



BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

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Department of Nuclear Energy

November 13, 1979

Mr. Robert L. Ferguson
Plant Systems Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Bob:

Enclosed is Brookhaven National Laboratory's comment on
item 3.1.9 of Three Mile Island - Unit 1.

Sincerely yours,

Edward A. MacDougall
Reactor Engineering Analysis

EAM:sd
enc.

cc.: R. Cerbone wo/enc.
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THREE MILE ISLAND - UNIT 1
FIRE PROTECTION REVIEW

SER Item 3.1.9 - Fire Barrier Penetrations

SER Section 3.1.9 indicates that the licensee will seal various types of fire barrier penetrations, including cable and pipe penetrations and building construction joints in various areas of the plant to provide appropriate fire resistance.

By letter dated June 12, 1979, the licensee provided test reports and a NEL-PIA (now ANI) Certificate of Approval for the cable and pipe penetration seal designed to be installed at the plant. The test procedure met the staff's criteria for penetration seal fire tests, except that no pressure differential was applied across the seal. The licensee's letters stated that no significant pressure differentials exist between various plant areas where these seals would be installed.

The licensee has not provided any information on the sealing of the building construction joints where the fuel handling building walls abut the reactor building.

We will require the licensee to quantify the pressure differential between plant areas where the proposed penetration seals will be installed, and to demonstrate by analysis or tests that the proposed penetration will perform as required under such pressure differential and fire conditions. We will further require the licensee to verify that the proposed building construction joint seals have a fire resistance rating of three hours (ASTM E-119), and flame spread and smoke development ratings of 25 or less (ASTM E-84).

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