

Lew W. Myers
Senior Vice President

412-393-5234
Fax: 724-643-8069

June 29, 2000
L-00-081

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

**Subject: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Response to a Verbal Request for Additional Information
License Amendment Request No. 277 Supplemental Information**

This letter provides the Beaver Valley Power Station's response to a verbal NRC request for additional information concerning Unit 1 License Amendment Request (LAR) No. 277. LAR No. 277 was submitted to the NRC by letter L-00-010 dated February 22, 2000. The subject LAR proposed changes to the Unit 1 Bases for Technical Specification (TS) 3/4.4.9.3, Overpressure Protection Systems (OPPS) and TS 3/4.1.2, Boration Systems. The proposed changes revise the Bases by providing an alternate means to vent the Reactor Coolant System (RCS) for low temperature overpressure protection and when required by the Boration System TS. The current TS Bases specifies an RCS vent to the containment atmosphere. The proposed change allows the required vent to be established to the Pressurizer Relief Tank as well as the containment atmosphere. The proposed changes also make the two Bases consistent in their reference to an RCS vent.

On May 31, 2000 a telephone conference call was held between the NRC and Beaver Valley Power Station (BVPS) personnel concerning LAR No. 277. The NRC requested a quantitative discussion regarding the maximum backpressure from the Pressurizer Relief Tank and its effect on: 1) the required boration flow from a low head safety injection pump when the reactor coolant system is vented to Pressurizer Relief Tank, and 2) the adequacy of a 2.07 square inches vent relative to low temperature overpressure protection. The attachment to this letter documents the responses provided by BVPS personnel.

A 001

Beaver Valley Power Station, Unit No. 1
Response to a Verbal Request for Additional Information
License Amendment Request No. 277 Supplemental Information
L-00-081
Page 2

If there are any questions concerning this matter, please contact Mr. Thomas S. Cosgrove, Manager, Licensing at 724-682-5203.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lew W. Myers".

Lew W. Myers

Attachment

- c: Mr. D. S. Collins, Project Manager
- Mr. D. M. Kern, Sr. Resident Inspector
- Mr. H. J. Miller, NRC Region I Administrator
- Mr. D. A. Allard, Director BRP/DEP
- Mr. L. E. Ryan (BRP/DEP)
- Ms. M. E. O'Reilly (FirstEnergy Legal Department)

**Subject: Beaver Valley Power Station, Unit No. 1
BV-1 Docket No. 50-334, License No. DPR-66
Response to a Verbal Request for Additional Information
License Amendment Request No. 277 Supplemental Information**

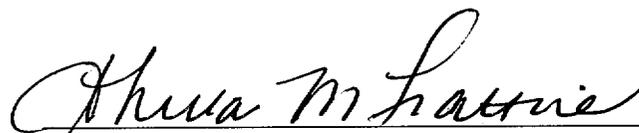
I, Lew W. Myers, being duly sworn, state that I am Senior Vice President of FirstEnergy Nuclear Operating Company (FENOC), that I am authorized to sign and file this submittal with the Nuclear Regulatory Commission on behalf of FENOC, and that the statements made and the matters set forth herein pertaining to FENOC are true and correct to the best of my knowledge and belief.

FirstEnergy Nuclear Operating Company


Lew W. Myers
Senior Vice President - FENOC

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BEAVER

Subscribed and sworn to me, a Notary Public, in and for the County and State above named, this 29th day of June, 2000.


My Commission Expires:

Notarial Seal
Sheila M. Fattore, Notary Public
Shippingport Boro, Beaver County
My Commission Expires Sept. 30, 2002
Member, Pennsylvania Association of Notaries

Attachment to Letter L-00-081

The NRC staff noted that the FirstEnergy Nuclear Operating Company (FENOC) February 22, 2000 submittal states that a calculation was performed to evaluate the effects of the elevated Pressurizer Relief Tank (PRT) backpressure on the operation of the Overpressure Protection System, and on the Boration System flow requirements. During a May 31, 2000 telephone conference call between NRC and FENOC, it was requested that FENOC provide a quantitative discussion regarding the maximum backpressure from the PRT and its effect on the following:

1. Required boration flow from a low head safety injection pump when the reactor coolant system is vented to PRT.

Response: Flow analysis was performed at elevated Reactor Coolant System (RCS) pressures to check at which pressure the Low Head Safety Injection (LHSI) flow would decrease below the minimum needed for boration requirements. These analyses simulate an open Power Operated Relief Valve (PORV) and a full pressurizer with discharge into a sealed Pressurizer Relief Tank (PRT). The minimum required LHSI pump flow to provide the equivalent boration capability of two Boric Acid Transfer Pumps was found to be 217 gpm. This is a conservative assumption since only one Boric Acid Transfer Pump in fast speed is adequate to comply with Technical Specification RCS boration requirements. One LHSI pump is capable of providing the required flow at RCS pressures of 135 psig or less. The RCS would not reach 135 psig since the rupture disc of the PRT opens at 90 psig. Therefore, it is shown that a single LHSI pump will provide the required minimum shutdown boration flow.

2. The adequacy of a 2.07 square inches vent relative to low temperature overpressure protection.

Response: As the PRT pressure increases there is little effect on the PORV discharge flow. The Overpressure Protection System (OPPS) limit is governed by PORV port (C_v), setpoint, and stroke time. These items are unaffected by the proposed change to the Technical Specification Bases. The most limiting mass injection case for OPPS actuation shows a High Head Safety Injection (HHSI) pump flow of less than 400 gpm. The PORV discharge flow, with a single open PORV being equivalent to a 2.07 square inches vent, is in the order of 900 gpm. As a result, the PORV to PRT discharge capacity far exceeds the mass input of the HHSI pump.