

March 13

Docket No. 50-412

Mr. J. J. Carey, Senior Vice President
Duquesne Light Company
Nuclear Group
Post Office Box 4
Shippingport, PA 15077

Dear Mr. Carey:

Enclosed is a copy of a "Notice of Environmental Assessment and Finding of No Significant Impact" for your information. This notice relates to your application dated February 2, 1987, as supplemented by letter dated February 13, 1987 for exemption from certain requirements of General Design Criterion 4, Appendix A to 10 CFR Part 50 for the Beaver Valley Power Station, Unit No. 2.

The notice has been sent to the Office of the Federal Register for publication.

Sincerely,

Peter S. Tam, Project Manager
Project Directorate No. 2
Division of PWR Licensing-A
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

DISTRIBUTION

<u>Docket File</u>	NRC PDR
L PDR	Gray File
PAD#2 Rdg	TNovak
OGC-Bethesda	DMiller
PTam	EJordan
ACRS (10)	JPartlow
Tech Branch	BGrimes
NThompson	

Scinto's concern has been addressed by specifically naming the piping involved. He agreed to the change by phone on 3/10/87
P. Tam

B703270013 B70313
PDR ADOCK 05000412
EA PDR

LA:PAD#2
DMS/er
3/3/87

PM:PAD#2
PTam:bg
3/4/87

PD:PAD#2
LRubenstein
3/13/87

OGC
3/5/87
3/19/87
3/5/87



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

March 13, 1987

Docket No. 50-412

Mr. J. J. Carey, Senior Vice President
Duquesne Light Company
Nuclear Group
Post Office Box 4
Shippingport, PA 15077

Dear Mr. Carey:

Enclosed is a copy of a "Notice of Environmental Assessment and Finding of No Significant Impact" for your information. This notice relates to your application dated February 2, 1987, as supplemented by letter dated February 13, 1987 for exemption from certain requirements of General Design Criterion 4, Appendix A to 10 CFR Part 50 for the Beaver Valley Power Station, Unit No. 2.

The notice has been sent to the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in cursive script that reads "Peter S. Tam".

Peter S. Tam, Project Manager
Project Directorate No. 2
Division of PWR Licensing-A
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

Mr. J. J. Carey
Duquesne Light Company

Beaver Valley 2 Power Station

cc:

Gerald Charnoff, Esq.
Jay E. Silberg, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, N.W.
Washington, DC 20037

Mr. R. E. Martin, Manager
Regulatory Affairs
Duquesne Light Company
Beaver Valley Two Project
P. O. Box 328
Shippingport, Pennsylvania 15077

Mr. C. W. Ewing, Quality Assurance
Manager
Quality Assurance Department
Duquesne Light Company
P. O. Box 186
Shippingport, Pennsylvania 15077

Zori Ferkin
Assistant Counsel
Governor Energy Council
1625 N. Front Street
Harrisburg, PA 15105

Director, Pennsylvania Emergency
Management Agency
Room B-151
Transportation & Safety Building
Harrisburg, Pennsylvania 17120

John D. Burrows, P.E.
Director of Utilities
State of Ohio
Public Utilities Commission
180 East Broad Street
Columbus, Ohio 43266-0573

Mr. T. J. Lex
Westinghouse Electric Corporation
Power Systems
P. O. Box 355
Pittsburgh, Pennsylvania 15230

Bureau of Radiation Protection
PA Department of Environmental
Resources
ATTN: R. Janati
P.O. Box 2063
Harrisburg, Pennsylvania 17120

Mr. P. RaySircar
Stone & Webster Engineering Corporation
P. O. Box 2325
Boston, Massachusetts 02107

BVPS-2 Records Management Supervisor
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

Mr. J. Beall
U. S. NRC
P. O. 181
Shippingport, Pennsylvania 15077

John A. Lee, Esq.
Duquesne Light Company
1 Oxford Centre
301 Grant Street
Pittsburgh, Pennsylvania 15279

Mr. Thomas E. Murley, Regional Admin.
U. S. NRC, Region I
631 Park Avenue
King of Prussia, Pennsylvania 15229

UNITED STATES NUCLEAR REGULATORY COMMISSIONDUQUESNE LIGHT COMPANY, ET ALBEAVER VALLEY UNIT 2DOCKET NO. 50-412NOTICE OF ENVIRONMENTAL ASSESSMENT ANDFINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of a scheduler exemption from a portion of the requirements of General Design Criterion (GDC) 4 (10 CFR 50, Appendix A) to the applicants* for Beaver Valley Unit 2, located at Beaver County, Pennsylvania.

ENVIRONMENTAL ASSESSMENT:

Identification of Proposed Action: The scheduler exemption would permit the applicants not to install the pipe whip restraints and jet impingement shields and not to consider the dynamic effects associated with postulated pipe breaks in certain Beaver Valley Unit 2 piping, on the basis of advanced calculational methods ("leak-before-break") for assuring that piping stresses would not result in rapid piping failure. All of the affected piping are inside containment and include: reactor coolant loop bypass lines, safety injection lines, accumulator injection lines, pressurizer surge line, and residual heat removal lines.

Need for Proposed Action: The proposed exemption is needed in order for the applicants not to consider the dynamic loading effects associated with the postulated full-flow circumferential and longitudinal pipe ruptures in certain

8703270022 870313
PDR ADOCK 05000412
PDR
BA

*The applicants are Duquesne Light Company, Ohio Edison Company, the Cleveland Illuminating Company and the Toledo Edison Company.

piping. These dynamic loading effects include pipe whip, jet impingement, asymmetric pressurization transients and break-associated dynamic transients in unbroken portions of the subject piping. Therefore, the applicants would not be required to install protective devices such as pipe whip restraints and jet impingement shields related to postulated break locations for the subject piping. Analysis shows that the pipe breaks, which these devices are designed to protect against, are extremely unlikely. On the other hand, the presence of these devices increase inservice inspection time in the containment and their elimination would lessen the occupational doses to workers and facilitate inservice inspections.

GDC 4 requires that structures, systems and components important to safety shall be appropriately protected against dynamic effects, including the effects of discharging fluids that may result from equipment failures. In recent submittals, the applicants have provided information to show, by advanced fracture mechanics techniques, that the detection of small flaws by either inservice inspection or leakage monitoring systems is assured long before flaws in the piping materials can grow to critical or unstable sizes which could lead to large break areas. The NRC staff has reviewed and accepted the applicants' conclusion and has published the results in Safety Evaluation Report Supplement No. 4 (NUREG-1057). The NRC staff agrees that double-ended guillotine break in the piping so named above, need not be required as a design-basis accident for pipe whip restraints. Accordingly, the NRC staff agrees that schedular exemption from GDC 4 is appropriate. (The subject GDC 4 is currently being revised to permit use of "leak-before-break" technology to preclude use of pipe whip restraints. The applicant's application is in line with the rulemaking but is ahead of it).

Environmental Impact of the Proposed Action: The proposed exemption would not affect the environmental impact of the facility. No credit is given for the restraints and shields to be eliminated in calculating accident doses to the environment. While the jet impingement barriers and pipe whip restraints would minimize the damage from jet forces and whipping from a broken pipe, the calculated limitation on stresses required to support this exemption assures that the probability of pipe breaks which could give rise to such forces are extremely small; thus, the pipe whip restraints and jet shield would have no significant effect on the overall plant accident risk.

The exemption would not otherwise affect radiological plant effluents. Likewise, the exemption would not affect non-radiological plant effluents, and has no other environmental impact. The elimination of the pipe whip restraints would tend to lessen the occupational doses to workers inside containment. Therefore, the Commission concludes that there are no significant radiological or non-radiological impacts associated with the exemption.

The proposed exemption involves design features located entirely within the restricted area as defined in 10 CFR 20. It does not affect plant non-radioactive effluents and has no other environmental impact. Therefore, the Commission concludes that there are no non-radiological impacts associated with this proposed exemption.

Since the staff has concluded that there are no measurable negative environmental impacts associated with this exemption, any alternatives would not provide any significant additional protection of the environment. The alternative to the exemption would be to require literal compliance with GDC 4.

Alternative Use of Resources: This action does not involve the use of resources not previously considered in the Final Environmental Statement (Operating License) for Beaver Valley Unit 2.

Agencies and Persons Contacted: The NRC staff reviewed the applicants' request and applicable documents referenced therein that support this exemption for Beaver Valley Unit 2. The NRC staff did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for this action. Based upon the environmental assessment, the staff concludes that this action will not have a significant effect on the quality of the human environment.

For details with respect to this action, see the request for exemption dated February 2, 1987, as supplemented February 13, 1987. These documents, used in the NRC staff's technical evaluation of the exemption request, are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C., and at the Local Public Document Room at the B. F. Jones Memorial Library, 663 Franklin Avenue, Aliquippa, Pennsylvania 15001. The staff's technical evaluation of the request has been published in Beaver Valley Unit 2 Safety Evaluation Report, Supplement 4 (NUREG-1057, Supplement 4) and is available for inspection at both locations listed above.

Dated at Bethesda, Maryland, this 13th day of March 1987.

FOR THE NUCLEAR REGULATORY COMMISSION



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