METROPOLITAN EDISON COMPANY

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603 TELEPHONE 215 – 929-3601

December 19, 1977
GQL 1750

Mr. B. H. Grier, Director
U. S. Nuclear Regulatory Commission
Office of Inspection & Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Sir:

Three Mile Island Nuclear Station Unit 2 (TMI-2)
License No. CPPR-66
Docket No. 50-320
Response to IE Bulletin No. 77-04

In response to your letter dated November 4, 1977, and the action requested in IE Bulletin 77-04 concerning the design performance of a system for controlling pH of containment sump water following a LOCA, we wish to advise you of the following:

Our Containment Heat Removal System (Building Spray portion) utilizes a Borated Water and Sodium Hydroxide Solution for heat and iodine removal as described in Chapter 6 of the FSAR. Proper pH control is inherent in the design of the system and requires no separate system for pH control of sump water. The NRC staff has reviewed the system's performance and has concluded in Supplement 1 of the TMI-2 Safety Evaluation Report (Section 6.0, paragraph 6.2.3, page 6-1) that it can meet the design criteria with a single active failure and is therefore acceptable.

Very truly yours,

Signed J. G. Herbein

J. G. Herbein
Vice President

cc: Dr. Ernst Volgenau, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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CENTRAL FILES

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

December 19, 1977

Docket No. 50-320

Metropolitan Edison Company
ATTN: Mr. J. G. Herbein
Vice President
P. O. Box 542
Reading, PA 19603

Gentlemen:

Enclosed is IE Bulletin No. 77-07 which requires action by you with regard to your power reactor facility(ies) with a construction permit.

Should you have questions regarding this Bulletin or the actions required of you, please contact this office.

Sincerely,

for Robert T. Carlson
Boyce H. Grier
Director

Enclosures:
1. IE Bulletin 77-07
2. List of IE Bulletins Issued in 1977

cc w/encls:
R. L. Wayne, QA Manager, Design & Construction
T. Gary Broughton, Safety & Licensing Manager
G. P. Miller, Superintendent
R. W. Heward, Jr., Project Manager
R. C. Arnold, Vice President, Generation
Gerald Charnoff, Esquire
Miss Mary V. Southard, Chairman Citizens for a Safe Environment

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D. C. 20555

IE Bulletin No. 77-07
Date: December 19, 1977

CONTAINMENT ELECTRICAL PENETRATION ASSEMBLIES AT NUCLEAR POWER PLANTS UNDER CONSTRUCTION

Description of Circumstances:

On October 3, 1977, Northeast Nuclear Energy Company reported to the NRC Region I Office that two control valves installed inside containment at Millstone Unit No. 2 demonstrated abnormal operational characteristics. The licensee reported that an unexpected closure of a letdown flow stop valve occurred. While investigating this problem, the normally closed safety injection recirculation return line drain valve was found to be in the open position. Investigation of these events revealed the cause for failure to be electrical shorts between conductors within a containment low voltage penetration assembly.

The licensee subsequently determined that the wiring for both of the valves shared the same low voltage module in an electrical penetration. Electrical tests by the licensee revealed that 15 of the 85 conductors in the suspect connector module exhibited decreased insulation resistance between conductors. Based on this finding, it is believed that an electrical path between adjacent circuits in the connector module was established. This resulted in spurious operation of the valves. Similar resistance checks performed on the remaining low voltage modules within the affected penetration assembly revealed 17 additional conductors with reduced insulation resistances. All conductors with resistances less than 20 megohms were disconnected and their circuits were reconnected through spare conductors.

Examination of the three remaining low voltage penetration assemblies identified 7 additional conductors with resistances of less than 20 megohms. Each of these circuits were also reconnected through a spare conductor.

Investigation showed that the reduced insulation resistance was probably caused by moisture accumulation within the penetration assembly together with small fissures in the epoxy seals surrounding each conductor in the module. The licensee believes that moisture penetrating these cracks