

FROM: Metropolitan Edison Company
Reading, Pennsylvania 1960
S. G. Miller

DATE OF DOCUMENT: 7-1-70	DATE RECEIVED 7-1-70	NO.: 200
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NO ACTION NECESSARY <input type="checkbox"/>	COMMENT <input type="checkbox"/>	BY:

TO: Dr Peter A. Morris

CLASSIF: U POST OFFICE REG. NO:

FILE CODE: 50-289

DESCRIPTION: (Must Be Unclassified)
Ltr trans the following:

REFERRED TO	DATE	RECEIVED BY	DATE
Long	7-1-70		
w/h cys for Action			

ENCLOSURES:
AMT # 14, notarized 6-30-70
consisting of revised pages w/attached
SUPPL # 1 to FSAR consisting of a
three (3) part report.
CERTIFICATE OF SERVICE, dtd 6-30-70
showing sv of Amt # 14 upon Richard
Menear, Chmn Bd of Supvrs, Londonberry
Township, Middleton, Penna and
C. Robert Budd, Chmn Bd of Comm,
Dauphin County, Harrisburg, Penna.
(3 Orig & 19 comf'd cys Amt # 14,
80 cys Suppl # 1, 1 Orig & 20 cys
Cert of SV rec'd) Holding (18) cys ACRS

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Regulatory file			
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Dromerick (3)			
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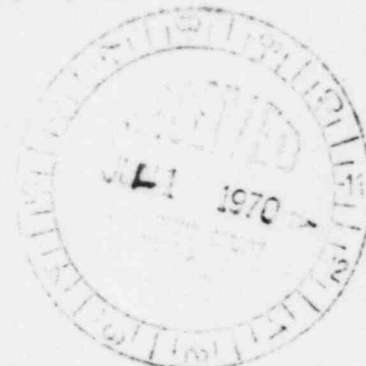
METROPOLITAN EDISON COMPANY SUBSIDIARY OF GENERAL PUBLIC UTILITIES CORPORATION

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603

TELEPHONE 215 - 929-3601

July 1, 1970

Dr. Peter A. Morris, Director
Division of Reactor Licensing
U. S. Atomic Energy Commission
Washington, D. C.



Dear Dr. Morris:

Subject: Three Mile Island Nuclear Station, Unit 1
Docket No. 50-289
Amendment No. 14

Regulatory

File Cy.

Attached are three signed original and 19 conformed copies of Amendment 14 to the Operating License Application for the Three Mile Island Nuclear Station, Unit 1. In addition, enclosed are one signed and 20 conformed copies of the Certificate of Service of Amendment 14 on the chief executives of the township and county in which the facility is to be located.

This amendment references Babcock and Wilcox topical reports relating to fuel rod failure mechanisms and Xenon Oscillation, Gilbert Associates Topical Report No. 1729 "Dynamic Analysis of Vital Piping Systems Subjected to Seismic Motion" and indicates the sections of the FSAR which respond to the ACRS recommendations concerning the scram bus and the separation of safety and control functions. We believe that separation to the extent practicable has been provided.

This amendment also includes Supplement 1 to the FSAR. This supplement is a three part report addressing iodine removal capabilities, evaluation of purging to control post accident hydrogen concentration and evaluation of accident doses using site measured meteorology.

We have recognized the need for a gross fuel failure detection system and have provided the following criteria for an on-the-line system to be installed at Three Mile Island: 1) Automatic indication of alarm must be given by the system; 2) The system must respond as promptly as feasible to give reliable indication; 3) The system must be capable of detecting the coolant activity resulting from the postulated fuel failure over background activity; 4) The system must be able to detect

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Dr. Peter A. Morris

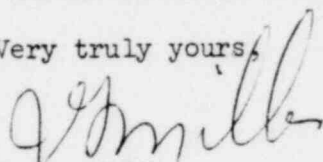
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July 1, 1970

the release of 1 per cent of the fuel in an assembly or the release of all plenum activity in one fuel assembly.

As indicated during the public hearing on April 10, 1968, pages 259-264 of the Transcript of Hearing, we performed a scoping study to determine how best to achieve our criteria. As a result of our scoping study, we rejected beta and delayed neutrons as a strong source in the detection of failed fuel. Gamma emitters appeared to offer the most feasible means to detect failed fuel during on-line operation. We are presently investigating two on-line gamma detection systems for installation at Three Mile Island.

Very truly yours,



J. G. Miller

Vice President and Chief Engineer

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Enclosures

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METROPOLITAN EDISON COMPANY

AND

JERSEY CENTRAL POWER & LIGHT CO.

THREE MILE ISLAND NUCLEAR STATION UNIT 1
APPLICATION FOR CLASS 104 b UTILIZATION
FACILITY OPERATING LICENSE



Regulatory

File Cy.

Docket No. 50-289
Amendment No. 14

Received w/Ltr Dated 7-1-70

Applicant submits by this Amendment, in support of its request for an initial operating license at a reactor power level of 2535 MWt, Supplement No. 1 to the FSAR and change pages to section 1 of the FSAR to include references to B&W topical reports relating to fuel rod failure mechanisms and xenon oscillations.

Supplement 1 to the FSAR is a three part report entitled as follows:

- I Iodine Removal Capabilities of the Three Mile Island Unit 1 Reactor Building Spray System.
- II Evaluation of Purging as a Means of Controlling Post Accident Hydrogen Concentration in the Three Mile Island Unit 1 Reactor Building.
- III An Evaluation of Accident Dose Probabilities Using Three Mile Island Site Measured Meteorology Data.

ACRS recommendations on the scram bus and separation of control and protection function are addressed in Section 7 of the FSAR. The design of the rod drive control system is described in 7.2.2 and trip circuitry is shown in figures 7-6 and 7-7. Separation of protection and regulation function is addressed in Sections 7.1 and 7.2

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A change page in section 5 is included to reference Gilbert Associates Topical Report No. 1729 "Dynamic Analysis of Vital Piping Systems Subjected to Seismic Motion".

METROPOLITAN EDISON COMPANY

By

[Signature]
Vice President

Attest:

[Signature]
Secretary

Sworn and subscribed to before me this 30th day of June 1970.

[Signature]
Notary Public

JERSEY CENTRAL POWER & LIGHT CO.

By

[Signature]
Vice President

Attest:

[Signature]
Secretary

Sworn and subscribed to before me this 30th day of June 1970.

[Signature]
Notary Public

CLARA L. LOMBARDI
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Feb. 10, 1975

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UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

IN THE MATTER OF)
METROPOLITAN EDISON COMPANY)

DOCKET NO. 50-289



CERTIFICATE OF SERVICE

Regulatory

File Cy.

Received w/Ltr Dated 7-1-70

This is to certify that a copy of Amendment No. 14 to the Application for Construction Permit and operating license for Three Mile Island Nuclear Station, Unit 1 dated June 30, 1970, and filed with the U. S. Atomic Energy Commission on July 1, 1970, has this 1st day of July, 1970, been served on the chief executives of Londonderry Township, Dauphin County, Pennsylvania, and Dauphin County, Pennsylvania by deposit in the United States mail, addressed as follows:

Mr. Richard Menear
Chairman, Board of Supervisors of
Londonderry Township
R. D. #1
Middletown, Pennsylvania

and:

Mr. C. Robert Budd
Chairman, Board of County Commissioners
of Dauphin County
Dauphin County Court House
P. O. Box 1295
Harrisburg, Pennsylvania

METROPOLITAN EDISON COMPANY

By: 

Vice President

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done 7-21-70

AMENDMENT NO. 14

THE METROPOLITAN EDISON COMPANY -- JERSEY CENTRAL POWER & LIGHT COMPANY

THREE MILE ISLAND NUCLEAR STATION UNIT 1

Amendment No. 14 to the Metropolitan Edison Company -- Jersey Central Power & Light Company application for Three Mile Island Nuclear Station Unit 1, Docket 50-289 includes both insert pages to the Final Safety Analysis Report as listed below and Supplement No. 1. Supplement No. 1 describes the acceptability of the Reactor Building spray system for iodine removal, an evaluation of containment purging for hydrogen control following an accident, and a probabilistic evaluation of accident doses using site measured meteorological data. Supplement No. 1 should be placed directly behind Section 15 in Volume 4.

The following sheets of the Final Safety Analysis Report are to be deleted and when appropriate revised sheets dated July 1, 1970 should be inserted.

Remove the following sheets:

Pages: Table of Contents - xi
(one each, in Volume 1,2,3, and 4).

Pages: 1-45, 1-46, 1-47, 1-48

Pages: 5-75, 5-76

Pages: 6-13, 6-14, 6-29, 6-30

Figures: 6-3, 6-5

Pages: 14-51, 14-52, 14-53, 14-54,
14-57, 14-58, 14-75, 14-76, 14-85,
14-86, 14-87, 14-88

Insert the following sheets:

Pages: Table of Contents - xi
(one each, in Volume 1,2,3, and 4).

Pages: 1-45, 1-46, 1-47, 1-48

Pages: 5-75, 5-76

Pages: 6-13, 6-14, 6-29, 6-30

Figures: 6-3, 6-5

Pages: 14-51, 14-52, 14-53, 14-54,
14-57, 14-58, 14-75, 14-76, 14-85,
14-86, 14-87, 14-88