and operated by the Duquesne Light Company. The facility is located on the licensees' site on the southern shore of the Ohio River in Reaver County, Pennsylvania, approximately 22 miles northwest of Pittsburgh and 5 miles east of East Liverpool, Ohio, and is described in Duquesne Light Company's Final Safety Analysis Report, as supplemented and amended, and in its Environmental Report, as supplemented and amended;

\*Duquesne Light Company is authorized to act as agent for Ohio Edison Company, The Cleveland Illuminating Electric Company, and The Toledo Edison Company and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

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- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
- (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, Duquesne Light Company to possess, use, and operate the facility at the designated location in Beaver County, Pennsylvania, in accordance with the procedures and limitations set forth in this license;
  - (2) Pursuant to the Act and 10 CFR Part 50, Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company to possess the facility at the designated location in Beaver County, Pennsylvania, in accordance with the procedures and limitations set forth in the license;
  - (3) Pursuant to the Act and 10 CFR Part 70, Duquesne Light Company to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
  - (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duquesne Light Company to receive, possess, and use at any time any byproduct, source, and special nuclear material such as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duquesne Light Company to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
  - (6) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duquesne Light Company to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:



(1) Maximum Power Level

Duquesne Light Company is authorized to operate the facility at reactor core power levels not in excess of 2652 megawatts thermal (100 percent power) in accordance with the conditions specified herein and in Attachment 1 to this license. The preoperational tests, startup tests and other items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license. Pending Commission approval, this license is restricted to reactor core power levels not to exceed 5 percent of full power (132.06 megawatts thermal).

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Apperdix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Duquesne Light Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Initial Startup Test Program (Section 14)\*

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

(4) Steam Generator Tube Rupture (Section 15.6.3)\*

At least 6 months before the first refueling outage, Duquesne Light Company shall submit the following plant-specific information for NRC review:

- (1) Analyses of steam line static load in the event of overflow;
- (2) Radiological consequence analysis;
- (3) A listing of systems and components credited in the analyses to mitigate accident consequences, including justification of their use if they are not safety-grade.

The staff has determined that the low probability of a design basis SGTR accident during the first cycle of operation offers reasonable assurance that Beaver Valley, Unit 2, can operate for one cycle until this issue is resolved.

\*The parenthetical notation following the title of license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

(5) Accumulator Tank Level or Pressure Instrumentation (Section 7.5.2.1)\*

Duquesne Light Company shall install and have operational qualified accumulator tank level or pressure instrumentation prior to startup following the second refueling outage.

(6) Fresh Fuel Storage

The following criteria apply to the storage and handling of new fuel assemblies in the Fuel Handling Building:

- (a) No more than two fuel assemblies shall be out of approved shipping containers or fuel assembly storage racks at any one time.
- (b) The minimum edge-to-edge distance between the above two new assemblies, the shipping container array, and the storage rack arrays shall be at least 12 inches.
- (c) New fuel assemblies shall be stored in such a manner that water would drain freely from the assemblies in the event of flooding and subsequent draining of the fuel storage area.

(7) Formal Federal Emergency Management Agency Finding

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

(8) Detailed Control Room Design Review (Section 18.1)\*

Prior to startup following the first refueling outage, Duquesne Light Company shall complete all Detailed Control Room Design Review (DCRDR) surveys, satisfactorily resolve all open DCRDR issues, and implement all proposed control room improvements resulting from the DCRDR.

(9) Safety Parameter Display System (Section 18.2)\*

Prior to startup following the first refueling outage, Duquesne Light Company shall provide acceptable responses and implement any proposed corrective actions related to the open issues on the Safety Parameter Display System (SPDS).



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(10) Natural Circulation Test (Section 5.4.7)\*

At least 6 months before the first refueling outage, Duquesne Light Company shall submit for NPC review a natural circulation analysis which demonstrates that the Diablo Canyon test is applicable to Beaver Valley, Unit 2. As an alternate, Duquesne Light Company may perform a natural circulation and boron mixing test at Beaver Valley, Unit 2 which meets the requirements of RTP RSB 5-1.

D. Exemptions

- (1) The facility requires a schedular exemption from General Design Criterion 4, Appendix A to 10 CFR 50, which requires that structures, systems and components important to safety be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping and discharging fluids that may result from equipment failures and from events and conditions outside the nuclear power unit. As the staff described in detail in Supplement 4 to the Safety Evaluation Report, installation of pipe whip restraints is not necessary to achieve the underlying purpose of the rule, since application of "leak-before-break" technology would achieve the same degree of safety at lower cost and reduce occupational exposure. This exemption is authorized by law and will not endanger life or property or the common defense and security, and certain special circumstances are present. With the granting of this exemption, the facility will operate, to the extent authorized herein, in conformity with application, as amended, the provisions of the Act, and the rules and regulations of the Commission. This schedular exemption is, therefore, hereby granted pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(ii) as follows:

Beaver Valley Power Station Unit 2 is exempt from the requirements of General Design Criterion (GDC) 4, Appendix A to 10 CFR 50 to eliminate the dynamic loading effects associated with the postulated pipe breaks described in detail in Section 3.6.3 of Supplement 4 to the Safety Evaluation Report. These dynamic loading effects include pipe whip, jet impingement, and break-associated dynamic transients. Specifically, this eliminates the need for pipe whip restraints with pipe breaks. This exemption will expire upon completion of the GDC-4 rulemaking changes but no later than startup following the second refueling outage.

- (2) The facility requires a technical exemption from 10 CFR 50, Appendix J, Section III.D.2(b)(ii) which requires that "Air locks opened during periods when containment integrity is not required by the plant's Technical Specification shall be tested at the end of such periods at not less than  $P_a$ ." The justification of this exemption is contained in Section 6.2.6 of Supplement 5 to

the Safety Evaluation Report. This exemption is authorized by law and will not endanger life or property or the common defense and security, and certain special circumstances are present. With the granting of this exemption, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission. Therefore, pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(ii) and (iii), Beaver Valley Power Station, Unit 2 is exempt from the quoted requirement and instead, is required to perform the overall air lock leak test at pressure P, prior to establishing containment integrity if the air lock maintenance that has been performed could affect the air lock sealing capability.

- (3) The facility requires a schedular exemption from 10 CFR 50.55a(h), which requires compliance with IEEE Standard 279-1971 pertaining to feedwater isolation on a high steam generator level. The staff has reviewed the information related to this exemption and documented its review in Section 7.3.3.12 of the Safety Evaluation Report, Supplement 5. This exemption is authorized by law and will not endanger life or property or the common defense and security, and certain special circumstances are present. With the granting of this exemption, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission. Therefore, pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(v), Beaver Valley, Unit 2, is granted a schedular exemption to postpone installation of the steam generator high level median selector, which is required to ensure that feedwater isolation on high steam generator level is in compliance with IEEE Standard 279-1971, to the end of the first refueling outage.
- (4) (Exemption regarding use of RM 50-2 is being developed).



- (5) The facility was previously granted an exemption from the criticality alarm requirements of paragraph 70.24 of 10 CFR Part 70 insofar as this section applies to this license. (See License No. SNM-1954 dated April 9, 1986, which granted this exemption).

E. Physical Security

Duquesne Light Company shall fully implement and maintain in effect all provisions of the physical security, guard training and qualification, and safeguards contingency plans previously approved by the Commission and all amendments and revisions to such plans made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled:

F. Fire Protection Program (Section 9.5.1)\*

Duquesne Light Company shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility, as amended and as described in the (SER) dated October 1985 (and Supplements 1 through 5) subject to the following provision below.

The licensees may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

G. Reporting to the Commission

Except as otherwise provided in the Technical Specifications or Environmental Protection Plan, Duquesne Light Company shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within twenty-four (24) hours to the NRC Operations Center via the Emergency Notification System with written follow-up with 30 days in accordance with the procedures described in 10 CFR 50.73(b), (c) and (e).

- H. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

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J. This license is effective as of the date of issuance and shall expire at midnight on

FOR THE NUCLEAR REGULATORY COMMISSION

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Enclosures:

1. Attachment 1
2. Appendix A - Technical Specifications
3. Appendix B - Environmental Protection Plan

Date of Issuance: