



Duquesne Light

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June 8, 1984

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

ATTENTION: Dr. Thomas E. Murley
Administrator

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
Significant Deficiency Report 84-01
"Clamp Anchor Assemblies with Undersized Welds"

Gentlemen:

This Final Report is in reference to the reportable Significant Deficiency relating to the installation, or release for installation, of seismic small bore clamp anchors with undersized welds. The previous Duquesne Light Company (DLC) report on this subject (2NRC-4-012, dated February 16, 1984) indicated that a subsequent report on this subject would be submitted by June 1, 1984. An extension until June 8, 1984, was approved by Mr. G. Walton, NRC Senior Resident Inspector, at the request of DLC. We anticipate that no additional reports will be issued on this matter.

DUQUESNE LIGHT COMPANY

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

RW/wjs
Attachment

cc: Mr. R. DeYoung, Director (3) (w/a)
NRC Document Control Desk (w/a)
Mr. G. Walton, NRC Resident Inspector (w/a)
Ms. M. Ley, Project Manager (w/a)
Mr. M. Licitra, Project Manager (w/a)
INPO Records Center (w/a)

SUBSCRIBED AND SWORN TO BEFORE ME THIS
8th DAY OF June, 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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BEAVER VALLEY POWER STATION - UNIT NO. 2
DUQUESNE LIGHT COMPANY

Report on Significant Deficiency No. 84-01
Clamp Anchor Assemblies with Undersized Welds

1. SUMMARY

Beaver Valley Power Station Unit 2's (BVPS-2) Mechanical Contractor, Schneider Power Corp., had the responsibility for the fabrication of clamp anchor assemblies for small bore pipe. These were initially to be fabricated in the contractor's fabrication facility local to the site that is subjected to similar controls to those placed upon fabrication activities at the site itself. However, the contractor requested and obtained approval to sub-contract these assemblies to Pittsburgh Bridge and Iron (PBI) for manufacture. During a routine inspection of installed piping on site, a QC Inspector who did not have direct responsibility for the inspection of the clamp anchor assemblies reported that he considered the welds to be undersized.

2. IMMEDIATE ACTION TAKEN

On receipt of the QC Inspector's report, an inspection was performed on similar items in the storage area. This inspection resulted in 100% rejection of the approximate 100 clamp anchor assemblies inspected. Following this report, a Stop Work Order was issued by the Mechanical Contractor to prevent further installation, and a Stop Work Order was also placed on the vendor to prevent further manufacture of these assemblies.

Mr. E. F. Kurtz, Jr., Manager of Duquesne Light Company (DLC) Regulatory Affairs Department, notified Mr. Glen Walton, NRC Resident Inspector, on January 16, 1984, that this matter had been determined to be a potentially reportable deficiency.

3. DESCRIPTION OF THE DEFICIENCY

Inspection by DLC Site Quality Control (SQC) revealed that virtually all the 1100 clamp anchor assemblies contained undersized welds. The majority includes welds less than 50% of the specified size. A total of 515 of these assemblies have been installed. An investigation of this incident revealed the following programmatic problems:

- a. It appears that the vendor QC Inspector became involved in the production process; and, thus, the assemblies were not independently verified by the QC Inspector prior to delivery.
- b. Because of the unique occurrence of the Mechanical Contractor placing a fabrication order for this project, the significance of their return to the contractor's local fabrication facility was missed; and, thus, adequate receiving inspection procedures were not invoked.

c. BVPS-2's Vendor Surveillance Group was involved at the vendor's plant, but had no opportunity to independently verify a sample of the welding. They were not given shipping release authority, usually applied under normal purchasing activity.

4. ANALYSIS OF SAFETY IMPLICATIONS

DLC has determined that the systems in which these clamp anchors are used include Category 1 systems and that multiple failures could impact on the integrity of systems and on the ability of the systems to perform their required safety functions.

5. CORRECTIVE ACTION TO REMEDY DEFICIENCY

As indicated in our previous report, laboratory testing was planned to determine the strength of the assemblies under load. A testing program was developed (2BVM-3324, "Clamp Anchor Test Program). However, as the actual weld dimensions were documented on Nonconformance and Disposition Reports (N&D's), it became evident that clamp anchors with such severe deficiencies could not be qualified to present design loads. Therefore, the laboratory test program was discontinued.

The location of each clamp anchor assembly was determined to facilitate rework or reassembly.

New clamp anchor designs have been issued for fabrication. The new design presents fewer fabrication problems and will be manufactured by a different vendor. The purchase order will be placed by Stone & Webster, the BVPS-2 Architect Engineer, to ensure normal purchase controls.

The DLC Vendor Surveillance program will be applied to the selected vendor of the new design pipe clamps. This will include shipping release authority and formal verification by the DLC-SQC Receiving Department.

The new assemblies will be used to replace all 1100 clamp anchors, which were received from PBI, including the 515 installed assemblies.

6. ADDITIONAL REPORTS

DLC does not anticipate submitting additional reports on this matter.