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JOHN S. KEMPER
VICE PRESIDENT
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Mr. Ronald C. Haynes, Director
United States Nuclear Regulatory Commission
Office of Inspection and Enforcement, Region I
631 Park Avenue
King of Prussia, PA 19406

Subject: USNRC IE Region Letter dated February 9, 1982
RE: Inspection of January 11-29, 1982
Inspection Report No. 50-352/82-03 & 50-353/82-02
Limerick Generating Station - Units 1 and 2
File: QUAL 1-2-2 (352/82-03 & 353/82-02)

Dear Mr. Haynes:

In response to the subject letter regarding items identified during the subject inspection of construction activities authorized by NRC License Nos. CPHP-106 and -107, we transmit herewith the following:

Attachment I - Response to Appendix A

Also enclosed as required by the Notice of Violation, is an affidavit relating to the response.

Should you have any questions concerning these items, we would be pleased to discuss them with you.

Sincerely,

JPE/and
Attachment

Copy to: Director of Inspection and Enforcement
United States Nuclear Regulatory Commission
Washington, D.C. 20555

J. P. Durr, USNRC Resident Inspector

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ATTACHMENT IRESPONSE TO APPENDIX AVIOLATION - A

10CFR 50.55a requires that Class 1 valves comply with the ASME Draft Code for Pumps and Valves (DCPV), which specifies in Section 314.1.6 that repair welding procedures be qualified in accordance with ASME Code Section IX. ASME Code Section IX, Paragraph V-6 requires welding procedure requalification if there is a change in the heat treating temperature. The repair welding procedure, QAP-49D, dated May 7, 1971, and Procedure Qualification Record QAP-49D, dated October 26, 1971, limit post-weld heat treatment temperatures to 1100 degree-1300 degree (Fahrenheit). Further, DCPV Section 314 specifies that nondestructive tests must be performed after any heat treatment.

Contrary to the above, from December 20, 1971 to February 12, 1972, Class 1 Main Steam Isolation Valve B21F022D, Serial No. 3-683, was repair welded, radiographed, and post-weld heat treated/tempered at 1340 degree F.

RESPONSE TO VIOLATION

The response to this violation is addressed in two separate parts:

1. Radiography Before Tempering:

The valve supplier's and licensee's interpretation of the code requirement for the timing of radiography is: The March 1970 Addendum of the Draft Pump and Valve Code allows radiography to be performed at any time. Paragraph 615.3(b) states: "Radiographic, ultrasonic and eddy current examinations may be performed before or after any forming or heat treatment." Also, Section 314 of the 1968 Draft ASME Code for Pumps and Valves for Nuclear Power requires that "non-destructive examinations for materials shall be performed after any heat treatments required by the Material Specification". The Material Specification for the MSIV's (ASTM A216-69) requires that the materials be either normalized or normalized and tempered.

Thus, the Draft Pump and Valve Code is interpreted for ASTM A216-69 to mean: "non-destructive examinations for materials shall be performed after normalizing or normalizing and tempering." This interpretation is considered as good engineering practice because tempering would not cause any change or growth of indications or defects.

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The March 1970 Addenda was issued to make editorial and other essential changes to the November 1968 draft of the ASME Code for Pumps and Valves for Nuclear Power and was invoked in the purchase order to the valve body manufacturer. Philadelphia Electric intends to note the use of this Addenda in the FSAR.

This interpretation is consistent with current editions of Section III of the ASME B&PV Code which allows radiography to be performed in any heat treated condition and does not state: "after material properties are established".

2. Post Weld Heat Treatment At 1340 degree F:

Weld Procedure QAP-49D, dated May 7, 1971 was used for repair welds on MSIV B22F022D. However, in March of 1973, Philadelphia Electric Company identified a noncompliance to this procedure during a source audit: weld repairs in excess of the qualified size range were made. Corrective action to this finding was to modify the procedure. Previous to this finding, a qualification of this procedure was performed and a PQR existed for the larger welds. The modified procedure was back dated October 26, 1971 to match the date of the PQR. The October 26, 1971 procedure was submitted as part of the final documentation package for the valve and therefore this was the procedure used in reviewing the final records.

QAP-49D dated October 26, 1971 did not limit post weld heat treatment temperatures. In addition, the DCPV did not limit the temperatures as do more current editions of the Code. (Section III started in 1973 to limit PWHT temperatures to 1250 degree F for carbon steel). Also, Section IX of the Code was ambiguous in regard to what change in heat treatment temperatures constituted the need for procedure requalification. However, recent editions of Section IX have cleared the ambiguity. In view of the current interpretation, we are in the process of qualifying the weld procedure for the post weld heat treatment temperatures used. We expect to have the qualification tests completed and evaluated by May 31, 1982.

We have reviewed the documentation of several other items supplied by the same foundry and samples of other suppliers and have determined that the high post weld heat treatment temperatures are isolated to the MSIV's. Also, since 1973 the Code has limited post weld heat treatment temperatures. Therefore, other than the above described actions, no additional action to prevent recurrence is needed.

Violation - B

IOCFR 50 Appendix B Criterion V requires that activities affecting quality be performed in accordance with procedures. Project Special Provision Notice PSP C-6.1, Revision 3, Paragraph 3.1.5, specifies that inspection hold points are mandatory and work shall not proceed to a point where work is no longer inspectable. Quality Control Instruction W-2.00, Paragraph 2.4.a.1, requires that minimum preheat and interpass temperatures be verified for full penetration groove welds as a hold point inspection.

Contrary to the above, reviews on January 21, 1982, disclosed that the preheat and interpass temperature hold point inspections for full penetration groove welds listed on Quality Control Inspection Record C-1415-W-1 had not been performed, and the welds had been completed without them.

Response to Violation

Bechtel Power Corporation NCR 5353 was written reporting that the preheat had not been verified on Quality Control Inspection Record C-1415-W-1. The NCR has been dispositioned by Bechtel design engineers to "use-as-is". The rationale for this decision is that the preheat requirements for these welds are to preheat to 70 degree F if the ambient temperature is below 32 degree F. The subject welds were performed during May and June of 1979, when the ambient temperature was above 32 degree F. The subject Quality Control Inspection Record C-1415-W-1 did not require interpass temperature inspection.

In an effort to determine if this inspector had missed other preheat hold point inspections, twelve (12) other inspection records completed by him were reviewed for similar discrepancies. No other discrepancies or missing sign-offs were found on these records. All open Civil Quality Control Inspection Records were reviewed for preheat requirements and sign-offs. All were found in conformance with the applicable procedures. A training session was held on January 13, 1982 for Quality Control, Welding Inspectors emphasizing the proper preheat requirements.

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COMMONWEALTH OF PENNSYLVANIA :

ss.

COUNTY OF PHILADELPHIA

JOHNS S. KEEPER, being first duly sworn deposes
and says:

That he is Vice President of Philadelphia Electric
Company, the holder of Construction Permits CRRR-106 and
CRRR-107 for Limerick Generating Station Units 1 and 2; that
he has read the foregoing Response to Inspection Report
No. 50-352/82-03 and 50-353/82-02 and knows the contents thereof;
and that the statements and matters set forth therein are true
and correct to the best of his knowledge, information and belief.

John S. Keeper

Subscribed and sworn to
before me this 11th day
of MARCH, 1982

John V. Trumbull
Notary Public
Notary Public, Philadelphia, Philadelphia Co.
My Commission Expires July 1, 1983