

UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION III  
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AUG 26 1974

Commonwealth Edison Company  
ATTN: Mr. Byron Lee, Jr.  
Vice President  
P.O. Box 767  
Chicago, Illinois 60690

Docket No. 50-249

Gentlemen:

Thank you for your letter dated August 8, 1974, informing us of the additional steps you have taken to correct the violations which we brought to your attention in our letters dated May 29, and July 12, 1974. Your letter did not respond to item (2) in the last paragraph of our July 12, 1974, letter. However, it is our understanding, based on a subsequent phone call with Mr. J. S. Able, that to avoid future violations of this type, appropriate members of your staff will review all nondestructive examination procedures with those persons directly involved in the implementation of the procedures prior to conducting future in-service inspection activities. We will examine these matters during a subsequent inspection.

Your cooperation with us is appreciated.

Sincerely yours,

James G. Keppler  
Regional Director

cc: B. B. Stephenson  
Superintendent

bcc w/ltr dtd 8/8/74:  
RO Chief, FS&EB  
RO:HQ (4)  
Licensing (4)  
DR Central Files  
RO Files  
PDR  
Local PDR  
NSIC  
DTIE  
Anthony Roisman, Esq.



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August 8, 1974

Mr. James G. Keppler  
Regional Director  
Directorate of Regulatory  
Operations - Region III  
U.S. Atomic Energy Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

**Subject: Dresden Station Unit 3 Supplement to Response  
to Non-compliance Letter of May 29, 1974, AEC  
Docket 50-249**

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Dear Mr. Keppler:

The following supplementary information is provided in response to your letter dated July 12, 1974.

Following are replies to the procedural areas which did not conform with the code requirements identified in paragraphs 3.a through 3.f of Inspection Report No. 050-249/74-04.

**3.a NDT-C-1, Revision 0, Ultrasonic Inspection of Pressure Retaining Bolting 2 Inches in Diameter and Above, Dated January 4, 1974.**

The only way this procedure failed to meet the requirement of NB-2585.3 of Summer, 1971, Section III, for studs over four inches in diameter was the lack of the plugged hole in the bottom of the calibration stud. The material, diameter and length were automatically correct, since one of the studs being tested served as the calibration piece. We had set a maximum of 5% of back reflection as the limit of acceptable discontinuity reflection, but in actuality, any discernable indication in the load-bearing area would have been rejected.

However, to meet the letter of the code, we prepared a new procedure, NDT-C-14, dated April 13, 1974, for pressure retaining bolting over four inches in diameter. NDT-C-1 has been revised (Revision 1) to limit it to pressure retaining bolting two inches to four inches in diameter, inclusive.

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Procedure NDT-C-14 requires the use of a spare reactor stud, with a plugged flat-bottom hole 3/8 inch in diameter and 3 inches deep drilled in one end, as the calibration standard. during the March, 1974 inspection in that we could not obtain a reflection from the code-drilled hole when using the method of DAC construction implied in NB-2585. Instead, the sensitivity used was that resulting from following the procedure; i.e. the gain needed to make the stud-end back reflection equal to 100% of screen height. The code is very ambiguous on the calibration for testing of studs over four inches in diameter, but we will attempt to resolve these ambiguities. As soon as we have done so, we will revise NDT--C.14 to reflect this resolution.

3.b NDT-C-2, Revision 2, Ultrasonic Inspection of Pipe Welds Dated December 3, 1973.

Our laboratory tests revealed that there was no uniform equivalency between the notches in our calibration pieces and the drilled holes specified in the Summer, 1971, Edition of ASME Section III code, Appendix IX. Use of the pipe calibration standards was halted and all such pieces were revised by drilling with code-specified holes. Only one class of pipe welds on Unit 3 was tested using a notched calibration piece. It was determined that the particular notched calibration piece used for testing this class of welds provided a sufficiently sensitive calibration to insure that any code-rejectable indications that might have been present would not have been overlooked and would have been recorded. Since no indications had been recorded for these welds, there were no reflectors present. that would produce code rejectable indications.

NDT-C-2 was re-written to require calibration from these holes and to also include reference to transfer mechanisms. This emerged as Revision 4 of NDT-C-2, dated April 23, 1974, which meets the requirements of the Summer, 1971, edition of the code. All other pipe welds tested were tested to this revised procedure.

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3.c NDT-C-4, Revision 0, Ultrasonic Inspection of External Support Attachment Welds on Piping, Dated January 7, 1974.

Only two welded support attachments were tested using a notched calibration piece. These were on the same class of pipe referred to in 3.b above, so the same calibration piece was used. The remarks on calibration and the sensitivity of the tests resulting from it made in 3.b are equally applicable here. All other piping support welds were tested using NDT-C-4, Revision 2, dated April 23, 1974, which met the requirements of the Summer, 1971, edition of the code. We have subsequently revised NDT-C-4 further, Revision No. 3 being dated May 20, 1974. This revision also fully meets the Summer, 1971 edition of the code.

3.d NDT-C-5, Revision 0, Ultrasonic Inspection of Reactor Vessel Welds, Dresden and Quad-Cities Station, Dated January 4, 1974.

We revised this procedure to use the proper code-drilled hole to establish a DAC curve for calibration, and also dealt with the transfer mechanism requirement of the code in the revised procedure. The revised procedure is NDT-C-5, Revision 2, dated April 23, 1974. All reactor vessel welds tested during this I.S.I., however, whether before or after April 23, were based on a calibration method consistent with the Summer, 1971, edition of Section XI of the ASME, B&PV code.

3.e NDT-C-10, Revision 0, Ultrasonic Inspection of Inner Radius of Nozzle-to-Vessel Junction, Dated March 1, 1974.

Operational Analysis Department Reports M-268-71 and M-861-74 were incorporated in this procedure to document the validity of the method. The revised procedure is NDT-C-10, Revision 2, dated April 24, 1974, which is in compliance with the Summer, 1971, edition of the code.

3.f NDT-C-11, Revision 0, Ultrasonic Inspection of Flange-to-Vessel, Flange-to-Head Welds, and Flange Ligaments Between Bolt Holes, Dated March 1, 1974.

This procedure was changed so as to have the revised.

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NDT-C-11 (Revision 2, dated April 23, 1974) deal with the Flange Ligaments between threaded bolt holes. The vessel-to-flange weld and heat-to-flange weld are now tested using the NDT-C-5, (Revision 2, dated April 23, 1974) procedure. All procedures now used to cover the items formerly covered by the original NDT-C-11, Revision 0 procedure perform calibration from code reference reflectors and address the matter of the transfer mechanism.

The following discussions are provided to clarify paragraph 3 of item 2 of my letter to you dated June 20, 1974.

1. As a result of the review with your inspector of the General Electric Company data of calibration block equivalence, it was the judgement of our Level III examiner that additional testing would more positively demonstrate equivalence between the ASME and our calibration blocks. As a result of this additional testing, our Level III examiner concluded our calibration blocks were not totally equivalent and recommended changing the I.S.I. procedures to require use of the ASME code calibration blocks. As indicated in the June 20, 1974, letter, these recommended procedure changes have been implemented. Regardless of the history, we have concluded that the equivalency of our notched calibration blocks was not demonstrated sufficiently by the General Electric Company data.

2. We agree the ASME code requires use of code calibration blocks or calibration blocks with demonstrated equivalent response.

3. It was not our intent to state that all notched calibration blocks were demonstrated equivalent to ASME calibration blocks, but that the calibration blocks were equivalent for the one type of weld which had been inspected previous to the use of ASME calibration blocks. The justification of the adequacy of these inspections is discussed above in item 3.b.

Your understanding that all data recorded for Dresden Unit 3 inservice inspection during spring, 1974, was based on the use of

Mr. James G. Keppler

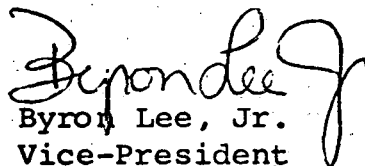
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ASME code calibration blocks (drilled holes) is correct except as indicated above in items 3.a, 3.b and 3.c. As discussed, calibration techniques used for these exceptions were demonstrated as equivalent to the code technique.

We appreciate this opportunity to clarify our previous response. We are available at your convenience if you require any further information.

Very truly yours,

  
Byron Lee, Jr.  
Vice-President