UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF

DOCKET NO. 50-320
LICENSE NO. DPR-73

METROPOLITAN EDISON COMPANY

This is to certify that a copy of Technical Specification Change Request No. 006 to Appendix A of the Operating License for Three Mile Island Nuclear Station Unit 2, has, on the date given below, been filed with the U. S. Nuclear Regulatory Commission and been served on the chief executives of Londonderry Township, Dauphin County, Pennsylvania and Dauphin County, Pennsylvania by deposit in the United States mail, addressed as follows:

Mr. Weldon B. Arehart
Board of Supervisors of
Londonderry Township
R. D. #1, Geyers Church Road
Middletown, Pennsylvania 17057

Mr. Harry B. Reese, Jr.
Board of County Commissioners
of Dauphin County
Dauphin County Court House
Harrisburg, Pennsylvania 17120

METROPOLITAN EDISON COMPANY

By J G Herbein
Vice President

Dated: May 19, 1978

7904190408

54-292

THREE MILE ISLAND NUCLEAR STATION, UNIT 2

OPERATING LICENSE NO. DPR-73

DOCKET NO. 50-320

TECHNICAL SPECIFICATION CHANGE REQUEST NO. 006-A

The licensee requests that the attached changed page replace page 2-3 of the existing Technical Specifications.

REASON FOR CHANGE REQUEST

At the time Met-Ed proposed the Technical Specification Limitation for Xenon concentration in water, the assertion was made that maximum permissible concentration (MPC) for TMI-2 should correlate to that proposed for TMI-1. The argument used in making this assertion has inadvertently been included in the TMI-2 Technical Specifications. Because it is not necessary to include the argument, in the Technical Specifications, but only to include the limitation we propose that the paragraph presenting the argument be deleted from page 2-3 of the TMI-2 Technical Specifications.

SAFETY ANALYSIS JUSTIFYING REQUESTED CHANGE

This change to the TMI-2 Technical Specifications will not change any effluent limitation, limiting condition for operation, or operational procedure. Instead, it only proposes the deletion of extraneous information from the body of the TMI-2 Technical Specifications. Therefore, this Proposed Change to the TMI-2 Technical Specifications will have no impact on safety analyses which have already been performed.

54-283

LIMITING CONDITIONS FOR OPERATION 2.0 MONITORING REQUIREMENTS

Specification Cont'd)

causes and describing the proposed program of action to reduce such releases rates.

For the purposes of this specification, the MPC_w (168 hour) for Xe-133 is $5 \times 10^{-3} \mu$ Ci/ml. The MPC_w (168 hour) for Xe-135 is $1 \times 10^{-3} \mu$ Ci/ml.

Specification (Cont'd)

D. Facility records shall be maintained of the radioactive concentrations and volume before dilution of each batch of liquid effluent released, and the average dilution flow and length of time over which each discharge occurred. Estimates of the error associated with each reported value should be included in facility records.

E. Radioactive liquid waste sampling and activity analysis shall be performed in accordance with Table 2.3-1. Prior to the release of each batch of liquid effluent, a sample shall be taken from that batch and analyzed for the concentration of each significant gamma emitter to demonstrate complaince with Specification "a" using the flow into which the effluent is discharged.

F. The liquid effluent radiation monitors RM-L6 and WDL-R-1311 shall be calibrated at least quarterly by means of a known radioactive source. RM-L6 and WDL-R-1311 shall also have an instrument channel test monthly and a source check prior to each discharge to verify that the read-out device is indicating as expected.

G. The ability of WDL-V-257 and WDL-V-99 to close automatically on receipt of a high radiation alarm signal from RM-16 and WDL-R-1311 shall be checked annually.

Bases

Liquid radioactive waste release levels to unrestricted areas should be kept "as low as practicable" and are not to exceed the concentration limits specified in 10 CFR 20. The objective provides reasonable assurance that the resulting annual exposure to an individual in off site areas will not exceed 5 millirem per year. This assurance is based on the fact that the Susquehanna River will dilute the liquid effluents upon their release from

Bases

Specifications A, B, and C, abov require that suitable equipment to monitor the release of radioactive materials in liquid effluents are operating during any period these releases are taking place.

The surveillance requirements given in the remaining specifications provide assurance that liquid wastes are properly controlled and monitored during any planned release of radioactive materials in liquid effluents.

THREE MILE ISLAND NUCLEAR STATION, UNIT 2

OPERATING LICENSE NO. DPR-73

DOCKET NO. 50-320

TECHNICAL SPECIFICATION CHANGE REQUEST NO. 006-B

The licensee requests that the attached changed pages replace pages 5-1 and 5-3 of the existing TMI-2 Technical Specifications.

REASONS FOR CHANGE REQUEST

This proposed change to the TMI-2 Technical Specifications involves requiring that an independent audit and review be performed on "Changes to Environmental Technical Specifications", "written procedures and changes thereto," and "changes or modifications to station on unit equipment", rather than requiring the above-mentioned review during the proposal stages of changes to the Environmental Technical Specifications, written procedures, etc.

The review of the various changes listed above could be more efficient, and more comprehensive, if it were performed after the change has been finalized, and implemented and not during the proposal stages. In this way, the reviewer could better assess the impact of the change on plant operation.

SAFETY ANALYSIS JUSTIFYING REQUESTED CHANGE

This change would not eliminate the required review, but would only allow the review to be performed in such a manner, and at such time so as to be most efficient, and most comprehensive. The required review will continue to be performed, and if the change is found to have an environmental impact, that impact will be evaluated, and appropriate action will be taken.

It is therefore, believed that this proposed change to TMI-2 Technical Specifications will have no impact on the safety analyses and environmental analyses which have already been performed.

54-288

5.0 Administrative Controls

5.1 Responsibility

Corporate responsibility for implementation of the Environmental Technical Specifications, and for assuring that station operations are controlled to provide protection for the environment and for coordination of Environmental Technical Specifications with Safety Technical Specifications has been assigned by the President of Metropolitan Edison Company to the Vice President & Manager-Generation Division.

Management responsibilities at the station level, for compliance with the Environmental Technical Specifications, rest with the Station Superintendent/ Senior Unit Superintendent through the Unit Superintendents, and the Supervisor of Radiation Protection and Chemistry. Management responsibilities for the Environmental Monitoring Program required by the Environmental Technical Specifications rest with the Manager-Generation Engineering, and are carried out by the Supervisor-Radiation Safety and Environmental Engineering.

5.2 Organization

The Metropolitan Edison Company organization responsible for performing environmental monitoring activities, reviewing and auditing such activities as defined in Sections 5.1 and 5.3, is shown in Figure 5.2-1.

5.3 Review and Audit

5.3.1 Independent Review

Independent review and audit for environmental matters will be performed under the direction of the Manager-Generation Quality Assurance. The review or audit will be conducted by the Quality Assurance Department reporting to the Manager-Generation Quality Assurance.

Independent review for matters not implemented by the RS&EE section reporting to the Manager-Generation Engineering may be performed either by the above mentioned Quality Assurance Department or by the RS&EE Section. The above mentioned independent audit and review shall encompass:

A. Coordination of Environmental Technical Specifications development with the Safety Technical Specifications to avoid conflicts and maintain consistency.

B. Changes to the Environmental Technical Specifications and evaluated impact of the change.

C. Written procedures, as described in Section 5.5, and changes thereto, which affect the environmental impact of the station.

54-289

D. Changes or modifications to station or unit equipment, or systems which might have an environmental impact to determine the environmental impact of the change.

E. Results of the Environmental Monitoring Programs prior to their submittal in each Environmental Monitoring Report (described in Subsection 5.6.1).

F. Investigations of all reported instances of violation of Environmental Technical Specifications, associated corrective action, and measures taken to prevent recurrence.

5.3.2 Audit Responsibility

Auditing of environmental activities which are conducted under the direction and control of the Manager-Generation Quality Assurance, will be conducted in accordance with the Operational Quality Assurance Plan.

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 an activity which may result in any discharge into navigable waters to provide the licensing agency a certification from the State having jurisdiction that the dicharge will comply with applicable provisions of Sections 301, 302, 306, and 307 of the FWPCA. Section 401 of PL 92-500 further requires that 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, with respect to Sections 2, if applicable, and 3 of these ETS, 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 the effluent limitations stipulated in NPDES permit PA-0009920, effective January 30, 1975 through January 30, 1980. Subsequent revisions to the certifications will be accommodated in accordance with the provisions of Subsection 5.7.2.

5.5 Procedures

Detailed written procedures, including applicable checklists and instructions, shall be prepared and followed to implement the environmental technical specifications. Procedures shall include sampling, data recording and storage, instrument calibration, measurements and analyses, and actions to be taken when limits are exceeded. Testing frequency of any alarms

54-258

THREE MILE ISLAND NUCLEAR STATION, UNIT 2

OPERATING LICENSE NO. DPR-73

DOCKET NO. 50-320

TECHNICAL SPECIFICATION CHANGE REQUEST NO. 006-C

The licensee requests that the attached changed page replace page 3/4 10-2 of the existing Technical Specifications.

REASON FOR CHANGE REQUEST

To clarify the Technical Specifications regarding reactivity computations during physics testing.

SAFETY ANALYSIS JUSTIFYING REQUESTED CHANGE

As described in Chapter 7 of the TMI-2 FSAR (page 7.8-1), the logic of the Intermediate Range high start-up rate rod withdrawal inhibit is: "one out of two." With this type of circuitry, a strict interpretation of the existing, TMI-2 Technical Specifications would disallow the control rod out-motion required for necessary reactivity measurements, in that one channel is required to be placed in a "trip condition", thus fulfilling the "one out of two" logic. The intent of footnote (1) to Section 3.10.2 of the TMI-2 Technical Specifications was to assure that a single intermediate range channel could provide an "out-motion inhibit" when required. Since this is accomplished by the existing circuitry without placing the channel used for reactivity computations in the trip condition, it is not necessary to place this channel in the trip condition. In fact, doing so would, as mentioned above, prohibit the out-motion needed for physics testing.

As demonstrated above, this change is administrative in nature, and serves to clarify the Technical Specification to allow what was clearly and expressly intended to be permitted by the NRC when the specification was initially approved and issued. Therefore, this change involves no unreviewed safety questions.

SPECIAL TEST EXCEPTIONS

PHYSICS TESTS

LIMITING CONDITION FOR OPERATION

3.10.2 The limitations of Specifications 3.1.1.3, 3.1.3.1, 3.1.3.2, 3.1.3.6, 3.1.3.7, and 3.1.3.8 may be suspended during the performance of PHYSICS TESTS provided:

a. The THERMAL POWER does not exceed 5% of RATED THERMAL POWER.

b. The reactor trip setpoints on the OPERABLE Nuclear Overpower Channels are set at ≤ 25% of RATED THERMAL POWER.

c. The nuclear instrumentation Source Range and Intermediate Range[(1)] high startup rate control rod withdrawal inhibit are OPERABLE.

APPLICABILITY: MODE 2.

ACTION:

With the THERMAL POWER > 5% of RATED THERMAL POWER, immediately open the control rod drive trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.2.1 The THERMAL POWER shall be determined to be ≤ 5% of RATED THERMAL POWER at least once per hour during PHYSICS TESTS.

4.10.2.2 Each Source and Intermediate Range and Nuclear Overpower Channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating PHYSICS TESTS.

(1) During PHYSICS TESTS one Intermediate Range Channel may be used as input for reactivity computations and that channel is considered OPERABLE for the purposes of Specifications 3.3.1.1 and 3.10.2.c.

54-300

Three Mile Island Nuclear Station, Unit 2
Operating License No. DPR-73
Docket No. 50-320

Technical Specification Change 006 (D and E)

Technical Specification Change 006 (D)

The licensee requests that the attached changed page replace page 6-20 of the existing TMI-2 Technical Specification.

Reason for Change Request

The proposed change would allow the Radiation Protection Foreman to have access and control of keys to high radiation areas, thus allowing more immediate access to the areas if necessary, without appreciably decreasing the administrative control for such areas.

Safety Analysis for Requested Change

The change to the TMI-2 Technical Specifications is entirely administrative in nature, and therefore, has no impact on the safety analyses which have already been performed.

Technical Specification Change 006 (E)

The licensee requests that the attached change page replace page 6-20 of the existing TMI-2 Technical Specifications.

Reason for Requested Change

The change would allow Radiation Chemistry Technicians to determine the frequency for performing radiation surveillances in Radiation Work Permits. This would allow Radiation Work Permits to be issued at all times (even when the "Facility Health Physicist" is not available). As the requirements now reads, it is ambiguous as the term "facility health physicist" is undefined.

Safety Analysis for Proposed Change

The change to the TMI-2 Technical Specifications is entirely Administrative in nature, and therefore, has no impact on the safety analyses which have already been performed.

54-201

b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with the monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

c. An individual qualified in radiation protection procedure who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the station Radiation Chemistry Technicians in the Radiation Work Permit. TSCR 006 (E)

6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Radiation Protection foreman or the Shift Foreman on duty. TSCR 006 (D)

Three Mile Island Nuclear Station, Unit 2
Operating License No. DPR-73
Docket No. 50-320

Technical Specification Change Request 006 (F)

The licensee requests that the attached changed page replace page 2-8 of the existing Technical Specifications.

Reason for Change Request

During the period of time, just prior to Unit Licensing, the trip setpoints and allowable values for certain reactor protection system functional units underwent a number of changes while Met-Ed was attempting to resolve the difference between allowable values and actual trip setpoints. In reviewing Fig. 2.2-2 in the License Edition of the Technical Specifications, it was realized through a clerical error, the maximum power levels at imbalance limits of -37.6% to +38.6% were not shown correctly. The max power levels at the max imbalance limits were correctly shown on Figure 2.2-2 in the "Proof and Review" copy of the Technical Specifications dated August 24, 1977, a copy of which is attached for incorporation.

Safety Analysis Justifying Change

The requested change results in a more conservative limitation on the maximum allowable nuclear overpower trip setpoint when an axial imbalance limit exists. Therefore, operation in a more conversative manner will not produce an impact on safety analyses which have already been performed.

54-203

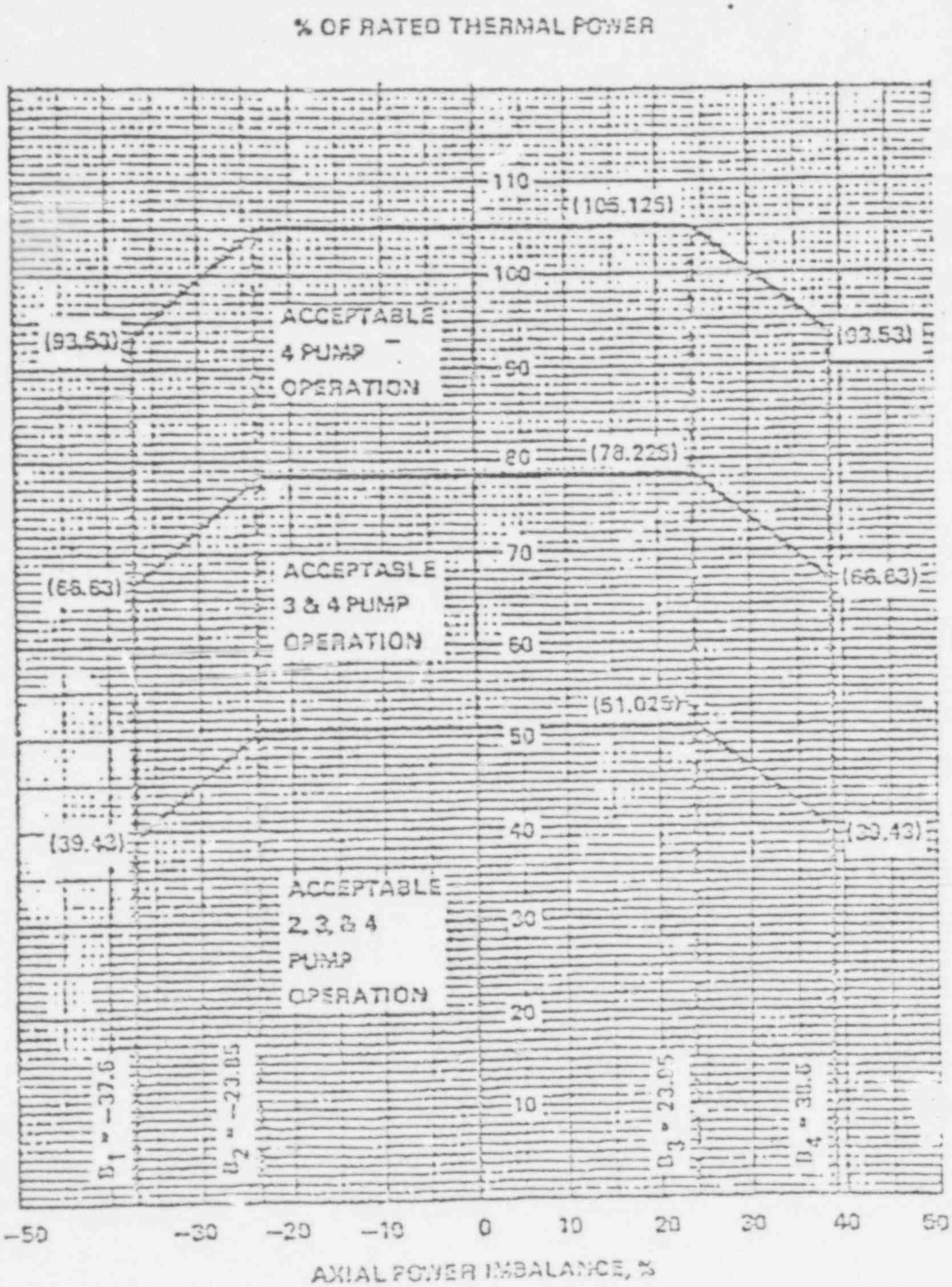

Figure 2.2–2 Allowable Value for Nuclear Overpower
Based on RCS Flow and Axial Power Imbalance

54-204
AUG 1 1977