Duquesne Light

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March 7, 1988

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1 and No. 2
BV-1 Docket No. 50-334, License No. DPR-66
BV-2 Docket No. 50-412, License No. NPF-73
NRC Bulletin No. 88-01; Defects in Westinghouse Circuit Breakers (TACS 65955/65956)

Gentlemen:

NRC Bulletin 88-01 requested that we perform and document inspection of the welds on the pole shafts and inspection of the alignment of the breaker closing mechanism for any Westinghouse series DS circuit breakers that are used in Class 1E service.

Beaver Valley Unit No. 1 has no DS circuit breakers that are used in Class 1E application. The reactor trip and reactor trip bypass breakers for Unit 1 are Westinghouse DB-50 breakers. Beaver Valley Unit No. 2 reactor trip and reactor trip bypass breakers, however, are Westinghouse DS-416 breakers. No other Westinghouse DS series breakers are used in Class 1E application at Unit 2.

An inspection was performed on the Unit 2 reactor trip and bypass breakers in September, 1987. This inspection was initiated after receiving NRC Information Notice 87-35, "Reactor Trip Breaker, Westinghouse Model DS-416, Failed to Open on Manual Initiation from the Control Room". All pole shaft welds (with the exception of the auxiliary switch lever weld) were inspected. While this inspection was not done to the full criteria of Bulletin 88-01 (proper weld size, length, fusion, absence of cracks and porosity), the pole shaft welds were inspected for proper weld size and length. This inspection was performed by a qualified welding inspector. The results of this inspection noted that all four breakers pole shafts did not meet the 3/16 inch fillet weld size criteria. However, all four breakers did meet the 1/8 inch fillet weld size criteria for 120° continuous around the shaft. While not part of the inspection criteria at the time, the inspection report also noted some discontinuities including lack of fusion, crater cracks and porosity on a few welds. Breaker alignment checks, as described in the Westinghouse Technical Bulletin NSID TB 87-11, were also performed during this inspection and found to be acceptable.

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When NRC Bulletin 88-01 was received the Train "B" reactor trip bypass breaker was removed for re-inspection to determine the extent of these discontinuities noted in the earlier inspection and to inspect the welds to the full criteria provided by Bulletin 88-01. As a result of this inspection, it was determined that the welds on this breaker's pole shaft satisfied the criteria of Sections 6.1.2 and 7.1 of the Westinghouse Technical Bulletin (as modified by NRC Bulletin 88-01) for 1/8 inch fillet welds. The pole shaft welds for this breaker were also observed by members of your staff (Mr. D. S. Hood and Mr. C. D. Sellers) on 2/17/88. The Train "A" reactor trip bypass breaker pole shaft was subsequently re-inspected. The pole shaft welds on this breaker also satisfied the Westinghouse Bulletin section 6.1.2 criteria (as modified). These bypass breaker weld inspections were performed by a qualified welding inspector.

The Unit 2 reactor trip breakers have not been re-inspected to date to ensure full compliance with the short-term criteria of NRC Bulletin 88-01. The bulletin requested this inspection be completed within 30 days after receipt of the bulletin. Per this response we request that this inspection be delayed until the next available maintenance outage on Unit 2 following receipt of acceptable pole shaft replacements from Westinghouse. This delay is requested for the following reasons:

1) The reactor trip breaker pole shaft welds were inspected in September 1987. While this inspection was not performed to the full criteria of NRC Bulletin 88-01, the inspection documented that the shaft welds meet the required size and length requirements of the Westinghouse Bulletin, Section 6.1.2. No other indications were noted on the welds for these breakers (lack of fusion, cracks or porosity) with the exception that some porosity was observed on one of the welds on the Train "A" reactor trip breaker. However, this porosity was not quantified since no criteria was available at the time. We believe the weld will meet the less than 1/16 inch cumulative diameter per one inch of weld criteria for porosity when re-inspected.

2) Breaker disassembly is required to allow access to the pole shafts. The required breaker disassembly, weld inspection and breaker reassembly will take greater than 2 hours to complete. The Unit 2 Technical Specifications allows a maximum of 2 hours operation on the bypass breakers for surveillance testing. Breaker manipulations, between the reactor trip and bypass breakers, could be attempted to place the bypass breakers in the reactor trip breakers position to allow time for this inspection, however, this evolution would significantly increase the potential for an inadvertent reactor trip.

3) An order for replacement pole shafts has been placed with Westinghouse. However, no acceptable replacement shafts are available at present.

4) There are a minimal number of cycles on the Unit 2 reactor trip and bypass breakers. This should minimize the potential for degradation of any weld due to cycle fatique. The Train "B" bypass breaker has approximately 780 cycles which is the maximum number of cycles of the four breakers.

In summary, proper alignment of the Unit No. 2 reactor trip and bypass breakers has been verified as described in the Westinghouse Bulletin. The reactor trip bypass breakers pole shaft welds have been inspected and satisfy the acceptance criteria of sections 6.1.2 and 7.1 of the Westinghouse Bulletin as modified by NRC Bulletin 88-01. The two main reactor trip breakers have been inspected, however, complete compliance with the acceptance criteria of Sections 6.1.1 or 6.1.2 of the Bulletin has not been demonstrated. This inspection will be completed at the next available maintenance outage after receiving acceptable replacement pole shafts. Details of this inspection will be provided on a follow-up response following completion of this inspection.

Both the reactor trip and bypass breaker pole shaft welds will be re-inspected every 200 cycles of operation (not to exceed 4000 cycles of operation) until the breaker pole shafts have been replaced with pole shafts meeting the requirements of Section 6.1.1 of the Bulletin.

The following information is provided concerning the cost of complying with this bulletin.

(1) staff time to perform requested inspections, corrective actions and associated operability testing - 70 manhours to date.

(2) staff time to prepare requested documentation - 30 manhours.

(3) additional cost incurred as a result of the inspection findings (e.g., cost of corrective actions, cost of down time) - it is estimated that four replacement pole shafts and materials will cost approximately $6,500 with 32 manhours per breaker to install the shafts and do required testing.

Should you have any questions with this response, please contact my office.

Very truly yours,

J. D. Sieber
Vice President, Nuclear

cc: Mr. J. Beall, Sr. Resident Inspector
Mr. W. T. Russell, NRC Region I Administrator
Mr. P. Tam, Project Manager
Director, Safety Evaluation & Control (VEPCO)

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF BEAVER)

On this 8th day of March, 1988, before me, Sheila M. Fattore, a Notary Public in and for said Commonwealth and County, personally appeared J. D. Sieber, 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, information and belief.

Sheila M. Fattore

SHEILA M. FATTORE, NOTARY PUBLIC
SHIPPINGPORT BORO, BEAVER COUNTY
MY COMMISSION EXPIRES OCT. 23, 1989
Member, Pennsylvania Association of Notaries

Submittal: Duquesne Light Company Response to NRC Bulletin 88-01, dated March 7, 1988.