

July 20, 1984

Docket No. 50-334

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Docket File

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

NRC PDR EJordan  
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Dear Mr. Carey:

SUBJECT: BEAVER VALLEY UNIT NO. 1 - OPERATION WITH TWO OUT  
OF THREE REACTOR COOLANT LOOPS - SAFETY EVALUATION

By letter dated October 27, 1978, Duquesne Light Company requested a number of technical specification changes. One of these requested changes would permit Beaver Valley Unit No. 1 to operate with only two of its three coolant loops, with the third one isolated by loop isolation valves. The enclosed Safety Evaluation discusses in detail results of our review.

Our review of the request has concentrated on the impact of this proposed change on the performance of safety related systems, the loop isolation valves, the design-basis accidents, as well as our evaluation of the impact on certain generic safety issues. We have sent out several rounds of questions and have visited the site on issues concerning human factors. You responded to such staff efforts by letters listed as References 10 through 20 in the enclosed Safety Evaluation Report.

We conclude that (1) the proposed method of loop isolation provide adequate protection for the integrity of the primary pressure boundary, (2) the likelihood of accidents and transients would not be significantly increased, (3) the isolation of one loop will not seriously degrade the performance of safety related systems, the instrumentation and control systems or that of the closed loop isolation valves, and (4) no major safety problems would result from two-loop operation (these include core thermal hydraulics, pressurized thermal shock, and SG tube damage).

You have reanalyzed the full spectrum of transients and accidents using acceptable codes and assumptions. The results demonstrate compliance with the acceptance criteria of the regulations and the Standard Review Plan.

As a result of our review, some changes to your proposed technical specifications will be necessary to ensure safe operation with one isolated loop. These changes are summarized in Section V of the SER. All except one (asymmetric LOCA blowdown load) have already been addressed by you in your letters. We will evaluate the adequacy of your revised technical specification changes against these concerns. Issuance of an amendment authorizing two-loop operation will be contingent upon satisfactory resolution of these concerns.

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Mr. J. J. Carey

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On the basis of the considerations discussed above, we conclude that N-1 loop operation at Beaver Valley Unit No. 1 does not constitute a threat to public health and safety. Please discuss with your Project Manager, Mr. Peter Tam, the proposed schedule of submittal of your revised amendment request.

/s/SVarga

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

ORB#1:DL  
PTam;ps  
7/20/84

DW  
ORB#1:DL  
DWigginton  
7/20/84

C-ORB#1:DL  
SVarga  
7/20/84

Mr. J. J. Carey  
Duquesne Light Company

Beaver Valley Power Station  
Unit 1

cc: Mr. W. S. Lacey  
Station Superintendent  
Duquesne Light Company  
Beaver Valley Power Station  
Post Office Box 4  
Shippingport, PA 15077

Mr. Thomas J. Czerpah  
Mayor of the Burrough of  
Shippingport  
Post Office Box 26  
Shippingport, PA 15077

Mr. K. Grada, Superintendent  
of Licensing and Compliance  
Duquesne Light Company  
Post Office Box 4  
Shippingport, PA 15077

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

Mr. John A. Levin  
Public Utility Commission  
Post Office Box 3265  
Harrisburg, PA 17120

Ohio Environmental Protection Agency  
Division of Planning  
Environmental Assessment Section  
Post Office Box 1049  
Columbus, Ohio 43216

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

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

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

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

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

Regional Radiation Representative  
EPA Region III  
Curtis Building - 6th Floor  
Philadelphia, PA 19106

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

Governor's Office of State Planning  
and Development  
ATTN: Coordinator, Pennsylvania  
State Clearinghouse  
Post Office Box 1323  
Harrisburg, PA 17120

Department of Environmental Resources  
ATTN: Director, Office of Radiolo-  
gical Health  
Post Office Box 2063  
Harrisburg, PA 17105

Mr. Joseph H. Mills, Acting Commissioner  
State of West Virginia Department  
of Labor  
1900 Washington Street  
East Charleston, West Virginia 25305

Beaver Valley Power Station  
Unit 1

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cc: N. H. Dyer, M.D.  
State Director of Health  
State Department of Health  
1800 Washington Street, East  
Charleston, West Virginia 25305

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

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406