Docket No. 50-320
Dr. Robert L. Long
Vice President and Director
Corporate Services and TM1-2 Divisions
GPU Nuclear Corporation
Post Office Box 480
Middletown, Pennsylvania 17057-0191

Dear Dr. Long:

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2 - ISSUANCE OF

AMENDMENT NO. 43 TO FACILITY OPERATING LICENSE NO. DPR-73

May 26, 1993

(TAC NO. M83028)

The Commission has issued the enclosed Amendment No. 43 to Facility Operating License No. DPR-73 for the Three Mile Island Nuclear Station, Unit 2, in response to your letter dated March 17, 1992 (Technical Specification Change Request No. 67), with Revision 1 dated June 18, 1992, and Revision 2 dated December 23, 1992. Your request for changes to the Recovery Operations Plan (your Recovery Operations Plan Change Request 46) is addressed in a separate letter issued concurrently with this license amendment.

Additionally, we have completed our review of your June 18th submittal, Revision 2 of the Offsite Dose Calculation Manual (ODCM), and find it acceptable.

Amendment No. 43 revises the Appendix A and Appendix B Technical Specifications by relocating requirements related to radiological effluents to a new document called the Offsite Dose Calculation Manual (ODCM). The removal of these requirements from the Technical Specifications is in accordance with the guidance in NRC staff issued Generic Letter 89-01 dated January 31, 1989.

A copy of the related Safety Evaluation supporting Amendment No. 43 is enclosed. Notice of Issuance will be included in the Commission biweekly <u>Federal Register</u> notice.

Sincerely,

ORIGINAL SIGNED BY

Michael T. Masnik, Senior Project Manager Non-Power Reactors and Decommissioning Project Directorate Division of Operating Reactor Support Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 43 to DPR-73

2. Safety Evaluation

9306070283 930526 cc w/enclosures: PDR ADOCK 05000320 See next page DISTRIBUTION: Docket File 50-320 BGrimes EHylton GHill (2) ACRS (10) PDR OGC WJones RDudley OPA OC/LFDCB ONDD r/f MMasnik DHagan CGrimes Region 1 RWood LBell ONDD: PMM774 ONDD: SC ONDD: LA MMasnik:dmj RDudley Conningham EKANSON 5/2//93 20/93 5/11/93 5/25/93

OFFICIAL RECORD COPY

DOCUMENT NAME: A:AMEND.43.MM (TM! #3 DISK)



# UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

May 26, 1993

Docket No. 50-320

Or. Robert L. Long Vice President and Director Corporate Services and TMI-2 Divisions GPU Nuclear Corporation Post Office Box 480 Middletown, Pennsylvania 17057-0191

Dear Dr. Long:

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2 - ISSUANCE OF

AMENDMENT NO. 43 TO FACILITY OPERATING LICENSE NO. OPR-73

(TAC NO. M83029)

The Commission has issued the enclosed Amendment No. 43 to Facility Operating License No. DPP-73 for the Three Mile Island Nuclear Station, Unit 2, in response to your letter dated March 17, 1992 (Technical Specification Change Request No. 67), with Revision 1 dated June 18, 1992, and Revision 2 dated December 23, 1992. Your request for changes to the Recovery Operations Plan (your Recovery Operations Plan Change Request 46) is addressed in a separate letter issued concurrently with this license amendment.

Additionally, we have completed our review of your June 18th submittal, Revision 2 of the Offsite Dose Calculation Manual (ODCM), and find it acceptable.

Amendment No. 43 revises the Appendix A and Appendix B Technical Specifications by relocating requirements related to radiological effluents to a new document called the Offsite Dose Calculation Manual (ODCM). The removal of these requirements from the Technical Specifications is in accordance with the guidance in NRC staff issued Generic Letter 89-01 dated January 31, 1989.

A copy of the related Safety Evaluation supporting Amendment No. 43 is enclosed. Notice of Issuance will be included in the Commission biweekly federal Register notice.

Sincerely.

Michael T. Masnik, Senior Project Manager

Michael I. Mashik, Senior Project Manager Non-Power Reactors and Decommissioning Project Directorate Division of Operating Reactor Support

Office of Nuclear Reactor Regulation

Inclosures:

I. Ameridment No. 43 to DPR-73

2. Safety Evaluation

cc w/enclosures: See next page Dr. R. L. Long GPU Nuclear Corporation Unit No. 2

cc:

Regional Administrator, Region I U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, Pennsylvania 19406

Or. Judith H. Johnsrud Environmental Coalition on Nuclear Power 433 Orlando Avenue State College, Pennsylvania 16801

Ernest L. Blake, Jr., Esq. Shaw, Pittman, Potts, and Trowbridge 2300 N Street, N.W. Washington, D.C. 20037

Secretary U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Mr. Russell Schaeffer, Chairperson Dauphin County Board of Commissioners Dauphin County Courthouse Front and Market Streets Harrisburg, Pennsylvania 17120

William Dornsife, Acting Director Bureau of Radiation Protection Department of Environmental Resources P. O. Box 2063 Harrisburg, Pennsylvania 17120

Mr. Ad Crable Lancaster New Era 8 West King Street Lancaster, Pennsylvania 17601

Mr. Francis I. Young
Senior Resident Inspector (TMI-1)
U.S. Nuclear Regulatory Commission
P. O. Box 311
Middletown, Pennsylvania 17057

Mr. Frank F. Hooper 4155 Clark Road Ann Arbor, Michigan 48104

Peter B. Bloch, Chairman Atomic Safety and Licensing Board Panel U.S. Nuclear Regulatory Commission Washington, D.C. 20555 Three Mile Island Nuclear Station Docket No. 50-320

Mr. Robert Rogan GPU Nuclear Corporation P. O. Box 480 Middletown, Pennsylvania 17057

Mr. David J. McGoff
Office of LWR Safety and Technology
NE-23
U.S. Department of Energy
Washington, D.C. 20545

Mr. Wythe Keever
The Patriot
812 Market Street
Harrisburg, Pennsylvania 17105

Mr. Robert B. Borsum
B & W Nuclear Technologies
Suite 525
1700 Rockville Pike
Rockville, Maryland 20852

Mr. Marvin I. Lewis 7801 Roosevelt Blvd. #62 Philadelphia, Pennsylvania 19152

Mr. Jane Lee 183 Valley Road Etters, Pennsylvania 17319

Mr. Walter W. Cohen, Consumer Advocate Department of Justice Strawberry Square, 14th Floor Harrisburg, Pennsylvania 17127

U.S. Environmental Prot. Agency Region III Office AITN: EIS Coordinator 841 Chestnut Street Philadelphia, Pennsylvania 19107

Mr. Charles N. Kelber
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



# UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

#### GPU NUCLEAR CORPORATION

DOCKET NO. 50-320

## THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

### AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 43 License No. OPR-73

- 1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by GPU Nuclear Corporation (the licensee), dated March 17, 1992, with revisions dated June 18, 1992, and December 23, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission rules and regulations set forth in 10 CFR Chapter 1;
  - 8. The facility will operate in conformity with the application, the provisions of the Act. and the rules and regulations of the Commission:
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter 1;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-73 is hereby amended to read as follows:

## (2) Technical Specifications

The Technical Specifications contained in Appendices A and 8, as revised through Amendment No. 43, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications and all Commission Orders issued subsequent to March 28, 1979.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Leymour H. Weiss, Director

Non-Power Reactors and Decommissioning

Project Directorate

Division of Operating Reactors Support Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications Appendix A and 8

Date of Issuance: May 26, 1993

## ATTACHMENT TO LICENSE AMENDMENT NO. 43

## FACILITY OPERATING LICENSE NO. DPR-73

## DOCKET NO. 50-320

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove ii iii vi ix x 1-6 3.3-1 3.3-2	Insert
3.3-3 B 3/4 3-1 B 3/4 3-2 B 3/4 3-3 5-1 6-8 6-10a 6-11 6-12 6-13 6-14 6-15 6-16 6-17	3.3-3 B 3/4 3-1 B 3/4 3-2 B 3/4 3-3 5-1 6-8 6-10a 6-11 6-12 6-13 6-14 6-15 6-16 6-17

DEFI	NITIONS	
SECT	TION	PAGE
1_0_1	DEFINITIONS - (Continued)	
1.21	CONTAINMENT ISOLATION	1-6
1.22	OFFSITE DOSE CALCULATION MANUAL (ODCM)	1-6
1,23	MEMBER(S) OF THE PUBLIC	1-6
1.24	UNRESTRICTED AREA	1-6
1.25	SITE BOUNDARY	1.6
FACI	ILITY MODES (TABLE 1.1)	. 1-7
FRE	QUENCY NOTATION (TABLE 1.2)	1-8
200	SAFFTY LIMITS	2.1

LIMITING CONDITIONS FOR OPERATION	
SECTION	PAGI
3.0 APPLICABILITY	3.0-1
3.1 WATER INJECTION COOLING AND REACTIVITY CONTROL SYSTEMS	
3.1.1 BORATION CONTROL  Borated Cooling Water Injection  Boron Concentration - Reactor Coolant System  Boron Concentration - Fuel Transfer Canal  Boron Concentration - Spent Fuel Pool "A"	3.1-1 3.1-2 3.1-3
3.3 INSTRUMENTATION	
3.3.1 NEUTRON MONITORING INSTRUMENTATION	
3.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION	3.3-1
3.3.3 MONITORING INSTRUMENTATION  Meteorological Instrumentation Essential Parameters Monitoring Instrumentation Chlorine Detection Systems Fire Detection Instrumentation	3.3-1 3.3-2 3.3-2
3.4 REACTOR COOLANT SYSTEM	
3.4.1 REACTOR COOLANT LOOPS	3,4.1
3.4.2 REACTOR VESSEL WATER LEVEL MONITORING	3.4-1
3.4.9 PRESSURE TEMPERATURE LIMITS	
3.5 COMMUNICATIONS	
3.5.1 CONTROL ROOM	3.5-1
3.6 CONTAINMENT SYSTEMS	
3.6.1 PRIMARY CONTAINMENT  Containment Integrity  Containment Isolation	3.6-1

BASES		
SECTION	PAG	E
3/4,0 AF	PPLICABILITY	- 1
3/4.1 W	ATER INJECTION COOLING AND REACTIVITY CONTROL SYSTEMS	
3/4,1.1	BORATION CONTROL AND BORATED COOLING WATER INJECTION	- I
3/4,3 IN	STRUMENTATION	
3/4.3.1	NEUTRON MONITORING INSTRUMENTATION B 3/4.3	- 1
3/4,3,2	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM . B 3/4.3 INSTRUMENTATION	- 1
3/4 3.3	MONITORING INSTRUMENTATION B 3/4.3 Mereorological Monitoring Instrumentation B 3/4.3 Essential Parameters Monitoring Instrumentation B 3/4.3 Chlorine Detection Systems B 3/4.3 Fire Detection Instrumentation B 3/4.3	-1 -1 -1
3 4 4 RF	EACTOR COOLANT SYSTEM	
3 4 4 1	REACTOR COOLANT LOOPS	. 1
3/4 4 2	REACTOR VESSEL WATER LEVEL MONITORING	- 1
3 4 4 9	PRESSURE/TEMPI RATURE LIMITS	- 1

ADMINISTRATIVE CONTROLS
-------------------------

SECTION		PAGE
6.0 ADM	INISTRATIVE CONTROLS	. 6-1
6.1 RESP	ONSIBILITY	6-1
	ANIZATION	
6.2.1	GPUNC Organization	
6.3 UNIT	STAFF QUALIFICATIONS	. 6-3
64 TRAI	NING	6-3
6.5 REVI	EW AND AUDIT	
6.5.1	TECHNICAL REVIEW AND CONTROL	6.3
6.5.1.10	Records	6-5
6.5.1.11	Qualifications	
652	INDEPENDENT SAFETY REVIEW	. 6-5
6521	Function	6-5
6525	Responsibilities	. 6-6
652.7	Records	6-7
65.28	Qualifications for Independent Safety Reviewers	. 6-7
6.5.3	AUDITS	6-7
6.5.3.2	Records	. 6-8
6.5.4	SAFETY REVIEW GROUP (SRG) (Until Implementation of IOSRG) .	. 6-8
6.5.4.1	Function.	
6542	Organization	
6.5.43	Responsibilities	
6546	Authorny	
6547	Qualifications	
6.5.4.8	Records	6-10
6.5.5	INDEPENDENT ONSITE SAFETY REVIEW GROUP (IOSRG)	
6.5.5.1	Function	
6.5.5.2	Organization	
6553	Responsibility	
6554	Authority	
6.5.5.5	Qualifications	
65.56	Records	. 6-10a

## ADMINISTRATIVE CONTROLS PAGE SECTION 6.9 REPORTING REQUIREMENTS 6.9.1 ROUTINE REPORTS AND REPORTABLE OCCURRENCES ..... 6-13 6.9.1.1 Annual Radiological Environmental Operating Report . . . . . . . . . 6-13 6912 Annual Radioactive Effluent Release Report ..... 6-13 6.9.1.4 6.9.2 6.11 RADIATION PROTECTION PROGRAM ..... 6-16 6.13 OFFSITE DOSE CALCULATION MANUAL (ODCM) ..... 6-17

## 1.21 CONTAINMENT ISOLATION shall exist when:

- a. Each penetration is:
  - 1. Closed by an accessible manual valve, a welded or bolted blind flange, or a deactivated automatic valve secured in the closed position to provide isolation of each penetration, or;
  - 2. Open per an approved procedure but can be closed pursuant to Specification 1.21.a.1. Controls shall be implemented to minimize the time the penetration is allowed open and to specify the conditions for which the penetration is open. Penetrations shall be expeditiously closed upon completion of the conditions specified in the approved procedures.
- b. The Equipment Hatch is closed and sealed.
- c. Each Containment Airlock is OPERABLE pursuant to Specification 3.6.1.6.
- 1.22 The OFFSITE DOSE CALCULATION MANUAL (ODCM) shall contain the methodology and parameters used in the calculation of off-site doses resulting from radioactive gases and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarin/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by Section 6.8.4 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating Report and the Annual Radioactive Effluent Release Report required by Specifications 6.9.1.1 and 6.9.1.2, respectively.
- 1.23 MENIBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the GPU System, GPU contractors or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries.
- 1.24 UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY access which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or for industrial, commercial, institutional, and/or recreational purposes.
- 1.25 SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled by GPU Nuclear.

## LIMITING CONDITIONS FOR OPERATION

## 3.3 INSTRUMENTATION

## 3.3.1 NEUTRON MONITORING INSTRUMENTATION

#### INTERMEDIATE AND SOURCE RANGE NEUTRON FLUX MONITORS

3.3.1.1 As a minimum, the intermediate and source range neutron monitoring instrumentation channels of Table 4.3-1 of the RECOVERY OPERATIONS PLAN shall be OPERABLE.

APPLICABILITY: MODE I

#### ACTION:

- a. With the number of source range neutron monitoring channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement of Table 4.3-1 of the RECOVERY OPERATIONS PLAN, restore the inoperable channel to OPERABLE status within 30 days.
- b. With no source range neutron monitoring channels OPERABLE, suspend all activities involving CORE ALTERATION, verify compliance with the boron concentration requirements of Specification 3.1.1.2 at least once per 24 hours by a mass balance calculation and at least once per 7 days by a chemical analysis and restore at least one source range neutron monitoring channel to OPERABLE status within 7 days.
- c. With no intermediate range neutron monitoring channels OPERABLE, restore at least one intermediate range channel to OPERABLE status within 7 days.

## 3.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

Deleted

## 3.3.3 MONITORING INSTRUMENTATION

## METEOROLOGICAL INSTRUMENTATION

3.3.3.4 The meteorological monitoring instrumentation channels shown in Table 4.3-5 of the RECOVERY OPERATIONS PLAN shall be OPERABLE.

APPLICABILITY: MODES I AND 2

#### ACTION:

With any of the above required meteorological monitoring channels inoperable, restore the inoperable channel(s) to OPERABLE status within 7 days.

## LIMITING CONDITIONS FOR OPERATION

## ESSENTIAL PARAMETERS MONITORING INSTRUMENTATION

3.3.3.5 The Essential Parameters Monitoring Instrumentation shall be OPERABLE in accordance with the requirements of Table 4.3-7 of the RECOVERY OPERATIONS PLAN.

APPLICABILITY: MODE I

#### ACTION:

For instrumentation not in accordance with the requirements of Table 4.3-7 of the RECOVERY OPERATIONS PLAN, restore the inoperable instrument(s) to the requirements of Table 4.3-7 of the RECOVERY OPERATIONS PLAN within 72 hours.

## CHLORINE DETECTION SYSTEMS

- 3.3.3.7 Two Chlorine Detection Systems, with their alarm/trip setpoints adjusted to actuate at a chlorine concentration of less than or equal to 5 ppm, shall be OPERABLE:
- a. One at the air intake tunnel, and
- b. One at the Control Room air supply duct.

APPLICABILITY: MODE 1

## ACTION:

With one or more Chlorine Detection Systems inoperable, within I hour initiate and maintain operation of the Control Room Emergency Ventilation System in the recirculation mode of operation; restore the inoperable detection system to OPERABLE status within 30 days.

## FIRE DETECTION INSTRUMENTATION

3.3.8 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 4.3-11 of the RECOVERY OPERATIONS PLAN shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3

## ACTION:

With the number of OPERABLE fire detection instruments less than required by Table 4.3-11 of the RECOVERY OPERATIONS PLAN, insure that an alternate instrument with the same coverage is OPERABLE, or;

- 1. Within I hour, establish a fire watch patrol to inspect the zone with the inoperable instrument(s) al least once per hour, and
- 2. Restore the inoperable instrument(s) to OPERABLE status within 14 days.

THIS PAGE INTENTIONALLY LEFT BLANK

## 3/4.3 INSTRUMENTATION

BASES

## 3/4.3.1 NEUTRON MONITORING INSTRUMENTATION

The neutron monitoring instrumentation, which was included in the normal Reactor Protection System Instrumentation, provides information regarding the shutdown status of the core and it will be used to monitor changes in neutron generation.

#### 3/4,3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

Deleted

#### 3/4,3,3 MONITORING INSTRUMENTATION

#### 3/4.3.3.4 METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public.

#### 3/4.3.3.5 ESSENTIAL PARAMETERS MONITORING INSTRUMENTATION

The OPERABILITY of the Essential Parameters Monitoring Instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables. Reactor Coolant System temperature indication is provided outside the Control Room in the event that Control Room habitability is lost.

## 3/4,3,3,7 CHLORINE DETECTION SYSTEMS

The OPERABILITY of the chlorine detection systems ensures that an accidental chlorine release will be detected promptly and the Control Room Emergency Ventilation System will automatically isolate the Control Room and initiate its operation in the recirculation mode to provide the required protection.

### 3/4.3 INSTRUMENTATION

#### BASES

### 3/4.3.3.8 and 3/4.3.3.9 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the Fire Detection Instrumentation ensures that adequate warning capability as required by the TMI-2 Fire Protection Program Evaluation, is available for the prompt detection of fires. The capability is required in order to detect and locate fires in their early stages. Prompt detection of fires is an integral element in the overall facility fire protection program.

In the event that a portion of the Fire Detection Instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service. For purposes of ALARA considerations, remote mechanisms (e.g., CCTV coverage) may be utilized to perform the fire patrol. However, the inoperability of this instrument would not affect the capability to maintain the safe shutdown condition of the plant nor the ability to prevent offsite releases greater than 10 CFR 100 limits.

THIS PAGE INTENTIONALLY LEFT BLANK

## 5.0 DESIGN FEATURES

## 5.1 SITE

## **EXCLUSION SITE**

5.1.1 The exclusion area is shown on Figure 5.1-1.

#### LOW POPULATION ZONE

5.1.2 The low population zone is shown on Figure 5.1-2.

### SITE BOUNDARY FOR GASEOUS EFFLUENTS

5.1.3 The SITE BOUNDARY for gaseous effluents shall be as shown in the ODCM.

## SITE BOUNDARY FOR LIQUID EFFLUENTS

5.1.4 The SITE BOUNDARY for liquid effluents shall be as shown in the ODCM.

#### 5.2 CONTAINMENT

#### CONFIGURATION

- 5.2.1 The reactor containment building is a steel fined, reinforced concrete building of cylindrical shape, with a dome roof and having the following design features:
- a. Nominal inside diameter = 130 feet
- b. Nominal inside height = 157 feet
- c. Minimum thickness of concrete walls = 4 feet
- d. Minimum thickness of concrete roof = 3.5 feet
- e. Minimum thickness of concrete floor pad = 13.5 feet
- f. Nominal thickness of steel liner = 1/2 inches
- g. Net free volume = 2.1 x 10° cubic feet

## DESIGN PRESSURE AND TEMPERATURE

5.2.2 The reactor containment building is designed and shall be maintained for a maximum internal pressure of 2 psig and a temperature of 286°F.

- d. During Modes 1, 2, and 3, the performance of activities required by the Recovery Quality Assurance Plan to meet the criteria of Appendix "B", 10 CFR 50. The audit frequency shall be at least once per 24 months.
- c. During Mode 1, the Emergency Plan and implementing procedures. The audit frequency shall be at least once per 12 months.
- f. Deleted.
- g. During Modes 1, 2, and 3, the Radiation Protection Plan and implementing procedures. The audit frequency shall be at least once per 12 months.
- h. During Modes 1, 2, and 3, the Fire Protection Program and implementing procedures. The audit frequency shall be at least once per 24 months.
- During Modes 1, 2, and 3, an independent fire protection and loss prevention program inspection and technical audit shall be performed annually utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- j. During Modes 1, 2, and 3, an inspection and technical audit of the fire protection and loss prevention program, by an ourside qualified fire consultant at intervals no greater than 3 years.
- During Modes 1, 2, and 3, any other area of unit operation considered appropriate by the SRG (until implementation of IOSRG), the Manager, SRG's immediate supervisor, the IOSRG, other managers reporting directly to the Office of the Director TMI-2, the Office of the President GPUNC. Any other areas required to be audited by QA will be identified to the appropriate QA Management level.
- The ODCM and implementing procedures at least once per 24 months.

## RECORDS

6.5.3.2 And treports encompassed by Section 6.5.3.1 shall be forwarded for action to the management positions responsible for the areas audited and either the SRG, (until implementation of ICISEC) or the IOSRG (upon its implementation), within 60 days after completion of the audit. The SRG, (until implementation of IOSRG) or the IOSRG will review specified audits performed by QA and make corrective action recommendations as appropriate.

## 654 SATETY REVIEW GROUP (SRG)

#### FUNCTION

6.5.4.1 The SRG shall be a full-time group of engineers, independent of the Site Operations and Engineering staff, and located onsite within the TMI-2 division. (See Organization Plan Figure 1.2.)

## APPLICABILITY

6.5.4.1.1 Until implementation of IOSRG.

#### CIPTURE CONTROLS

#### AUTHORITY

6.5.5.4 The IOSRG shall have access to the unit and unit records as necessary to perform its evaluations and assessments. Based on its reviews, the IOSRG shall provide recommendations to the management positions responsible for the areas reviewed.

#### QUALIFICATIONS

6.5.5.5 The IOSRG engineers shall have either: (1) a Bachelor's Degree in Engineering or the Physical Sciences and three years of professional level experience in the nuclear power field including technical supporting functions, or (2) eight years of appropriate experience in nuclear power plant operations and or technology. Credit toward experience will be given for advance degrees on a one-to-one basis up to a maximum of two years.

## RECORDS

6.5.5.6 Reports of evaluations and assessments encompassed in Section 6.5.5.3 shall be prepared, approved, and transmitted to the Office of the Director, TMI-2, the division vice president responsible for nuclear safety assessment and the management positions responsible for the areas reviewed.

#### 6.6 REPORTABLE EVENTS ACTION

- 6.6.1 The following actions shall be taken for REPORTABLE EVENTS:
  - a. The Commission shall be notified and/or a report submitted pursuant to the requirements of Section 50.73 of 10 CFR Part 50, and
  - b Until implementation of IOSRG, each REPORTABLE EVENT shall be investigated and reviewed by the SRG, including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence. A report shall be submitted to the Manager, SRG's immediate supervisor and the Office of the Director. TMI-2. Upon implementation of IOSRG, each REPORTABLE EVENT shall undergo an independent safety review, by a qualified ISR. This review may be performed after the fact.
  - c. Deleted

## 6.7 SECTION DELETED

### 6.8 PROCEDURES AND PROGRAMS

- 6.8 i. Written procedures shall be established, implemented and maintained covering the activities referenced below:
  - a The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978.
  - b Recovery Operations Plan implementation.
  - Surveillance and test activities of safety-related equipment and radioactive waste management equipment.

- 6.8.2.1 Each procedure and any change to any procedure prepared pursuant to 6.8.1, shall be prepared, reviewed and approved in accordance with 6.5 and will be reviewed periodically as required by ANSI 18.7 1976.
- 6.8.2.2 Deleted.
- 6.8.3.1 Temporary changes to procedures of 6.8.1 may be made provided that:
  - a. The intent of the original procedure control is not altered, and
  - b. (1) For those procedures which affect the operational status of unit systems or equipment, the change is approved by two members of the unit management staff, at least one of whom holds a Senior Reactor Operator's License. (Note: The requirement for a Senior Reactor Operator's License applies during Mode 1 only.) If one of the two above signatures is not by a supervisory person within the Department having cognizance of the procedure being changed, the signature of that supervisory person within the department will also be required, or
    - 2) For those procedures which do not affect the operational status of unit systems or equipment, the change is approved by two members of the responsible organization. If one of the two above signatures is not by a section manager/director within the Department having cognizance of the procedure being changed, the signature of that section manager/director within the department will also be required, and
  - The change is documented. Independent Safety Review completed, and the required reviews and approvals are obtained within 14 days, and
  - d. Those changes to procedures required by Specification 3.9.13 are submitted to the NRC for review within 72 hours following approval by the management level specified for implementation by Section 6.5.1.9.
- 6.8.4 The following programs shall be established, implemented, and maintained:
  - a. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBER(S) OF THE PUBLIC from radioactive effluents as low as is reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,

- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table II, Column 2.
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20,106 and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix 1 to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days.
- timirations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix 1 to 10 CFR Part 50.
- 7) I imitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY conforming to the doses associated with 10 CFR Part 20. Appendix B, Table II, Column 1,
- I imitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE 180UNDARY conforming to Appendix I to 10 CFR Part 50,
- 2) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from tritium and all radiomichides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix 1 to 10 CFR Part 50.

## b Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the gridance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table II, Column 2.
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM.
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,
- Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50.
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY conforming to the doses associated with 10 CFR Part 20, Appendix B, Table II, Column 1,
- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from tritium and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix 1 to 10 CFR Part 50.

## b. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM.
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

## 6.9 REPORTING REQUIREMENTS

## ROUTINE REPORTS AND REPORTABLE OCCURRENCES

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted in accordance with 10 CFR 50.4 unless otherwise noted.

## ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

6.9.1.1 The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted before May 1 of each year. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

## ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT2

6.9.1.2 The Annual Radioactive Effluent Release Report covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be (1) consistent with the objectives outlined in the ODCM and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

<sup>&</sup>lt;sup>1</sup> A single submittal may be made for a multi-unit station.

<sup>&</sup>lt;sup>2</sup> A single submittal may be made for a multi-unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

## AUMINISTRATIVE CONTROLS

### ANNUAL REPORTS1

- 6.9.1.4 Annual reports covering the activities of the unit as described below during the previous calendar year shall be submitted prior to March 1 of each year.
- 6.9.1.5 Reports required on an annual basis shall include:
  - a. A tabulation of the number of station, utility and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated manrem exposure according to work and job functions, 2 e.g., reactor operations and surveillance, in-service inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20% of the individual total dose whole body dose received from external sources shall be assigned to specific major work functions.
  - h. The following information on aircraft movements at the Harrisburg International Airport:
    - 1. The total number of aircraft movements (takeoffs and landings) at the Harrisburg International Airport for the previous twelve-month period.
    - 2. The total number of movements of aircraft larger than 200,000 pounds, based on a current percentage estimate provided by the airport manager or his designee.

## RADIATION SAFETY PROGRAM REPORT

6.9.1.6 Deleted.

## REPORTABLE OCCURRENCES

6.9.1-7 Deleted.

## PROMPT NOTIFICATION WITH WRITTEN FOLLOWUP

6.9 1.8 Deleted

<sup>1</sup> A single su' mittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

<sup>2</sup> This tabulation supplements the requirements of §20.407 of 10 CFR Part 20.

### THIRTY DAY WRITTEN REPORTS

6.9.1.9 Deleted.

### REPORTING REQUIREMENTS FOR INCIDENT WHICH OCCURRED ON MARCH 28, 1979

6.9.1.10 Section deleted. All reporting requirements completed.

#### SPECIAL REPORTS

6.9.2 Special reports shall be submitted in accordance with 10 CFR 50.4 within the time period specified for each report.

## 6.10 RECORD RETENTION

- 6.10.1 The following records shall be retained for at least five years:
  - a. Records of sealed source and fission detector leak tests and results.
  - b. Records of annual physical inventory of all sealed source material of record.
  - c. Records of changes made to the procedures required by Specifications 6.8.1.d and e.
- 6.10.2 The following records shall be retained as long as the Licensee has an NRC license to operate or possess the Three Mile Island Facility.
  - a. Records and logs of unit operation covering time interval at each power level.
  - b. Records and logs of principal maintenance activities, inspection, repair and replacement of principal items of equipment related to nuclear safety and radioactive waste systems.
  - c. ALL REPORTABLE EVENTS submitted to the Commission.
  - d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
  - e. Records of changes made to the procedures required by Specifications 6.8.1.a, b, c, and f.
  - f. Radiation Safety Program Reports and Quarterly Recovery Progress Reports on the March 28, 1979, incident.
  - g. Records of radioactive shipments.
  - h. Records and logs of radioactive waste systems operations.

## ADMINISTRATIVE CONTROLS

- i. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Safety Analysis Report, TER, SD, or Safety Evaluation previously submitted to NRC.
- Records of new and irradiated fuel inventory, fuel transfers and assembly ournup histories.
- k. Records of transient or operational cycles for those unit components designed for a limited number of transients or cycles.
- 1. Records of reactor tests and experiments.
- m. Records of training and qualification for current members of the unit staff.
- n. Records of in-service inspections performed pursuant to these Technical Specifications.
- o. Records of Quality Assurance activities required by the Operating Quality Assurance Plan.
- p. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- q. Records of meetings of the Plant Operation Review Committee (PORC) and the General Review Committee (GRC) and reports of evaluations prepared by the SRG or by the IOSRG, if applicable to TMI-2.
- r. Records of the incident which occurred on March 28, 1979.
- s. Records of unit radiation and contamination surveys.
- t. Records of radiation exposure for all individuals entering radiation control areas.
- u. Records of gaseous and liquid radioactive material released to the environs.
- Records of reviews performed for changes made to the OFFSITE DOSE CALCULATION MANUAL.

## 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained, and adhered to for all operations involving personnel radiation exposure.

## 6.12 HIGH RADIATION AREA

In lieu of the "control device" or "alarm signal" required by Paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area shall be controlled as specified in the Radiation Protection Plan.

## 6.13 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2 v. This documentation shall contain:
  - Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  - A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.106, 40 CFR Part 190, 10 CFR 50.36a, and Appendix 1 to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by GPU Nuclear management.
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

## ATTACHMENT TO LICENSE AMENDMENT NO. 43

## FACILITY OPERATING LICENSE NO. DPR-73

## DOCKET NO. 50-320

Replace the following pages of the Appendix B Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

ines	indic	ating the	area c	of chang	e.
Reme	ove				Inser
1-1-1-1	2				i i i i 1-1
1- 2- 2- 2-	4 1 2 3				2-1
2- 2- 2- 2- 2-	5 6 7				
2- 2- 2- 2-	9 10 10a 10b				
	12				
2-					
2- 3- 3.2- 3.2-	16 1 1				3-1
3.2- 3.2- 3.2- 3.2- 3.2-	4 5 6				
3.2- 3.2- 3.2- 3.2-	8 9 10 11				
3.2- 5- 5-	3 4 5				5-3 5-4 5-5 5-6
5- 5- 5-	7 B				5-7 5-8 5-9

#### ENVIRUNMENTAL TECHNICAL SPECIFICATIONS

## TABLE OF CONTENTS

SECTION		PAGE
1.0	DEFINITIONS	1-1
2.0	LIMITING CONDITIONS FOR OPERATION	2-1
3.0	ENVIRONMENTAL MONITORING	3-1
4.0	SPECIAL STUDIES AND REQUIREMENTS	4-1
4.1	RESIDUAL CHLORINE STUDY PROGRAM	4-1
4.2	THERMAL PLUME MAPPING	4-3
4.3	HYDRAULIC EFFECTS	4-4
4.4	EROSION CONTROL INSPECTION	4-5
4.5	HERBICIDE APPLICATIONS	4-6
4.6	EXCEPTIONAL OCCURRENCES	4-7
4.6.1	UNUSUAL OR IMPORTANT ENVIRONMENTAL EVENTS	4-7
4.6.2	ENCEEDING LIMITS OF OTHER RELEVANT PERMITS	4-7
5.0	ADMINISTRATIVE CONTROLS	5-1
5.1	RESPONSIBILITY	5.1
5.2	ORGANIZATION	5-1
5.3	REVIEW AND AUDIT	5-1
5,3.1	INDEPENDENT REVIEW	5-1
5.3.2	AUDIT RESPONSIBILITY	5-3
5.4	STATE AND FEDERAL PERMITS AND CERTIFICATES	5-3
5.5	PROCEDURES	5-3
5.6	STATION REPORTING REQUIREMENTS	5-6
5.6.1	ROUTINE REPORTS	5-6
5.6.2	NONROUTINE REPORTS	5-7
THREE N	ILE ISLAND - UNIT 2 i AMENDMENT NO.	43

SECTION		PAGE
5.6.2.a	PROMPT REPORT	. 5-7
5.6.2.6	THIRTY DAY REPORT	. 5-7
5.6.2.c	CONTENT OF NONROUTINE REPORTS	. 5-7
5.7	CHANGES IN ENVIRONMENTAL TECHNICAL SPECIFICATIONS AND PERMITS	. 5-8
5.7.1	CHANGE IN ENVIRONMENTAL TECHNICAL SPECIFICATIONS	5-8
5.7.7	CHANGES IN PERMITS AND CERTIFICATIONS	. 5-8
5.8	RECORDS RETENTION	. 5-8

## I.V DEFINITIONS

NPDES Permit: NPDES Permit is the National Pollutant Discharge Elimination System Permit No. PA0009920 issued by the Environmental Protection Agency to Metropolitan Edison Company. This permit authorized Metropolitan Edison Company to discharge from TMINS, controlled waste water into the waters of the Commonwealth of Pennsylvania.

## 2.0 LIMITING CONDITIONS FOR OPERATION

Deleted

# 3.0 ENVIRONMENTAL MONITORING

Deleted

### 5.3.2 AUDIT RESPONSIBILITY

Deleted

### 5.4 STATE AND FEDERAL PERMITS AND CERTIFICATES

Section 401 of PL 92-500, the Federal Water Pollution Control Act Amendment of 1972 requires any applicant for a Federal license or permit to conduct any activity which may result in any discharge into navigable waters to provide the licensing agency a certification from the State having jurisdiction that the discharge will comply with applicable provisions of Sections 301, 302, 306, and 307 of the FWPCA. Section 401 of PL 92-500 further requires than any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with the applicable limitations. Certifications provided in accordance with Section 401 set forth conditions on the Federal license or permit for which the certification is provided. Accordingly, the licensee shall comply with the requirements set forth in the 401 certification dated November 9, 1977 or its currently applicable revision, issued to the licensee by the Pennsylvania Department of Environmental Resources, which requires, among other things, that the licensee comply with effluent limitations stipulated in NPDES permit PA-0009920, effective January 30, 1975. Subsequent revisions to the permits analor certifications will be accommodated in accordance with the provisions of Subsection 5,7,2.

### 5.5 PROCEDURES

Deleted

## 5.6 STATION REPORTING REQUIREMENTS

## 5.6.1 ROUTINE REPORTS

Deleted

## 5.6.2 NONROUTINE REPORTS

A report shall be submitted in the event that an Exceptional Occurrence as specified in Section 4.6 occurs. Report shall be submitted under one of the report schedules described below.

#### 5.62 a PROMPT REPORT

Those events specified as prompt report occurrences shall be reported within 24 hours by telephone, telegraph, or facsimile transmission to the NRC followed by a written report to the NRC within 30 days.

# 5.6.2.b THIRTY DAY EVENT

Nonroutine events not requiring a prompt report as described in Subsection 5.6.2.a, shall be reported to the NRC either within 30 days of their occurrence or within the time limit specified by the reporting requirement of the corresponding certification or permit issued pursuant to Sections 401 or 402 of PL 92-500, whichever time duration following the nonroutine event shall result in the earlier submittal.

### 5.6.2.c CONTENT OF NONROUTINE REPORTS

Written 30-day reports and, to the extent possible, the preliminary telephone, telegraph, or facsimile reports shall (a) describe, analyze, and evaluate the occurrence, including extent and magnitude of the impact, (b) describe the cause of the occurrence, and (c) indicate the corrective action (including any significant changes made in procedures) taken to preclude repetition of the occurrence and to prevent similar occurrences involving similar components or systems.

### 5.7 CHANGES IN ENVIRONMENTAL TECHNICAL SPECIFICATIONS AND PERMITS

### 5.7.1 CHANGE IN ENVIRONMENTAL TECHNICAL SPECIFICATIONS

Request for changes in environmental technical specifications shall be submitted to the NRC for review and authorization per 10 CFR 50.90. The request shall include an evaluation of the environmental impact of the proposed change and a supporting justification. Implementation of such requested changes in ETS shall not commence prior to incorporation by the NRC of the new specifications in the license.

# 5.7.2 CHANGES IN PERMITS AND CERTIFICATIONS

Of the protection of the environment that pertain to the requirements of these ETS shall be reported to the NRC within 30 days. In the event that the licensee initiates or becomes aware of a request for changes to any of the water quality requirements, limits or values stipulated in any certification or permit issued pursuant to Sections 401 and 402 of PL 92-500 which is also the subject of an ETS reporting requirement, NRC shall be notified concurrently with the authorizing agency. The notification to the NRC shall include an evaluation of the environmental impact of the revised requirement, limit or value being sought.

If, during NRC's review of the proposed change, it is determined that a potentially severe environmental impact could result from the change, that NRC will consult with the authorizing agency to determine the appropriate action to be taken.

# 5.8 RECORDS RETENTION

Records and logs relative to the following areas shall be made and retained throughout the term of the operating license. These records and logs shall be made available to NRC on request.

- a. Records and drawing changes detailing station and unit design changes made to system and equipment which could potentially affect the environment.
- b. Records of all data from environmental monitoring, surveillance and study activities required by these environmental technical specifications.



# UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20595

# RELATED TO AMENDMENT NO. 43 TO FACILITY OPERATING LICENSE

NO. DPR-73

GPU NUCLEAR CORPORATION

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

DOCKET NO. 50-320

#### 1.0 INTRODUCTION

By letter dated March 17, 1992, GPU Nuclear Corporation (GPUN or the licensee) requested the approval of a change to the Three Mile Island Nuclear Station (TMI-2) Appendix A and Appendix B Technical Specifications (A-TS and B-TS respectively). The purpose of the amendment request is to relocate the TMI-2 technical specifications related to radiological effluents to the Offsite Dose Calculation Manual (ODCM) in accordance with the guidance in NRC staff Generic Letter B9-01 dated January 31, 1989. A copy of the proposed ODCM was enclosed for NRC staff review in the March 17, 1992 submittal. On June 18, 1992, the licensee submitted Revision 1 to their amendment request. Revision 1 provided an updated copy of the TMI Site ODCM. The updated copy of the ODCM was identified as Revision 2. On December 23, 1992, the licensee submitted Revision 2 to their amendment request. The revision requested that the requirements for quarterly dose assessment and semi-annual radioactive effluent release reporting contained in the TMI-2 technical specifications be changed to an annual reporting requirement in accordance with the provisions of 10 CFR 50,36a(a)(2) made effective on October 1, 1992.

# 2.0 DISCUSSION AND EVALUATION

The staff has completed its review of the TMI ODCM, Revision 2, and finds it acceptable.

This license amendment removes radiological effluent technical specifications from the license and relocates them to the OOCM. The license amendment also changes the reporting requirements for radiological effluents.

The staff evaluation of each of the licensee's proposed changes to the TML-2 technical specifications are as follows:

(1) Add to A-TS, Section 1.0, "DEFINITIONS the definitions for "ODCM, MEMBER(S) OF THE PUBLIC, UNRESTRICTED AREA and SITE BOUNDARY."

Evaluation: Addition of the definition for ODCM is consistent with the requirements and definitions contained in NRC staff Generic Letter 89-01. The definitions of member(s) of the public, unrestricted area and site boundary are used elsewhere in the technical specifications and the addition provides clarity to the requirements. The staff finds the change acceptable.

(2) Change A-TS, Section 3.3.3.1, "Radiation Monitoring Instrumentation," by relocating the Limiting Condition for Operation (LCO) that requires operability of the IMI-2 radiation monitors to the OCDM.

Evaluation: The surveillance requirements for TMI-2, which are normally contained in Section 4 of the A-TS at other facilities, have been removed from the A-TS by a prior change to the license and placed in a separate document called the Recovery Operations Plan. A-TS Section 3.3.3.1 requires that the radiation monitors in Table 4.3-3 of the Recovery Operations Plan be operable. In a separate document issued concurrently with this amendment the staff has approved a change to the TMI-2 Recovery Operations Plan. This change transfers the radiation monitoring requirements in the Recovery Operations Plan Table 4.3-3 to the ODCM. This change, relocating the radiation monitoring requirements to the ODCM, is consistent with the requirements of MRC staff Generic Letter 89-01. Since the radiation monitoring requirements will no longer be in Table 4.3-3 of the Recovery Operations Plan, there is no requirement to specify operability of the monitors in the A-TS. The staff finds the change acceptable.

(3) Change A-TS. Section 3/4.3.3.1. "Radiation Monitoring Instrumentation." by relocating the Basis for the LCO on radiation monitors to the ODCM.

Evaluation: Section 3/4.3.3.1 of the A-TS provide the bases for the specification 4.3.3.1. The licensee proposes relocating the bases to the ODCM since the actual specification is also being relocated to the ODCM (see Item 2 above). This change is consistent with the requirements in NRC staff Generic Letter 89-01. The staff finds the change acceptable.

(4) Change A-TS. Section. 5.1.3, "Site Boundary for Gaseous Effluents," is revised by relocating the figure that specifies the site boundary from the A-TS to the ODCM.

Evaluation: Section 5 of the A-TS contains figure 5.1-3 which identifies the site houndary for gaseous effluents. The licensee proposes relocating the figure to the ODCM. Relocation of the figure that specifies the site boundary for purposes of evaluating gaseous effluent releases from TM1-2 to the document that contains the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous releases is consistent with the intent of NRC staff Generic letter 89-01. The staff finds the change acceptable.

(5) Change A-TS, Section. 5.1.4, "Site Boundary for Liquid Effluents," is revised by relocating the figure that specifies the site boundary from the A-TS to the ODCM.

Evaluation: Section 5 of the A-TS contains figure 5.1-4 which identifies the site boundary for liquid effluents. The licensee proposes relocating the figure to the ODCM. Relocation of the figure that specifies the site boundary for purposes of evaluating liquid effluent releases from TMI-2 to the document that contains the methodology and parameters used in the calculation of offsite doses resulting from radioactive liquid releases is consistent with the intent of Generic Letter 89-01. The staff finds the change acceptable.

(6) Add to A-TS. Section 6.5.3, "Audits," the requirement to audit the ODCM and the implementing procedures at least once every 24 months.

Evaluation: Current Quality Assurance requirements for radiological programs are contained in the TMI-2 Appendix B technical specifications (B-TS) Section 5.5.2, Quality Assurance of Program Results. The licensee has requested in this license amendment to delete Section 5.5.2 of the B-TS. The proposed audit requirement in Section 6.5.3.1. of the A-TS incorporates the to-be-deleted B-TS 5.5.2 and is consistent with the TMI-1 technical specifications. The new section in the A-TS requires the periodic audit of the new ODCM. The staff finds the change acceptable.

(7) Change the A-TS, title of Section 6.8 "Procedures" to "Procedures and Programs."

Evaluation: The current title of Section 6.8.1 is "Procedures." The licensee proposes changing the tile of this section to "Procedures and Controls." The licensee is proposing, in Item 8 below, a new subsection in Section 6.8.1 entitled "Radioactive Effluent Controls Program." Inclusion of the programmatic controls for the Radioactive Effluent Controls Program (RECP) and the Radiological Environmental Monitoring Program (REMP), both which are contained in the ODCM, necessitates the change in the title of this section. This administrative change improves the clarity of the document and the staff finds it acceptable.

(8) Add to A-TS, Section 6.8, "Procedures," a new Subsection 6.8.4 which requires the establishment, implementation and maintenance of an RECP and an REMP.

Evaluation: The licensee is proposing to add a new subsection to Section A-TS 6.8 entitled "Radioactive Effluent Controls Program." The addition of this subsection to Section 6.8 is specified verbatim by Enclosure 3 to NRC staff Generic Letter 89-01. The staff finds this change acceptable.

(9) Add to A-TS, Section 6.9, "Reporting Requirements," new Sections 6.9.1.1, "Annual Radiological Environmental Operating Report," and 6.9.1.2, "Annual Radioactive Effluent Release Report." The licensee also proposes to delete the requirement to submit reports to the NRC from the B-TS.

Evaluation: Current radiological reporting requirements for TMI-2 are contained in the B-TS. The licensee proposes adding two new sections to the A-TS Section 6.9.1.1 "Annual Radiological Environmental Operating Report" and Section 6.9.1.2 "Annual Radioactive Effluent Release Report." NRC staff Generic Letter 89-01 provides guidance in relocating the reporting requirement for both reports from the B-TS to the A-TS. The licensee's proposal is consistent with the guidance in Enclosure 3 to NRC staff Generic Letter 89-01. The staff finds this change acceptable. The licensee also proposes to eliminate the Quarterly Radiological Releases and Estimated Dose Report required by B-TS Section 5.6.1.C. and the Semi-annual Effluent Release Report, mentioned in several sections of the B-TS (i.e. Section 3.2.1 "ACTION") and required by the TMI-1 technical specifications, but not specifically identified in a separate section of the TMI-2 A-TS or B-TS as a routine reporting requirement. These two submittals would, under the requirements of A-TS Section 6.9 "Reporting Requirements" be submitted annually instead of quarterly or semi-annually. This requested change in the frequency of submittals is consistent with recent (57 FR 169, August 31, 1992) changes to 10 CFR 50.36a(2). 10 CFR 50.36a(2) specifies that the annual radioactive effluent release report must be submitted annually for the previous 12 months. The regulations does not specify a fixed date to submit the report to the NRC. In a memorandum from L. Cunningham (NRC), dated May 14, 1993, the NRC staff specified "prior to May 1 of each year" as an acceptable submittal date. The licensee approved the revised date change to A-TS Section 6.9.1.2 telephonically on May 25, 1993. The licensee's original proposed wording for this section was "60 days after January 1 of each year." The staff finds these changes acceptable.

(10) Add to A-TS, Section 6.10, "Records Retention," the requirement to retain the records of reviews performed for changes made to the ODCM.

Evaluation: The current A-TS section 6.10.2 does not specify that records of reviews performed for changes made to the ODCM be retained. The licensee proposes adding this requirement to this section. This change is specified in Enclosure 3 to NRC staff Generic Letter 89-01. The staff finds this change acceptable.

(11) Add to A-TS, a new section, Section 6.13, "Off-site Dose Calculation Manual," which provides for administrative controls related to the newly developed ODCM.

Evaluation: The current A-TS does not specify any administrative controls for the OOCM. The licensee proposes adding this new section which specifies controls for the ODCM. This change is specified in Enclosure 3 to NRC staff Generic Letter 89-01. The staff finds the change acceptable.

(12) Delete B-TS, Section 1.0, Definitions, the following Definitions:
"Accuracy, Aerial Remote Sensing, Batch Release, Calibration, Channel Check, Channel Functional Test, Closed Cycle Cooling, Combined Available Chlorine, Composite Sample, Continuous Release, Daily Average Concentration, Daily Maximum Concentration, Free Available Chlorine, Grab Sample, Ground Truth or Ground Data Survey, Herbicides, Infrared, Photographic, Lake Federick, Manner of Herbicide Application, Multispectrial or Multiband Photographs, Normal Operation, Precision, Protected Areas, Sampling Frequency, Scale, Spectral Band, Station or Unit, Total Residual Chlorine, and Surveillance Requirement."

Also the licensee proposes removing Table 1.1 on page 1-4, entitled "Sampling Frequency and Notation."

Evaluation: The definitions listed above either pertain to the nonradiological monitoring requirements which were deleted in Amendments 21 or 40, or radiological effluent monitoring and instrumentation, which is to be relocated from the B-TS to the ODCM by this amendment request. With the changes proposed by this amendment request there is no need to include a table that defines sampling frequency and notation, since the B-TS no longer specifies any sampling. The staff finds these changes acceptable.

(13) Relocate B-TS, Section 2.0, "Limiting Conditions for Operation," from the B-TS to the ODCM as Part II, Sections 2.0 and 3.0. The only changes made to this section are renumbering and typographic corrections.

Evaluation: This change is consistent with the guidance presented in NRC staff Generic Letter B9-01. Minor changes in numbering and the correction of typographic errors are administrative in nature. The staff finds the change acceptable.

(14) Relocate B-TS, Section 3.2, "Radiological Environmental Monitoring," from the B-TS to the ODCM as Part I, Section B.O. Since Part I of the ODCM applies to both TMI-1 and TMI-2, there are instances where the current technical specification requirements for TMI-1 and TMI-2 were not the same. In those cases the more restrictive requirement was incorporated in Part I of the ODCM. Additionally, there were other changes to this section consisting of renumbering sections and typographic corrections.

Evaluation: The current B-TS for TMI-2 contain Section 3.2, "Radiological Environmental Monitoring" which defines the limits and conditions for the controlled release of radioactive effluents. The licensee proposes removing this section from the B-TS and relocating it to the ODCM as Part I, Section B.O. This change is consistent with the guidance presented in NRC staff Generic Letter B9-01. Minor changes in numbering and the correction of typographic errors are administrative in nature. Examples of resolution of inconsistencies between the TMI-1 and TMI-2 current programs include requiring an analysis for I-131 in the ODCM (not required by the current TMI-2 B-TS but required by the TMI-1 technical specifications), specifying the maximum sampling period in days between semiannual samples in the ODCM (not specified

in the current TMI-2 B-TS but specified in the TMI-1 technical specifications) or specifying sampling specific food products (fruits and vegetables) in the ODCM (not included in the current TMI-2 B-TS but in the TMI-1 technical specifications). The staff finds these changes acceptable.

(15) Change 8-TS, Section 5.4, "State and Federal Permits and Certifications," by deleting the reference to Sections 2 and 3 of the 8-TS.

Evaluation: Sections 2 and 3 are being deleted in their entirety from the B-TS and being relocated in the ODCM. Section 5.4 of the B-TS states in part that "... the licensee shall comply with the requirements, with respect to Sections 2, if applicable, and 3 of these ETS, set forth in the 401 certification...". The licensee proposes to reword the section to read "... the licensee shall comply with the requirements set forth in the 401 certification...". Since neither section will exist in the B-TS references to these sections should also be deleted. The staff finds the change acceptable.

(16) Change B-TS, Section 5.5, "Procedures," by deleting the section in its entirety and relocating revised text on this requirement to A-TS Section 6.8.4.

Evaluation: This section currently specifies radiological programmatic controls. Programmatic controls of the radiological program have been moved to A-TS Section 6.8.4 (see Item 8 above). The licensee is proposing to add a new subsection to section A-TS 6.8 entitled "Radioactive Effluent Controls Program." The addition of this subsection to Section 6.8 is specified verbatim by Enclosure 3 to NRC staff Generic Letter 89-01. The staff finds this change acceptable.

(17) Change 8-TS, Section 5.5.2, "Quality Assurance of Program Results," by deleting this section in its entirety and relocating revised text on this requirement to A-TS Section 6.8.4.

Evaluation: Current technical specification B-TS Section 5.5.2 requires certain program controls to assure the quality of the radiological monitoring program. The licensee proposes relocating this section to the A-TS Section 6.8.4. The text has been altered consistent with the text taken verbatim from the NRC staff Generic Letter 89-01. The staff finds the change acceptable.

(18) Change B-TS, Section 5.5.3, "Compliance with Procedures," by deleting this entire section. The section requires that the facility is operated in compliance with the station procedures and in compliance with the B-TS.

Evaluation: This requirement is redundant to Section 2.C.(2) of license DPR-73 which states that the licensee shall operate the facility in accordance with the Technical Specifications. It is also redundant to Section 6.B.2 of the A-TS which requires that written procedures be established, implemented and maintained. Additionally, it is redundant to the new Section 6.B.4 to the

A-TS (see Item B above) which provides the programmatic controls for the radiological requirements that are being transferred to the A-TS and the ODCM, consistent to NRC staff Generic Letter B9-01. Removal of redundant requirements is considered an administrative change. The staff finds the change acceptable.

(19) Change B-TS, Section 5.5.4, "Changes in Procedures, Station Design. or Operation," by deleting this entire section. This section allows for changes to procedures, station design or operation as described in the B-TS Sections 2 and 5 or changes to the monitoring programs described in B-TS Section 3.

Evaluation: Section 2, "Limiting Conditions for Operation", of the B-TS, limits the release of radiological effluents. This section is being relocated to the ODCM in its entirety by this license amendment (see item 13 above). Section 3, Environmental Monitoring, specifies both radiological and nonradiological monitoring programs. There are no nonradiological monitoring programs required under the current B-TS. All nonradiological monitoring programs have been deleted by prior license amendments. The radiological monitoring programs specified by this section have been transferred, by this license amendment to the ODCM (see Item 14 above). Section 5, Administrative Controls, specifies programmatic controls for the B-TS. The sections of Section 5 that pertain to certain administrative controls of the radiological programs are being relocated to the A-TS by this amendment (see items 17 and 1B above). Therefore, the sections identified by this technical specification are no longer in the B-TS. Additionally, technical review involving modifications or changes to procedures, or station design, which would include radiological requirements is addressed in the A-TS existing Section 6.5.1. Deletion of Section 5.5.4 of the B-TS removes a section that no longer pertains to requirements in the B-TS. The referenced sections are transferred to the ODCM or the A-IS. The existing A-TS, along with several new sections will prescribe how future changes can be made. The staff finds the change acceptable.

(20) Change B-TS, Section 5.6.1., "Routine Reports," by relocating the sections which pertains to radiological reporting, to the A-TS, and/or the ODCM. B-TS Section 5.6.1.A.(2), which pertains to radiological reporting, is being relocated to the A-TS, Section 6.9.1.1 and the ODCM, Part III, Section 1.0. B-TS Section 5.6.1.C. which requires a quarterly report entitled "Quarterly Radiological Releases and Estimated Dose Report." is being relocated to A-TS Section 6.9.1.2 and the ODCM Part III, Section 3.0 and changed from a quarterly reporting requirement to an annual reporting requirement. It is also being retitled as the "Annual Radioactive Effluent Release Report."

Evaluation: The relocation of B-TS Section 5.6.1.A.(2) to A-TS Section 6.9.1.1 and the OOCM is consistent with the guidance contained in NRC staff Generic Letter B9-01. Relocation of the requirement for a Quarterly Radiological Releases and Estimated Dose Report to the A-TS and the ODCM is consistent with the guidance in NRC staff Generic Letter B9-01. Changing the reporting requirement from a quarterly report to an annual report is

consistent with the recent change (57 FR 169, August 31, 1992) to 10 CFR 50.36a which now requires an annual release and dose report. See also the response to Item 9 above. The staff finds the changes acceptable.

(21) Change B-TS, Section 5.6.2, Nonroutine Reports, by deleting the reference to Section 2 in the technical specification. The phrase "a Technical Specification Limiting Condition for Operation (Section 2), if applicable, is exceeded or if" is deleted.

Evaluation: As described in Item 13 above Section 2 of the B-TS are being relocated to the ODCM as prescribed by NRC staff Generic Letter 89-01. The proposed change improves the clarity of the B-TS by removing a reference to a section that no longer exists in the revised B-TS. The staff finds the change acceptable.

(22) Change A-TS, "INDEX," by changing pages ii, iii, vi, ix, x of the table of contents to reflect the sections either added or deleted by the above detailed changes.

Evaluation: A number of sections have been added and several deleted from the A-TS by this amendment request. The licensee has updated pages ii. iii, vi, ix and x of the A-TS table of content, called "INDEX." The staff finds this an administrative change and therefore finds it acceptable.

(23) Change B-TS, "TABLE OF CONTENTS" by changing pages i and ii of the table of contents to reflect the sections deleted.

Evaluation: Subsections of Sections 2 and 3 of the Table of Contents have been removed to reflect the changes proposed by this amendment. The staff finds this an administrative change and therefore finds it acceptable.

Based on the above evaluation, we find that the licensee's changes to the Appendix A and 8 Technical Specifications for TMI-2, as described in Revision 2 dated December 23, 1992 are consistent with NRC issued Generic Letter 89-01 dated January 31, 1989. The staff finds the proposed changes acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of Pennsylvania cognizant individual was notified of the proposed issuance of this amendment. The State official had no comment.

### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in the location of specific surveillance requirements and changes in reporting requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no change in individual cumulative occupational exposure or exposure to the public. The Commission has previously issued a

proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (58 FR 16226) dated March 25, 1993). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

### 5.0 CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Michael T. Masnik

Date: May 26, 1993