



**Duke Energy Corporation**

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Vice President

April 5, 2000

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555-0001

Subject: Relief Request 00-001  
McGuire Nuclear Station Units 1 and 2  
Docket Nos. 50-369, 50-370

Re: Letter Duke Energy Corporation to U.S. Nuclear  
Regulatory Commission, Retraction of Relief  
Request 99-002, March 23, 2000

Pursuant to 10CFR50.55a(a)(3)(i), Duke Energy Corporation requests the use of an alternative to the ASME Section XI requirements as described in the attached Relief Request 00-001. This relief request is due to changes in code requirements. The code only required inspection of the pressurizer skirt outer weld in the previous inspection interval. The code now requires examination of the inner and outer welds. Specific details are described in the attached relief request. This submittal replaces Relief Request 99-002 which was retracted by the referenced letter.

Questions on this matter should be directed to Norman T. Simms, McGuire Licensing and Compliance, at (704) 875-4685.

Sincerely,

H. B. Barron, Vice President  
McGuire Nuclear Station

Attachments

A047

U.S. Nuclear Regulatory Commission  
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Page 2 of 2

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## Duke Energy Corporation

Station McGuire Unit 1 & 2SECOND 10-YEAR INTERVAL REQUEST FOR ALTERNATIVE NO. 00-001

**Pursuant to 10CFR50.55a(a)(3)(i)**, Duke Energy Corporation requests the use of an alternative to the ASME Boiler and Pressure Vessel Code, Section XI for McGuire Units 1 and 2. Specifically, Duke Energy requests approval to perform ultrasonic examination of area C-D on Attachment 1, the ID surface area of the Pressurizer Skirt. The ultrasonic examination is proposed as an alternative to the required surface examination of the support skirt weld area C-D. There is insufficient clearance to permit the required surface examination.

I. System / Component(s) for Which the Alternative is Requested:

Safety-related ASME Section XI Code Class 1 Pressurizer Integrally Welded Attachments (Pressurizer Support Skirt to Lower Head.)

**McGuire 1**

Item Number	ID Number	Description
B08.020.001	1PZR-SKIRT	Pressurizer Support Skirt to Lower Head

**McGuire 2**

Item Number	ID Number	Description
B08.020.001	2PZR-SKIRT	Pressurizer Support Skirt to Lower Head

II. Code Requirement:

It is required by the 1989 ASME Boiler and Pressure Vessel Section XI Code (no addenda) that the surface of Class A Pressurizer Integrally Welded Attachments, Table IWB-2500-1, Examination Category B-H, Item Number B8.20 be examined per Examination Requirements IWB-2500-13, 14 and 15.

III. Code Requirement for which the Alternative is Requested:

ASME Boiler and Pressure Vessel Code Section XI, 1989 Edition (no addenda), Table IWB-2500-1 Examination Category B-H, Item No. B8.20, Figure No. IWB-2500-13. Examination Requirements Figure Number IWB-2500-13 requires a surface examination to areas (A-B) **and** (C-D). Note 2 states "The extent of the examination includes essentially 100% of the length of the attachment weld at each attachment subject to examination." (See Attachment 1)

IV. Basis for Alternative Examination

Duke Energy requests relief from the surface examination required on surface area C-D as shown on Attachment 1. Surface area C-D is inaccessible for examination for the following reasons:

1. The Pressurizer heater cables must be disconnected for access which, in the past, has caused a number of the termination joints and ceramic insulators to fail. (See Attachment 2)
2. The maximum clearance between the inside surface of the support skirt and the outside row of the Pressurizer heaters is 14 inches. This is insufficient clearance for performing the required surface examination. (See Attachment 3)
3. The ID of the Pressurizer Support Skirt is a high radiation area. Personnel performing the required examination would receive a significant dose. The general area dose rate is 400mr/hr and the contact dose rates range from 1000 to 3000mr/hr.

V. Alternate Examination or Testing:

The ID surface (surface area C-D) of the weld will be examined by ultrasonic testing. The support skirt weld surface will be scanned with two angle beams in two opposing axial directions and two opposing circumferential directions. These angle beam scans will cover the inner weld and base metal surfaces from points "C" to "D". A straight beam scan will also be performed from point "C" toward the vessel shell to the maximum extent practical. (See Attachment 4)

VI. Justification for the Granting of Relief:

There is inadequate accessibility of the inside surface (surface C-D) of the Pressurizer Support Skirt Weld to perform the required surface examination. Therefore, an ultrasonic examination will be used to inspect the inner examination surface from the skirt's exterior surface. The ultrasonic method has been shown capable of detecting surface connected flaws in pressure vessel welds when a properly designed technique is used. The ultrasonic procedure and the basic calibration block will conform to the requirements of ASME Section XI, Appendix I, 1989 Edition.

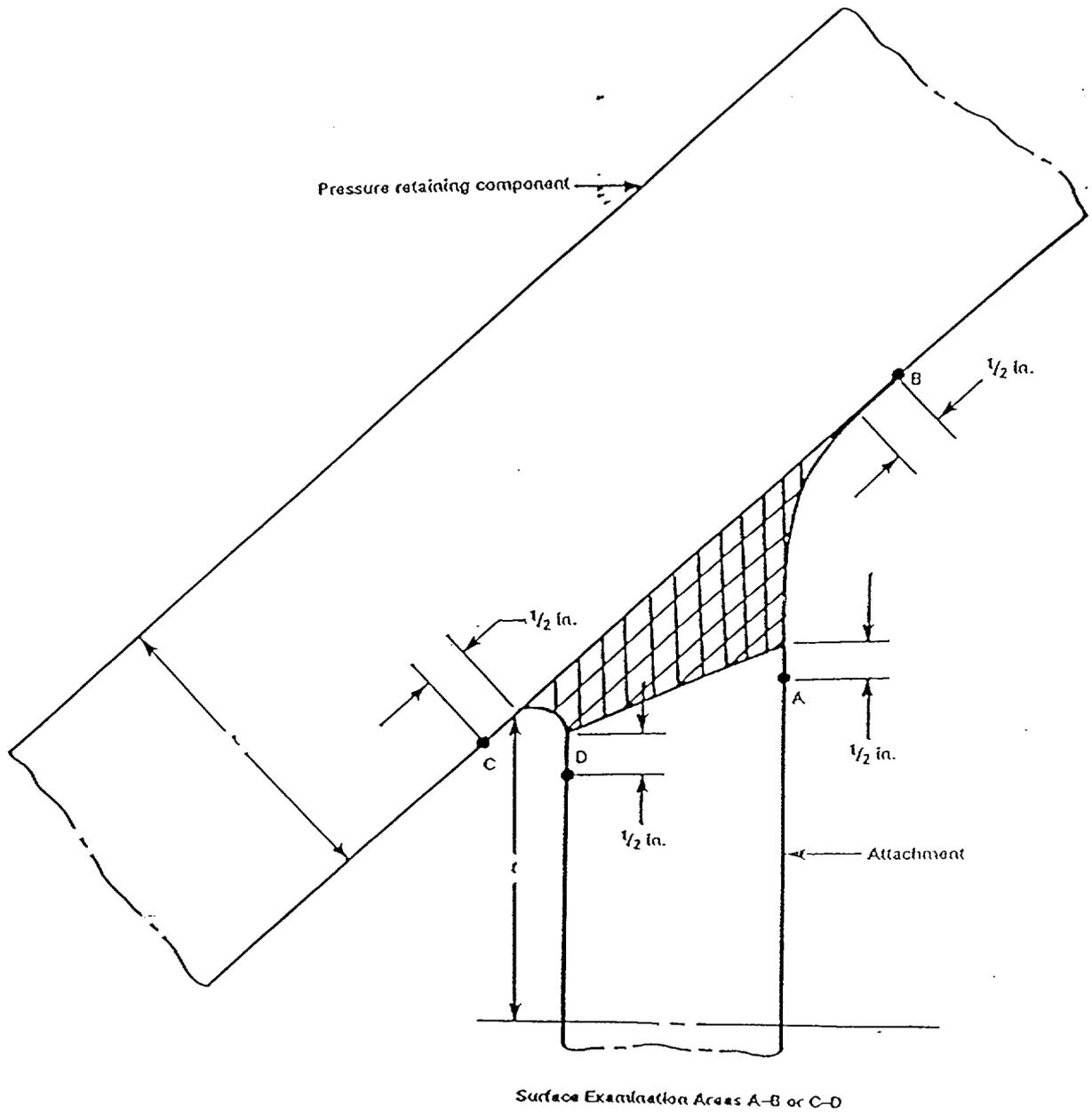
VII. Implementation Schedule:

The weld will be scheduled in accordance with ASME Section XI requirements as shown in the McGuire Nuclear Station Inservice Inspection Plan Second Ten Year Interval for Unit 1 & Unit 2..

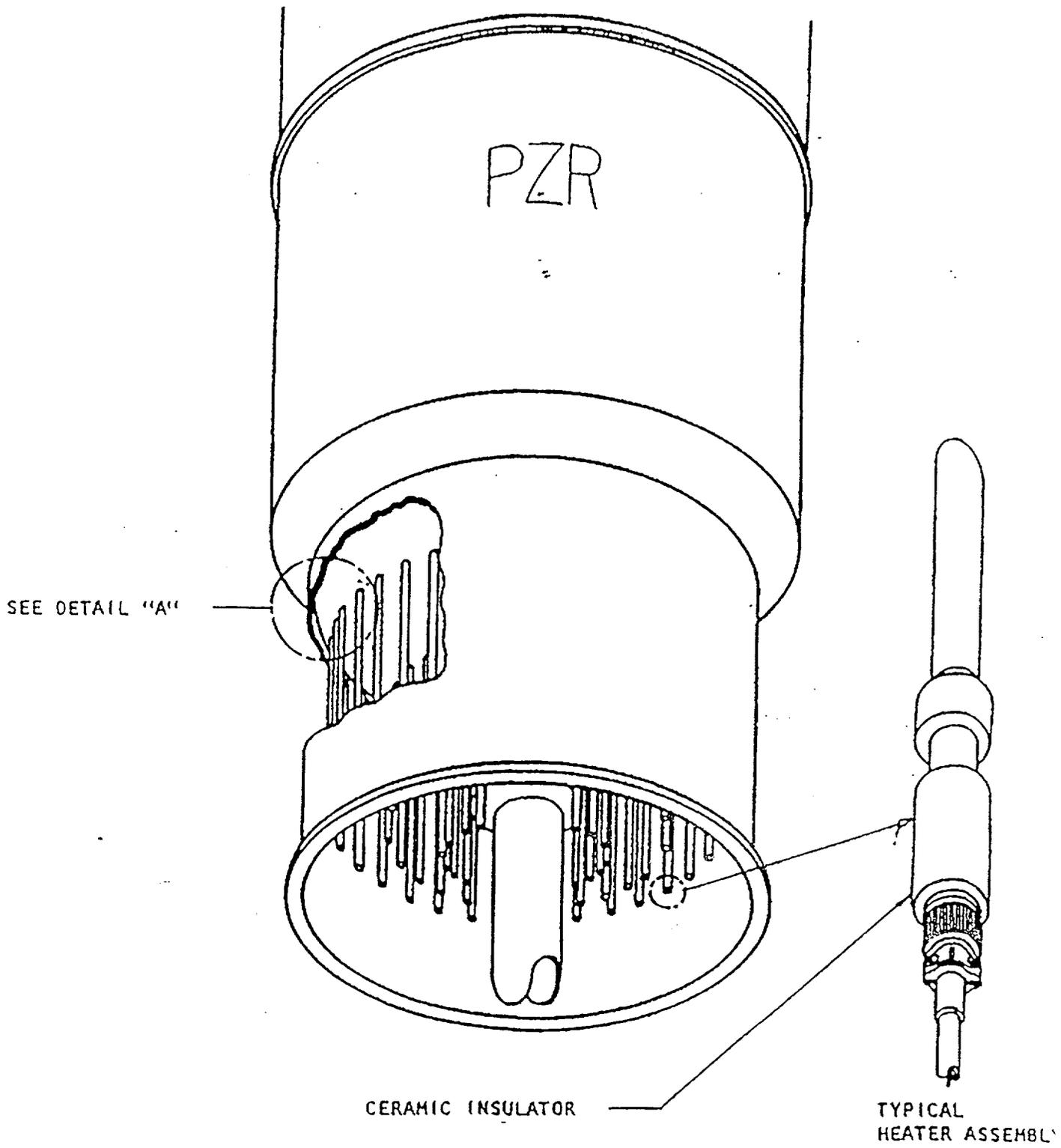
The following individuals contributed to the development of this RFA. Gary Underwood (Plan Manager McGuire) sections I-VII, Jim McArdle (Level III NDE) sections V and VI, Ken Pitser (Engineer Primary Systems) section V, Mark Pyne (Nuclear G.O. Engineering) review and Kevin Rhyne (Nuclear G.O. Supervising Engineer) final review.

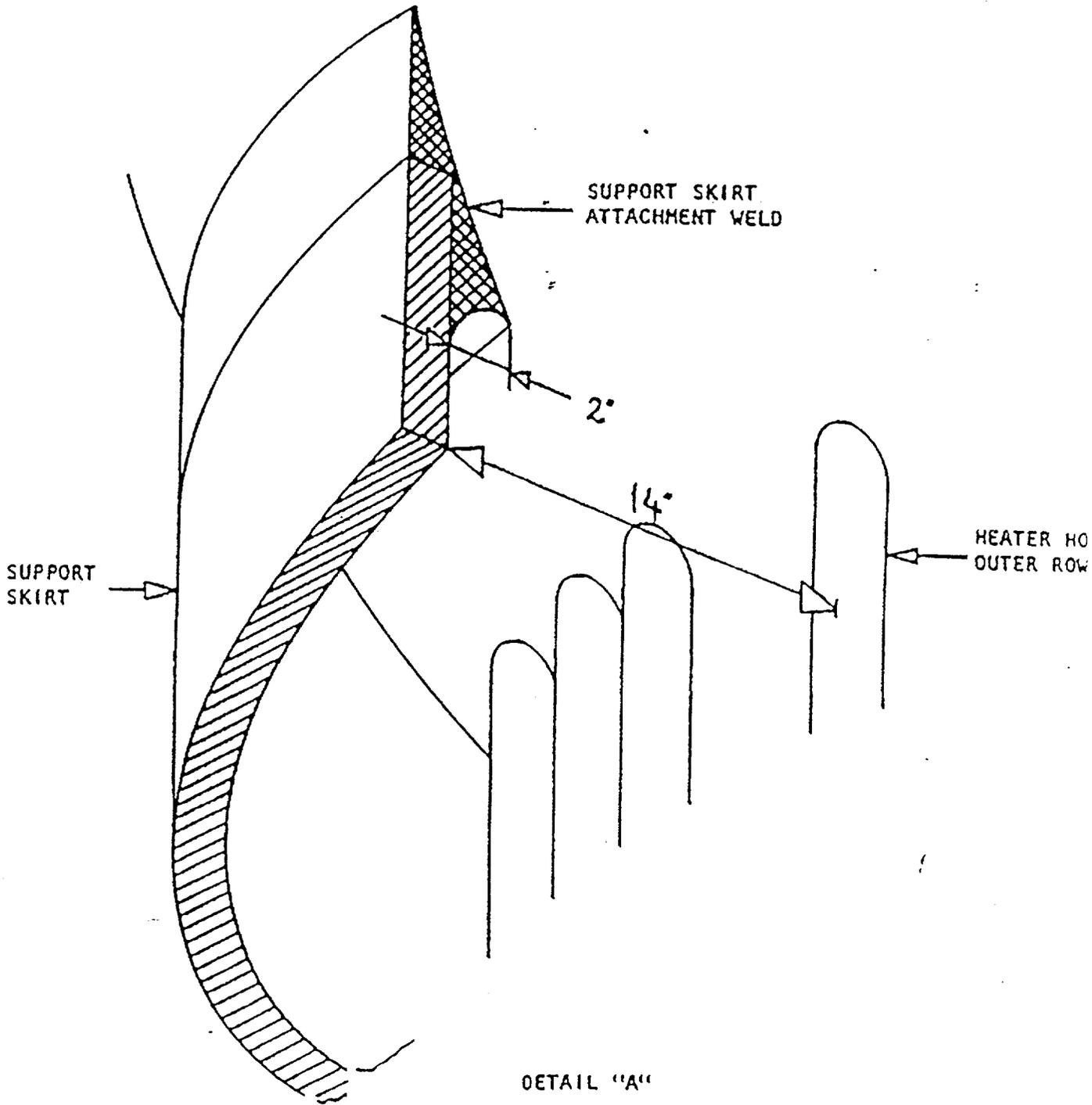
Sponsored By: Gary Underwood Date 3/27/2000

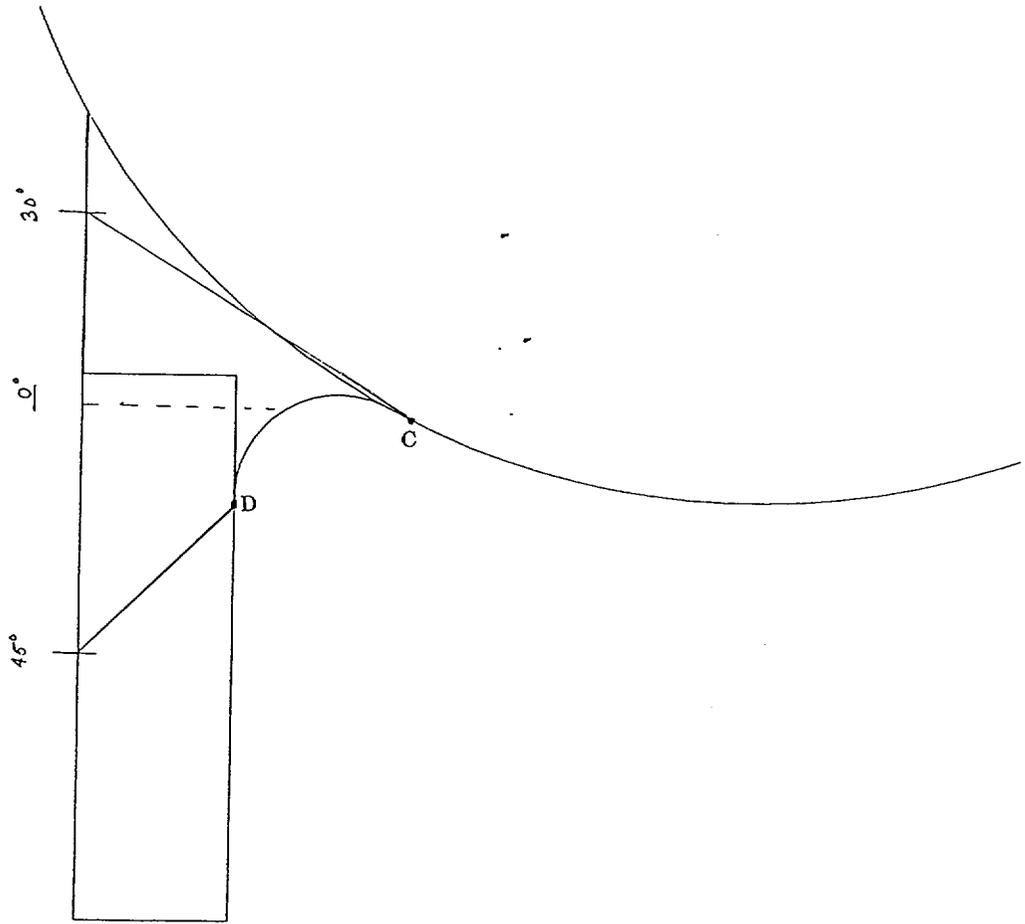
Approved By: R. Kevin Rhyne Date 3/27/00



Attachment 1  
Request For Alternative 00-001







Pressurizer Support Skirt Weld  
UT Scan Plan