



Duquesne Light

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January 5, 1984

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

ATTENTION: Mr. Richard W. Starostecki
Division of Project and Resident Programs

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
Potential for Misoperation of DS-416 Reactor Trip Switchgear
Undervoltage Attachments
Significant Deficiency Report No. 83-03

Gentlemen:

Pursuant to the requirements of 10CFR50.55(e), the "Final Report on the Potential for Misoperation of DS-416 Reactor Trip Switchgear Undervoltage Attachments" is attached for your review. If there are any questions concerning this report, please contact the Beaver Valley Unit 2 Project Office.

DUQUESNE LIGHT COMPANY

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

JMM/wjs
Attachments

cc: Mr. R. DeYoung, Director
Office of Inspection and Enforcement (3) (w/attachments)
Mr. G. Walton, NRC Resident Inspector (w/attachments)
Ms. L. Lazo, Project Manager (w/attachments)
NRC Document Control Desk (w/attachments)
INPO Records Center (w/attachments)

SUBSCRIBED AND SWORN TO BEFORE ME THIS
5th DAY OF January, 1984.

Anita Elaine Reiter
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

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COMMONWEALTH OF PENNSYLVANIA)
) SS
COUNTY OF ALLEGHENY)

On this 5th day of January, 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.

Anita Elaine Reiter
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

BEAVER VALLEY POWER STATION UNIT NO. 2
DUQUESNE LIGHT COMPANY

Final Report on the Potential for Misoperation of
DS-416 Reactor Trip Switchgear Undervoltage Attachments

1. SUMMARY

On March 30, 1983, Westinghouse (W) advised affected operating plants of the potential for misoperation of DS-416 reactor trip switchgear undervoltage attachments based on reported malfunctions at one plant during testing.

W advised operating plants on April 15, 1983, of an additional misoperation of another DS-416 undervoltage attachment. Investigation of this event revealed a missing retaining ring on one of the two undervoltage attachment pivot shafts.

2. IMMEDIATE ACTION TAKEN

On April 20, 1983, W advised the Nuclear Regulatory Commission (NRC) of the potential for misoperation of DS-416 reactor trip switchgear undervoltage attachments. S. D. Hall, Duquesne Light Company, notified E. Brunner, Region I office, on April 26, 1983, that an evaluation of this problem for Beaver Valley Unit No. 2 (BVPS-2) was underway.

3. DESCRIPTION OF DEFICIENCY

Based on reported malfunctions at one plant during testing, W advised affected operating plants on March 30, 1983, of the potential for misoperation of DS-416 reactor trip switchgear undervoltage attachments. W began an evaluation of the input from several affected operating plants concerning dimensions of several clearances in the undervoltage attachment.

On April 15, 1983, W advised operating plants of an additional misoperation of another DS-416 undervoltage attachment. Investigation of this event revealed a missing retaining ring on one of the two undervoltage attachment pivot shafts. This allowed the pivot shaft to move laterally such that one end came out of its guide hole in the frame of the undervoltage attachment, and did not permit the attachment to operate on demand.

4. ANALYSIS OF SAFETY IMPLICATIONS

W evaluated the input from several affected operating plants concerning dimensions of several clearances in the undervoltage attachment and concluded that deviations from the recommended clearances could increase the potential for misoperation of the attachment, thereby creating a condition wherein the reactor trip switchgear might not open on automatic demand from the reactor protection system.

The W evaluation of the retaining ring issue revealed a discrepancy in design. The groove in the shaft receiving the retaining ring was not increased in width to be consistent with an earlier (1972) retaining ring

design change. The new retaining ring is wider than the original design and does not seat properly in the existing grooves. This discrepancy increases the potential for misoperation of the DS-416 undervoltage attachment, thereby creating a condition wherein the reactor trip switchgear might not open on automatic demand from the reactor protection system.

5. CORRECTIVE ACTION TO REMEDY DEFICIENCIES

Four replacement undervoltage attachments will be installed on DS-416 reactor trip switchgear for BVPS-2 prior to initial plant operation. The new attachments have modified (widened) grooves to accommodate the new retaining rings.

6. ADDITIONAL REPORTS

This is the final report on this subject. No additional reports will be issued.