

Florida Power

CORPORATION

Crystal River Unit 3

Docket No. 95-002

February 6, 1996
3F0296-03

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Inservice Inspection Program (ISI) Relief Request 95-050

Dear Sir:

Pursuant to 10 CFR 50.55a(g)(5)(iii), Florida Power Corporation (FPC) is submitting the attached, Relief Request 95-050. This Relief Request is requesting approval for performing limited examination of the two core flood nozzle inner radius sections.

Industry practice for the submittal of relief requests identifying limited examinations generally consists of a post-examination report containing the extent of the examination performed. In the case of the core flood nozzle inner radius inspection, FPC was informed by Framatome Technologies that an inspection performed at another plant of similar design to Crystal River had resulted in a limited exam. FPC discussed with our NRC Project Manager the access restrictions involving this examination and requested his preference regarding the time for a submittal of a limited examination relief request. As a result, it was agreed that FPC would submit the attached request for relief prior to our refueling outage scheduled to start February 29, 1996. FPC appreciates your prompt review in order to allow us to implement this request during the aforementioned refueling outage.

Sincerely,

G. L. Boldt
Vice President
Nuclear Production

GLB/LVC

Attachment

xc: Regional Administrator, Region II
Senior Resident Inspector
NRR Project Manager

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PDR ADOCK 05000302
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FLORIDA POWER CORPORATION
INSERVICE INSPECTION
RELIEF REQUEST # 95-050
CRYSTAL RIVER UNIT 3

REFERENCE CODE: ASME Boiler and Pressure Vessel Code, Section XI, 1983 Edition through Summer 1983 Addenda

I. COMPONENT FOR WHICH RELIEF IS REQUESTED:

(a) Name and Identification Number:

Core Flood Nozzle Inner Radius (W) Axis Unique Identifier B1.4.1B (see attached inside view of the reactor pressure vessel)

Core Flood Nozzle Inner Radius (Y) Axis Unique Identifier B1.4.2B (see attached inside view of the reactor pressure vessel)

(b) Function:

Provide Reactor Vessel Core Flooding capability

(c) ASME Section III Code Class:

Class 1

(d) Category:

Category B-D, Full Penetration Welds of Nozzles in Vessels - Inspection Program B

II. REQUIREMENT THAT HAS BEEN DETERMINED TO BE IMPRACTICAL:

The 1983 Edition, Summer 1983 Addenda of ASME Section XI, does not allow any limitations to the volumetric examination of the Core Flood Nozzle Inner Radius Section Item B3.100. Access for these examinations is restricted.

III. BASIS FOR REQUESTING RELIEF:

A full volumetric examination of the core flood nozzle inner radius section was performed during preservice examinations conducted at CR-3. During the first interval of operation, the immersion method was used to perform a complete volumetric examination of the nozzle inner radius section. Improvements in volumetric examination methods have since shown the contact examination method to be much more reliable, and modern reactor vessel inspection equipment has been designed to utilize this technique.

BASIS FOR REQUESTING RELIEF (continued)

Crystal River Unit 3 is currently in its second interval of operation. During the last outage of this interval, volumetric examination of the reactor vessel welds including the nozzle-to-vessel welds and nozzle inside radius sections will be performed using more modern automated reactor vessel inspection equipment. This equipment uses the contact method with a four array transducer head measuring seven inches by seven inches. In order to complete the examination of the full volume of the weld as shown in the attached figure number IWB-2500-7(a), the transducer array must be positioned inside the core flood nozzle. Positioning of the transducer array inside the nozzle is severely limited by a 9 inch diameter conical flow restrictor recessed in the nozzle, only 3-3/4 inches from the inside of the reactor vessel shell (see core flood nozzle venturi sketch).

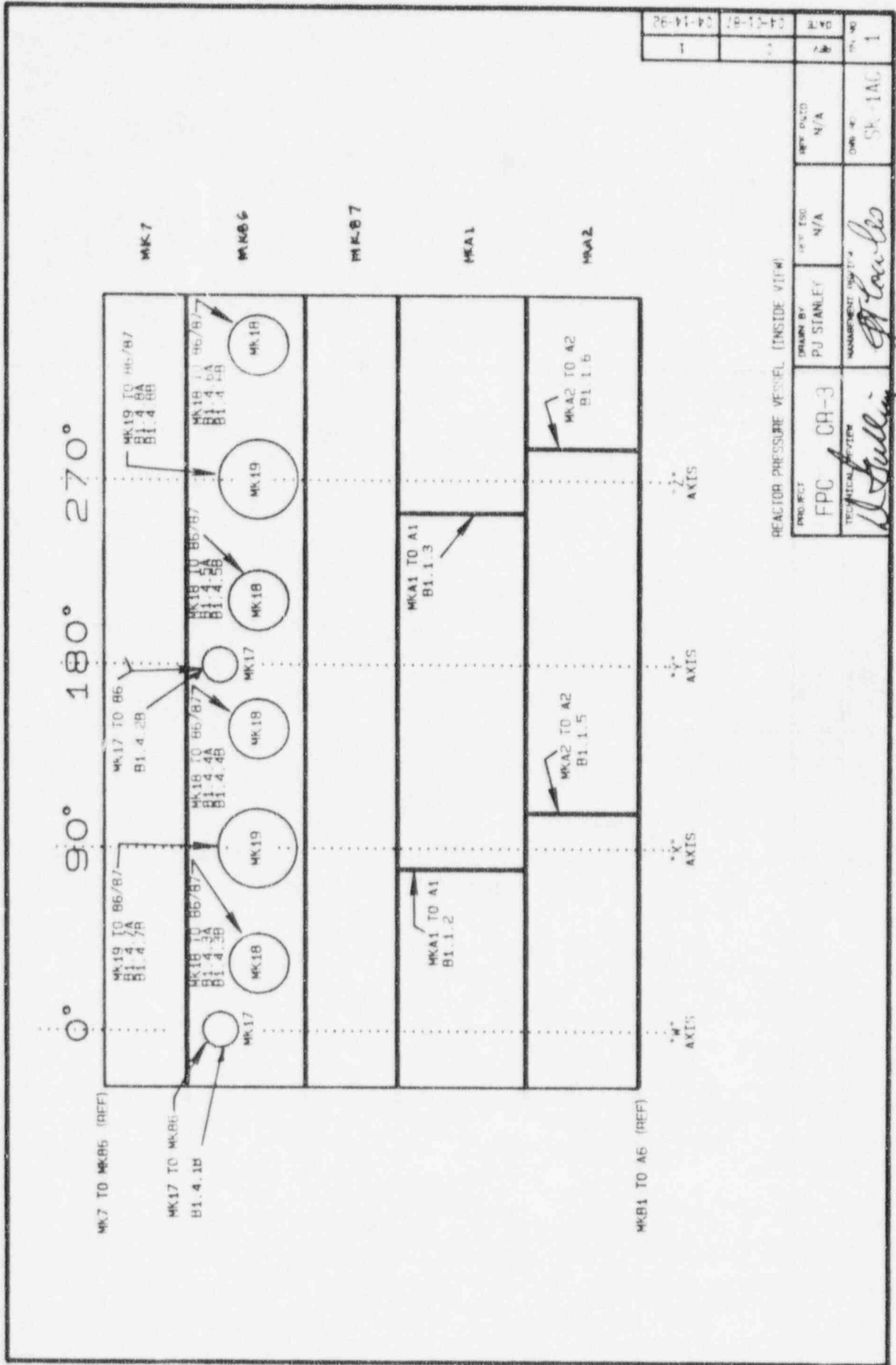
Although use of the contact method will prohibit inspection of the full volume of the nozzle inner radius section, the contact method produces better examination results than the immersion technique utilized in the previous interval, and is the method which will be utilized during reactor vessel examination.

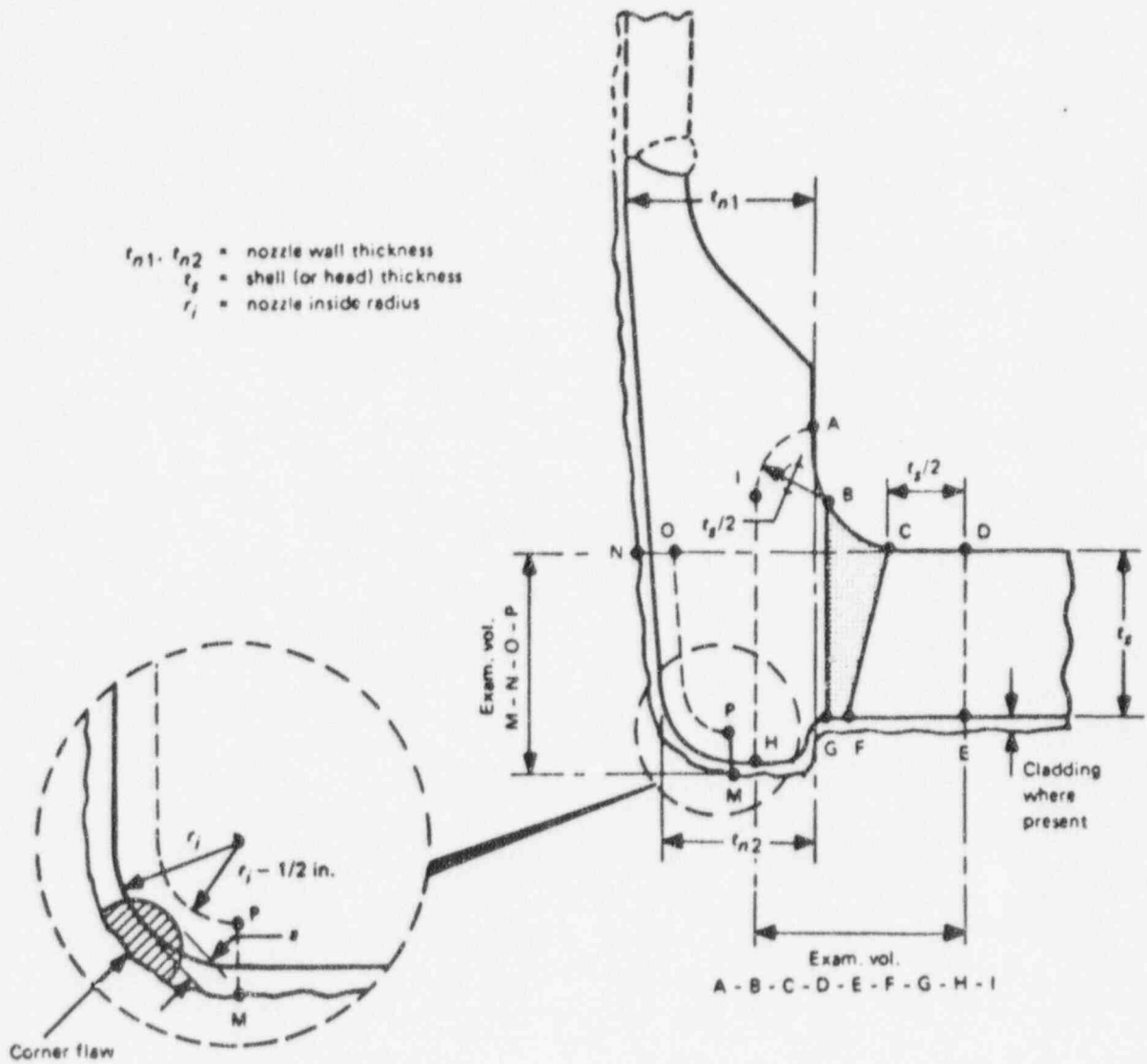
IV. ALTERNATE EXAMINATION:

Examination of the two core flood nozzle inner radius sections will be performed to the maximum extent practical within the limitations of design and geometry. Examination of those portions of the core flood nozzles inner radius which are limited by the flow restrictors will be documented on a limited examination report and include the percentage of the weld examined and the calculations used to determine the amount of limited examination.

V. IMPLEMENTATION SCHEDULE:

The examinations will be performed during Florida Power Corporations' Crystal River Unit 3 Refuel 10 outage scheduled to begin in February of 1996.





EXAMINATION REGION (Note (1))

- Shell (or head) adjoining region
- Attachment weld region
- Nozzle cylinder region
- Nozzle inside corner region

EXAMINATION VOLUME (Note (2))

- C-D-E-F
- B-C-F-G
- A-B-G-H-I
- M-N-O-P

NOTES:

- (1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
- (2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

FIG. IWB-2500-7(a) NOZZLE IN SHELL OR HEAD
 (Examination Zones in Barrel Type Nozzles Joined by Full Penetration Corner Welds)

CORE FLOOD NOZZLE VENTURI SKETCH

