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May 6, 1983

Docket No. 50-320

Mr. B. K. Kanga, Director
Three Mile Island Unit 2
GPU Nuclear Corporation
P.O. Box 480
Middletown, PA 17057

Dear Mr. Kanga:

Subject: Three Mile Island Nuclear Station, Unit 2
Operating License No. DPR-73
Docket No. 50-320
Technical Specification Change Request No. 38

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 21 to Facility Operating License No. DPR-73. This amendment is in response to your request dated August 25, 1982 (4400-82-L-0127), a meeting held between GPU Nuclear Corporation (GPUNC) staff and NRC staff on October 26, 1982, and your revised submittal dated January 24, 1983 (4410-83-L-0009).

This amendment consists of changes in the radiological environmental monitoring program requirements as specified in Appendix B of the technical specifications. Modifications have been made to the changes as requested in the referenced correspondence. These modifications have been discussed with members of your staff.

You have also requested staff approval of your Aquatic Monitoring Program (attachment B to the GPUNC change request). The staff has reviewed that document and our required revisions are discussed in attachment 1.

We have determined that the amendment involves an action that is insignificant from the standpoint of environmental impact and that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

Having made this determination, we have further concluded that pursuant to 10 CFR 51.5 (d)(4) an environmental impact statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

8305180238 830506
PDR ADOCK 05000320
P PDR

OFFICE	TMIPO:NRR	TMIPO:NRR	TMIPO:NRR	ELD		
SURNAME	TPoindexter:bg	RAWeller	BJSnyder	JRTBarrett		
DATE	5/6/83	5/6/83	5/6/83	5/4/83		

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-960

Copies of the Notice of Issuance have been forwarded to the Office of the Federal Register for publication. In addition to the above, revised pages for the Technical Specifications and the related Safety Evaluation are enclosed. This amendment will become effective immediately upon issuance.

Sincerely,

/s/ Michael T. Masnik
for
Bernard J. Snyder, Program Director
Three Mile Island Program Office
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 21
2. Certificate of Service
3. License as Amended
4. Revised Pages
5. Safety Evaluation
6. Attachment 1; Required Changes to Environmental Monitoring Program
7. Notice of Issuance

cc: J. Barton
J. Larson
J. Byrne
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GENERAL PUBLIC UTILITIES NUCLEAR CORPORATION

DOCKET NO. 50-320

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 21
License No. DPR-73

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Metropolitan Edison Company, Jersey Central Power and Light Company, and Pennsylvania Electric Company (the licensee), dated October 30, 1981 and amended by letter dated December 3, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter 1;

   B. The facility will be operated by GPU Nuclear Corporation (established by Amendment and Modification of Order dated 12/30/81 replacing Metropolitan Edison as the operating licensee) in conformity with the License, the Order for Modification of License dated July 20, 1979, the Order of February 11, 1980, as subsequently modified and amended, the application for amendment, 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 will 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;

   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's regulations and all applicable requirements have been satisfied.

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

   2.C.(2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 21 are hereby incorporated in the license. The licensee 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bernard J. Snyder, Program Director
TMI Program Office
Office of Nuclear Reactor Regulation

Attachment: Revised Technical Specifications

Date of Issuance: May 6, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
GENERAL PUBLIC UTILITIES NUCLEAR CORPORATION	)	Docket No. 50-320 OLA
	)	
(Three Mile Island Nuclear Station, Unit 2)	)	

CERTIFICATE OF SERVICE

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Secretary
U.S. Nuclear Regulatory Commission
ATTN: Chief, Docketing & Service Br.
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FACILITY OPERATING LICENSE NO. DPR-73

DOCKET NO. 50-320

Replace the following pages of Appendix "B" Technical Specifications with the enclosed pages as indicated. The revised pages contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Pages

3-1
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*4-7
*4-8

*Pages included for information only.

3.0 Environmental Monitoring

3.1 Nonradiological Monitoring

A. Initiation and Duration of Monitoring Programs

The aquatic environmental monitoring programs described in this Section shall commence as specified under each program and continue until modified or terminated as provided for in Subsection 5.7.1 of the ETS. Modifications of the ETS or programs may be proposed at any time with appropriate justification in accordance with 10 CFR 50.90.

B. Delays in Sample Collection

If offsite sample collection cannot be undertaken on the scheduled date (plus or minus the number of days allowed by the appropriate sampling frequency definitions) due to adverse weather conditions or for other justifiable reasons, the factual basis shall be recorded and collections shall commence on the first practical date following the scheduled date.

C. Bases for Continued Monitoring

The bases for the York Haven Pond studies in relation to the accident and cleanup at TMI are provided in the Programmatic Environmental Impact Statement (PEIS) Section 11.10. The PEIS (page 11-8) states, "These programs monitor the aquatic biota and sport fishery in that segment of the Susquehanna River where the TMI effluent first enters, is the last dilute, and where effects (if any) would be seen first." The knowledge of effects (or no effects) will be invaluable in allaying the fears of resource users downstream, including the Chesapeake Bay. These programs are concerned with measuring the integrity of the aquatic system and the fishery resource. Ecological matters are a concern also, since they could ultimately translate into people problems (if the ecosystem is interrupted by TMI operations). The status of the fish community or populations can reflect the status of the aquatic environment, and the status of the sport fishery can reflect the attitudes of the local people.

As stated in NUREG-0754, a fishery is made of three essential components: (1) the fish (the biotic populations); (2) their environment or habitat (as influencing, governing, or limiting factors); and (3) the people who exploit or depend on the biota (anglers, watermen, markets, restaurants, etc.). A nuclear plant has the potential to alter components (1) and (2) via intake and discharge (rad and non-rad) effects, as well as component (3) by affecting the public's perception of threat. A disruption of any of the components could affect the fishery. Following an event (accidental or planned) at TMI, a capability should exist for evaluating impacts to all components. A continuing river monitoring program is therefore essential.

3.1.1 Abiotic

3.1.1.a Aquatic

3.1.1.a.(1) Thermal Characteristics of Cooling Water Discharge

Environmental Monitoring Requirement

Deleted

Action

Deleted

Bases

Deleted

Bases

Deleted

3.1.1.a.(2) pH

Environmental Monitoring Requirement

Deleted

Action

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Bases

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3.1.1.a.(3) Biocide

Environmental Monitoring Requirement

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Action

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Bases

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3.1.1.a.(4) Water Quality Analysis

Environmental Monitoring Requirement

Information on the physical and chemical characteristics of the Susquehanna River at the times and sampling locations of the Aquatic Biotic Monitoring Program of ETS Subsection 3.1.2.a. shall be collected in the vicinity of the Three Mile Island Nuclear Station.

The following physical and chemical characteristics of the Susquehanna River shall be measured at the times and sampling locations of the Benthic Macroinvertebrates survey of these ETS Subsection 3.1.2.a(1)(a).

Temperature
pH
Dissolved Oxygen
Total Dissolved Solids

The following physical and chemical characteristics of the Susquehanna River shall be measured at the times and sampling locations of the General Ecological Survey of these ETS Subsection 3.1.2.a(1): temperature, pH, dissolved oxygen.

All samples shall be collected and all analyses shall be performed in accordance with the procedures prepared by the licensee in accordance with Section 5.5.

The collection of samples shall coincide to the extent practicable with biological sampling at the same location.

Action

The results of the monitoring conducted under this program shall be summarized, analyzed, interpreted, and reported in accordance with Subsection 5.6.1. The licensee shall indicate for each parameter the date of sampling, sampling location, concentration measured, depth of sample, and method of analysis used.

Bases

Examination of the water quality, at the times and locations used for the aquatic biological investigations will yield data required for the evaluation of trends and unusual occurrences that may be suggested by the biological observations.

3.1.1.a.(5) Chemical Release Inventory

Environmental Monitoring Requirement

Deleted

Action

Deleted

Bases

Deleted

3.1.2 Biotic

3.1.2.a Aquatic

3.1.2.a.(1) General Ecological Survey

3.1.2.a.(1)(a) Benthic Macroinvertebrates

Environmental Monitoring Requirement

The benthic macroinvertebrates shall be sampled to detect and assess the significance of changes in species composition, standing crop biomass, distribution, and abundance as related to Three Mile Island Nuclear Station (TMINS).

All samples shall be collected and all analyses shall be performed in accordance with the Procedures prepared by the licensee as per Section 5.5.

Action

Description of the program, results, and interpretative analyses of environmental impacts shall be reported per the routine report schedule of Subsection 5.6.1. Results reported shall contain information encompassing but not be limited to: sample date; station number; depth of the sample in meters; gear type used; substrate type (expressed in general terms); sample size (a real size sampled in m^2); species or taxon; the estimated or actual number of each taxon in the sample; biomass expressed as milligrams (mg) by weight per m^2 for each indicated taxon; the relative abundance of each taxon.

Bases

Because benthic organisms are sedentary and cannot "avoid" adverse conditions, they are useful indicators of water quality and environmental change.

The environmental assessment made in the FES-OL of 1972 (Section V.C.2) and the Supplement to the FES-OL of 1976 (Section 5.5.2.3) determined that impacts to the benthos of Lake Frederick area (York Haven Reservoir) of the Susquehanna River may result from the operation of Three Mile Island Nuclear Station. The Atomic Safety and Licensing Board determined in its Initial Decision, dated December 20, 1977 (page 80 ff.), that the program to monitor the benthic macroinvertebrates should continue for at least three years following the onset of Unit 2 operation. This requirement has been completed without

evidence of significant, adverse impacts to the benthos from the operation of TMI-1, the combined operations of TMI-1 and TMI-2, the accident at TMI-2, or the post accident shutdown modes of TMI-1 and TMI-2.

3.1.2.a.(1)(b) Ichthyoplankton

Environmental Monitoring Requirement

The ichthyoplankton shall be sampled to detect and assess the significance of changes in species composition, relative abundance, density, and seasonal and spatial distribution as related to TMINS. All samples shall be collected and all analyses shall be performed in accordance with the Procedures prepared by the licensee as per Section 5.5.

Approval for modification or termination of the monitoring requirement may be obtained from the NRC in accordance with Subsection 5.7.1.

Action

Description of the program, results, and interpretative analysis of environmental impacts shall be reported as per the routine report schedule of Subsection 5.6.1.

Results reported shall contain information encompassing but not limited to: sampling date; station number; depth of the sample in meters; species or taxon; life stage of the specimens; and No/100 m^3 (the estimated number of organisms per 100 cubic meters of water filtered or pumped).

Bases

The environmental assessments made in the FES-OL of 1972 (Section V.C.2) and the Supplement of the 1976 (Section 5.5.2.2) determined that impacts to the ichthyoplankton of Lake Frederic may result from the operation of Three Mile Island Nuclear Station. The Atomic Safety and Licensing Board determined in its Initial Decision, dated December 20, 1977 (Page 80 ff.), that the program to monitor the possible impacts to fish should continue for at least three years following the onset of Unit 2 operation. Combined far-field and entrainment studies have been conducted during the operation of TMI-1, the operation of TMI-1 and TMI-2, the accident at TMI-2, and the post accident shutdown period of TMI-1 and TMI-2. All studies have indicated that no significant, adverse impacts resulted from the activities at the TMINS.

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3.1.2.a.(1)(c) Fish

Environmental Monitoring Requirement

The ichthyofauna shall be sampled to detect and assess the significance of changes in species composition, relative abundance, and seasonal and spatial distribution, as related to TMINS.

All samples shall be collected and all analyses shall be performed in accordance with the Procedures prepared by the licensee per Section 5.5. Data will be collected by methods appropriate for statistical analyses in the form of catch-per-unit-effort. Additionally, creel surveys shall be continued.

When large numbers of fish are captured which may be in excess of those required for proper analysis, a subsample shall be taken which is representative of the sample as a whole (e.g., by species, size classes, reproductive status). The excess shall be returned.

Approval for modification of termination of this monitoring requirement may be obtained from NRC in accordance with Subsection 5.7.1.

Action

Description of the program, results, and interpretative analyses of environmental impacts shall be reported per the routine report schedule of Subsection 5.6.1.

Results reported shall contain information encompassing but not limited to: sampling date; station number, depth of the sample in meters; sampling gear type used; duration of sampling (minutes); species or taxon; actual or estimated number of each taxon collected in the sample; length frequencies (number 5mm intervals); and mean weight (grams) for all specimens in each length interval. If a significant deviation from preoperational conditions is discovered, the reasons for the deviation shall be determined.

Bases

The environmental assessments made in the FES-OL of 1972 (Section V.C.2) and the supplement to the FES-OL of 1976 (Section 5.2.2.1) determined that impacts to the fish populations of Lake Frederic may result from the operation of Three Mile Island Nuclear Station because of impingement of adult and juvenile fishes and the entrainment of fish eggs and larvae. The Atomic Safety and Licensing Board determined in its Initial Decision, dated December 20, 1977 (page 80 ff.), that the program to monitor the possible impacts to fish should continue for at least three years following the onset of TMI-2 operation.

Studies of adult and juvenile fish populations have been conducted during the operation of TMI-1, the operation of TMI-1 and TMI-2, the accident of TMI-2, and the post accident shutdown period of TMI-1 and TMI-2. All studies have indicated that no significant adverse impacts resulted from activities at the TMINS.

3.1.2.a.(2) Impingement of Organisms

Environmental Monitoring Requirement

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Action

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Bases

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3.1.2.a.(3) Entrainment of Ichthyoplankton

Environmental Monitoring Requirement

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Action

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Bases

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3.1.2.b Terrestrial

3.1.2.b.(1) Aerial Remote Sensing

Environmental Monitoring Requirement

Deleted

Bases

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4.0 Special Studies and Requirements

4.1 Residual Chlorine Study Program

Requirement

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Action

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Bases

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4.2 Thermal Plume Mapping

Requirement

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Action

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Bases

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4.3 Hydraulic Effects

Requirement

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Action

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Bases

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4.4 Erosion Control Inspection

Requirement

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Action

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Bases

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4.5 Herbicide Applications

Requirement

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Action

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Bases

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4.6 Exceptional Occurrences

4.6.1 Unusual or Important Environmental Events

Requirements

The licensee shall be alert to the occurrence of unusual or important events. Unusual or important events are those that cause or could cause potentially significant environmental impact casually related with station operation. The following are examples: excessive bird impaction events on cooling tower structures or meteorological towers (defined by the Atomic Safety and Licensing Board in its Initial Decision, dated December 20, 1977 (page 80 ff.), as more than 100 in any one day); on-site plant or animal disease outbreaks; unusual mortality of any species protected by the Endangered Species Act of 1973; fish kills near or downstream of the site.

This special requirement shall commence with the date of issuance of the operating license for TMI-2 and continue until approval or modification or termination is obtained from the NRC in accordance with Subsection 5.7.1.

Action

Should an unusual or important event occur, the licensee shall make a prompt report to the NRC in accordance with the provisions of Subsections 5.6.2.a and 5.6.2.c.

Bases

Prompt reporting to the NRC of unusual or important events as described above is necessary for responsible and orderly regulation of the nation's system of nuclear power reactors. Prompt knowledge and action may serve to alleviate the magnitude of the environmental impact or to place it into a perspective broader than that available to the licensee. The information thus provided may be useful or necessary to others concerned with the same environmental resources. NRC also has an obligation to be responsive to inquiries from the public and news media concerning potentially significant environmental events at nuclear power stations.

4.6.2 Exceeding Limits of other Relevant Permits

Requirements

The licensee shall notify the NRC of occurrences of exceeding the limits specified in relevant permits and certificates issued by other Federal, State, and local agencies which are reportable to the agency which issued the permit. This requirement shall apply only to topics of NEPA concern within the NRC area of responsibility as identified in these Environmental Technical Specifications.

This requirement shall commence with the date of issuance of the operating license for TMI-2 and continue until approval for modification or termination is obtained from the NRC in accordance with Subsection 5.7.1.

Action

The licensee shall make a report to the NRC in accordance with the provisions of Subsections 5.6.2.b. and 5.6.2.c. in the event of a reportable occurrence of exceeding a limit specified in a relevant permit or certificate issued by another Federal, State, or local agency.

Bases

NRC is required under NEPA to maintain an awareness of environmental impacts casually related with the construction and operation of facilities licensed under its authority. Further, some of the ETS requirements are couched in terms of compliance with relevant permits (such as the NPDES) issued by other licensing authorities. The reports of exceeding limits of relevant permits also alert the Staff to environmental problems that might require mitigative action.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

GENERAL PUBLIC UTILITIES NUCLEAR CORPORATION

DOCKET NO. 50-320

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

Introduction

By letter dated August 25, 1982, (4400-82-L-0127) as amended by letter dated January 24, 1983, (4410-83-L-0009) the General Public Utilities Corporation (GPUNC) requested changes to the Technical Specifications of Operating License No DPR-73 for the Three Mile Island Nuclear Station Unit No. 2 (TMI-2). The requested changes to Appendix B of the Operating License No. DPR-73 pertain to the following:

(1) Eliminate activities that are duplicated in the licensee's National Pollutant Discharge Elimination System (NPDES) permit;

(2) Eliminate those programs that have been satisfactorily completed (Section 4 special studies);

(3) Eliminate those programs that are not related to monitoring the integrity of the river system in relation to the cleanup;

(4) Modify the General Ecological Survey (Section 3.1.2.a.1);

(5) Eliminate the erosion control inspection section, and

(6) Eliminate the discussion on herbicide use.

Discussion and Evaluation

Because of the number of changes proposed by the licensee, the staff has addressed each type of modification separately.

Editorial Changes

3.1.a Nonradiological Monitoring (In Part)

3.1.1.a (4) Water Quality Analysis (In Part)

3.1.2.a (1)(b) Ichthyoplankton

3.1.2.a (1)(c) Fish

The licensee has requested modifications to the above sections to modify the bases or to correct spelling. The wording that discusses the duration of environmental monitoring program has also been revised. As discussed in attachment 1, page 3 of this document, the paragraph discussing fish capture has been retained. Because these changes do not affect the ability of the licensee to monitor the environment as applicable to TMI-2 in its present state, the staff finds them acceptable.

3.1 Nonradiological Monitoring

The staff has added section C, "Bases for Continued Monitoring." The new section explains the reasons that the staff is continuing to require certain aspects contained in the environmental monitoring programs of the ETS.

3.1.1.a (1) Thermal Characteristics of Cooling Water Discharge

3.1.1.a (2) pH

3.1.1.a (3) Biocide

The licensee has requested the deletion of the subject sections in their entirety. The TMI-2 reactor presently has a decay heat rate low enough that the loss of heat to the containment building atmosphere is sufficient to keep the reactor coolant system at an acceptable temperature. Therefore the systems that would be used at a normally operating plant are not necessary to

maintain this temperature level. The decay heat rate decreases with time with the only credible mode that could reverse this trend being re-criticality. Numerous analyses have been performed by the licensee and the NRC to verify that with the present level of boration, criticality will not occur. Without a decay heat source that is magnitudes higher than what presently exists, the use of cooling systems that discharge into Susquehanna will be minimal.

Also, these requirements are activities that are duplicates of what is required in the facility's National Pollutant Discharge Elimination System (NPDES) Permit. The NRC has stated in previous correspondence that where duplications occur between the NPDES permit and the Environmental Technical Specifications, the ETS requirements may be deleted. (Reference 1)

Therefore unless the licensee requests the restart of TMI-2, significantly alters the use of cooling systems that discharge into the river or modifies the requirements of the NPDES permit, the staff finds these changes acceptable.

3.1.1. a (4) Water Quality Analysis

3.1.1. a (5) Chemical Release Inventory

The licensee has proposed the deletion of Turbidity, Alkalinity, Copper (total and dissolved), Zinc (total and dissolved), and Sulfate from the list of physical and chemical characteristics that must be measured at the times and sampling locations of the Benthic Macroinvertebrates survey of ETS Subsection 3.1.2 a (1)(a).

As stated in the previous discussion, unless the licensee requests the restart of TMI-2 or modifies the comparable requirements in the facility's NPDES permit, the staff finds this change acceptable.

3.1.2.a (1)(a) Benthic Macroinvertebrates

The licensee has proposed to delete the biomass requirement from the reporting requirements. Additional explanatory wording was also proposed for the bases.

Biomass determination is a standard method of estimating macroinvertebrate abundance and has been performed at TMI since the inception of the environmental monitoring program. A reduction in sampling stations, sampling frequency and biomass determination would in the opinion of the staff seriously threaten the integrity of the program. Therefore the requested deletion of the biomass requirement is denied. The additional wording for the bases is approved.

3.1.2.a (2) Impingement of Organisms

3.1.2.a (3) Entrainment of Ichthyoplankton

The licensee has requested the deletion of the subject sections in their entirety. The staff agrees that based on nine years of data, minimal impacts have been seen at both intakes. Also small fractions of ichthyoplankton have been entrained at TMI-2. Therefore it is the licensee's opinion that additional impingement and entrainment studies are not necessary to monitor clean-up activities. The staff agrees with this assessment and therefore approves the deletion.

4.1 Residual Chlorine Study Program

4.2 Thermal Plume Mapping

4.3 Hydraulic Effects

The licensee has requested the deletion of these sections in their entirety. These programs are a duplicates of the requirements presently contained in the NPDES permit and as stated in reference 1, no longer falls under the jurisdiction of the NRC. In addition, it is the staff's opinion that these parameters need not be monitored by NRC because of the present shutdown status

of TMI-2.

The staff therefore finds the above deletions acceptable.

4.4 Erosion Control Inspection

4.5 Herbicide Applications

The licensee has requested the deletion of the above sections because of the historical data that has indicated no significant impact on the environment. Additionally, the use of herbicides is regulated by the U.S. Environmental Protection Agency and the Pennsylvania Department of Environmental Resources (PaDER). PaDER also regulates soil erosion control.

The staff agrees with the licensee's assessment and therefore finds the proposed changes acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts or an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5 (d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

Based on the considerations discussed above, we have concluded that:

(1) Because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant reduction in a margin of safety, it does not involve a significant hazards consideration.

(2) There is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner.

(3) Such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

REFERENCE PAGE

(1) Memorandum;Shapar, ELD to Denton, NRR, dated December 7, 1979;
"Deletion of Limiting Conditions for Operation as to Water Quality
Requirements and Other Aquatic Monitoring Requirements from Existing
Construction Permits and Operating Licenses"

ATTACHMENT 1

REQUIRED CHANGES TO THE GPU/TMI-2 AQUATIC MONITORING PROGRAM

2.1 Benthic Macroinvertebrates

The proposed program of sampling three stations on a monthly basis, April - November, is acceptable. This encompasses the period of major biological activity of the River invertebrates. Prior to April and after November, the biological activity is reduced and sampling is difficult due to inclement weather and hazardous River conditions.

2.3 Ichthyoplankton

The proposed program to sample 4 stations along the west shore of TMI does not meet the intent of the monitoring program. Three of the four additional stations (Nos. 5, 6, 7) suggested by the licensee should be added. The licensee's proposed station No. 8 (10B1) should be deleted and replaced with station 10B2 located at the southwest tip of Shelley Island. Station 10B2 has been a high density area for ichthyoplankton of important fish species (perch, channel catfish, carp, shiners). Station 10B1 located on the upstream portion of Bashore Island has little spawning habitat and low planton densities. These four additional stations are located in important fish spawning and nursery areas of the York Haven Pond. Sampling of these areas is necessary for an assessment of the overall integrity of the Pond in relation to the cleanup of TMI-2.

This program is acceptable with eight stations, sampled at night on a weekly basis, from April through August. This encompasses the spawning season of the important fishes of the York Haven Pond. Night sampling has been very effective and has provided the historic data used for resource description and impact analysis.

2.4 Fish

Electrofishing

The proposal to sample six stations during April through November is acceptable. Semi-monthly sampling during August and September is acceptable. Semi-monthly sampling also should occur during the peak spawning months of May and June. Monthly sampling during the remaining months of April, July, October, and November is acceptable. This stratified sampling scheme is acceptable because it is designed to sample more frequently during periods of increased biological activity and appearance of young fish.

Seine

Monitoring of the Pond fish resource by seine should be retained. The five stations proposed by the licensee are acceptable. A sixth station (No. 9B3) should be added at the southwest portion of TMI. This area will be in the

downstream effluent plume area. It is a productive area for channel catfish, walleye, and darters, and is relatively undisturbed by high river flows. The sampling frequency for monitoring by seine should be the same as for electrofishing, in order to sample more frequently during periods of increased biological activity.

Creel Survey

The proposal to reduce the sampling frequency of the creel survey program to once per month is unacceptable. The proposed survey year should be April through November. Sampling during December through March may be terminated due to the general absence of angler activity during those months.

This program examines the fishery resource at the human level - people as harvesters and predators, whose perceptions and behavior affect their harvests and consumption. A reduction of sampling frequency by 50% seriously would affect across-year comparisons of fishery data.

General Requirements

Sampling methods should continue to be consistent with those currently in effect. The Annual Report should continue to provide the same treatments of data and discussion of findings. A reduction in sampling effort should not result in reduced quality of information, as presented in the Annual Report. Across-year comparisons of data will be more difficult now due to fewer data points, thus more effort will need to be applied in comparing stations with corresponding time periods during previous years. Attention should be given to the key factors noted in the 1980 Annual Report (Section 6.2.3).

Enumeration of diseases, parasites, and anomaly conditions of fishes taken by seine should continue. Inspection of fishes caught by electrofishing for these conditions also should occur. For fishes captured by seine, the observed conditions should be presented in the Annual Report by species, condition type, station location, and percent occurrence by species and station.

The fish movements program has been terminated, but any recaptures of tagged fish by seine, electrofishing, or anglers should continue to be reported and discussed in the Annual Report.

The licensee cited the destructive nature of sampling by seine as one reason for terminating this program. The reduced level of sampling now permitted should alleviate much of the problem. Additionally, examination of recent Annual Reports showed that only small portions of the many thousands of fish of some species (that were preserved upon capture) actually were examined in the laboratory. The February 1978 ETS contained the following requirement

in Section 3.1.2.a. (1)(c) Fish:

"When large numbers of fish are captured which may be in excess of those required for proper analysis, a subsample shall be taken which is representative of the sample as a whole (e.g., by species, size classes, reproductive status). The excess shall be returned."

The above requirement will be retained in the Appendix B ETS. If fishes are returned as excess, gross examinations should be performed for the presence of disease, parasite, and anamaly conditions.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-320

GPU NUCLEAR CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 21 to Facility Operating License No. DPR-73, issued to GPU Nuclear Corporation, Metropolitan Edison Company, Jersey Central Power & Light Company, and Pennsylvania Electric Company (the licensee).

Operating License No. DPR-73 formerly authorized operation of the Three Mile Island Nuclear Station, Unit 2 (TMI-2) located in Dauphin County, Pennsylvania, but that authorization was limited, by an Order for Modification of License dated July 20, 1979 to maintaining the facility in its present safe shutdown condition; 44 Fed. Reg. 45271 (August 1, 1979). This amendment effects changes to License No. DPR-73 with respect to the radiological environmental monitoring program requirements as specified in Appendix B of the Technical Specifications. Specifically, this amendment consists of changes to Appendix B of Operating License No. DPR-73 pertaining to the following: (1) Eliminate activities that are duplicated in the licensee's National Pollutant Discharge Elimination System (NPDES); (2) eliminate those programs that have been satisfactorily completed (Section 4 special studies); (3) eliminate those programs that are not related to monitoring the integrity of the river system in relation to the cleanup; (4) modify the General Ecological Survey (Section 3.1.2.a.1); (5) eliminate the erosion control inspection section; and (6) eliminate the discussion on herbicide use.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the act and the Commission's rules and regulations in 10 CFR Chapter 1, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

We have determined that the amendment does not authorize a change in effluent types or total amounts or an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5 (d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated August 25, 1982 and amended by letter dated January 24, 1983, (2) Amendment No. 21 and License No. DPR-73 consisting of changes in the radiological environmental monitoring program requirements as specified in Appendix B of the Technical Specifications, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Document Room, 1717 H Street, N.W., Washington, D.C. 20555 and at the Government Publications Section, State Library of Pennsylvania 17126.

A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Program Director, TMI Program Office, Office of Nuclear Reactor Regulation.

Dated at Bethesda, Maryland, this 6th day of May, 1983.

FOR THE NUCLEAR REGULATORY COMMISSION

Bernard J. Snyder, Program Director
TMI Program Office
Office of Nuclear Reactor Regulation