



## Duquesne Light

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August 8, 1984

Mr. Harold R. Denton  
Office of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, DC 20555

ATTENTION: Mr. George W. Knighton, Chief  
Licensing Branch 3  
Office of Nuclear Reactor Regulation

SUBJECT: Beaver Valley Power Station - Unit No. 2  
Docket No. 50-412  
Draft SER Open Items 150 and 151, Equipment Qualification

Gentlemen:

This letter forwards responses to the issues listed below. The following items are enclosed:

Enclosure 1: Response to Open Item 150 of the Beaver Valley Power Station  
Unit No. 2 Draft Safety Evaluation Report

Enclosure 2: Response to Open Item 151 of the Beaver Valley Power Station  
Unit No. 2 Draft Safety Evaluation Report

If there are any questions in this regard, please contact C. L. Hill at (412) 787-5141.

DUQUESNE LIGHT COMPANY

By *E. J. Woolever*  
E. J. Woolever  
Vice President

CLH/wjs  
Enclosures

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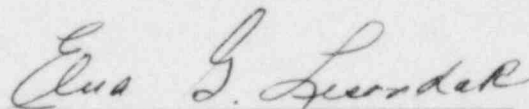
SUBSCRIBED AND SWORN TO BEFORE ME THIS  
8<sup>th</sup> DAY OF August, 1984.

*Elva G. Lesondak*  
Notary Public

ELVA G. LESONDAK, NOTARY PUBLIC  
ROBINSON TOWNSHIP, ALLEGHENY COUNTY  
MY COMMISSION EXPIRES OCTOBER 20, 1986

COMMONWEALTH OF PENNSYLVANIA    )  
  )   SS:  
COUNTY OF ALLEGHENY                )

On this 8th day of August, 1984, before me,  
a Notary Public in and for said Commonwealth and County, personally  
appeared E. J. Woolever, who being duly sworn, deposed and said that (1) he  
is Vice President of Duquesne Light, (2) he is duly authorized to execute  
and file the foregoing Submittal on behalf of said Company, and (3) the  
statements set forth in the Submittal are true and correct to the best of  
his knowledge.

  
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Notary Public

ELVA G. LESONDAK, NOTARY PUBLIC  
ROBINSON TOWNSHIP, ALLEGHENY COUNTY  
MY COMMISSION EXPIRES OCTOBER 20, 1986

ENCLOSURE 1

Draft SER Open Item No. 150 (Section 3.10.1): "Seismic and Dynamic Qualification"

1. The applicant should identify the in-plant dynamic loads which may be induced during the operation of Beaver Valley 2 plant, and address their effects on the seismic and dynamic qualification of safety-related equipment.
2. The applicant should commit to establish a maintenance and surveillance program to maintain equipment in a qualified status throughout the life of the plant.
3. The applicant should commit to establish a central filing system capable of retrieving qualification documentation, in an auditable manner, before the plant operation.
4. The applicant should commit to update the equipment lists and pertinent qualification information contained in the tables in FSAR Sections 3.9 and 3.10.
5. For any BOP equipment, and NSSS equipment not covered under the Westinghouse generic qualification program as approved by the staff and for which single axis and/or single frequency testing methods were used, justification should be provided for the validity of the methodology in light of the current staff licensing criteria as specified in SRP 3.10.

Response

The following response to SER Open Item No. 150 was discussed with NRC Equipment Qualification Branch (EQB) reviewer, A. Lee, during a June 13, 1984, telecon.

1. Vibrations from normal operating conditions and their effects on aging will be considered. Loads occurring during faulted or abnormal conditions do not need to be addressed. A. Lee provided these guidelines during a June 13, 1984, telecon.
2. A maintenance and surveillance program to maintain equipment in a qualified status throughout the life of the plant will be presented at the pre-audit meeting.
3. A central filing system containing qualification documentation in an auditable manner exists at SWEC's Boston office and at W's Monroeville office. Copies of qualification documents of those items selected by the NRC for the audit will be available at the site at the time of the audit.
4. The equipment list and the pertinent qualification information will be updated concurrently with the summary SQRT listing submittal to

the NRC as agreed to in a meeting on April 10, 1984, and subsequent telephone conversation with the NRC.

5. Examples comparing single-axis and single-frequency testing with multi-axis and multi-frequency testing will be provided during the pre-audit meeting.

## ENCLOSURE 2

Draft SER Open Item No. 151 (Section 3.10.2): "Pump and Valve Operability Assurance

1. There should be a list of equipment types which clearly shows the methods used for qualification. This list should also address which standards are met, in particular, those cited in SRP 3.10.
2. Clarification of how aging was incorporated in the qualification process should be contained in the FSAR. In addition, the applicant should commit to establish a maintenance and surveillance program to maintain equipment in a qualified status throughout the life of the plant. The criteria for the maintenance and surveillance program should be contained in the FSAR.
3. SRP 3.10, Paragraph II.1.a(2) indicates that equipment should be tested in the operational condition, that is, normal plant loadings should be superimposed on seismic and dynamic loads, including thermal, flow induced loads and degraded flow conditions. The FSAR should clearly indicate how this requirement is met. In addition, the FSAR should clearly show the loads and conditions considered in the qualification of safety-related pumps and valves.
4. The extent to which draft standards ANSI/ASME QNPE-1 (N551.1), QNPE-2 (N551.2), QNPE-3 (N551.3), QNPE-4 (N555.4) and N41.6 and issued standard ANSI/ASME B.16.41 are used needs to be clearly stated in the FSAR. In addition, the applicant's position with respect to Regulatory Guide 1.148 must also be indicated in the FSAR and the extent to which the applicant follows the requirements and recommendations of IEEE 344-1975.
5. The FSAR should show the extent to which operational testing is being used to meet the requirements of SRP Section 3.10. The extent to which operational testing is performed at full flow and temperature conditions should be shown.

### Response

1. The SQRT/PVORT master list of safety related equipment shall identify the methods used for qualification and the codes and standards that are met.
2. For an explanation of how aging is incorporated in the qualification program for electrical equipment, please refer to the Environmental Qualification of Class 1E Electrical Equipment Report submitted to the NRC on June 22, 1984, via letter 2NRC-4-087. For the environmental qualification of mechanical equipment, the approach was to identify the non-metallics susceptible to radiation and thermal degradation. Documentation attesting to the non-metallics's qualified life is provided, and on that basis a determination is made as to whether to include it in the maintenance/surveillance program.

3. Section 3.9B.3.2 of the FSAR shows the loads and conditions considered in the qualification of safety related pumps and valves.
4. The implementation section of R. G. 1.148 identifies that the Regulatory Guide is applicable to plants docketed after July 1, 1981, and for replacement valves ordered after July 1, 1981, on operating plants or for plants under construction. The Regulatory Guide is therefore not applicable on BVPS-2. The FSAR position on R. G. 1.148 will be reviewed to reflect the above position. The draft standards identified have not been endorsed by the NRC and are thus not applicable for BVPS-2. BVPS-2 is complying with SRP 3.10 requirements for plants docketed before October 27, 1972, (i.e., as a minimum meeting the requirements of IEEE 344-1971).
5. The extent to which operational testing of pumps and valves is employed on BVPS-2 is reflected in Section 3.9B.3.2 of the FSAR.