UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

March 29, 1977

Docket No. 50-346

MEMORANDUM FOR: K. V. Seyfrit, Chief, Reactor Technical Assistance Branch, IE:HQ

THRU: R. F. Heishman, Chief, Reactor Construction and Engineering Support Branch, RIII

FROM: E. L. Jordan, Chief, Engineering Support Section, RIII

SUBJECT: FIRE BARRIER TEST DISCREPANCIES (A/I F30277H1) TOLEDO EDISON COMPANY - DAVIS-BESSE 1

Several discrepancies were identified during an inspection conducted at Davis-Besse March 23-25, 1977 relating to tests of fire barriers. These tests provide the basis for fire barrier installations at the Davis-Besse facility. The details of the discrepancies which were identified by the RIII Electrical Inspector, Mr. F. Jablonski, are provided in the enclosure.

In summary, it was determined that fire resistance tests did not fully comply with ASTM E-119-73 requirements since:

1. No floor test of a penetration was performed.

2. Wall test penetrations were filled with silicone foam with the penetration held vertical, not as done in the field.

3. Test specimens were not truly representative of actual construction in either cable configuration or tray installation in the wall openings.

4. Test penetrations were faced with a fire resistant damming material which is not in use at Davis-Besse.

5. Flexible ceramic fibers which are in use in certain installations at Davis-Besse were not tested.

Similarly, the hose stream test did not fully comply with ASTM E-119-73 requirements since the tested cable tray installation was not truly representative of the actual construction either in cable configuration or tray installation.

It is the licensee's position that based upon NELPIA's acceptance of the silicone foam penetration seals, no further action is required.

It is RIII concern that TECo letter of November 3, 1975 to NRR which stated tests were conducted to ASTM E-119 gave more credit to tests than is warranted based upon the identified discrepancies.

With respect to Davis-Besse, RIII is of the opinion that resolution of the discrepancies need not delay licensing providing a commitment is obtained to perform "truly representative" fire barrier tests "under the most adverse design conditions".

RIII requests a position regarding adequacy of the fire stops as installed at Davis-Besse.

As a possible generic concern, RIII understands that the subject fire barrier tests were also used as the basis for fire barrier installations at Hatch and D. C. Cook facilities.

E. L. Jordan, Chief
Engineering Support Section

Enclosure: Fire Barrier
Test Discrepancies

cc w/encl.:
R. F. Warnick, Regional Coordinator
T. N. Tambling, RIII