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CONTROL NO: 10183
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FROM: Metroplitan Edison Co. Reading, Penn. R. C. Arnold	DATE OF DOC 10-3-74	DATE REC'D 10-8-74	LTR xxxx	TWX	RPT	OTHER
TO: Mr. J.P.O'Reilly	ORIG 1	CC	OTHER	SENT AEC PDR xxxxx SENT LOCAL PDR xxxx		

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	xxxxxxxx			1	50-289

DESCRIPTION: Ltr Reporting Abnormal Occurrence #74-9 on 9-26-74 regarding Excessive Free Chlorine Concentration at the Plant River Discharge which is in violation of Environmental Tech-Spec.....

ENCLOSURES:

ACKNOWLEDGED

DO NOT REMOVE

PLANT NAME: Three Mile Island Unit # 1

FOR ACTION/INFORMATION 10-10-74 JGB

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INTERNAL DISTRIBUTION

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CASE	KNIGHT	BALLARD	GOULBOURNE (L)	
GIAMBUSSO	PAWLICKI	SPANGLER	KREUTZER (E)	PLANS
BOYD	SHAO		LEE (L)	MCDONALD
MOORE (L) (BWR)	STELLO	ENVIRO	MAIGRET (L)	CHAPMAN
DEYOUNG (L) (PWR)	HOUSTON	MULLER	REED (E)	DUBE w/input
SKOVHOLT (L)	NOVAK	DICKER	SERVICE (L)	E. COUPE
GOLLER (L)	ROSS	KNIGHTON	SHEPPARD (L)	
P. COLLINS	IPPOLITO	YOUNGBLOOD	SLATER (E)	D. THOMPSON (2)
DENISE	TEDESCO	REGAN	SMITH (L)	KLECKER
REG OPR	LONG	PROJECT LDR 2	TEETS (L)	EISENHUT
FILE & REGION (3)	LAINAS	St. Mary	WILLIAMS (E)	
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7910240 751 S LB

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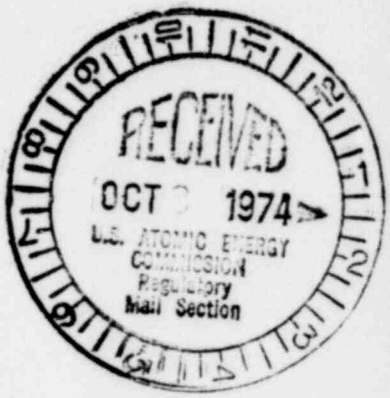
METROPOLITAN EDISON COMPANY

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

October 3, 1974
GQL 0372

Regulatory File Cy.

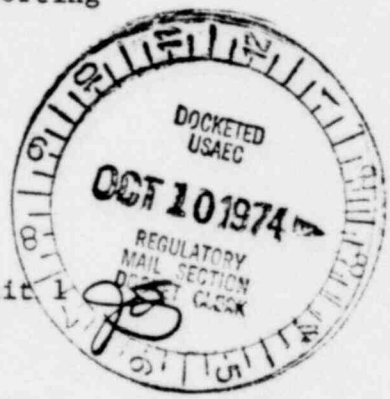


Mr. J. P. O'Reilly, Director
Regulatory Operations - Region 1
U.S. Atomic Energy Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Mr. O'Reilly:

Operating License DPR-50
Docket No. 50-289

In accordance with the Environmental Technical Specifications for Three Mile Island Nuclear Station, Unit 1, we are reporting the following Environmental Incident:



(1) Reporting Number: E.I. 50-289/74-9

(2a) Report Date: October 3, 1974

(2b) Occurrence Date: September 26, 1974

(3) Facility: Three Mile Island Nuclear Station, Unit 1

(4) Identification of Incident:

Excessive Free Chlorine Concentration at the Plant River Discharge which is a violation of the Environmental Technical Specifications, paragraph 2.2.1a, and constitutes exceeding a limiting condition for operation.

(5) Conditions Prior to Occurrence:

The reactor was at steady state power with major plant parameters as follows:

Power: Core: 100%
Elec.: 865 MW (Gross)

1459 191

RC Flow: 1.38×10^8 lb/hr

RC Pressure: 2155 psig

10183

RC Temperature: 579°F

PRZR Level: 240 in

PRZR Temp.: 650°F

(6) Description of Incident: During a periodic evolution conducted to chlorinate the systems cooled by the mechanical draft cooling tower, the plant river discharge sample taken 10 minutes after commencement of the evolution indicated a free chlorine concentration of .10 ppm. The 30 and 50 minute grab samples both indicated a free chlorine concentration of less than .10 ppm.

In that chlorine addition had been terminated about 15 minutes after commencement of the evolution, it was determined that there were no additional actions which could be taken to get the reading within the specification limit.

(7) Designation of Apparent Cause of Incident: It is believed that the incident resulted primarily from the lack of adequate guidelines to aid in determining how the chlorine feed rate should be varied as a function of existing conditions, such as river water transit time through the cooling systems, cooler heat load, river water temperature, pH, and organic composition.

(8) Analysis of Incident: For the following reasons it is believed that the level of free chlorine in the discharge water was not high enough and did not exist for a long enough period of time to have caused any environmental damage or to have endangered either the health or safety of the public:

a. Chlorine addition was secured about 5 minutes after the collection of the 10-minute sample.

b. The 30 and 50 minute grab samples indicated free chlorine concentrations of only .07 ppm, which is well below the .10 ppm limit.

(9) Corrective Action: Immediate corrective action involving termination of chlorine addition was not possible because chlorine addition had already been terminated by the time it was realized that the limit for free chlorine had been exceeded; however, prior to the chlorination period of 0900 the next day the chlorine feed rate was reduced from 300 to 250 lb/day.

The Plant Operations Review Committee (PORC) met immediately after the incident was reported and recommended to the Station Superintendent that as a long-term corrective action he continue to have chlorine usage closely monitored to insure that chlorine levels remain below specification limits. The Station Superintendent concurred with this recommendation, and chlorine usage continues to be closely monitored.

Additionally, consultants retained by Met-Ed will continue with a study begun several months ago to investigate the chlorination program and the systems, procedures, and analytical equipment associated with it. A part of this study will be conducted under paragraph 2.2.1b of the Environmental Technical Specifications.

It should be noted that previous Environmental Incidents had reported a series of reductions in chlorination feed rate to a point where it had been decreased to less than 150 lb/day; in this incident the addition rate was initially 300 lb/day; and that the increase to 300 lb/day was felt to be justified based on the set of conditions that existed just prior to the incident together with additional studies that have been done by our consultant.

(10) Failure Data:

a. Previous Failures: Although the incident under discussion is not thought to have resulted from equipment failure, similar incidents were reported on the following occasions:

EI 50-289/74-2	June 5, 1974
EI 50-289/74-3	June 12, 1974
EI 50-289/74-4	June 13, 1974
EI 50-289/74-5	June 14, 1974
EI 50-289/74-6	June 20, 1974
EI 50-289/74-7	June 26, 1974

b. Equipment Identification: Not applicable.

Sincerely,

R. C. Arnold

RCA:cas
File: 20.1.1/7.7.3.11.1
cc: Director
Directorate of Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545