

September 12, 1989

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C-143 to DPR-66

Docket No. 50-334

Mr. J. D. Sieber, Vice President
Nuclear Group
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

Dear Mr. Sieber:

SUBJECT: BEAVER VALLEY UNIT 1 - CORRECTION OF ERRORS IN SAFETY EVALUATION
ASSOCIATED WITH AMENDMENT NO. 143 (TAC 73604)

Amendment No. 143, issued on July 27, 1989, contains some errors in its safety evaluation. The errors can all be attributed to our original intent to issue amendments to both Units 1 and 2 under the same cover, then having to separate them upon learning of the need to issue an amendment to Unit 1 under emergency circumstances; some Unit 2 information was inadvertently left in the safety evaluation.

Enclosed is a revised page 3 to the safety evaluation. We apologize for the inconvenience these errors may have caused.

Sincerely,

Signed by

Peter S. Tam, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

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[TAC 73604]

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Mr. J. Sieber
Duquesne Light Company

Beaver Valley Power Station
Units 1 & 2

cc:

Jay E. Silberg, Esquire
Shaw, Pittman, Potts and Trowbridge
2300 N Street, N.W.
Washington, DC 20037

Bureau of Radiation Protection
Pennsylvania Department of
Environmental Resources
ATTN: R. Janati
Post Office Box 2063
Harrisburg, Pennsylvania 17120

Kenny Grada, Manager
Nuclear Safety
Duquesne Light Company
P. O. Box 4
Shippingport, Pennsylvania 15077

Mayor of the Borough of
Shippingport
Post Office Box 3
Shippingport, Pennsylvania 15077

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

Ashley C. Schannauer
Assistant City Solicitor
City of Pittsburgh
313 City-County Building
Pittsburgh, Pennsylvania 15219

Roy M. Smith, Commissioner
Department of Labor
Bldg. 3, Room 319, Capitol Complex,
Charleston, West Virginia 25305

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

John D. Borrows
Director, Utilities Department
Public Utilities Commission
180 East Broad Street
Columbus, Ohio 43266-0573

Resident Inspector
U.S. Nuclear Regulatory Commission
Post Office Box 181
Shippingport, Pennsylvania 15077

Director, Pennsylvania Emergency
Management Agency
Post Office Box 3321
Harrisburg, Pennsylvania 17105-3321

- c. Use of reduced containment net free volume (see change (3) above).
- d. Assumption of 10% degradation of rated head for the quench spray and recirculation spray pumps, in accordance with ASME Section XI, and addressing the licensee's SSFE concerns.
- e. Containment quench spray thermal efficiency is assumed to be 99% (95% was assumed in the licensing basis), and recirculating spray thermal efficiency is assumed to range between 99% and 95% (a constant 90% was assumed in the licensing basis). These are currently acceptable values.
- f. Use of ANS 5.1-1979 model for decay heat generation (previously, ANS 5.1-1971 was used).
- g. Reactor thermal power of 2733 MWT, i.e. licensed rating plus 2% uncertainty (previously, the ESF rating of 2766 MWT was used).
- h. Credit for steam condensation by safety injection during reflooding was assumed (previously not allowed).

The results of the licensee's analyses show that the Containment Depressurization System is capable of reducing the containment pressure to subatmospheric within 1 hour for river water temperature up to 88°F. Depressurization will still be attained in an hour if river water temperature was at 90°F or less and initial containment temperature at greater than 95°F. Thus no revisions need be made to accident evaluations in the unit's licensing basis. Furthermore, the reanalysis showed that NPSH requirements will continue to be satisfied for the low head safety injection pumps and recirculation spray pumps.

The licensee evaluated the effect of elevated service water temperature on other plant systems, such as the emergency diesel generators cooling system, control room air conditioning units, safeguards area air conditioning units, etc. All of these evaluations lead to the conclusion that the system are capable of accepting the increased river water temperature while continuing to perform their intended design functions.

The licensee evaluated the effect of the increased service water temperature on the reactor coolant system's cooldown capability using the residual heat removal systems. At the elevated temperatures, Unit 1 would require 28 hours (instead of 24 hours) to cool down from 350°F to 140°F. There is thus a time increase of about 4 hours, but the longer cooling time is still within acceptable limits.