

PART 21 IDENTIFICATION NO. 81-417-000 COMPANY NAME TVA

DATE OF LETTER 5/1/81 DOCKET NO. SO-566/567

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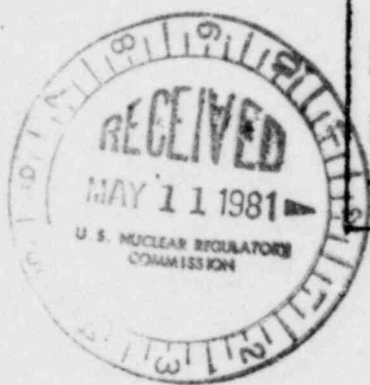
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ACTION:

PRELIMINARY EVALUATION OF THE ATTACHED REPORT INDICATES LEAD RESPONSIBILITY FOR FOLLOWUP AS SHOWN BELOW:

IE

NRR

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OTHER

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POOR ORIGINAL

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

81-417-000

400 Chestnut Street Tower II

May 1, 1981

YCRD-50-566/81-12
YCRD-50-567/81-10

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

YELLOW CREEK NUCLEAR PLANT UNITS 1 AND 2 - COMBUSTION ENGINEERING FAILURE
TO IMPLEMENT DESIGN CRITERIA - YCRD-50-566/81-12, YCRD-50-567/81-10 -
FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on April 1, 1981, in accordance with 10 CFR 50.55(e) as NCR YCN YCP 8103. Enclosed is our first interim report. We expect to submit our next report by August 4, 1981. We consider 10 CFR Part 21 to be applicable to this deficiency.

If you have any questions concerning this matter, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Jr., Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ENCLOSURE
YELLOW CREEK NUCLEAR PLANT UNITS 1 AND 2
COMBUSTION ENGINEERING: FAILURE TO IMPLEMENT
DESIGN CRITERIA
YCRD-50-566/81-12, YCRD-50-567/81-10
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

While construction employees at the site were preparing to install the spent fuel rack embedment anchor bolts, they discovered that Combustion Engineering's (CE's) design would not adequately prevent leakage of spent fuel pool water past the embedment anchor bolt nut and washer because the design does not allow seal welding to the anchor bolt (see figure 1). The potential leakage path presented by the embedment design violates the NRC Regulatory Guide (RG) 1.13 recommendations, of which CE is cognizant. TVA design criteria are also violated in that if leakage were to occur, no means are available for early detection and quantification of the leakage other than by a lowering in the pool level. TVA's review should have determined the violation of TVA design criteria since CE is not cognizant of requirements specific to TVA design criteria. The spent fuel pool embedments were designed and supplied by CE.

Interim Progress

CE and TVA have jointly developed a recommended design to alleviate the deficiency in design of the spent fuel rack embedments. The proposed design calls for countersinking the embedment bolt and nut into the embedded plate and machining the top of the bolt to be flush with or lower than the top surface of the embedded plate, so that the liner plate can be lapped over the bolts and seal welded to the embedded plate (see figure 2). To meet TVA's design criteria for leakage detection, a channel will be machined between the bolt locations and the liner seal weld around the entire embedded plate. This channel will be routed off the side of the plate into the leakage channel system beneath the pool liner. CE is now in the process of revising the design drawings to incorporate the design. The modification to the embedded plates will be completed before installation of the plates.

POOR ORIGINAL

FIGURE 1: Spent Fuel Pool Embedment
(Original Design, Typical) NTS

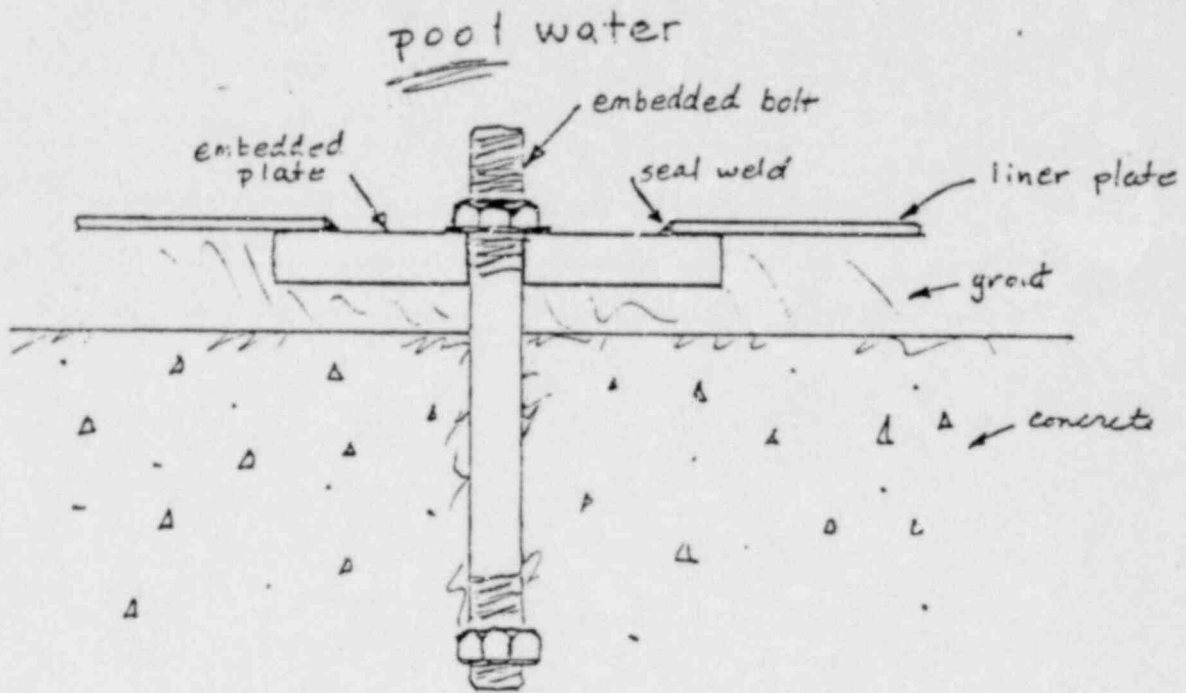


FIGURE 2: Spent Fuel Pool Embedment
(New Design, Typical) NTS

