

December 19, 1996

Mr. J. E. Cross  
President  
Generation Group  
Duquesne Light Company  
Post Office Box 4  
Shippingport, Pennsylvania 15077

SUBJECT: INTEGRATED INSPECTION REPORT 50-334/96-05 AND 50-412/96-05

Dear Mr. Cross:

This letter refers to your August 23, 1996 correspondence, in response to our July 24, 1996 letter.

Thank you for informing us of the corrective and preventive actions documented in your letter. These actions will be examined during a future inspection of your licensed program.

Your cooperation with us is appreciated.

Sincerely,

**Original Signed By:**

Peter W. Eselgroth, Chief  
Projects Branch 7  
Division of Reactor Projects

Docket Nos. 50-334; 50-412

cc w/o cy of Licensee's Response:

Sushil C. Jain, Vice President, Nuclear Services  
T. P. Noonan, Vice President, Nuclear Operations  
L. R. Freeland, Manager, Nuclear Engineering Department  
B. Tuite, General Manager, Nuclear Operations Unit  
K. L. Ostrowski, Manager, Quality Services Unit  
R. Brosi, Manager, Nuclear Safety Department

cc w/cy of Licensee's Response

M. Clancy, Mayor  
Commonwealth of Pennsylvania  
State of Ohio

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**Duquesne Light Company**

Beaver Valley Power Station  
P.O. Box 4  
Shippingport, PA 15077-0004

THOMAS P. NOONAN  
Division Vice President  
Nuclear Operations

August 23, 1996

(412) 393-7622  
Fax (412) 393-4905

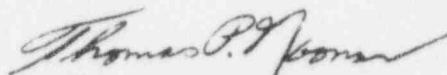
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**Subject: Beaver Valley Power Station, Unit No. 1**  
**Docket No. 50-334, License No. DPR-66**  
**Integrated Inspection Report 50-334/96-05 and 50-412/96-05**  
**Reply to Notice of Violation**

In response to NRC correspondence dated July 24, 1996, and in accordance with 10 CFR 2.201, the attached reply addresses the Notice of Violation transmitted with the subject inspection report.

If there are any questions concerning this response, please contact Mr. Roy K. Brosi at (412) 393-5210.

Sincerely,



Thomas P. Noonan

c: Mr. L. W. Rossbach, Sr. Resident Inspector  
Mr. H. J. Miller, NRC Region I Administrator  
Mr. D. S. Brinkman, Sr. Project Manager  
Mr. P. W. Eselgroth, Chief, Projects Branch No. 7  
Division of Reactor Projects, Region I

DELIVERING  
QUALITY  
ENERGY

960836042 STP

DUQUESNE LIGHT COMPANY  
Nuclear Power Division  
Beaver Valley Power Station Unit No. 1

Reply to Notice of Violation

Integrated Inspection Report 50-334/96-05 and 50-412/96-05  
Letter dated July 24, 1996

**VIOLATION (Severity Level IV, Supplement VIII)**

**Description of Violation (50-334/96-05-02)**

10CFR50.55a(g)(4) requires, in part, that components classified as ASME Class 1, 2 and 3, meet the requirements of Section XI of the ASME Code.

The 1983 Edition, Summer 83 Addenda, of Section XI of the ASME Code, Mandatory Appendix III, and DLC UT Procedure UT-303, Paragraph 3.2.2.3, requires piping welds to be examined with the sound beam parallel and transverse to the weld seam. Calibrations are to be performed using the reflector perpendicular to the sound beam.

The ASME Code, Section XI, Mandatory Appendix III, Article III 3230, and DLC UT Procedure UT-303, Paragraph 3.2.2.3, require the use of side drilled holes to construct the distance amplitude correction (DAC) curve and the inside diameter (ID) notch to establish reference sensitivity.

Contrary to the above, during the 1996 refueling outage, the licensee failed to perform a calibration for ultrasonic examinations using a reflector perpendicular to the sound beam for examinations with the sound beam traverse to the weld seam (circumferential examinations) on six ASME Class 2 pipe weld examinations (calibration sheets C-96-27, C-96-34, C-96-40, C-96-47, C-96-51 and C-96-54).

Also, for two calibrations (calibration sheets C-96-57 and C-96-46) side drilled holes were not used to construct the DAC curve.

**Reason For Violation:**

- A. The six reports identified above, where circumferential calibrations were not documented were confined to the same team of two contracted NDE technicians. Based on further investigation of this problem, it appears that the circumferential calibrations had been performed, but documentation was not maintained nor included on the calibration reports. The root cause evaluation concluded that this oversight was due to a combination of procedure complexity, ineffective contractor training and failure to identify the deficiency during subsequent data review.
- B. The two calibrations performed without using the side drilled holes were for examination of dissimilar metal nozzle to safe-end welds. The root cause evaluation concluded the calibration technique specified by the Duquesne Light Company (DLC) UT Level III and applied by the contracted NDE technicians was not previously qualified. This deficiency was also not identified during subsequent data review.

**Corrective Actions Taken And Results Achieved:**

- A. Station Problem Reports 1-96-488 and 1-96-489 were generated and formal root cause evaluations were completed on the calibration problems identified in the violation.
- B. The effects on the ultrasonic (UT) examinations that were performed without a proper circumferential calibration were evaluated. The evaluation determined that, even without the circumferential calibration being performed, flaws oriented transverse to the weld would still have been detected; however, the flaw location would not have been accurate. Since the circumferential examinations were completed in these instances with no recorded indications, the examinations performed are considered to be technically valid.
- C. A review of the calibration reports for the ultrasonic examinations completed for the Unit 1 Eleventh Refueling Outage was performed and no additional circumferential calibration deficiencies were identified.

- D. An NDE demonstration and engineering evaluation of the calibration sensitivity of the ID notch versus the 1/2T side-drilled hole was conducted. The results demonstrated the ID notch calibration for the refracted longitudinal technique used, produced a greater examination sensitivity than that of the code-specified side-drilled hole calibration technique. The greater examination sensitivity using the ID notch was subsequently demonstrated to the satisfaction of the Authorized Nuclear Inservice Inspector (ANII) as an alternative examination method as permitted by paragraph IWA-2240 of ASME Section XI. Therefore, the examinations performed are considered technically valid.

**Actions Taken to Prevent Recurrence:**

As a result of the root cause evaluation conclusions, the following corrective actions have been taken:

- A. The DLC UT Level III was counseled as to the expectations and requirements when reviewing NDE calibration and examination records.
- B. The ultrasonic calibration report form was revised to more clearly define the calibration orientation (axial vs. circumferential).
- C. Quality Services Procedure 2.5 was revised to provide procedural controls for the site specific training of contracted NDE personnel on DLC NDE procedures.
- D. DLC Ultrasonic Procedure UT-303 was revised to clarify procedural requirements and allow for the use of ID notch calibration.

**Date When Full Compliance Will Be Achieved:**

As described above, Duquesne Light Company is in full compliance at this time.