

OCT 28 1985

Docket No. 50-412

Duquesne Light Company
ATTN: Mr. J. J. Carey
Vice President
Nuclear Group
Post Office Box 4
Shippingport, Pennsylvania 15077

Gentlemen:

Subject: Inspection Report No. 50-412/85-04

This refers to your letter dated May 30, 1985, in response to our letter dated April 23, 1985 and your revised response dated July 29, 1985.

Thank you for informing us of the corrective and preventive actions documented in your letters. Your response to violation no. 85-04-04 regarding instrument and impulse lines using a common support states that neither the instrument or impulse lines are now considered redundant safety-related systems. However, at the time of the inspection, metal tag nameplates attached to the instrument and impulse lines included an asterisk (2CCP*FT117A2, 2CCP*FT117B2) which is used to indicate safety-related components and systems. Furthermore, examination of the installation drawing by the inspector and licensee personnel indicated the lines to be category 1 redundant lines.

Verification of this discrepancy as well as your corrective action for violation nos. 85-04-02 and 85-04-03 will be examined during a future inspection of your licensed program.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:
Jacque P. Durr



Stewart D. Ebnetter, Director
Division of Reactor Safety

8511010027 851028
PDR ADOCK 05000412
Q PDR

IEOL

OFFICIAL RECORD COPY

RL BV2 85-04 - 0001.0.0
10/18/85



cc:

E. J. Woolever, Vice President, Nuclear Construction Division
R. E. Martin, Manager, Engineering
R. J. Swiderski, Manager, Startup Group
E. Ewing, Quality Assurance Manager
E. F. Kurtz, Jr., Manager, Regulatory Affairs
P. RaySircar, Stone and Webster Engineering Corporation
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
Commonwealth of Pennsylvania

bcc:

Region I Docket Room (w/concurrences)
DRP Section Chief

RI:DRS *31*
Paolino/ca
10-9-85

CP
RI:DRS
Anderson
10/9/85

D
RI:DRS
Durr
10/24/85

OFFICIAL RECORD COPY

RL BV2 85-04 - 0001.1.0
10/09/85



Duquesne Light

Nuclear Construction Division
Robinson Plaza, Building 2, Suite 210
Pittsburgh, PA 15205

2NRC-5-078
(412) 787-5141
(412) 923-1960
Telecopy (412) 787-2629

May 30, 1985

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
USNRC IE Inspection Report No. 50-412/85-04

Gentlemen:

This is in response to the Notice of Violation cited in Inspection No. 50-412/85-04 and listed in Appendix A (Notice of Violation) attached to your letter to Mr. E. J. Woolever, dated April 23, 1985.

The due date for submittal of this report was extended (until May 31, 1985) by the NRC Senior Resident Inspector in response to a request from Duquesne Light Company.

Notice of Violation 85-04-02: Instrument Tubing Separation

10CFR50, Appendix B, Criterion X, states in part that: "A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with ... drawings for accomplishing the activity."

Specification 2BVS-977, page 1-39, line 13-15, states in part that: "All Group A and Group C tubing systems serving redundant instruments shall be routed to provide a minimum distance of 4 ft.-0 in. between each pair."

Contrary to the above, on January 30, 1985, the inspector identified redundant instrument line Nos. 2CCP*FT117A and 2CCP*FT117B1 and line Nos. 2CCP*FT117B2 and 2CCP*FT117A2, which did not meet the 4 ft. separation criteria. This characteristic is not included as an attribute check of the instrument inspection plan IP-7.2.9.

This is a Severity Level IV Violation (Supplement II).

Response

The above instances identified by the NRC as being possible deviations from the 4 ft. minimum separation criterion were in regard to redundant, safety-related impulse lines run in plant areas not containing any high energy line break (HELB) hazards. The 4 ft. separation criterion, as

85-04-02-0353

contained in the 2BVS-977 subsection titled "Category I Separation," was promulgated for redundant safety-related impulse lines located in the vicinity of high energy lines and thus exposed to HELB hazards. However, because 2BVS-977 was not clear regarding the required separation distances for HELB hazard and nonhazard areas (as discussed below), SWEC issued STOP WORK E&DCR 2PH-0097 on February 5, 1985, to halt all work involving QA Category I instrument tubing until an overall review of this issue was completed. Subsequently, specific actions were taken by SWEC in the following areas:

- ° The separation for redundant impulse lines was reviewed. This review determined that the 4 ft. minimum separation distance could be reduced. (It exceeds the 18 in. minimum separation distance recommended in Regulatory Guide 1.151, Rev. 0.)
- ° The engineering and design process was reviewed. It was also verified that the BVPS-2 Hazards Analysis Program (Procedure 2BVM-165) adequately considers the separation of safety-related instrument impulse lines as a final engineering confirmation.
- ° The instrument installation specification (2BVM-977) for separation criteria for instrument tubing was reviewed. This review determined that clarifications were required to distinguish between hazard and nonhazard areas; these clarifications were issued as E&DCR 2P4652B on February 27, 1985.
- ° All issued isometric drawings for QA Category I instrument tubing were reviewed. Some 75 of over 900 reviewed required revision by means of a note to indicate where specific deviations from E&DCR 2P-4652B were allowable pending confirmation by the Hazards Analysis Program. However, the review in general confirmed that the intended design requirements were being fulfilled.
- ° A specific project procedure (2BVM-228) governing instrument tubing layout was developed. This procedure clearly translates separation requirements of 2BVS-977 into detailed design procedures and design verification steps.

The information presented above reaffirms the responses provided to Audit SPC-4 regarding SQC verification of adequate instrument tubing separation. The engineering and design process for instrument tubing isometrics, coupled with SQC verification of tubing installation in accordance with the isometrics, provide sufficient controls to ensure compliance with separation criteria.

The circumstances surrounding Violation 85-04-02 have been reviewed for possible reportability under the provisions of 10CFR50.55(e). This review was completed on March 7, 1985, and concluded that deficiencies meeting the criteria for reportability under 10CFR50.55(e) did not exist.

in either the applicable engineering and design processes, in Specification 2BVS-977, or in any actual physical installations.

Based on the information and actions described above, STOP WORK E&DCR 2PH-0097 was fully released on February 27, 1985, to reinstate all work on QA Category I instrument tubing.

Violation 85-04-03: Vents on Flow Lines

10CFR50, Appendix B, Criterion III, states in part that: "... measures shall include provisions to assure that appropriate quality standards are specified and included in the design document and that deviations from such standards are controlled...."

Specification 2BVS-977, page 1-42, lines 5-8, states: "Each vent and drain shall have the piping/tubing connected to its discharge so as to direct the effluent away from any possible contact with the operator or other persons in the vicinity of the vent or drain."

Contrary to the above, on January 29, 1985, the inspector identified vent and drain lines from system No. 2CHS*FT110 installed per the drawing but contrary to the specification requirement.

This is a Severity Level V Violation (Supplement II).

Response

The requirements quoted above were noted as being reported on pages 1-42 and 1-48 of 2BVS-977 by the NRC Inspector in Section 4.3 of the inspection report. The requirements are part of the subsection titled "Instrument Valves" in the specification. This subsection relates to vent, drain, blowdown, crossover, and other valves that are provided in the immediate vicinity of an instrument and are used for routine maintenance and calibration of the instrument. Due to the relatively frequent usage of such valves, operator and equipment safety consideration warrant providing the vent and drain valves at instruments with discharge tubing to adequately direct any possible effluent discharges.

The vent valve with U-shaped discharge tubing identified as a concern by the NRC represents a high point vent that was required on a section of instrument tubing that could not be continuously sloped towards the subject instrument. This vent valve and its discharge tubing were installed in accordance with applicable isometric drawings. Because high point vents are generally necessary only in the process of bringing a system to an operational status, the use of high point vent valves is relatively infrequent.

We have reviewed the direction of discharge of effluent from similarly configured high point vent tubing. The "U" tube has been rotated, where

necessary, in order to provide more accessibility for the operator and to allow control of the effluent discharge. In addition, administrative procedures will be developed to ensure, where necessary, that the appropriate method of contaminated effluent control is used to provide protection against the effluent contacting personnel and/or equipment during the venting operation of these high point valves with "U" shaped discharge tubing.

Violation 85-04-04: QA Category I Instrument Tubing Mounted on Same Support

10CFR50, Appendix B, Criterion V, states in part that: "Activities affecting quality shall be prescribed by documented instructions ... and shall be accomplished in accordance with these instructions."

Specification 2BVS-977, page 1-40, lines 25-29, states: "Redundant lines shall be supported by independent supports provided specifically for support of instrument tubing."

Contrary to the above, on January 29, 1985, the inspector identified redundant Category I instrument tubing Nos. 2CCP*FT117B2 and 2CCP*FT117A2 mounted on common hanger Nos. TSA-180 and TSA-189.

This is a Severity Level IV Violation (Supplement II).

Response

The proper designations for the instruments and supports referred to above, as indicated on drawings RK-303-AC-1 and RK-303-A for elevation 728 ft.-6 in. of the main steam and cable vault area, are 2CCP-FT117B2, 2CCP-FT117A2, TSR-180, and TSR-189.

Neither these instruments nor their impulse lines are safety-related components. For nonsafety-related instruments and impulse lines, the use of common supports is acceptable and is not prohibited by 2BVS-977. Therefore, the installations of concern noted in Violation 85-04-04 do not represent a deviation from applicable engineering requirements.

To provide further assurance that the requirements of 2BVS-977 regarding common supports have been properly implemented, SWEC initiated and completed an engineering review of all BVPS-2 isometric drawings issued for QA Category I instrument tubing. This review confirmed that supports for all redundant, safety-related instrument impulse lines had been properly specified, with one exception. This exception (redundant safety-related tubing on a common support) has been evaluated and determined to be acceptable. In accordance with 2BVS-977, and as clarified by E&DCR 2P-4652B, the acceptability of this installation has been formally identified as requiring final confirmation by the Hazards Analysis Program.

not true

*75' 18 inch Hazard area
57 in non-hazard area*

In order to provide general requirements for supports on safety-related and nonsafety-related instrument impulse lines, E&DCR 2P-4652B was issued on February 27, 1985, against Specification 2BVS-977 and clarifies 2BVS-977 regarding requirements for supports.

DUQUESNE LIGHT COMPANY

J. D. Carey
Vice President

SDH/wjs

cc: Mr. R. DeYoung, Director (3)
Mr. B. K. Singh, Project Manager
Mr. G. Walton, NRC Resident Inspector
INPO Records Center
NRC Document Control Desk

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY)

On this 30th day of May, 1985, before me, a Notary Public in and for said Commonwealth and County, personally appeared J. J. Carey, 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 Keiter
Notary Public

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



Duquesne Light

Nuclear Construction Division
Robinson Plaza, Building 2, Suite 210
Pittsburgh, PA 15205

2NRC-5-109

(412) 787-5141

(412) 923-1960

Telecopy (412) 787-2629

July 29, 1985

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
Revised Response to USNRC IE Inspection Report 50-412/85-04

REFERENCE: 2NRC-5-078, dated May 30, 1985

Gentlemen:

The following is a revised response to the Notice of Violation cited in Inspection Report 50-412/85-04 for violation 85-04-02 and 85-04-04. This is being submitted per NRC request in a telecon with Mr. Ralph Paolino (NRC), Mr. Glen Walton (NRC), Mr. Les Arch (DLC), and Mr. Stanley Hall (DLC) on June 28, 1985.

Duquesne Light Company's (DLC) previous response to violation 85-04-02 (see above reference), relating to the third and fourth specific actions on Page 2, reads as follows:

- ° The instrument installation specific (2BVM-977) for separation criteria for instrument tubing was reviewed. This review determined that clarifications were required to distinguish between hazard and nonhazard areas; these clarifications were issued as E&DCR 2P4652B on February 27, 1985.
- ° All issued isometric drawings for QA Category I instrument tubing were reviewed. Some 75 of over 900 reviewed required revisions by means of a note to indicate where specific deviations from the E&DCR 2P4652B were allowable pending confirmation by the Hazards Analysis Program. However, the review in general confirmed that the intended design requirements were being fulfilled.

The information presented above reaffirms the responses provided to Audit SPC-4 regarding SQC verification of adequate instrument tubing separation. The engineering and design process for instrument tubing isometrics, coupled with SQC verification of tubing installation in accordance with the isometrics, provide sufficient controls to ensure compliance with separation criteria.

The following is DLC's revised response providing additional information regarding action taken:

~~850806/329~~

- * The instrument installation specific (2BVS-977) for separation criteria for instrument tubing was reviewed. This review determined that clarifications were required to distinguish between hazard and nonhazard areas; these clarifications were issued as E&DCR 2P4652B on February 27, 1985, and subsequently incorporated it into 2BVS-977, Rev. 2, dated April 29, 1985.
- * In order to ensure compliance with the modified separation requirements contained in E&DCR 2P4652B, SWEC initiated and completed a review of all existing isometric drawings for QA Category I instrument tubing. This review determined that noted instances where separation distances were not in accordance with relevant separation criteria were limited to those cases for which the lesser distances were shown on applicable SWEC isometric drawings.
- * Over 900 isometric drawings were examined during this review, and approximately 75 were found to require revision. These drawings have been revised by the addition of a note that identifies the specific deviation from the separation criteria for E&DCR 2P4652B and indicates that confirmation of the acceptance of the deviation will be verified and documented under the BVPS-2 Hazards Analysis Program, in accordance with 2BVM-165.
- * Each of these deviations from the separation requirements of E&DCR 2P4652B were evaluated and it was determined that, in each case, the noted conditions represented an acceptable instrument tubing configuration with no rerouting of tubing required. Hazards analysis confirmation of the acceptance of these conditions will be documented as part of the normal work activities and schedules comprising the Hazards Analysis Program.
- * During the isometric drawing review, approximately 18 conditions were noted that represented deviations from the original separation criteria of 2BVS-977. Of these 18 deviations, 17 instances concerned redundant impulse lines separated by less than 4 feet in HELB hazard areas; one deviation represented redundant impulse lines on common supports in a nonhazard area. Final documentation will be developed following hazards analysis of the conditions, as previously discussed.
- * Because the original tubing separation criteria of 2BVS-977 had not been properly implemented in certain isolated cases, and in order to strengthen the engineering and design process for instrument tubing isometrics, project procedure 2BVM-228 was revised as of April 24, 1985, to clearly translate the separation requirements of 2BVS-977 into detailed design procedures and design verification steps. Training of appropriate personnel regarding the content and use of revised 2BVM-228 has been completed.

In addition, DLC has re-evaluated the need for an SQC inspection for spatial separation of redundant safety-related instrument lines.

The following actions will be/have been taken to ensure SQC involvement in the verification of separation criteria.

- 1) SEG has furnished SQC with a list of safety-related instruments which identifies the redundant groups.
- 2) SQC is in the process of revising IP-7.2.9 to require inspection for redundancy of such instruments. This inspection will be done at the time of the tubing configuration inspection for future installations. SQC will issue the required revision to IP-7.2.9 by July 19, 1985.

Those instruments which have previously been subject to a tubing configuration walkdown will be reinspected to ensure the redundancy requirements have been met. SQC estimates that it will be able to complete the reinspection by August 15, 1985.

- 3) Violations to the redundancy criteria will be processed as indicated below:
 - a) Those which violate the redundancy criteria and installation drawing. These will be identified on N&D's.
 - b) Those which violate the redundancy criteria but which are installed in accordance with the installation drawing. If they are not identified on the drawing as being reviewed by the Engineers, then they will be reported on a "Redundant Separation Evaluation Request." This "Request" will identify such violations to SEG. SEG will evaluate these conditions and in the space provided, justify them if they meet the reduced separation criteria. If the conditions do not meet the reduced separation criteria, or if the reduced separation criteria does not apply, SEG will indicate which drawings need to be revised to rework the condition.

The SQC inspection plan will be revised by July 26, 1985, to address the use of the Redundant Separation Evaluation Request.

- c) Those which violate the redundancy criteria but which are installed in accordance with the installation drawing. If they are identified on the drawing as being reviewed by the Engineers, no corrective action will be required.

In regards to Violation 85-04-04, the following revised response is provided. The revisions are identified by an underscore.

Response

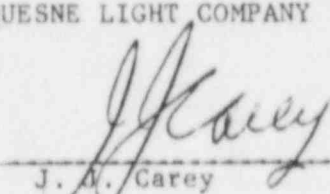
The proper designations for the instruments and supports referred to above, as indicated on drawings RK-303-AC-1 and RK-303-AA for elevation 728 ft.-6 in. of the main steam and cable vault area, are 2CCP-FT117B2, 2CCP-FT117A2, TSR-180, and TSR-189.

Neither these instruments nor their impulse lines are redundant safety-related components. For nonsafety-related instruments and impulse lines, the use of common supports is acceptable and is not prohibited by 2BVS-977. Therefore, the installations of concern noted in Violation 85-04-04 do not represent a deviation from applicable engineering requirements.

To provide further assurance that the requirements of 2BVS-977 regarding common supports have been properly implemented, SWEC initiated and completed an engineering review of all BVPS-2 isometric drawings issued for QA Category I instrument tubing. This review confirmed that supports for all redundant, safety-related instrument impulse lines had been properly specified, with one exception. This exception (redundant safety-related tubing on a common support) has been evaluated and determined to be acceptable. In accordance with 2BVS-977, and as clarified by E&DCR 2P4652B, the acceptability of this installation has been formally identified as requiring final confirmation by the Hazards Analysis Program. In order to provide general requirements for supports on safety-related and nonsafety-related instrument impulse lines, E&DCR 2P4652B was issued on February 27, 1985, against Specification 2BVS-977 and clarifies 2BVS-977 regarding requirements for supports.

DUQUESNE LIGHT COMPANY

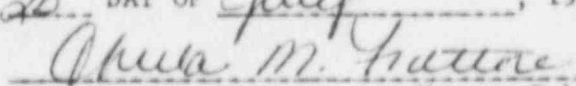
By


J. A. Carey
Vice President

SDH/wjs

cc: Mr. J. M. Taylor, Director (3)
Mr. B. K. Singh, Project Manager
Mr. G. Walton, NRC Resident Inspector
INPO Records Center
NRC Document Control Desk

SUBSCRIBED AND SWORN TO BEFORE ME THIS
26 DAY OF July, 1985.


Notary Public

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF BEAVER)

On this 25th day of July, 1985, before me, a
Notary Public in and for said Commonwealth and County, personally appeared
J. J. Carey, 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.

Sheila M. Fattore
Notary Public

SHEILA M. FATTORE, NOTARY PUBLIC
SHIPPINGPORT BORO, BEAVER COUNTY
MY COMMISSION EXPIRES SEPT. 16, 1985
Member, Pennsylvania Association of Notaries