



Metropolitan Edison Company  
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Middletown, Pennsylvania 17057

Writer's Direct Dial Number

December 23, 1980  
TLL 684

TMI Program Office  
Attn: Mr. Lake H. Barrett, Deputy Director  
U. S. Nuclear Regulatory Commission  
c/o Three Mile Island Nuclear Station  
Middletown, Pennsylvania 17057

Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)  
Operating License No. DPR-73  
Docket No. 50-320  
Design Criteria for the Modification for Closure  
of Reactor Building Penetration 401

Attached is our design criteria for the modification of reactor building penetration 401 (P401).

The purpose of this modification is to provide a more permanent closure for P401 due to the potential for flooding through this penetration as a result of an increase in reactor building water level. This modification is not intended to return P401 to its pre-accident condition, however, as it will still be used to provide provisions for monitoring reactor building water level. Our intention is to perform this modification prior to March 31, 1981.

Sincerely,

/s/ C. K. HOVEY

C. K. Hovey  
Vice-President and  
Director, TMI-2

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cc: [REDACTED]

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## THREE MILE ISLAND UNIT 2

### DESIGN CRITERIA

#### MODIFICATION FOR CLOSURE OF REACTOR BUILDING PENETRATION 401

##### 1. SCOPE

This document provides criteria for design modifications to Reactor Building penetration number 401 to provide a more permanent closure of the penetration, in consideration of future potential increase of building water level to the extent of flooding the penetration.

##### 2. INTRODUCTION

Penetration 401 was modified in late Summer 1979 to allow access to obtain samples of the building sump water. Following successful completion of the sampling program, further design changes were made to use the penetration for building water level measurement, by addition of a manometer system to the sampling tubing. The penetration has remained in this basic configuration to date, to allow daily water level measurements. The present configuration is described by Reference 1 and Reference 2.

The intended modification will remove the 12-inch gate valve and the special cover assembly outboard of the valve. A welded closure assembly will then be added. Provisions for building water level measurement will remain. This modification is not intended to return the penetration design to the pre-accident condition nor to qualify the penetration for plant restart.

##### 3. DESIGN REQUIREMENTS

###### 3.1 Codes and Standards

- 3.1.1 Design and fabrication shall be in accordance with applicable portions of ANSI B 31.1 and ASME Section VIII.

3.1.2 Welding shall be in accordance with ASME Section IX.

3.2 Design Pressure and Temperature:

10 psig (positive) and 2.5 psi (vacuum) at 50°F to 100°F.

3.3 Design Loads:

Design shall consider deadweight and pressure loads, and accelerations applicable to the plant operating basis earthquake, without loss of function.

4. TESTING

All welds shall receive visual plus liquid penetrant inspections.

5. QUALITY ASSURANCE

Design, procurement, fabrication, and testing are within quality assurance scope.

6. REFERENCES

6.1 Drawing JS061780, Revision 0

Three Mile Island Unit #2, Containment Penetration No. 401,  
M20 area.

6.2 Three Mile Island Unit #2 procedure 2104-4.47, Instrument Hookup,

Measurement and Removal for Reactor Building Sump Level Determinations.