

THE CINCINNATI GAS & ELECTRIC COMPANY



October 11, 1983
LOZ-83-0164

J. WILLIAMS, JR.
SENIOR VICE PRESIDENT
NUCLEAR OPERATIONS

Docket No. 50-358

U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attention: Mr. J.G. Keppler
Regional Administrator

Gentlemen:

RE: WM. H. ZIMMER NUCLEAR POWER STATION - UNIT 1
AUGUST 11, 1983 MEETING WITH NUCLEAR REGULATORY
COMMISSION PRESENTING PROGRAM FOR WELDING
REINSPECTION OF CLASS I STRUCTURAL STEEL
W.O. 57300, JOB E-5590, FILE #503

PRINCIPAL STAFF	
✓ RA	DEPRP
✓ Y/R	OE
✓ Y/R	CRASH
✓ Y/R	ORNA
✓ PAO	SCS <i>Aug 3</i>
✓ SDA	ML
✓ ENF	File <i>Lee</i>

This letter is to document an August 11, 1983 meeting held at Wm. H. Zimmer site between the Nuclear Regulatory Commission (NRC) and The Cincinnati Gas & Electric Company (CG&E). The NRC was represented by Messrs. L. Kintner, C. Scheibelhut, D. Keating, and W. Christianson. During this meeting CG&E's program for Welding Reinspection of Class I Structural Steel was presented.

The proposed program is summarized below. Program details are provided in Attachment A to this letter.

WELDING REINSPECTION OF CLASS I STRUCTURAL STEEL-SUMMARY

CG&E has developed a program to evaluate welding non-conformances resulting from reinspection of Class I structural steel. This work is a QCP Task I activity. Program details are provided in Attachment A. No relaxation of the Show Cause Order is being requested in association with this program.

In summary, all accessible Class I structural steel welds will be inspected. Those welds not meeting visual acceptance criteria will be identified on Nonconformance Reports. Analytical evaluations, deleting portions of welds with deficiencies, will be conducted in order to verify that Code allowable stresses are satisfied. Cases where Code allowable stress limits are met, with the reduced weld section, will be

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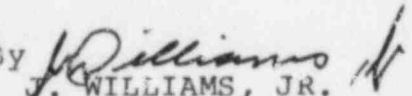
Mr. J.G. Keppler
Regional Administrator
October 11, 1983
LOZ-83-0164
Page 2

dispositioned "Accept-As-Is". Total rework investigations performed substantiate the assumption that overlap and lack of fusion deficiencies do not mask defects. Those welds found with major deficiencies (including all cracks) will be reworked. This program is in conformance with the structural steel design and construction commitments contained in Chapter 3 of the FSAR.

This program is currently in process. Please let us know if additional information or clarification is required.

Very truly yours,

THE CINCINNATI GAS & ELECTRIC COMPANY

By 
J. WILLIAMS, JR.
SENIOR VICE PRESIDENT

RRW/sfr

cc: NRC Office of Inspection & Enforcement
Washington, D.C. 20555
NRC Resident Site Supervisor
ATTN: W.M. Hill
NRC Zimmer Project Inspector, Region III
ATTN: E. R. Schweibinz

ATTACHMENT AWelding Reinspection of Class I Structural Steel

In 1981, CG&E developed an inspection/analytical program to evaluate welding non-conformances resulting from reinspection of Class I structural steel. The program's option of dispositioning non-conformances "Accept-As-Is" based on an engineering analysis was discontinued because of NRC concern. Particularly, the NRC was concerned that overlap and lack of fusion may mask additional defects which could affect the remaining visually accepted portions of the welds. Consequently, further investigation of weld non-conformances were conducted. The QCP investigation of welding non-conformances found in the Auxiliary Building Control Room Ceiling based on a total rework situation has shown that out of 465 conditions of overlap and lack of fusion, and one condition of cracking, no masked discontinuities were found.

Based upon this effort, we do not believe such total rework of all non-conformances is appropriate. Instead, CG&E proposes to proceed as outlined below:

- (1) All discontinuities found shall be identified on nonconformance reports. The method established for dispositioning nonconformances shall be as follows:
 - a. Original calculations shall be reviewed and revised to delete accumulated length of welds with discontinuities from original design welds specified.
 - b. Unless specific information is stated regarding the discontinuity location, the accumulated length of welds with discontinuities will be eliminated at the most critical section to give a conservative review.
 - c. If the remaining portion of the weld, which meets modified visual criteria of AWS D 1.1 - 1972, can accommodate all design loading within Code allowable stresses, the weld will be dispositioned "Accept-As-Is".

(2) The guide established for dispositioning structural steel welding deficiencies identified is as follows:

- a. Arc Strike - Since AISC quality criteria and inspection standards require arc strike removal on fatigue designed structural members only, arc strikes will not be removed since the steel is not designed for fatigue. Arc strikes will be repaired if they result in cracking or if there are multiple arc strikes that cause a significant loss of base metal.
- b. Consumed Edge - This is not normally detrimental except for cover plates. Therefore, with that exception, this condition will be dispositioned "Accept-As-Is" by the Architect Engineer. Cover plates will be evaluated on a case by case basis by the Architect Engineer.
- c. Fusion Type Discontinuity (Slag inclusion, incomplete fusion, and incomplete joint penetration) - The length of this condition is eliminated from the strength review calculations.
- d. Overlap - The length of this condition is eliminated from strength review calculations.
- e. Porosity - When size of the porosity exceeds the amount allowed by the Code, all sections of weld that have porosity over what the Code allows are eliminated from strength review calculations.
- f. Undercut - Depending on depth and length, section strength calculations are made to see if the reduced section can withstand the design loads.
- g. Peening - All peened areas are ground off and reinspected for size and quality weld.
- h. Cracks - All cracks are repaired.