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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges

John F. Wolf, Chairman
Oscar H. Paris
Frederick J. Shon

SERVED MAR 15 1983

In the Matter of
METROPOLITAN EDISON COMPANY, ET AL.
(Three Mile Island Nuclear Station,
Unit 2)

Docket No. 50-320 OLA

March 14, 1983

ORDER GRANTING JOINT MOTION TO APPROVE
STIPULATION REGARDING SETTLEMENT OF LOCHSTET CONTENTIONS

A "Stipulation Regarding Settlement of Lochstet Contentions" was entered into by Counsel for NRC Staff, Counsel for Licensee and William A. Lochstet and filed with this Board. A copy of said stipulation is attached hereto. In addition, those parties filed a Joint Motion to Approve the Stipulation, a copy of which is attached hereto.

For good cause shown the Joint Motion to Approve Stipulation is granted and it is ORDERED that:

1. The Stipulation Regarding Settlement of Lochstet Contentions is approved;

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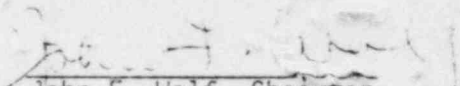
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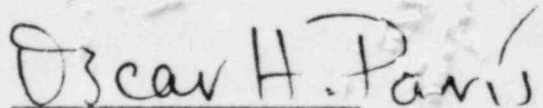
2. Dr. Lochstet, Intervenor, is dismissed from the proceeding;
and


3. Proposed Technical Specification 3.3.1.1 set forth in an attachment to the February 11, 1980 Order issued by the Director, Office of Nuclear Reactor Regulation, shall be modified in accordance with the revisions specified in the proposed Amendment of Order upon entry of that Amendment of Order. A copy of said amendment is attached hereto.

A formal amendment incorporating the Specifications as amended will await the outcome of the present proceedings.

THE ATOMIC SAFETY AND
LICENSING BOARD


John F. Wolf, Chairman
ADMINISTRATIVE JUDGE


Oscar H. Paris
ADMINISTRATIVE JUDGE


Frederick J. Simon
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland
this 14th day of March, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
METROPOLITAN EDISON COMPANY, ET AL.) Docket No. 50-320 OLA
(Three Mile Island Nuclear Station,)
Unit 2))

STIPULATION REGARDING SETTLEMENT
OF LOCHSTET CONTENTIONS

For the purpose of resolving the remaining contentions advanced by Dr. William Lochstet relative to the captioned proceeding, General Public Utilities Nuclear Corporation, Metropolitan Edison Company, Jersey Central Power and Light Company, and Pennsylvania Electric Company (collectively, the Licensee), William A. Lochstet and the Staff of the Nuclear Regulatory Commission (NRC Staff) hereby stipulate and agree as follows:

1. In consideration of NRC modification of proposed Technical Specification 3.3.1.1 in accordance with the attached proposed Amendment of Order, Dr. Lochstet agrees to withdraw Contention 2 advanced in his pleading entitled, "Supplement to Request for Hearing and Petition for Leave to Intervene," dated June 17, 1980.

2. In light of the following considerations, Dr. Lochstet agrees to withdraw Contention 3 advanced in his pleading entitled, "Supplement to

Request for Hearing and Petition for Leave to Intervene," dated June 17, 1980:

(a) The NRC Staff has evaluated the consequences in the event of a leakage of sump water from the reactor building in the Final Programmatic Environmental Impact Statement (PEIS) issued in March 1981 and has determined that such leakage as might occur would not pose a threat to the health and safety of the local population. PEIS Appendix V, p. V.1.

(b) Monitoring wells have been placed around the reactor building which would indicate radioactivity in the ground water long before it would reach the river, thereby allowing corrective measures to be taken. Memorandum for the Commissioners from Harold Denton, Director Office of Nuclear Reactor Regulation, dated April 8, 1980. SECY-80-181.

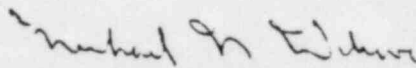
(c) A sump water contingency plan was developed for removal of the sump water from the reactor building in the event that substantial leakage developed. Letter from R. C. Arnold to Harold Denton (TLL-541) dated November 4, 1980.

(d) A submerged demineralizer system (SDS) has been installed and all of the radioactive water in the reactor building has been processed through it, with the exception of (1) a few inches of water that will remain on the reactor building floor when the surface suction pump loses suction and (2) the relatively small amount of water in the containment sump. As a result of the removal of the water from the reactor building, the potential for leakage due to static head has been eliminated. See Weekly Status Reports from Lake Barrett to Harold Denton, September 21, 1981 to March 1, 1982.

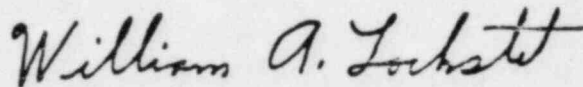
(e) The reactor building water has also been polished in the EPICOR II system, after treatment in the SDS. Id.

3. Dr. Lochstet hereby withdraws his "Request for Hearing and Petition for Leave to Intervene," dated March 18, 1980, and consents to dismissal from the proceeding.

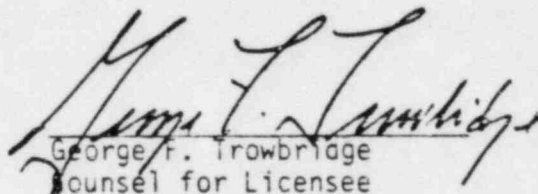
4. This Agreement is contingent upon the grant of the "Joint Motion to Approve Stipulation," which accompanies this Stipulation, by the Atomic Safety and Licensing Board.



Michael N. Wilcove
Counsel for NRC Staff



William A. Lochstet



George F. Trowbridge
Counsel for Licensee

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
METROPOLITAN EDISON COMPANY, ET AL.) Docket No. 50-320 OLA
(Three Mile Island Nuclear Station,)
Unit 2))

JOINT MOTION TO APPROVE STIPULATION

For the purpose of resolving the remaining issues advanced by Intervenor William Lochstet relative to the captioned proceeding, the Licensee, Dr. William Lochstet, and the Staff of the Nuclear Regulatory Commission (NRC Staff) have entered into the attached "Stipulation Regarding Settlement of Lochstet Contentions." Pursuant to the provisions of this Stipulation, the parties thereto hereby move the Atomic Safety and Licensing Board (Board) to enter an Order taking the following action:

1. Approving the subject Stipulation;
2. Dismissing Dr. Lochstet from the proceeding;
3. Modifying proposed Technical Specification 3.3.1.1 set forth in an attachment to the February 11, 1980 Order issued by the Director, Office of Nuclear Reactor Regulation in accordance with the revisions set forth in the proposed Amendment of Order attached to the subject Stipulation, upon entry of that Amendment of Order.

This Motion does not affect the proposed contentions of Intervenor Environmental Coalition on Nuclear Power.

A proposed Order granting the instant motion is provided for the Board's consideration.

Respectfully submitted,

Michael N. Wilcove

Michael N. Wilcove
Counsel for NRC Staff

William A. Lochstet

William A. Lochstet

George F. Trowbridge

George F. Trowbridge
Counsel for Licensee

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
METROPOLITAN EDISON COMPANY, et al.) Docket No. 50-320 OLA
(Three Mile Island Nuclear Station,)
Unit 2))

AMENDMENT OF ORDER

I.

General Public Utilities Nuclear Corporation, Metropolitan Edison Company, Jersey Central Power and Light Company and Pennsylvania Electric Company (collectively, the Licensee) are the holders of Facility Operating License No. DPR-73, which had authorized operation of the Three Mile Island Nuclear Station, Unit 2 (TMI-2) at power levels up to 2772 megawatts thermal. The facility, which is located in Londonderry Township, Dauphin County, Pennsylvania, is a pressurized water reactor previously used for the commercial generation of electricity.

By Order for Modification of License, dated July 20, 1979, the Licensee's authority to operate the facility was suspended and the Licensee's authority was limited to maintenance of the facility in the present shutdown cooling mode. 44 Fed. Reg. 45271 (August 1, 1979). By further Order of the Director, Office of Nuclear Reactor Regulation, dated February 11, 1980, a new set of formal license requirements was imposed to reflect the post-accident condition of the facility and to assure the continued maintenance of the current safe, stable, long-term cooling condition of the facility. 45 Fed. Reg. 11282 (February 20,

1980). These requirements were memorialized in the form of proposed Technical Specifications set forth in an attachment to the Order.

II.

Several requests for a hearing were filed in connection with the February 11, 1980 Order. By Memorandum and Order dated August 29, 1980 the Atomic Safety and Licensing Board admitted, among others, Dr. William Lochstet as an Intervenor, subject to his subsequently advancing at least one litigable contention. By a "Supplement to Request for Hearing and Petition for Leave to Intervene" dated June 17, 1980, Dr. Lochstet submitted three proposed contentions to the Board. At the request of all parties, the Board deferred ruling on the proposed contentions of all of the Intervenors (including Dr. Lochstet) to allow opportunity to pursue settlement. These settlement efforts have already resulted in Dr. Lochstet's withdrawal of his proposed Contention 1 ("Order Granting Joint Motion to Approve Stipulation," April 9, 1981) and have now, as discussed below, resulted in the withdrawal of Dr. Lochstet's remaining proposed contentions.

Dr. Lochstet's second contention concerns the Source and Intermediate Range Neutron Monitors (proposed Technical Specification 3.3.1.1). His third contention concerns the possibility of leakage to the environment of the high level radioactive water in the reactor building. Consistent with the Commission's policy and regulations with respect to settlement of matters without resort to a formal adjudicatory process, the Licensee, the Staff and Dr. Lochstet have met in an effort to resolve the concerns in the above areas. To settle proposed

Contention 2, the parties jointly propose to modify proposed Technical Specification 3.3.1.1. The proposed modification has been reviewed by the Staff and is consistent with the objective of providing reasonable assurance that the activities authorized can be conducted without undue risk to the public health and safety.

After the March 28, 1979 accident, one of the two source range neutron monitoring channels was inoperable. Accordingly, the requirement reflected in proposed Technical Specification 3.3.1.1 originally required only the one working channel to be operable. In March 1981, the inoperable channel was restored to operable status. Proposed Technical Specification 3.3.1.1 is, therefore, now being modified to require both source range neutron monitoring channels to be operable while fuel is in the reactor. This action enhances the capability for monitoring the reactivity status of the reactor and thereby increases safety.

Proposed Technical Specification 3.3.1.1 is also modified to clarify the action requirements to be taken in the event that the one intermediate range neutron channel should become inoperable.

The Staff's assessment of this modification is set forth in the concurrently issued Safety Evaluation. This evaluation concluded, in material part, that the modification does not involve a significant hazards consideration and that there is reasonable assurance that the health and safety of the public will not be endangered thereby. Accordingly, prior public notice of this Amendment of Order was not required. This Amendment of Order will be effective thirty days from its date of issuance.

It was further determined that the Amendment of Order does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Accordingly, pursuant to 10 C.F.R. § 51.5(d)(4), an environmental impact statement or environmental impact appraisal and negative declaration need not be prepared herewith.

Resolution of Dr. Lochstet's third contention has been achieved on the basis of developments after the pleading of the contention. Those developments are enumerated in the "Stipulation Regarding Settlement of Lochstet Contentions" (_____, 1982) and do not require amendment of the February 11, 1980 Order.

III.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, the requirements imposed by the Director's Order of February 11, 1980 are modified, effective thirty days from the date of issuance of this Amendment of Order, by revision of proposed Technical Specification 3.3.1.1 in the manner described in Section II of this Order and as set forth specifically in Attachment A hereto.

For details with respect to this action see (1) "Request for Hearing and Petition for Leave to Intervene," by William A. Lochstet, dated March 18, 1980, (2) "Supplement to Request for Hearing and Petition for Leave to Intervene," by William A. Lochstet, dated June 17, 1980, and (3) Director's Order of February 11, 1980. All of the above documents are available for inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C., and at the Commission's Local

Public Document Room at the State Library of Pennsylvania, Government
Publications Section, Education Building, Commonwealth and Walnut
Streets, Harrisburg, Pennsylvania 17126.

FOR THE NUCLEAR REGULATORY COMMISSION

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Effective date:

Dated at Bethesda, Maryland
this day of 1982

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

GPU NUCLEAR CORPORATION

METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER AND LIGHT COMPANY

PENNSYLVANIA ELECTRIC COMPANY

DOCKET NO. 50-320

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

Introduction

GPU Nuclear Corporation, Metropolitan Edison Company, Jersey Central Power and Light Company and Pennsylvania Electric Company (collectively, the Licensee) are the holders of Facility Operating License No. DPR-73, which had authorized operation of the Three Mile Island Nuclear Station, Unit 2 (TMI-2) at power levels up to 2772 megawatts thermal. By Order for Modification of License, dated July 20, 1979, the Licensee's authority to operate the facility was suspended and the Licensee's authority was limited to maintenance of the facility in the present shutdown cooling mode (44 Fed. Reg. 45271) (August 1, 1979). By further Order of the Director, Office of Nuclear Reactor Regulation, dated February 11, 1980, a new set of formal license requirements was imposed to reflect the post-accident condition of the facility and to assure the continued maintenance of the current safe, stable, long-term cooling condition of the facility (45 Fed. Reg. 11282) (February 20, 1980). These requirements were memorialized in the form of proposed Technical Specifications set forth in an attachment to the Order.

Several requests for a hearing have been filed in connection with the Order and granted by the presiding Atomic Safety and Licensing Board established to rule on such requests and to preside over any eventual hearings.

These parties have sought to introduce a number of issues involving the proposed Technical Specifications. One party expressed a concern dealing with the minimum number of source range neutron channels required to be operable (proposed Technical Specification 3.3.1.1) during the present shutdown (recovery) mode of operations. Consistent with the Commission's regulations which encourage settlement of potential issues in a proceeding (see 10 CFR §2.759), the staff has modified the proposed Technical Specification which is effective 30 days after the date of this amendment of order in a manner agreed upon by the parties to the stipulation and described hereafter.

Evaluation

The February 11, 1980 Order established, in the form of proposed Technical Specification 3.3.1.1, a requirement for a minimum of one source range neutron monitoring channel to be operable as long as fuel remained in the reactor. A single channel was specified since only one channel was operable; the second channel was inoperable having failed within the reactor building shortly after the March 28, 1979 accident.

With the core in its present subcritical configuration, only the source range neutron channels would read on scale. Since the intermediate range channels would come on scale only in the unlikely event that the reactor reaches an approximately critical condition, repair of the intermediate range channels is not of immediate concern. Thus restoration of the inoperable source range neutron monitoring channel to an operable status and developing procedures to assure continued operability were established as high priority tasks during the early reactor building re-entries. The inoperable channel was restored to operable status in March 1981. This channel will be verified as being in operation within 30 days after the date of this amendment of order with subsequent surveillance requirements being performed as stated in section 4.3.1 of the Recovery Ops Plan. Therefore, we have revised proposed Technical Specification 3.3.1.1 to require that both source range neutron monitoring channels be maintained in an operable condition as long as fuel remains in

the reactor. This action enhances the capability for monitoring the reactivity status of the reactor and thereby provides for an enhancement of safety. Technical Specification 3.3.1.1 is also modified to clarify the action requirements to be taken in the event that the one intermediate range neutron channel is inoperable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor 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 Section 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 the amendment.

Conclusion

As discussed above, the amendment to proposed Technical Specification 3.3.1.1 augments the requirements established in the Director's February 11, 1980, Order. Therefore, we have concluded that: (1) the amendment does not involve a significant increase in the probability or consequences of accidents previously considered nor a significant decrease in a safety margin and does not, therefore, 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 modified manner, and (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.

LIMITING CONDITIONS FOR OPERATION

3.3 INSTRUMENTATION

3.3.1 NEUTRON MONITORING INSTRUMENTATION

3.3.1.1 As a minimum, the neutron monitoring instrumentation channels of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: When fuel is in the reactor pressure vessel.

ACTION:

- a. With only one source range neutron monitoring channel OPERABLE, within 30 days either restore two source range channels to OPERABLE status or submit to the NRC, for its approval, a plan for restoring two source range channels to OPERABLE status.
- b. With no source range neutron monitoring channels OPERABLE, 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 channel to OPERABLE status within 7 days. If not restored to OPERABLE status within 7 days, promptly, but not later than 30 days from loss of OPERABILITY, submit to the NRC, for its approval, a plan for restoring the inoperable channel(s) to OPERABLE status.
- c. With no intermediate range neutron monitoring channels OPERABLE, restore at least one intermediate range channel to OPERABLE status within 7 days. If not restored to OPERABLE status within 7 days, promptly, but not later than 30 days from loss of OPERABILITY, submit to the NRC, for its approval, a plan for restoring at least one intermediate range channel to OPERABLE status.

3.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

3.3.2.1 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: RECOVERY MODE.

ACTION:

- a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint Value.
- b. With an ESFAS instrumentation channel inoperable, take the action shown in Table 3.3-3.

TABLE 3.3-1

NEUTRON MONITORING INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Intermediate Range, Neutron Flux and Rate	1	0	1
2. Source Range, Neutron Flux and Rate	2	0	2

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)				
1. Emergency Bus #2-1E and 2-2E	2/Bus	2/Bus	2/Bus	10
2. Emergency Bus #2-3E and 2-4E	2/Bus	1/Bus	2/Bus	11

ACTION 10 - With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the tripped condition within 4 hours.

ACTION 11 - None except as provided in Specification 3.0.3.