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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nunzio J. Palladino, Chairman
Thomas M. Roberts
James K. Asselstine
Frederick M. Bernthal
Lando W. Zech, Jr.

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In the Matter of METROPOLITAN EDISON COMPANY (Three Mile Island Nuclear Station, Unit No. 1)	Docket No. 50-289 SP (Restart)

MEMORANDUM AND ORDER

CLI-85-09

I. Introduction and Summary

Three Mile Island, Unit 1 (TMI-1) has not operated since February 15, 1979, when its operator, Metropolitan Edison Company, shut it down for refueling.[1] Following the March 28, 1979 accident at TMI-2, the Commission on July 2, 1979 issued an immediately effective enforcement order (unpublished) directing that TMI-1 remain shut down until further

[1] As a result of a corporate reorganization effective January 1, 1982, General Public Utilities Nuclear Corp. (GPU Nuclear) replaced Metropolitan Edison Company as licensee. Licensee will be referred to throughout this Order as licensee, GPU Nuclear, or GPUN. Reference will also be made to General Public Utilities Corp. (GPU), the parent company of GPU Nuclear.

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order. In an August 9, 1979 Order the Commission explained the basis for its shutdown decision and established the restart proceeding to determine whether TMI-1 should be allowed to resume operation. CLI-79-8, 10 NRC 141. Exhaustive hearings have been held in the restart proceeding, and only two issues, both management-related, remain pending before the agency. The agency's appellate review of the Atomic Safety and Licensing Board's ("Licensing Board") decision on the adequacy of GPUN's training program is underway, and the Licensing Board is currently preparing its decision on the Dieckamp mailgram issue.

In today's decision for the reasons that follow, the Commission, after setting forth its overall views on licensee's competence and integrity, concludes that the two remaining management issues do not raise concerns warranting maintaining the immediate effectiveness of the shutdown Orders, and therefore that lifting the effectiveness of these Orders is required. This decision lifts the effectiveness of the shutdown Orders, an action which permits TMI-1 to resume operation, subject to satisfactory completion of the conditions imposed in this order.

The Commission's review of whether to lift the immediate effectiveness of the 1979 shutdown Orders has taken considerably longer than the Commission originally anticipated because of a succession of events and the development of new information following the initial closing of the formal adjudicatory record in 1981. The Commission evaluated whether that new information warranted reopening of the record in an Order dated February 25, 1985, and concluded that it did not.

CLI-85-2, 21 NRC 282. Some of that new information is also discussed in today's decision.

Because of the unique nature of this proceeding, the Commission has decided also to address certain other concerns which have been brought to its attention in the context of the restart proceeding, but which fall outside the scope of the proceeding.

II. Background

A. Establishment of the Proceeding -- Effectiveness and Appellate Reviews

The law normally affords a licensee the opportunity to challenge an enforcement action in a public hearing prior to the time an enforcement action takes effect:

> The norm for administrative action modifying outstanding licenses embraces a prior opportunity to be heard....
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> [I]t has always been recognized that summary administrative action substantially curtailing existing rights ... is a 'drastic procedure.' Fahay v. Mallonee, 332 U.S. 245, 253 (1947). See Ewing v. Mytinger & Casselberry, Inc., 339 U.S. 594, 599 (1950); Davis, Administrative Law § 7.08.

Consumers Power Company (Midland Plant, Units 1 and 2), CLI-73-38, 6 AEC 1082, 1083 (1973).

In this case, however, the Commission determined in 1979 that the public health, safety and interest required making the shutdown Orders

immediately effective.[2] Since the law obligates the Commission to lift the effectiveness of an immediately effective shutdown order once the concerns which led to making the order immediately effective have been adequately resolved, see, e.g., Pan American Airways v. C.A.B., 684 F.2d 31 (D.C. Cir. 1982); Northwest Airlines v. CAB, 539 F.2d 738 (D.C. Cir. 1976); Air Line Pilots Ass'n., International v. C.A.B., 458 F.2d 846 (D.C. Cir. 1972), cert. denied, 420 U.S. 972 (1975), the Commission provided for a dual review of the Licensing Board's decision. One review was the normal appellate review which consisted of appeals of Licensing Board decisions to the Atomic Safety and Licensing Appeal Board ("Appeal Board") and then to the Commission.[3] The other, the "effectiveness review," involved determining whether to lift the immediate effectiveness of the shutdown Orders and authorizing plant operation during the pendency of the appellate review. See CLI-79-8, 10 NRC 141, 149 (1979). This "effectiveness" review, which involves "the most discretionary aspects" of the Commission's enforcement authority, CLI-81-34, 14 NRC 1097, 1098 (1981), originally consisted of a review of

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[2] In the Commission's July 2, 1979 Order directing that TMI-1 remain shut down pending further order, the Commission stated that it lacked the "requisite reasonable assurance" that Unit 1 "can be operated without endangering the health and safety of the public," and that "it is in the public interest that a hearing precede restart of the facility." This step was taken based upon a provision in the law that allows such immediate action when required by the public health and safety or public interest. See 10 CFR 2.202(f), which implements 5 U.S.C. § 558(c).

[3] The Commission originally intended to conduct the appellate review of the Licensing Board's decision itself. Because of the complexity of the proceeding, the Commission subsequently established an Appeal Board to hear initial appeals. CLI-81-19, 14 NRC 304 (1981).

decisions rendered by the Boards, other relevant information provided to the parties for comment, and party comments.

These two independent reviews have been simultaneously underway since the Licensing Board issued its first Partial Initial Decision. While the Commission originally anticipated that the effectiveness review would be completed before any of the appellate review was finished, the appellate review has been completed on all but the two remaining management issues, namely, training and the Dieckamp mailgram. Accordingly, the Commission's effectiveness review is now limited to whether the concerns regarding those two issues are such as to warrant maintaining the effectiveness of the shutdown Orders.[4]

Today's decision is based on the record of the formal adjudication. This record includes the relevant adjudicatory decisions, and other matters and papers filed in the formal adjudication, including information presented in motions to reopen the record and non-disputable matters such as personnel changes.

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[4]Neither the Licensing Board's forthcoming decision on the Dieckamp mailgram nor the appellate review of that decision and the training decision will be prejudiced by this effectiveness decision. If the Licensing Board, or the Appeal Board or Commission as part of the appellate review, should determine that additional measures are required, appropriate action will be taken.

B. Proceedings Before the Licensing Board

The Licensing Board to date has issued four Partial Initial Decisions in this proceeding.[5] The first set forth the procedural background of the hearing and contained the Board's findings on the management competence of GPU Nuclear. Among the issues addressed in that decision were licensee's management structure, the adequacy of its operator training program, its safety-related maintenance and repair procedures, management's response to the TMI-2 accident, and the licensee's technical capability and resources. LBP-81-32, 14 NRC 381 (August 27, 1981). With the exception of a subissue involving possible cheating on operator license examinations, over which it retained jurisdiction,[6] the Board's conclusions on the management issues were favorable to resumed operation of TMI-1.[7] On October 2, 1981, the Licensing Board reopened the record to hear evidence on the implications

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[5] Over 155 days of adjudicatory hearings have been held in this proceeding, and thirteen parties have participated. In addition, thousands of members of the public who were not parties to the proceeding have provided written and/or oral statements.

[6] Shortly before the issuance of the Board's first decision, the NRC staff notified the Licensing Board of its investigation into alleged cheating by two of licensee's senior reactor operators on NRC-administered, operator license exams. In light of this development the Board retained jurisdiction "to consider further the effect of the investigation of cheating on our decision subsequent to the issuance of the investigation report." 14 NRC at 403.

[7] The Board, however, imposed ten license conditions regarding management, if licensee were permitted to restart TMI-1.

of the information on cheating, and appointed a Special Master to hear the evidence.

On December 14, 1981 the Licensing Board issued a Partial Initial Decision on hardware/design issues, the separation of Units 1 and 2, and emergency planning. This decision was also favorable to restart, subject to correction of various deficiencies. LBP-81-59, 14 NRC 1211, 1711.

The Special Master issued his recommended findings on the cheating issues on April 28, 1982. LBP-82-34B, 15 NRC 918. After reviewing the Special Master's Report, and the parties' written comments on that Report, the Licensing Board on July 27, 1982 issued its Third Partial Initial Decision, which addressed the cheating incidents. The Board, imposing four conditions on the licensee's training program, concluded that the issues in the reopened proceeding "have been resolved in favor of restarting Three Mile Island Unit 1", and that the conclusions of the two earlier Partial Initial Decisions remained in effect. LBP-82-56, 16 NRC 281, 385.

On May 3, 1985, the Licensing Board issued its Fourth Partial Initial Decision.[8] LBP-85-15, 21 NRC ___. That decision, issued in response to the Appeal Board's remand in ALAB-772, see discussion infra, addressed the adequacy of GPU Nuclear's licensed operator training program. The Licensing Board found the training program adequate,

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[8] In response to a Commission request in CLI-85-2, the Licensing Board on April 11, 1985 provided its ultimate conclusion on the training issue and the essence of the supporting rationale. LBP-85-10, 21 NRC ___.

provided that GPU Nuclear "institute a procedure for evaluating after training the performance of its trained operators in the job setting for revision of the training program." Slip op. at 214. The Board retained jurisdiction "solely for the purpose of approving the plan for job-performance evaluation," id., but held that the plan did not have to be developed or approved prior to restart.

C. Appellate review

In the emergency planning area, the Appeal Board, although it modified somewhat the Licensing Board's decision, found that the plans were adequate once all required conditions were met. ALAB-697, 16 NRC 1265; ALAB-698, 16 NRC 1290 (1982). On September 8, 1983, the Commission completed its review of ALAB-697 and ALAB-698 and, reinstating a condition regarding staffing of the emergency offsite facility imposed by the Licensing Board, concluded that emergency planning for TMI-1 is adequate, subject to necessary staff certifications.[9] CLI-83-22, 18 NRC 299 (1983).

In the hardware area, the Appeal Board in ALAB-729, 17 NRC 814 (1983), found in favor of restart.[10] The Commission took review of five

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[9]Staff on April 2, 1985 certified that the conditions related to emergency preparedness had been satisfied.

[10]As a separate matter, the Appeal Board on June 30, 1982 requested Commission authorization to hear three issues sua sponte: (1) repair of the corroded steam generator tubes; (2) possible cracking in some high-pressure nozzles or their thermal sleeves; and (3) possible

[Footnote Continued]

issues in that opinion, and on July 26, 1984 resolved four of them on the basis of the record already developed in this proceeding. On the fifth issue, the Commission directed staff to certify the status of environmental qualification for radiation of certain electrical equipment.[11] CLI-84-11, 20 NRC 1.

In the management area, the Appeal Board on August 31, 1983 reopened the record on allegations made by Mr. Harold Hartman, a former TMI-2 operator, which dealt with possible falsification of leak rate data at TMI-2 prior to the accident. ALAB-738, 17 NRC 177.[12]

[Footnote Continued]

distortion of auxiliary feedwater spargers. The Commission, although it agreed that these issues "must be satisfactorily resolved before ... a decision on ... restart," decided to handle these issues outside of the restart proceeding. CLI-82-12, 16 NRC 1 (1982). The first issue is being addressed in the separate proceeding on the steam generator repairs at TMI-1. The Licensing Board issued a decision authorizing issuance of the license amendment necessary for operation with the repaired steam generators, LBP-84-47, 20 NRC 1405 (1984) aff'd, ALAB-807, 21 NRC ____ (1985), and that amendment was issued. The latter two issues were addressed by the staff in SECY-82-502. Staff found no cracking in TMI-1 nozzles or sleeves and that the feedwater sparger issue was inapplicable to TMI-1. The Commission accepts the NRC staff's findings and is satisfied that these issues have been resolved.

[11] Staff on May 24, 1985 certified that the equipment was qualified.

[12] The Commission on October 7, 1983 took review of whether the hearing ordered by the Appeal Board should proceed prior to completion of an investigation into these allegations by the NRC's Office of Investigations and, to preserve the status quo, stayed the Appeal Board's decision while it conducted that review. Subsequently, the Department of Justice requested the Commission not to pursue this matter during the pendency of the criminal proceeding against Metropolitan Edison Co., United States v. Metropolitan Edison Co., No. 83-00188 (M.D. Pa.), and the Commission agreed to cooperate. After the criminal proceeding was settled via a plea agreement and resulting conviction, the Commission lifted the stay. CLI-84-17, 20 NRC 801 (1984).

On May 24, 1984 the Appeal Board issued its decision on the rest of the management issues. ALAB-772, 19 NRC 1193. The Appeal Board found that the record needed further development on GPU Nuclear's licensed operator training program, and on a May 9, 1979 mailgram from GPU President Herman Dieckamp to Congressman Udall concerning the TMI-2 accident. The Appeal Board in ALAB-772 also granted a motion to reopen on pre-accident leak rate practices at TMI-1.

On September 11, 1984 the Commission took review of whether the hearings ordered by the Appeal Board in ALAB-738 and ALAB-772 were warranted, and whether any of the information in NUREG-0680, Supp. No. 5, TMI-1 Restart, An Evaluation of the Licensee's Management Integrity as it Affects Restart of Three Mile Island Nuclear Station Unit 1, Docket 50-289, (July 1984), ("NUREG-0680, Supp. No. 5"), warranted further hearings.[13] CLI-84-18, 20 NRC 808. On February 25, 1985, the Commission held that for public policy reasons the Licensing Board should issue its decision on the two remaining issues in this proceeding -- training and the Dieckamp mailgram -- but no other hearings were warranted within the restart proceeding. CLI-85-2, 21 NRC 282 (1985).

The Commission in CLI-85-2 fully explained why no further hearings were warranted within the restart proceeding. Briefly summarized, the Commission found that no issue met the standards for reopening, i.e.,

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[13]The NRC staff in NUREG-0680, Supp. No. 5 set forth its latest evaluation of licensee's management integrity, specifically focusing on matters addressed in numerous investigations conducted by the Commission's Office of Investigations.

raised a significant safety concern which might have affected the Licensing Board's decision. With regard to the three most significant issues discussed in CLI-85-2 -- TMI-2 leak rate falsifications, TMI-1 leak rate practices, and staff's "likely" change of position -- the Commission found as follows.

Personnel changes and procedural safeguards have mooted the significance of the TMI-2 leak rate falsifications for current TMI-1 operations.[14] Of those licensed to operate TMI-2 prior to the accident, only one -- Michael Ross -- is licensed to operate TMI-1, and he has been cleared of involvement in falsifications at TMI-2 by the NRC's Office of Investigations (OI) report. GPU Nuclear's upper management similarly has been cleared of involvement by the U.S. Attorney, based on a grand jury proceeding which led to the indictment of Metropolitan Edison Company. Hence the fact that individuals working at TMI-2 over six years ago may have falsified records has no significance to the current operation of TMI-1.

With regard to pre-accident TMI-1 leak rate practices, the Commission in CLI-85-2 explained that the circumstantial evidence of a

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[14]The Commission in CLI-85-2 stated that it would be instituting a proceeding separate from the restart proceeding on TMI-2 leak rate falsifications "to determine the ultimate status of those likely involved in the TMI-2 leak rate falsifications, which includes those licensee has segregated from operational duties at TMI-1 and those now working at other nuclear facilities." 21 NRC at 305. The Commission excluded from this hearing those cleared by the U.S. Attorney, and Michael Ross, cleared by OI's investigation. The Commission also offered Charles Husted an opportunity to request a hearing on a condition imposed by the Appeal Board which barred him from having any supervisory responsibilities insofar as the training of non-licensed personnel was concerned.

few irregularities does not raise a current safety concern. OI investigated pre-accident TMI-1 leak rate practices, and found no pattern of falsifications, nor any motive to falsify. While the OI investigation did identify some procedural violations, such as the practice of discarding test results, those violations are just one more example of pre-accident deficiencies at TMI, and their significance today is minimal at best. The purpose of the restart proceeding was to determine whether current practices at TMI-1 provide reasonable assurance of safe operation. Whether TMI-1 can be safely operated was extensively litigated, and the Commission is satisfied, based on the extensive examination of GPU Nuclear in this proceeding, that the personnel, procedures, and organization currently in place provide reasonable assurance that similar procedural deficiencies will not recur.

The third significant issue in CLI-85-2 -- staff's "likely" change of position -- is also of minimal current significance. Of the four events relied on by staff for its "likely" change of position, one (the Floyd certification) was fully litigated, and the other three (TMI-2 leak rate practices, pre-accident training irregularities, and licensee's response to the 1979 Notice of Violation) have no current significance. Therefore staff's "likely" change of position does not warrant further hearings.

D. Effectiveness review of management issues

The Commission as part of its effectiveness review of the Licensing Board's decisions has obtained written submissions from the parties, and has heard oral presentations by the parties on October 14, 1981 in Washington, D.C. on the Licensing Board's First Partial Initial Decision on management competence, and on November 9, 1982, in Harrisburg, Pennsylvania on the next two Licensing Board Partial Initial Decisions.[15] In addition, the Commission held an evening session in Harrisburg on November 9, 1982 where it heard from members of the public regarding the restart of TMI-1.[16]

Subsequent to receipt of the parties' comments on the Licensing Board's decision on the cheating incidents, there were numerous developments in the management area which have led to additional oral and written presentations by the parties and have affected and substantially prolonged the Commission's review process. Although the Commission in CLI-85-2, 21 NRC 282 (1985), decided that none of this new information warranted further hearings, as summarized supra, the Commission will briefly discuss the chronology of events in order to place today's decision in perspective.

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[15]The parties mentioned in today's decision are the Commonwealth of Pennsylvania (Commonwealth), the Union of Concerned Scientists (UCS), Three Mile Island Alert (TMIA), Marjorie and Norman Aamodt, the NRC staff, and the licensee.

[16]The Commission has also solicited and received numerous written submissions from the public on whether and, if so, under what conditions, TMI-1 should be restarted.

On April 18, 1983, the NRC staff advised the Commission that because of the pendency of several matters that might bear on the competence and integrity of TMI-1 management, the so-called "open issues," the staff was initiating actions to "revalidate" its position that licensee management had sufficient integrity to operate the facility.[17] Staff in a May 19, 1983 memorandum to the Commission listed the following open issues: the General Public Utilities (GPU) v. Babcock and Wilcox (B&W) lawsuit transcript review;[18] the Hartman allegations concerning leak rate falsifications at TMI-2;[19] the Parks,

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[17]Staff "revalidated" its position in NUREG-0680, Supp. No. 5, concluding that "there is reasonable assurance that GPUN can and will conduct its licensed activities in accordance with regulatory requirements and that GPUN can and will operate TMI-1 without undue risk to the health and safety of the public." Id. at 13-10.

[18]GPU sued B&W in the United States District Court for the Southern District of New York (80 Civ. 1683(RO)), claiming that B&W, the manufacturer of the reactor's nuclear steam supply system, should be held liable for causing the TMI-2 accident. That lawsuit was settled after nearly three months of trial. Much of the information developed in that trial appeared to relate to licensee's management competence and integrity, and hence appeared relevant to the restart proceeding. Accordingly, the Commission directed the NRC staff to review the trial transcripts and the exhibits, whether introduced in evidence or not, to determine whether they contained new information relevant to restart. The Commission also provided the parties to the restart proceeding an opportunity to comment on these documents and the staff's review, and several parties submitted comments. Several issues arising from this review were referred to OI for investigation, and are discussed separately, infra.

The Appeal Board denied a motion to reopen the record based on the GPU v. B&W trial evidence, ALAB-738, 18 NRC 177, 195-197 (1983), and the Commission declined to take review of that holding.

[19]Harold Hartman, a reactor operator at TMI-2 prior to the accident, alleged that leak rate tests, which were used to assess whether primary system leakage surpassed technical specification limits,

[Footnote Continued]

King, and Gischel allegations regarding improper practices and harassment at TMI-2 during the cleanup;[20] concerns raised by the firm of Rohrer, Hibler and Replogle (RHR) and by Basic Energy Technology Associates, Inc. (BETA) reports;[21] and questions regarding whether GPU

[Footnote Continued]

were purposely manipulated and records of such tests falsified or destroyed at TMI-2 prior to the accident to cover up the fact that over an extended period of time the results of the tests exceeded technical specification limits. The Commission in CLI-85-2 explained that these allegations do not raise a concern for current operation of TMI-1. See discussion supra.

[20] Messrs. King and Gischel were employed by GPU Nuclear in connection with the ongoing cleanup of TMI-2. Mr. Parks was employed by Bechtel. They alleged that established safety procedures were not being followed in conducting the cleanup, and that they had been harassed by management for raising these concerns. These allegations were referred to OI, which conducted separate investigations into the alleged procedural violations and the harassment claims. OI Report Nos. 11-83-C02 (May 18, 1984), 11-83-002 (September 1, 1983). The Appeal Board prior to completion of the OI investigations denied a motion to reopen the record on these allegations. ALAB-738, 18 NRC 177, 197 (1983). Based on the OI investigations, the Commission found that licensee had not discriminated against Messrs. King and Gischel. For the purpose of its analysis, the Commission accepted staff's conclusion that Mr. Parks had been discriminated against, but found that this single act of discrimination did not meet the standards for reopening, particularly given that the major GPUN official involved no longer was associated with TMI-1. CLI-85-2, 21 NRC 282, 327-29 (1985).

[21] The RHR and BETA reports were prepared for licensee by outside consultants. The RHR report ("Priority Concerns of Licensed Nuclear Operators at TMI and Oyster Creek and Suggested Action Steps" (March 15, 1983)) dealt primarily with operator attitudes, while the BETA report ("A Review of Current and Projected Expenditures and Manpower Utilization for GPU Nuclear Corporation" (February 28, 1983)) was designed to evaluate operational efficiency. Both reports contained information that appeared to bear on issues in the restart proceeding, and hence were the subject of comments by several parties. Staff in NUREG-0680, Supp. No. 4 ("TMI-1 Restart -- An evaluation of the RHR, BETA, and Draft INPO Reports" (October, 1983)) evaluated these reports and found no significant new information. The Appeal Board denied a motion to reopen the record based on the substance of these reports. ALAB-774, 19 NRC 1350 (1984).

failed promptly to notify the Commission or Appeal Board of material information in the RHR, BETA and other reports.[22] Subsequently, additional questions were raised regarding the preparation of the Keaten report by GPU,[23] leak rate practices at TMI-1,[24] pre-accident training irregularities,[25] changes to the Lucien Report,[26] and a change in

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[22]The NRC staff concluded that the RHR and BETA reports were not provided to the NRC in a timely manner. This issue was referred to OI to determine why the reports were not provided at an earlier time. The OI investigation did not disclose evidence of a deliberate attempt by licensee management to withhold information contained in the RHR and BETA Reports from the NRC. OI Report No. 1-83-013, April 16, 1984. The Appeal Board denied a motion to reopen based on the reporting of these documents to the NRC, ALAB-774, 19 NRC 1350 (1984), as did the Commission. CLI-85-2, 21 NRC 282, 341 (1985).

[23]Questions regarding preparation of the Keaten report -- an internal GPU report on the TMI-2 accident written by a task force headed by R.W. Keaten -- arose from the review of the GPU v. B&W trial material. Essentially, this issue, which was investigated by OI, involves the propriety of changes made to drafts of the report by GPU management, and whether those changes reflect adversely on management's integrity. OI in its investigation did not find evidence of improper changes to the Keaten Report itself. However, OI did find that licensee in response to the NRC's October 25, 1979 Notice of Violation (NOV) had made inaccurate and incomplete statements. OI Report No. 1-83-012 (May 18, 1984). The Commission found that the removal of the individuals primarily responsible for the response to the NOV mooted any significance of this issue. CLI-85-2, 21 NRC 282, 323, 334 (1985).

[24]The NRC staff in its abbreviated investigation into leak rate test practices at TMI-2 discovered some questionable data at TMI-1. Accordingly, OI was asked to investigate possible leak rate falsification at TMI-1. OI completed its investigation (OI Report Nos. 1-83-028 and 1-83-028, Supplement, April 16, 1984) shortly before the Appeal Board reopened the record on this issue in ALAB-772, 19 NRC 1193 (1984), rev'd CLI-85-2, 21 NRC 282 (1985). OI, although it identified some procedural irregularities, did not find either a pattern of falsifications or a motive to falsify. The Commission found that this issue did not meet the standards for reopening. See discussion supra.

[25]Staff in the review of the GPU v. B&W trial record found several pre-accident licensee memoranda which indicated possible regulatory

[Footnote Continued]

operator testimony regarding the sequence of events during the accident.[27] Further, licensee was indicted for criminal acts in connection with the Hartman allegations, and subsequently pled guilty to one count and nolo contendere on six others. The United States District Court for the Middle District of Pennsylvania on February 29, 1984 entered a judgment of guilty on the one count, and a judgment of conviction on the six counts to which Metropolitan Edison pled nolo contendere.

In response to these open issues, licensee on June 10, 1983 committed to several significant organizational changes. Licensee committed to reassign personnel such that "no TMI-2 licensed operator will operate TMI-1, with the exception of the Manager of Operations,

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[Footnote Continued]

violations in licensee's training program. OI conducted three separate inquiries into pre-accident training irregularities. OI Report Nos. Q-1-83-014 (May 31, 1983); Q-1-83-015 (July 26, 1983); Q-1-84-004 (March 22, 1984). OI determined that none of these inquiries warranted a full investigation. The Appeal Board in ALAB-774 denied a motion to reopen based on pre-accident training irregularities. 19 NRC 1350 (1984).

[26]The GPU v. B&W trial record review also led to an OI inquiry into changes made to a technical report regarding the accident prepared by K.P. Lucien of Energy Incorporated under contract to the licensee. OI Report No. Q-1-84-006 (May 18, 1984). Based on OI's investigation, the Commission found no direct evidence of wrongdoing, and concluded that hearings on this issue were not warranted. CLI-85-2, 21 NRC 282, 337 (1985).

[27]OI also investigated the causes of a change in testimony by licensee employees during the GPU v. B&W trial from their earlier statements concerning whether full-flow high pressure injection (HPI) had been manually initiated on the morning of the accident when the last two reactor coolant pumps were shutdown. OI Report No. 1-84-005 (July 13, 1984). The Commission found from OI's investigation that there was no factual evidence to support the charge that the change in testimony was improperly motivated, and that this issue did not warrant reopening. CLI-85-2, 21 NRC 282, 338 (1985).

Michael Ross."[28] Licensee also committed to "add full time on shift operational quality assurance [QA] coverage until the open issues are resolved."[29] Further, licensee stated that until the open issues were effectively resolved it would "reassign personnel such that those functions which provide overview assessment, analysis, or audit of plant activities would contain only personnel with no pre-accident involvement as exempt Met Ed employees at TMI-1 or 2."[30] Finally, licensee committed to "reallocate the priorities and assignments within the Office of the President of GPU Nuclear."

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[28]The Licensing Board described Mr. Ross as possibly "the most important person on the TMI-1 operating team as far as the public health and safety is concerned," 14 NRC at 439, and hence Mr. Ross has been closely examined throughout this proceeding. As explained in CLI-85-2, the Commission finds that TMI-1 can be operated safely with Mr. Ross in his current position. 21 NRC at 298-99 (1985).

The Commission in CLI-85-2 modified licensee's commitment and imposed it as a condition: "No pre-accident TMI-2 operator, shift supervisor, shift foreman, or any other individual both in the operating crew and on shift for training as a licensed operator at TMI-2 prior to the accident shall be employed at TMI-1 in a responsible management or operational position without specific Commission approval. 'Operational position' as used here includes any position involving actual operation of the plant, the direction or supervision of operators, or independent oversight of operations. This condition shall also apply to the pre-accident Vice-President, Generation, TMI-2 Station Manager, TMI-2 Supervisor of Technical Support (from January 1977 to November 1978), TMI-2 Superintendent of Technical Support (from December 1978 to the accident), and TMI-2 Supervisor of Operations. This condition shall not apply to Michael Ross, and Brian Mehler may continue in his present position consistent with this condition." 21 NRC at 341-42.

[29]See discussion supra for a listing of the "open issues."

[30]Mr. Clark at the November 28, 1983 Commission meeting explained that "the exempt classification [a payroll classification] ... picks up all supervisory management, all people charged with the responsibility for directing the operation. It does not pick up the workers, the hands-on people, be they mechanics or clerks."

The Commission on November 28, 1983 heard oral presentations from GPU on its June 10, 1983 management organization proposal and subsequent changes.[31] GPU in its presentation stated that its June 10, 1983 plan had been implemented, and committed to taking the following further steps. First, GPU would elect to the GPU Nuclear Board of Directors three outside directors "with meaningful credentials and demonstrated independence." Second, these new directors would comprise a Nuclear Safety and Compliance Committee of the GPU Nuclear Board, and that Committee would employ a staff to monitor the operation and maintenance of the GPU system nuclear units.[32] Third, the Nuclear Safety and Compliance Committee would periodically issue reports regarding the

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[31]The Commission heard oral presentations by the other parties on December 5, 1983 on GPU's proposal. Staff in its presentation set forth the conditions under which it believed TMI-1 could be safely operated, which included round-the-clock NRC inspection and a 25% power limitation.

UCS in comments dated January 25, 1984 argued that the Commission had failed to respond to the UCS request that the parties be provided an opportunity to present oral responses to staff's December 5 proposal. The Commission responded to the UCS motion by providing the parties an opportunity to submit written comments on staff's proposal. The parties also had the opportunity to discuss the staff proposal in the August 15, 1984 oral presentations to the Commission.

[32]Licensee notified the Commission on March 15, 1984 that Messrs. Lawrence L. Humphreys (Chief Executive Officer of UNC Nuclear Industries), Warren F. Witzig (Chairman, Nuclear Engineering Department, Pennsylvania State University), and Robert V. Laney (consultant in nuclear and energy project management) had been elected to the GPU Nuclear Board of Directors, and that they would make up the Nuclear Safety and Compliance Committee.

The Commission in CLI-85-2 adopted licensee's commitment as a condition: "Licensee, in the absence of Commission authorization to the contrary, is to retain its expanded Board of Directors and its Nuclear Safety and Compliance Committee." 21 NRC at 342.

operation and maintenance of the GPU system nuclear units, and those reports would promptly be provided to the NRC and the public. Fourth, Mr. Robert Arnold, who had been President of GPU Nuclear, was reassigned to non-nuclear work within the GPU system. Mr. Philip Clark, formerly Executive Vice President, replaced Mr. Arnold as President of GPU Nuclear, while Mr. E.E. Kintner, formerly Vice President, became Executive Vice President. Both Messrs. Clark and Kintner were elected members of the Board of Directors of GPU Nuclear.[33]

On January 27, 1984 the Commission set forth its tentative views and plan for resolution of management integrity issues prior to restart.[34] The Commission stated that the only then-ongoing OI investigation which might require further resolution prior to a decision on the management issues was the Unit 1 leak rate investigation. The Commission explained "that, in principle, temporary separation from

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[33]Subsequently, on February 6, 1984, GPU Nuclear announced further changes to its organization. Mr. John F. O'Leary, former Deputy Secretary of the Department of Energy and GPU Board member since October 1979, was elected Chairman of GPU Nuclear. Mr. Clark, President and Chief Operating Officer of GPU Nuclear, was also appointed Chief Executive Officer. Mr. Herman Dieckamp, former Chairman and Chief Executive Officer of GPU Nuclear since its inception, remained only as a member of the Board of Directors of GPU Nuclear, although he continued to hold the positions of President, Chief Operating Officer, and a member of the Board of Directors of GPU.

[34]The Commission on January 20, 1984 provided the parties with a list of integrity issues for comment. This list represented a compilation of issues having as their bases "facts or disputes about facts raised during the restart proceeding or thereafter, and which at face value appear to have some possible connection with management integrity." The list was designed to assist the Commission in identifying and evaluating issues concerning licensee's integrity. Licensee, staff, TMIA, the Aamodts, UCS, and the Commonwealth commented on that list.

nuclear operations of some GPU employees and other actions, including those proposed by the licensee, can serve as an interim solution to the management integrity issues raised by the 'open items,' pending resolution of those items." The Commission also noted its view, "based on currently available information, ... that neither Chairman of the Board William Kuhns nor President of GPU Herman Dieckamp will have to be temporarily or permanently separated from nuclear operations prior to restart."

The Commission on June 1, 1984 requested the parties "to comment on whether, in view of ALAB-772 and all other relevant information, including investigative reports by the Office of Investigations, the management concerns which led to making the 1979 shutdown orders immediately effective have been sufficiently resolved so that the Commission should lift the immediate effectiveness of those orders prior to completion of review of any appeals from ALAB-772." Licensee, staff, TMIA, the Aamodts, UCS and the Commonwealth submitted comments, and the Commission heard oral presentations from the parties on August 15, 1984.

Staff, as part of its comments, provided its "revalidation" of licensee's management in NUREG-0680, Supp. No. 5. Staff in that evaluation found a "pattern of activity on the part of ... Met-Ed [which], had it been known at the time [of the Licensing Board proceeding on TMI-1 restart], would likely have resulted in a conclusion by the staff that the licensee had not met the standard of reasonable assurance of no undue risk to public health and safety." Id. at 13-5. With regard to the current licensee, GPU Nuclear, staff balanced the past improper acts of Metropolitan Edison against GPU Nuclear's record

of remedial actions and performance, including the record of current senior management, and concluded that GPU Nuclear was acceptable.

The Commission, in its September 11, 1984 Order taking review of whether further hearings should be held, stated it would not rule "on whether to lift the immediate effectiveness of the 1979 shutdown orders until after it has decided on what further evidentiary hearings, if any, are required in the restart proceeding." The Commission further stated that, if it "decides that further hearings are required, it will decide whether the public health, safety and interest require completion of those hearings prior to a decision on lifting effectiveness." CLI-84-18, 20 NRC 808, 809 (1984).

After the Commission decided what further hearings were required and the Licensing Board issued its partial initial decision on GPU Nuclear's licensed operator training program, the Commission heard oral presentations from the parties on May 22, 1985. The parties in their presentations addressed both the training decision and the overall question of whether the Commission should now lift the immediate effectiveness of the shutdown Orders.

III. The Commission's Effectiveness Decision

The Commission in CLI-85-2 decided that for public policy reasons the Licensing Board should issue a decision on the two issues remaining in this proceeding, training and the Dieckamp mailgram. The Commission further decided that hearings in the restart proceeding were not warranted on any other issue. The question before the Commission now is

accordingly limited to whether any concerns regarding the training issue are such as to warrant maintaining the immediate effectiveness of the shutdown Orders prior to completion of the agency's appellate review of that issue, and whether any concerns regarding the mailgram issue warrant maintaining the effectiveness of the shutdown orders at least until the Licensing Board issues a decision on that issue.[35]

As explained below, the Commission has decided that these two issues do not raise serious questions about whether TMI-1 can be safely operated, and accordingly do not warrant keeping TMI-1 shutdown until agency proceedings have been completed. The Commission, after first placing these two issues in perspective by providing a general overview of the competence and integrity issues, will discuss below why these two issues do not raise serious questions about the current safe operation of TMI-1. The Commission will then address procedural issues raised by intervenors. Finally, the Commission will discuss staff's proposals of round-the-clock NRC inspection and a 25% power limitation.

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[35]Were the Commission to wait for completion of the proceedings before the Licensing Board, it would then have to decide whether to await completion of the appellate review. As explained infra, the Dieckamp mailgram issue does not raise health and safety concerns that warrant maintaining the immediate effectiveness of the shutdown Orders. Therefore, there is no reason to postpone a decision until the Licensing Board issues its decision.

A. Management Competence and Integrity

1. Introduction

In the Commission's August 9, 1979 Order, the Commission directed the Licensing Board to evaluate whether licensee had sufficient managerial capability and resources to operate TMI-1 safely. 10 NRC 141, 145. In a subsequent Order issued on March 6, 1980, the Commission gave the Licensing Board specific guidance on areas to be addressed in determining whether management had sufficient competence to operate the facility. CLI-80-5, 11 NRC 408 (1980).[36] The Licensing Board addressed these issues in its Partial Initial Decision of August 27, 1981, LBP-81-32, 14 NRC 381, and reassessed management competence after the cheating incidents in its Partial Initial Decision of July 27, 1982. LBP-82-56, 16 NRC 281.

The Appeal Board in its review of the Licensing Board's decisions reopened the record on four management-related issues: the adequacy of training, the accuracy of the Dieckamp mailgram, pre-accident TMI-1 leak

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[36] The Commission in that Order directed the Licensing Board "to examine the following broad issues: (1) whether Metropolitan Edison's management is sufficiently staffed, has sufficient resources and is appropriately organized to operate Unit 1 safely; (2) whether facts revealed by the accident at Three Mile Island Unit 2 present questions concerning management competence which must be resolved before Metropolitan Edison can be found competent to operate Unit 1 safely; and (3) whether Metropolitan Edison is capable of operating Unit 1 safely while simultaneously conducting the clean-up operation at Unit 2." CLI-80-5, 11 N.R.C. 408, 408 (1980). The Commission then went on to list 13 specific issues for the Licensing Board to examine in the course of examining the broad questions.

rate practices, and TMI-2 leak rate falsifications. The Appeal Board found the record on the remaining management issues to be adequate, and affirmed the Licensing Board's findings on those issues.

The Commission in CLI-85-2 reversed the Appeal Board's decision to reopen the record on TMI-1 leak rate practices and TMI-2 leak rate falsifications. 21 NRC 282 (1985). The Commission, having carefully reviewed the Appeal Board decisions on the management issues, is satisfied that the Appeal Board has thoroughly evaluated the major issues relating to management, and endorses its favorable substantive findings on licensee's management. The Commission addressed the Appeal Board's conclusion that further hearings are required in CLI-85-2. The Appeal Board decisions, the Commission's decision in CLI-85-2, the Licensing Board's May 3, 1985 decision on training, and the underlying adjudicatory record constitute the basis for the Commission's finding that GPU Nuclear has sufficient competence and integrity to operate TMI-1 safely. Nevertheless, because the management competence and integrity issues are so significant, for completeness, before addressing the training and Dieckamp mailgram issues, we will summarize here our reasons for endorsing the overall favorable findings in the adjudicatory proceeding on the management issues.

2. Overview

The Commission has indicated that the broad issues regarding competence to be considered in this proceeding are whether GPU Nuclear management "is sufficiently staffed, has sufficient resources and is

appropriately organized to operate Unit 1 safely." CLI-80-5, 11 NRC 408 (1980). Essentially, the issue of competence concerns whether GPU Nuclear has the technical resources and capabilities to provide reasonable assurance that TMI-1 will be operated safely.

The concept of "integrity," or "character," is a more difficult one to define. See generally, e.g., ALAB-772, 19 NRC 1193, 1206-1208; Houston Lighting and Power Company (South Texas Project, Units 1 and 2), LBP-84-13, 19 NRC 659 (1984). A generally applicable standard for integrity is whether there is reasonable assurance that the licensee has sufficient character to operate the plant in a manner consistent with the public health and safety and applicable NRC requirements. The Commission in making this determination may consider evidence regarding licensee behavior having a rational connection to the safe operation of a nuclear power plant.[37] This does not mean, however, that every act of licensee is relevant. Actions must have some reasonable relationship to licensee's character, i.e., its candor, truthfulness, willingness to abide by regulatory requirements, and acceptance of responsibility to protect public health and safety. In addition, acts bearing on character generally should not be considered in isolation. The pattern of licensee's relevant behavior, including corrective actions, should be considered.

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[37]The references to "licensee behavior" include acts of licensee employees, since all organizations carry on their activities through individuals.

Without question, the Metropolitan Edison management of TMI-2 prior to and immediately following the March 28, 1979 accident failed to provide the climate, resources, attitude, and leadership that the Commission expects of a licensee. We note that a portion of this proceeding and the parties' efforts have been devoted to demonstrating management's failures prior to the accident, which include the events leading to the criminal conviction of Metropolitan Edison. However, those past events are six years old, and the company responsible no longer operates TMI-1.[38] The Commission's responsibility and concern is with the management and company that would operate Unit 1 today, and with their willingness and ability to operate the plant according to the high standards that we require and that the public demands and deserves. Therefore, the Commission rests its decision on evidence demonstrating that past inadequacies have been corrected, and that the current company and management have the necessary competence and integrity to provide reasonable assurance that TMI-1 will be operated consistent with public health and safety and the Commission's requirements.

GPU Nuclear has replaced Metropolitan Edison as the company responsible for operation of TMI-1. GPU Nuclear has a new chairman and revised Board of Directors, a new President, Executive Vice President, Vice President of TMI-1, Chairman of the General Operations Review

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[38] Not only does a company with a different name now have responsibility for operation of TMI-1, but the organizational structure is substantially modified from the previous company and a substantial number of the individuals in direct management of TMI-1 at the time of the accident have been replaced. See discussion infra.

Board, and numerous other lower-level managers, as well as a substantially modified organizational structure and operational procedures.[39] It is the qualifications of this management, not the management of six years ago, that the Commission is now evaluating. The Commission is satisfied that current management has both the necessary competence and integrity to operate TMI-1 safely.

The Commission in reaching its favorable conclusion regarding management competence and integrity has considered the depth with which the performance and plans of the licensee have been examined. Indeed, because of the TMI-2 accident, the Commission has examined the management of this utility more extensively than in any other case in NRC's history. That examination has shown that present GPU Nuclear management is fundamentally sound. Personnel changes in GPU Nuclear management in 1983-84 (which were not in dispute) even further support this conclusion.[40]

With regard to licensee's overall competence, licensee in the initial proceeding on management issues made a strong affirmative showing of the overall strength of its management structure, human

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[39] See 14 NRC at 403 et al. Philip Clark, GPUN President, informed the Commission during oral presentations on August 15, 1984 of the current figures. Of the twelve senior GPUN employees, eight joined the GPU system after the TMI-2 accident. Three of the remaining four had no involvement with Metropolitan Edison. Of 435 key personnel (including managers, technical/professional and licensed operators), 235 joined GPU after the accident and another 100 had been employed within the GPU system prior to the accident, but not with Metropolitan Edison.

[40] No party moved to reopen the record based on these personnel changes.

resources, safety review process, and shift staffing commitments. The GPU Nuclear structure provides dedicated technical resources to operate GPU's nuclear facilities, thus minimizing resource competition from the non-nuclear aspects of GPU operations. The organization of GPU Nuclear provides significantly greater technical resources and more logically organized and accountable functional relationships than existed in Metropolitan Edison. The quantity of technical resources applied to nuclear operations has been significantly increased.[41] Those GPUN managers new to the GPU system since the accident have extensive experience and significant technical qualifications that adequately correct pre-accident failings.

The training department has increased its staff, significantly expanded and modified the curriculum, and significantly increased the time devoted to operator training. An entirely revised maintenance system has been put in place since the accident. Subsequent allegations that management aided cheating were not proven during an extensive hearing. While the cheating should not have occurred, the Commission finds that, because present GPU Nuclear management did not participate in, encourage, or condone the cheating, those incidents do not undermine the overall competence of GPU Nuclear management to operate TMI-1 safely.

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[41] See 14 NRC at 413. On August 15, 1984 GPU Nuclear provided the Commission with current information on its technical resources. Approximately 915 full-time company employees devote their efforts to TMI-1. Of these, 435 are key personnel, including managers, technical/professional positions, and licensed operators. Prior to the [Footnote Continued]

The Commission finds, considering the above factors, that licensee's current management has the requisite competence to provide reasonable assurance that TMI-1 can be operated safely.

With regard to licensee's integrity, the restart proceeding would not have been as lengthy and complex as it has been had licensee's performance been exemplary. The licensee's performance since the accident has been marred first and foremost by the cheating incidents. In this connection the Commission notes not only the cheating itself, but licensee's early unwillingness in a few particular instances to acknowledge the fact of cheating and to take prompt disciplinary action against those responsible.[42]

GPU Nuclear was also responsible for several procedural violations during the TMI-2 cleanup, for procedural violations at TMI-1 found in the October 28, 1983 Region I inspection report, and for the harassment of Parks.

However, the issue before the Commission is not whether GPU Nuclear has made mistakes, but whether GPU Nuclear as presently constituted and staffed has the necessary integrity to provide reasonable assurance that it will safely operate TMI-1. The Commission finds that it has. GPU Nuclear has now shown a determination to correct its errors and improve

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[Footnote Continued]

TMI-2 accident, Metropolitan Edison devoted approximately 315 employees to TMI-1, including 127 key personnel. Prior to the accident the TMI training staff was comprised of seven individuals. It now has 55.

[42]The Licensing Board in its May 3, 1985 decision on training found that licensee's management had now accepted their responsibility for the cheating.

itself. The Commission notes in this regard GPU Nuclear's willingness to seek the views of independent evaluators,[43] to implement their recommendations,[44] and to add qualified outside expertise to its staff.[45] Further, high-level management at GPU Nuclear has demonstrated a commitment to assure that a proper attitude is followed throughout the organization.[46]

Most importantly, there is no persuasive evidence that any of the individuals in charge of GPU Nuclear have been personally implicated in wrongful acts. Indeed, the individuals currently responsible for the leadership of GPU Nuclear present an impressive array of credentials and

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[43]For instance, licensee contracted for the BETA and RHR Reports, see note 21, supra, for a review of its training programs by Data Design Laboratories ("Assessment of Selected TMI-1 Training Programs" (September 10, 1982)) ("1982 DDL Report"), and for an assessment by Admiral H.G. Rickover ("An Assessment of the GPU Nuclear Corporation Organization and Senior Management and its Competence to Operate TMI-1" (November 19, 1983)) ("Rickover Report"). Licensee has also been evaluated by the Institute of Nuclear Power Operations. These reports for the most part were generally favorable to licensee.

[44]For instance, all but one of the original Operator Accelerated Retraining Program (OARP) Review Committee's recommendations on licensee's training program have been or are being implemented, all but two of the recommendations in the RHR report have been or are being implemented, and all but two of the recommendations in the BETA report have been addressed, either through implementation or disagreement.

[45]For instance, GPU Nuclear has expanded its Board of Directors to include three outside directors, who will also head a Nuclear Safety and Compliance Committee. See generally note 32 and accompanying text, supra.

[46]For instance, upper management in response to the cheating personally interviewed operators to ensure that the operators understood that cheating would not be tolerated, and upper management in response to the Parks incident has implemented policies to ensure that harassment does not recur.

experience. They are also responsible for the significant improvements made over the past performance of Metropolitan Edison Company.

The Commission finds that the present organization which will be responsible for operation of TMI-1 has demonstrated, both in personnel and in actions, that the past failings at TMI will not be repeated. In sum, after considering the personnel currently in charge of TMI-1 and the performance of GPU Nuclear, the Commission concludes that GPU Nuclear has the necessary competence and integrity to provide reasonable assurance of safe operation of TMI-1. The Commission expects GPU Nuclear to recognize that the public as well as the NRC will be closely watching its future performance, and therefore to strive to achieve standards of excellence that will serve as a model for the industry. We will now turn to the two specific issues still pending in the restart proceeding.

B. Whether the Training Issue Raises Concerns Warranting Maintaining the Immediate Effectiveness of the Shutdown Orders

1. Background

a. Proceedings Through ALAB-772

One of the most important issues in the restart proceeding is whether the operators at TMI-1 are adequately trained. In its First Partial Initial Decision, the Licensing Board, after reviewing the program, organization, and personnel devoted to training, concluded that "Licensee has in place at TMI-1 a comprehensive and acceptable training program". 14 NRC at 478.

After the Special Master examined the cheating incidents, the Licensing Board in its Third Partial Initial Decision reevaluated the training program. The Licensing Board stated that it "remained convinced that the evidence supported the conclusion that Licensee's training program was well designed to train qualified operators and that there was a rational plan to implement the program." 16 NRC at 379. The Board was satisfied that licensee was devoting sufficient resources to its training program, and that licensee "cannot be faulted in the selection of the advice it sought for its training program, the credentials of its training managers or on the general design of its training program." Id. The Licensing Board found that inadequacies in the administration of the training program resulted from a failure to apply the principles of quality assurance and quality control to the instruction and examination process, and did not represent a total program failure. The Licensing Board imposed four conditions aimed at ensuring adequate program implementation, which were to be satisfied by licensee within two years following any restart authorization.[47]

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[47] Those four conditions were:

"(1) There shall be a two-year probationary period during which the Licensee's qualification and requalification testing and training program shall be subjected to an in-depth audit by independent auditors, approved by the Director of NRR, such auditors to have had no role in the TMI-1 restart proceedings.

(2) Licensee shall establish criteria for qualifications of training instructors to ensure a high level of competence in instruction, including knowledge of subjects taught, skill in presentation of knowledge, and preparation, administration, and evaluation of examinations.

[Footnote Continued]

The Appeal Board in ALAB-772 held that the Licensing Board had not developed an adequate record on the adequacy of the training program in light of the cheating incidents. The Appeal Board found that "[t]he deficiencies in operator testing, as manifested by the cheating episodes, may be symptomatic of more extensive failures in licensee's overall training program. Whether those deficiencies still exist or have been sufficiently cured is not evident from the record." 19 NRC at 1233.

The Appeal Board held that the "principal difficulty" with the Licensing Board's decision was its failure adequately to reconsider in light of the cheating incidents its earlier finding that licensee's training program was "'comprehensive and acceptable.'" Id., quoting 14 NRC at 478. The Appeal Board noted in this regard "that the generally positive testimony of the OARP Review Committee and licensee's other independent consultants was of decisional significance" to the Licensing

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[Footnote Continued]

(3) Licensee shall develop and implement an internal auditing procedure, based on unscheduled ("surprise") direct observation of the training and testing program at the point of delivery, such audits to be conducted by the Manager of Training and the Supervisor of Operator Training and not delegated.

(4) Licensee shall develop and implement a procedure for routine sampling and review of examination answers for evidence of cheating, using a review process approved by the NRC Staff."

16 NRC at 384.

The last three of these conditions have been implemented. Design Data Labs has been hired (and approved by staff) to do the in-depth audit required by the first condition. The probationay period has been incorporated as a license condition.

Board's initial favorable finding.[48] Id. at 1234. The Appeal Board noted that the OARP Review Committee prior to the cheating incidents had found "pre-accident neglect" of the TMI Training Department and identified shortcomings (such as bitterness and anxiety among some employees, inadequate training facilities, and the need for special teacher training for the instructors). Despite these criticisms, the OARP Review Committee on balance gave the licensee's training program high marks. The Appeal Board believed that additional testimony was required from the OARP Review Committee regarding how it would now strike the balance between the positive and negative aspects of the program. The Appeal Board held that, "[o]nce the cheating incidents raised questions about that judgment, it was incumbent upon the Board to seek further testimony from the independent experts upon which it so heavily relied in the first instance." Id. The Appeal Board therefore reopened the record and directed the Licensing Board to take further evidence from the OARP Review Committee regarding the effect of the cheating incidents on its earlier favorable findings.[49]

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[48]The OARP Review Committee was comprised of five individuals with expertise in various aspects of training who are not affiliated with the licensee, although their compensation was paid by licensee.

[49]In CLI-85-2, the Commission, noting that the evidentiary hearing on training had been completed, found that for public policy reasons the Licensing Board should proceed to issue its decision. 21 NRC 282.

b. The Licensing Board's Decision on Remand

The Licensing Board, following the lead of licensee and UCS, chose to interpret the Appeal Board's directive broadly. Thus, rather than limiting the hearing to the views of the OARP Review Committee, the Board considered the overall question of whether GPU Nuclear's licensed operator training program is adequate to prepare the TMI-1 licensed operators to operate the plant safely.[50]

The Licensing Board, after examining all the evidence before it,[51] concluded "that the Licensee has made an appropriate response to the 1981 cheating episodes and to the concerns of the Appeal Board in ALAB-772." Slip op. at 11-12. The Board found licensee's response satisfied each of the following four essential elements: (1) management personnel have conceded their failures in connection with the cheating, have committed to prevent any recurrence, and have extensively improved communications between management and employees; (2) employee attitudes

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[50] Licensee chose to present testimony on the overall adequacy of its training program, and UCS challenged that overall adequacy. The Board explained as follows: "The Board agreed with the Staff that ALAB-772 did not remand this matter to litigate again the entire licensed-operator training program. Licensee and UCS, having elected a complete litigation, the Board followed them, because a complete case tended to bound the concerns of ALAB-772." Slip op. at 210.

[51] Six groups of witnesses testified in the reopened hearings on training. Licensee presented four groups, consisting of the panel of five experts who made up the Reconstituted OARP Review Committee, and three groups of licensee employees involved in the training program. Staff presented a panel of witnesses who testified regarding the methodology used by the Reconstituted OARP Committee to evaluate the training program. Finally, a UCS witness also testified regarding the methodology which should be used to evaluate a training program.

have improved; (3) examination security will prevent future cheating; and (4) the training program has been improved. The fourth element was the most extensively litigated, and received the most attention in the Board's decision.

The Licensing Board in reaching its decision examined the personnel in charge of the training program, management's response to the cheating, including employee attitudes, and the licensed-operator training program itself. The examination of the training program included an examination of program development and methodology, substance and execution, and program evaluation and feedback.

The Board found that the "licensed operator training program for TMI-1 is adequate to train reactor operators and senior reactor operators to operate the unit safely," slip op. at 214, with one proviso. That proviso was that the "training program needs improvement because it does not provide for the evaluation of its trained personnel in the job setting for the purpose of validating and revising its training program." Slip op. at 154. To correct this deficiency, the Board imposed a condition requiring licensee to "implement a plan to evaluate the performance of trained reactor operators and senior reactor operators in the job setting for revision of its TMI-1 licensed-operator training program." Id. at 216. The Board, although it retained jurisdiction to review the terms of the license condition to be proposed

by licensee, held that this plan did not need to be developed and approved prior to restart.[52]

Finally, the Board considered the impact of the views of the Reconstituted OARP Review Committee.[53] The Board could not find from

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[52]The Licensing Board had explained in its April 11, 1985 Response to CLI-85-2 that "(f)ormal evaluation of operator performance in the job setting is almost by its very nature a function best performed after restart...." Slip op. at 8.

[53]The Reconstituted OARP Review Committee (Reconstituted Committee) conducted two reviews of licensee's training program. The first, which consisted of reviewing documents, interviewing training instructors, supervisors and administrators, and inspecting training facilities, was conducted in response to the Appeal Board's decision in order to provide a Report to the Commission in connection with a then-upcoming meeting on whether to lift the effectiveness of the shutdown Orders. The Reconstituted Committee in its July 3, 1984 "Special Report of the Reconstituted OARP Review Committee" ("Special Report") responded to the Appeal Board's concerns "[w]ithin the limits of time and resources available." Special Report at 5. The Reconstituted Committee stated in that Special Report that the cheating incidents "were extremely serious and reflect unfavorably on the organizations as well as the individuals involved." Id. at 5. Nonetheless, the conclusions of the Reconstituted Committee were favorable.

The Reconstituted Committee conducted a further review of the training program in order to prepare its testimony. In that review, the Reconstituted Committee reviewed pertinent documentation, interviewed personnel, observed training sessions, and visited relevant facilities. The Reconstituted Committee in their testimony discussed, among other things, licensee's training resources and management, the training staff, instructor development, licensed operator training programs and procedures, and communications between management, training and operations personnel. The Committee also discussed the specific subissues raised by the intervenors.

The Committee, recognizing that its earlier Special Report had been limited by time constraints, explained that, subsequent to that Report, each member had spent as much time as he had available to further reviewing licensee's training program to provide assurance that the conclusions reached in the Special Report were correct. The Committee concluded as follows: "[I]t is the Committee's judgment that the licensed operator training program at TMI-1 is an effective program and

[Footnote Continued]

the substance of Committee's review alone that the Committee's ultimate conclusion -- that the program was adequate to produce individuals competent to operate TMI-1 -- was either correct or incorrect. However, the Licensing Board did find that the Committee satisfied the remanded order in ALAB-772, in that the Committee "provided its very carefully constructed and well-founded opinions on the basic issue and various subsidiary evidentiary questions just as the Appeal Board requested." Slip op. at 211. Therefore, the Board, rather than attempting to separate the Committee's findings and testimony from the other evidence, simply used those findings in conjunction with other evidence in analyzing each issue regarding licensee's training program.[54] The Board in this regard noted the very high value it placed on the Committee members' opinions.

c. Analysis

The concerns about licensee's training program which led in part to making the 1979 shutdown Orders immediately effective were based on the apparent deficiencies in licensee's pre-accident training program. Licensee's current training program, as extensively described by the Licensing Board, bears little resemblance to that pre-accident program.

[Footnote Continued]

will continue to qualify individuals to operate TMI-1. The Committee thus takes this opportunity to reaffirm the conclusions reached in the Special Report...."

[54]The Licensing Board also addressed the impact of INPO's

[Footnote Continued]

There have now been three hearings which have considered the adequacy of GPU Nuclear's licensed operator training program. The Licensing Board found that licensee's improvements to its training program over this time period have been significant. Licensee has substantially improved the licensed operator training staff for TMI-1,[55] upgraded the training facilities and support equipment,[56] and changed

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[Footnote Continued]

accreditation of licensee's training program. As the Board did not rely on this accreditation in its decision, that accreditation need not be further addressed here.

[55]As summarized by the Licensing Board:

> In 1981, it [the licensed operator training staff] consisted of one supervisor and two instructors, who were SRO-licensed. Two contractor-supplied personnel also were assigned. None of these individuals held degrees.... Today, manpower in the Operator Training section devoted to TMI-1 licensed operator training consists of one manager, one administrative assistant, two staff positions (both with responsibilities as instructors), one supervisor, and three instructors (one of whom is assigned as Supervisor of Non-licensed Operator Training). Of the six persons designated to conduct licensed operator training, four have been licensed or certified as senior reactor operators. Three of these licenses are current; the other is not, but that instructor is now requalifying for a current SRO license.... The combined nuclear power plant experience of the staff is forty-eight years, of which twenty-five years are commercial. The combined instructor experience for the Operator Training staff is twenty-nine years, of which twenty-two years are in the nuclear field. Five of the staff hold bachelor's degrees; one of these has a master's degree as well.

Slip op. at 22. In addition, there is now a separate Simulator Development Section of the Training Department that consists of one manager and three instructors. See Slip op. at 29.

[56]"An upgrading of training facilities and support equipment has been in progress since 1980. The majority of classroom training for licensed operators now takes place in a modern, 20,000 square-foot training center built for this purpose and first occupied in mid 1981. The center, used entirely for training purposes, has fifteen classrooms

[Footnote Continued]

the training program "from a traditional, knowledge-based program that depended heavily upon the prior knowledge of the instructors to a very modern, structured, performance-based program." Slip op. at 13.[57]

The question facing the Commission, then, is whether, after three exhaustive hearings and a Licensing Board decision favorable to licensee,[58] there are still concerns about licensee's licensed operator training program which warrant maintaining the effectiveness of the shutdown Orders. In light of the depth of examination given licensee's training program and the Licensing Board's favorable findings, the answer to this question is favorable to restart. The Commission finds that there are no concerns about the adequacy of GPU Nuclear's training program which would warrant maintaining the immediate effectiveness of

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[Footnote Continued]

(two of which can be combined into an auditorium). It houses the Basic Principles Training Simulator (BPTS) and its support equipment, a control room mockup, office space for a training staff of 62, a library, file room, audio-visual equipment room, conference room and photocopy, vending machine, storage and rest room area.... A new, identically sized building has been designed with construction to begin in the spring of 1985. This building will house the BPTS and the new replica simulator (under construction), the Communications Division, and will provide more instructor work area." Slip op. at 31.

[57] The credit for this improvement must be given to the managers now in charge of licensee's training program. See Slip op. at 75-76.

[58] Concerning the one deficiency found by the Licensing Board, the Commission agrees that job performance evaluations are best performed after a plant goes into operation, and that this condition need not be met prior to restart. See LBP-85-10, 21 NRC ___ (1985). With regard to whether reasonable progress has been made on this item, the Board stated that licensee would demonstrate reasonable progress if it began immediately to satisfy the requirement. Licensee on May 28, 1985 submitted a proposed plan to satisfy this requirement. Under the terms of the Board's decision, this is sufficient to demonstrate reasonable progress.

the shutdown Orders during the agency's appellate review of the Licensing Board's decision.[59]

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[59] On May 22, 1985, TMIA moved the Commission to reopen the record. TMIA claimed that it had just discovered another instance of cheating by Floyd in 1979, and that licensee's failure to produce this information during the hearings undermines the Licensing Board's conclusion in its May 3, 1985 Partial Initial Decision on training that licensee's managers have acknowledged their failures and their responsibility to prevent cheating.

The Licensing Board's May 3, 1985 decision has been appealed to the Appeal Board. Accordingly, that Board is the appropriate one initially to consider TMIA's motion. That motion is therefore hereby referred to the Appeal Board.

The Commission has nonetheless considered whether the pendency of that motion should impact on today's decision. The Commission has decided that it should not. First, licensee identified this incident to the Commission and parties on June 1, 1984, nearly one year before TMIA chose to file its motion to reopen. TMIA's motion therefore appears to be untimely, and should not cause any further delay in making today's decision.

More importantly, the adequacy of licensee's current training program has been litigated and found to be acceptable. The consideration of the current training program specifically included whether adequate remedial steps had been taken in response to earlier cheating. One more example of earlier cheating would be redundant and of minimal significance.

With regard to the assertion that licensee withheld the information, the Commission need only note that licensee itself identified this information one year ago.

The Commission therefore concludes that the pendency of this motion to reopen does not raise concerns which would warrant maintaining the effectiveness of the shutdown Orders.

C. Whether The Dieckamp Mailgram Issue Raises Concerns Which Warrant Maintaining the Immediate Effectiveness of the Shutdown Orders

1. Background

On May 7, 1979 Congressman Udall, then-Commissioner Gilinsky and others toured Three Mile Island. James Floyd, who was at that time TMI-2 Supervisor of Operations, conducted the tour of the TMI-2 control room. Mr. Floyd during that tour stated that on the first day of the accident a pressure spike[60] occurred which initiated the containment building spray. He asserted that the spike had been observed by licensee personnel and an NRC inspector.

On May 8, 1979, the New York Times published an article describing Mr. Floyd's presentation. The paper stated that Mr. Floyd asserted that control room personnel and NRC inspectors knew the plant's fuel core was seriously damaged two days before the damage was formally reported and the seriousness of the accident made public.

Herman Dieckamp, GPU President, on May 9 sent a mailgram to Congressman Udall with a copy to then-Commissioner Gilinsky. That mailgram stated, in pertinent part, "There is no evidence that anyone interpreted the 'pressure spike' and the spray initiation in terms of reactor core damage at the time of the spike nor that anyone withheld any information."

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[60] The "pressure spike" refers to the sudden increase in containment pressure during the accident from about 3 to 28 psig, followed by a [Footnote Continued]

In the original management hearings neither the parties nor the Licensing Board pursued whether Dieckamp told the truth in the mailgram. Instead the Licensing Board relied on the NRC's Office of Inspection and Enforcement (IE) investigation and testimony to conclude that Mr. Dieckamp had not made a material false statement, and that Mr. Dieckamp believed the statement to be true when he made it. 14 NRC at 555-56.

In ALAB-772, supra, the Appeal Board found the Licensing Board's reliance on IE's investigatory report unjustified because of the conclusory nature of that document. The Appeal Board noted that no party had actively pursued this issue and that no party had chosen to cross-examine Mr. Dieckamp on the mailgram when he testified in the proceeding. Nonetheless, it held that the Licensing Board erred in not pursuing the matter more fully. Although the Appeal Board noted that it was not suggesting any wrongdoing by Mr. Dieckamp, and that further hearings might not be very fruitful because memories fade after five years, it remanded the matter to the Licensing Board for further hearings in order not to "leave it dangling." 19 NRC at 1268.

On February 25, 1985, the C mmission found as a matter of public policy that the Licensing Board should issue a decision on the Dieckamp mailgram issue. The Commission in that Order noted that Mr. Dieckamp continues to hold a high-level position with licensee's parent

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[Footnote Continued]

rapid decrease to 4 psig. This spike was due to the burning or explosion of hydrogen, which is symptomatic of core damage.

organization, and that hearings would resolve any "lingering questions." CLI-85-2, 21 NRC 282, 289 (1985).

2. Analysis

The Commission has given considerable thought to whether it should wait for the Licensing Board to issue its decision on the mailgram issue before making its decision as to whether to lift the immediate effectiveness of the shutdown Orders. The Commission has determined that the mailgram issue does not raise health and safety concerns that would warrant maintaining the immediate effectiveness of the shutdown Orders.

Mr. Dieckamp is no longer President of GPU Nuclear and is not involved in the daily operations at TMI-1. Although he continues to serve on the Board of Directors of GPU Nuclear, in that position he does not have day-to-day responsibility for the safe operation of the facility. Executive management responsibility is vested in Messrs. Clark, Kintner, and O'Leary, none of whom were at GPU at the time of the accident. Moreover, these individuals have direct access to the parent Board of Directors of GPU for matters of safety and budget without going through Mr. Dieckamp in his role as President of GPU. We do not believe that under the present organizational structure and procedures, including provision for independent oversight of nuclear safety, Mr. Dieckamp's presence as President of GPU and as a Board member of GPUN could adversely affect the safe operation of TMI-1,

especially for the short period before the Licensing Board renders a decision.

We further emphasize that in ordering further hearings the Appeal Board did not find that Mr. Dieckamp had probably engaged in wrongdoing. Rather, the Appeal Board wanted to resolve any lingering suspicions. If the Licensing Board should determine that Mr. Dieckamp has engaged in wrongdoing, the Commission will take appropriate action. However, options to be considered in that event would not include shutting down the facility.

D. Procedural Issues

1. Applicable Standards for An Effectiveness Decision

UCS argues that this proceeding is no longer an enforcement proceeding where the issue would be whether to lift the immediate effectiveness of the shutdown Orders. UCS contends instead that, because the Licensing Board has imposed license conditions, it is a license amendment proceeding. UCS therefore concludes that the standards in 10 CFR 2.764 or 2.204 for making a Licensing Board decision immediately effective should apply, and that these regulations do not allow the Commission to make an "immediate effectiveness" decision where the controlling decision -- the Appeal Board's decision in ALAB-772 to reopen the record -- is not favorable to operation.

The Commission does not agree with UCS. That the Licensing Board has imposed license conditions does not convert this proceeding into a license amendment proceeding. Once the Commission establishes a formal

adjudicatory hearing in an enforcement case, as it did here, it need not grant separate hearings on any license conditions that are imposed as a direct consequence of that enforcement hearing. The UCS logic would lead to a situation in which every condition or qualification on operation suggested in an enforcement hearing would have to be recycled through an array of separate additional hearings.[61]

Therefore this remains an enforcement proceeding, and neither 10 CFR 2.764 or 2.204 are applicable.[62] Rather, the standard for

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[61]Nor would restart itself constitute a license amendment, as UCS contends. Restart involves lifting a suspension, and hence does not create new hearing rights. See, e.g., San Luis Obispo Mothers for Peace v. NRC, 751 F.2d 1287, 1314 (D.C. Cir. 1984); Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-79-7, 9 NRC 680, aff'd Friends of the Earth v. United States, 600 F.2d 753 (9th Cir. 1979); Public Service Co. of Indiana (Marble Hill Nuclear Generating Station), CLI-80-10, 11 NRC 438 (1980), aff'd Save the Valley v. NRC, 714 F.2d 142 (6th Cir. 1983) (Table).

[62]10 CFR 2.204, which provides that the Commission shall make a license amendment immediately effective upon finding that the public health, safety, or interest so requires, applies only when the Commission makes the determination to make a license amendment effective without affording an opportunity for a prior hearing. Here an exhaustive hearing has already been held on possible amendments to the license, and since additional amendments would be imposed or granted only as a result of a prior hearing, 10 CFR 2.204 does not apply.

10 CFR 2.764(f)(2) is similarly inapplicable. 10 CFR 2.764(f)(2)(i) provides that the Commission shall make a Licensing Board decision authorizing a unit to operate at full power immediately effective "if it determines that it is in the public interest to do so, based on a consideration of the gravity of the substantive issue, the likelihood that it has been resolved incorrectly below, the degree to which correct resolution of the issue would be prejudiced by operation pending review, and other relevant public interest factors." The standards in 10 CFR 2.764(f)(2) apply only to initial licensing decisions. TMI-1 received an operating license in 1974, and a decision to allow restart of TMI-1 would reinstate licensee's rights under that operating license. That license conditions have been imposed as a

[Footnote Continued]

determining whether to lift the immediate effectiveness of an enforcement order is whether the concerns which led to making that order immediately effective have been adequately resolved. Once this has been done, the Commission is legally obligated to lift the immediate effectiveness of the order, regardless of the nature of the latest Board decision.[63] As the Commission explained in an earlier order:

> Here, a decision by the Commission rather than granting effectiveness to a Licensing Board decision, would be determining, based on that decision and other factors, whether the concerns which prompted its original immediate suspension order of August, 1979, justify a continuation of that suspension. If they do not, and the Commission therefore can no longer find that the "public health, safety and interest" mandates the suspension, then the Commission is required by law -- whatever the nature of the Licensing Board's decision -- to lift that suspension immediately. This is a matter peculiarly within the Commission's knowledge and involving the most discretionary aspects of its enforcement authority.

CLI-81-34, 14 NRC 1097, 1098 (1981).

2. Whether the Commission Can Base its Effectiveness Decision in Part on Information Outside the Formal Adjudicatory Record

UCS, TMIA and the Aamodts argue that the Commission must base its decision whether to lift the immediate effectiveness of the shutdown Orders on the formal adjudicatory record. They argue that the

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[Footnote Continued]

result of the hearing process does not convert this enforcement proceeding into a licensing action such that 10 CFR 2.764 would apply, as any enforcement proceeding can lead to license conditions.

[63]The Aamodts on October 27, 1983 requested the Commission to revoke GPU Nuclear's license to operate TMI-1. For reasons set forth in this Order the Commission has denied that request.

Commission's regulations do not authorize consideration of off-the-record material and that such consideration denies them the fundamental right of cross-examination.

The Commission's decision today is based entirely on the formal record of the proceeding.[64] The Commission therefore need not address this argument.

3. Legal Effect of ALAB-772 on Lifting Immediate Effectiveness

UCS argues that the Commission cannot lift the effectiveness of the shutdown Orders because its earlier orders establish that the Commission may not order restart unless the Boards' decisions are favorable to restart. Similarly, UCS maintains that this is no longer a case of lifting the immediate effectiveness of a shutdown order, because licensee has had a hearing and failed to prevail. Hence, UCS concludes, restart cannot be authorized unless and until the Licensing Board finds in licensee's favor on all issues.

The Licensing Board has now found in licensee's favor on all but one issue, the Dieckamp mailgram, which remains pending before the Board. Hence the UCS arguments are moot except for that issue.

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[64] As explained supra, the formal record includes information presented in motions to reopen the record and non-disputable matters such as personnel changes. It also includes the fact that GPUN has taken various corrective steps, such as commissioning independent reviews. See note 43, supra. The substantive conclusions of these reports were not litigated, however, and accordingly are not considered in today's decision.

The Commission already has concluded that the mailgram issue does not raise health and safety concerns that warrant maintaining the immediately effective shutdown Orders. Clearly the Commission is not legally bound to wait for a Licensing Board decision on such an issue prior to lifting the immediate effectiveness of the shutdown Orders. The Appeal Board did not find against licensee; rather, the Appeal Board found the evidentiary record inadequate to resolve one way or the other whether Mr. Dieckamp engaged in any wrongdoing. TMI-1 is shut down, then, not because of the Appeal Board's decision, but because of the immediately effective shutdown Orders. The UCS argument that licensee has had a hearing and failed to prevail is therefore without merit.

Concerning whether the Commission has bound itself to await a final Licensing Board decision, no matter how insignificant the issue for safe operation of TMI-1, the Commission in the August 9, 1979 Order establishing the restart proceeding stated that, "[i]f the Licensing Board should issue a decision authorizing [restart] ..., the Commission will ... decid[e] whether the provision of this order requiring the licensee to remain shut down shall remain immediately effective." 10 NRC at 149. See also CLI-81-19, 14 NRC 304, 305 (1981); Order of March 10, 1982 (Unpublished); Order of July 2, 1979 (Unpublished).

The Commission subsequently stated, however, that if the public health, safety and interest no longer require the suspension, "then the Commission is required by law -- whatever the nature of the Licensing Board decision -- to lift that suspension immediately". CLI-81-34, 14 NRC 1097, 1098 (1981). Hence the Commission has put the parties on

notice that the entire hearing and decision process did not necessarily have to be completed before an effectiveness decision.

Even if the Commission had not put the parties on notice, moreover, the change in circumstances since this proceeding began in 1979 would justify the course chosen in this order. When the Commission originally contemplated that it would consider restart only if the Licensing Board's decision were favorable, it did not envision that the proceeding would last over five years[65] or that only one issue not signficant for safe plant operation would remain before the Licensing Board, and that after an appellate remand. The Commission cannot ignore its legal obligation to lift the immediate effectiveness of a shutdown order once the concerns which led to making that order immediately effective are satisfied, even if a single issue not significant for safe plant operation remains pending before the Licensing Board. See, e.g., Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-79-7, 9 NRC 680 (1979) (resumption operation authorized prior to hearing); see also ICC v. Oregon Pacific Industries, 420 U.S. 121, 127 (1975) (Powell, J., concurring); Pan American Airways v. C.A.B., 684 F.2d 31 (D.C. Cir. 1982); Northwest Airlines, Inc. v. Civil Aeronautics Board, 539 F.2d 748 (D.C. Cir. 1976); Airline Pilots Ass'n, International v. C.A.B., 458 F.2d 846 (D.C. Cir.), cert denied, 420 U.S. 972 (1975). Hence the pendency of the mailgram issue before the

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[65]The Commission in its August 9, 1979 Order suggested a tentative schedule for the restart proceeding under which the Licensing Board would have issued its decision in slightly under one year. 10 NRC at 152.

Licensing Board does not preclude the Commission from lifting the immediate effectiveness of the shutdown Orders.

E. Staff's Proposal of a 25% Power Limitation and Round-the-Clock NRC Inspection

The NRC staff at one time proposed limiting the power level to 25%, with operation beyond 25% depending "upon the functioning of the GPUN Nuclear Safety and Compliance Committee, a Staff report on plant operations at 25% of power with no major safety problems having been identified, and an evaluation of the GPU operational QA [quality assurance] coverage." Staff also would require round-the-clock NRC inspection, "at least until the licensee's operational QA coverage and the Nuclear Safety and Compliance Committee of the licensee's Board of Directors are solidly in place and functioning." These conditions were apparently originally based on concerns both about the integrity of those who will be operating TMI-1 and about the effect of six years of non-operation on plant systems and personnel. Although staff has not repeated this proposal in recent filings, the Commission has decided that it warrants some discussion.

The licensee, UCS, and the Aamodts commented specifically on staff's proposed conditions. Licensee stated that a temporary limit of 40-45% of full power would be more meaningful in terms of plant conditions and operator experience than the 25% proposed by staff.

UCS argued that the staff's goals in limiting operation to 25% power can be achieved at 5% power, and that an accident at 25% could

result in release of radiation beyond the limits permitted by 10 CFR Part 100. Hence UCS concluded that a 25% power limit is unsupported.

The Aamodts maintained that round-the-clock NRC inspection would be inadequate because of the NRC's lack of specific knowledge of how TMI-1 operates and because such a "policing action by NRC is not an acceptable alternative to a competent and trustworthy management or experienced and trained operators." The Aamodts also questioned the competence and integrity of NRC inspectors, and noted that NRC surveillance would create practical and legal problems concerning who had responsibility for operating the plant.

The Commission has determined that the management concerns which led to making the 1979 shutdown Orders immediately effective have been resolved adequately, and hence that GPU Nuclear has the required competence and integrity to operate TMI-1 safely pending completion of further proceedings. Therefore, the Commission has decided not to impose on licensee for integrity reasons either of staff's proposed conditions.

However, the Commission notes that TMI-1 has been shut down for over six years. The Commission believes because of this consideration alone that the power level should be raised gradually to ensure that all components of the facility still function properly, and that there is an adequate opportunity to operate the plant at low power levels. Accordingly, to ensure a safe return to operation, the Commission directs the licensee to submit a power ascension schedule, with hold points as necessary at appropriate power levels, to the NRC staff for

its approval prior to restart. Licensee is not to restart TMI-1 until the staff has approved the proposed power ascension schedule.

Furthermore, because the facility has not operated for six years, the Commission has determined that licensee's performance during the period of start-up and power ascension, beginning with initial criticality, should be carefully monitored and thoroughly evaluated. During this time period, and any time period thereafter staff feels to be appropriate, the staff is to provide more oversight to TMI-1 than it would normally give an operating reactor. The NRC staff is to develop the oversight program and is to provide a general description of it to the Commission for its information prior to restart.[66]

The Commission is also directing the staff to prepare combined Performance Appraisal Team (PAT) inspections and Systematic Appraisal of Licensee Performance (SALP) inspections at the end of six months of operation and again at the twelve-month mark. These reports will address areas such as plant operations, maintenance, licensed and non-licensed operator training, quality assurance, radiological controls, fire protection, emergency preparedness, security and safeguards and design, engineering and plant modifications. The combined PAT/SALP reports are to be provided to the Commission and the public.

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[66]The increased NRC oversight and power ascension programs are not being imposed because of any contested issues in the proceeding; they are being imposed because the plant has been shut down for over 6 years. Therefore, it is permissible for the Commission to allow the staff to approve these programs, without the participation of the other parties.

F. Summary of Effectiveness Decision

The law requires the Commission to lift the immediate effectiveness of the shutdown Orders once the concerns which led to making those Orders immediately effective are satisfied. After a full agency appellate review, all but two issues in the restart proceeding have been resolved favorably to resumed operation of TMI-1. While one of those issues remains pending before the Licensing Board, the other has been resolved favorably by that Board. The Commission has now determined that any remaining concerns about those two issues do not warrant maintaining the effectiveness of the shutdown Orders. Accordingly, the Commission must lift the immediate effectiveness of the shutdown Orders. This decision authorizes TMI-1 to restart, subject to satisfactory completion of the conditions imposed in this order.

IV. Discussion of Other Issues

As noted earlier, the Commission has decided because of the unique nature of this proceeding also to discuss several other concerns raised by members of the public which fall outside the scope of the restart proceeding.

The prospect that TMI-1 may be restarted has evoked a great deal of concern on the part of many residents of the surrounding communities. Most of the written comments and oral statements addressed to the Commission at a November 9, 1982 public meeting in the Harrisburg, Pennsylvania area were opposed to restart. Many of those opposed were

greatly concerned for their own safety and the safety of their families. We recognize that those concerned look to us to safeguard their interests and we are confident that the basis for their concerns about the safety of this plant have been resolved.

Members of the public raised three general concerns that warrant comment here: (1) whether the results of public referenda[67] against allowing restart should prevent restart; (2) whether TMI-1 should remain shut down until Unit 2 is cleaned up; and (3) whether this decision to lift the immediate effectiveness of the shutdown Orders reflects a choice of economics over public safety.

With regard to the first issue, the Commission believes that such referenda provide a valuable indication of public concern. Even though such concerns are ordinarily transmitted and translated into government action through legislation enacted by elected legislative bodies, the Commission has given careful consideration to the public's concerns regarding this matter. To alleviate at least some of the public's concerns, the Commission has attempted to explain fully the basis for its decision today. The fact remains, however, that the NRC is not a legislative body and it lacks discretion to act on the basis of issues that are not within the scope of the laws established by Congress. In the Atomic Energy Act, Congress has directed the NRC to make decisions regarding the licensing of nuclear reactors, such as this one, on the

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[67] On May 18, 1982, Dauphin, Cumberland, and Lebanon Counties held a non-binding referendum on the restart of TMI-1. The majority of the votes cast in all three counties opposed restart.

basis of its own expert judgment and analysis of whether the detailed regulatory requirements of the Commission have been satisfied. While we are aware of the sentiment of many members of the public against restart, we are convinced there is reasonable assurance that this plant will be safely operated. Hence we must make our decision to authorize this plant to resume operation.

With regard to the second issue, the cleanup of TMI-2, many commenters believed that cleanup should be completed prior to any decision to restart TMI-1. The Commonwealth of Pennsylvania opposed restart until adequate funding has been assured to complete the cleanup. The Commonwealth also asserted that the cleanup activities may pose a threat to the safe operation of Unit 1 and argued that restart should be postponed until questions regarding the wisdom and safety of operating Unit 1 next to the damaged Unit 2 have been answered.

The Commission for some time has been concerned about the pace of the cleanup efforts and in many forums has advocated that cleanup be conducted on an expedited basis. Recently there has been substantial progress both in securing cleanup funds and in the cleanup itself. The Commission set forth its views on the present status of the cleanup and funding for the cleanup in an information notice on March 6, 1985 (50 Fed. Reg. 9143). The Commission's views are summarized below.

The funding for the cleanup as proposed by Pennsylvania Governor Richard Thornburgh -- the Thornburgh Plan -- provides that funding will come from the utility industry, ratepayers, and the federal and state governments. While the ratepayers and federal and state governments have contributed funds to the cleanup for several years, no monies were

forthcoming from the industry prior to December 1984 due to a requirement by Edison Electric Institute (EEI) that $100 million be pledged before any money is actually contributed.

The Commission was becoming increasingly concerned in view of these events over both the pace of the cleanup and the possibility that funding shortfalls might slow down that effort even further. Accordingly, the Commission in June 1984 directed the NRC staff to explore means to expedite the cleanup effort, including alternative methods to accomplish the cleanup, as well as actions that would compel the licensee to complete specific cleanup milestones by specified dates.

Several significant events occurred while this effort was underway. EEI lifted the requirement that $100 million be pledged before any money could be contributed, and informed the Commission in a letter dated September 5, 1984, that beginning in 1985 for a period of six years EEI members will contribute $25 million annually to the cleanup of TMI-2, for a total of $150 million. To ensure that this annual $25 million contribution is met, Pennsylvania and New Jersey electric utilities have agreed to make up any shortfall by providing research and development grants each year to the extent necessary to maintain an annual funding level of $25 million per year for this program. Hence the industry's share of the cleanup funds (amounting to $25 million per year for six years) is now as reasonably assured as the other sources of funding.[68]

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[68]The first payment of $10.9 million from EEI was provided to GPU on December 28, 1984.

Further, in late 1983 the upper GPUN management structure responsible for the cleanup began to change and a new management team began to be assembled. Progress in the cleanup began to improve, and in February 1984 the polar crane load test was conducted. Five months later the reactor pressure vessel head was removed, which constitutes a significant milestone in the progress of the cleanup. Licensee's management has now publicly committed to accelerate the early steps of the cleanup with the goal of conforming by the end of 1986 to the milestones identified in its December 1982 schedule.

The Commission in its August 9, 1979 Order directed the Licensing Board to address whether decontamination operations at TMI-2 would affect safe operation of TMI-1. The Licensing Board in its Second Partial Initial Decision held that, subject to licensee's compliance with four conditions, it was satisfied that Units 1 and 2 were sufficiently separated so that the cleanup of Unit 2 should not interfere with the safe operation of Unit 1. No party to the proceeding, including the Commonwealth, appealed those findings.

The Commonwealth in its comments noted that after the Licensing Board issued its findings the Commission advised the Chairman of the Senate Subcommittee on Nuclear Regulation, Committee on Environment and Public Works, in a letter dated March 22, 1982, that "the potential for slow degradation of containment integrity and equipment capability plus the increasing concern for an unexpected release of radioactive material" argued for a more aggressive and expeditious TMI-2 cleanup program. In that letter the Commission also raised the issue of the increased possibility of accidents involving radiation leakage and

subsequent exposure to workers and the public as the TMI-2 equipment deteriorates. The Commonwealth argued that the possibility of these events raises questions about the ability of the licensee to keep Unit 2 in a safe configuration.

The NRC staff has continued to monitor closely the condition of the TMI-2 reactor for indications of equipment deterioration which could pose threats to public health and safety.[69] The Commission finds that the plant has continued to be maintained in a safe configuration and agrees with the Licensing Board that the condition of TMI-2 or its cleanup should not pose a threat to the safe operation of Unit 1, because of the nearly complete separation of the units. If for some reason the situation at TMI-2 unexpectedly were to deteriorate, the Commission would take prompt action regarding TMI-1 to prevent any harm to public health and safety, including shutting down Unit 1, if necessary. As long as TMI-2 remains in a safe configuration, we do not believe ongoing TMI-2 cleanup activities should bar the restart of TMI-1.

Finally, this decision to lift the immediate effectiveness of the original shutdown Orders does not reflect a choice of economics over safety. The Commission has kept TMI-1 shut down for nearly six years while hearings have proceeded on the concerns which caused the Commission to issue the shutdown Orders. The sole issue in determining

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[69] For example, the NRC staff has established an office at Three Mile Island which is manned by eleven professionals. A major function of that office is to monitor the status of TMI-2 plant conditions.

whether to lift those shutdown Orders is whether the original safety concerns have been resolved adequately. Economics plays no role in that determination. After an extensive adjudicatory hearing, one issue (training) remains pending before the agency on appellate review, and one (mailgram) remains pending before the Licensing Board. The Commission in this decision has fully addressed the significance of those two issues. The Commission finds there is reasonable assurance of the protection of the public health and safety, and, accordingly, must lift the immediate effectiveness of the shutdown Orders.

V. Conclusion

All but two issues in the restart proceeding -- training and the Dieckamp mailgram -- have been resolved after full agency appellate review. The Commission finds that the concerns regarding these two issues have been resolved sufficiently to require lifting the immediate effectiveness of the 1979 shutdown Orders.

In sum, the Commission has found that GPU Nuclear, the current licensee at TMI-1, represents a significantly improved organization over Metropolitan Edison Company in terms of personnel, organizational structure, procedures, and resources. The Commission is satisfied that the pre-accident management faults at TMI have been corrected such that there is reasonable assurance that TMI-1 can and will be safely operated. The Commission also finds that none of the other concerns raised outside of this proceeding warrant separate enforcement action to keep TMI-1 shut down. Accordingly, the Commission is lifting the

immediate effectiveness of the shutdown Orders. However, because TMI-1 has been shut down for over six years, the Commission is imposing the following two conditions:[70]

(1) To ensure a safe return to operation, licensee is to submit a power ascension schedule, with hold points as necessary at appropriate power levels, to the NRC staff for staff's approval. The plant cannot be restarted prior to staff approval of such a schedule; and

(2) The NRC staff prior to restart is to provide to the Commission for its information a general description of a program to provide increased NRC oversight at TMI-1 during the period of start-up and power ascension, beginning with initial

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[70]Staff on May 29, 1985 certified that all other conditions required to be met prior to restart had been met.

criticality, and any time period thereafter staff feels to be appropriate.

Commissioner Asselstine dissents from this Order. His dissenting views are attached. As reflected in his attached separate views, Commissioner Bernthal disagrees, as a policy matter, with this Order only insofar as it indicates that further hearings are not warranted. The additional views of Chairman Palladino and statements of Commissioner Roberts and Commissioner Zech are also attached.

It is so ORDERED.[71]

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[71]TMIA, on May 20, 1985, filed a motion requesting the Commission "to stay its order of May 29, 1985, which will authorize the restart of Three Mile Island, Unit 1." In the alternative, TMIA requested a stay of two weeks to permit it the necessary time to seek an emergency stay from the courts. Licensee and the NRC staff opposed TMIA's request. UCS on May 28 also filed a stay motion.

The TMIA and UCS requests to stay the Commission's decision were filed prematurely. The Commission therefore could have simply rejected them. However, because of the controversy surrounding the restart of TMI-1, the Commission has considered these requests.

The Commission disagrees with the arguments that the standards for grant of a stay are satisfied. For the reasons set out in this and other Commission orders, TMIA and UCS have not made a strong showing that they are likely to prevail on the merits. The one issue raised by UCS that is not addressed in this or another order is that UCS is entitled to comment on staff's certification regarding environmental qualification of electrical equipment. Certification is a matter outside the proceeding, and therefore UCS is unlikely to prevail on the merits of this claim. Moreover, neither TMIA nor UCS has demonstrated any irreparable injury, and the grant of a stay would have a significant adverse impact on others. Finally, the Commission finds that the public interest does not lie in the grant of a stay.

Licensee in response to the TMIA motion stated that each month's delay in returning to operation will cost licensee's ratepayers $6.7 million in increased costs, that licensee's nonresidential customers will continue to suffer competitive disadvantages, that GPU

[Footnote Continued]

For the Commission

SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, D.C.
this 29th day of May, 1985.

[Footnote Continued]

common stockholders will suffer an approximately $5 million reduction in earnings, and the TMI-1 owners' ability to fund excess advances to the TMI-2 cleanup will be impaired. Clearly this is a significant adverse impact on licensee and others. Moreover, ascension to full power is a gradual process, and the public health and safety risks at low levels of power are far less than the theoretical, but fully acceptable, risks of full-power operation. The Commission in this Order is requiring that licensee submit a power ascension schedule with appropriate hold points, and licensee in response to TMIA's motion stated that "not until the sixth day after a Commission restart order does Licensee intend to take TMI-1 critical, ... [and a] full 10 days will elapse before the plant even reaches and passes through the 5% power level." Licensee further stated that it would be a minimum of 99 days before TMI-1 begins sustained full-power operation. The plant therefore will be operated at relatively low power levels for several weeks. Moreover, as an extra measure of caution, the NRC staff will be providing increased NRC oversight of TMI-1 during its start up and initial operation. Under the circumstances, the Commission finds that the standards for a stay have not been met.

However, the Commission recognizes that the parties to this proceeding likely will seek to stay today's decision in the courts. Therefore, to afford the parties to this proceeding an opportunity to seek judicial relief, if they so desire, the Commission has decided that TMI-1 cannot be returned to initial criticality until the later of the following:

(1) The conditions imposed in this order are met, and the license conditions imposed in this proceeding to date are formally included in the TMI-1 license; or

(2) no party to this proceeding has sought a judicial stay of this decision by June 3 at 5:00 p.m. If a judicial stay is sought by June 3, then in order to allow time for responses to the court and a court decision, TMI-1 cannot be returned to initial criticality until noon on June 11.

DISSENTING VIEWS OF COMMISSIONER ASSELSTINE

One reason for the Commission's 1979 decision to shutdown TMI-1 was that the Commission had questions about the management capabilities of Metropolitan Edison (predecessor to GPU Nuclear). The utility had, after all, presided over the worst accident ever at a commercial nuclear reactor in this country. The Commission set up a Licensing Board to hear the evidence and decide whether GPUN had the requisite corporate character and competence to be permitted to operate TMI-1. The Licensing Board's conclusion was favorable, but in the years since the accident, new evidence has come to light repeatedly which cast continued doubt on GPUN's competence and integrity. This is one reason this proceeding has lasted for six years. 1/ In its order today, the Commission heaves a sigh of relief and concludes that all questions about the management capabilities of GPUN have been satisfactorily answered and that GPUN may be permitted to restart TMI-1. I cannot agree with the Commission's conclusion.

The Commission has managed to identify the primary question which must be answered -- Does the licensee exhibit the corporate integrity necessary for the Commission to be confident that the licensee will operate the plant safely? Unfortunately, the Commission's decisionmaking process has not been able to produce a dispositive answer to that question. This is

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1/ Another reason is that in 1981 the primary coolant water was contaminated with a corrosive agent (thiosulfate) resulting in extensive damage to the TMI-1 steam generators and requiring novel and time-consuming repairs which have only recently been completed.

primarily because the Commission has either ignored or discounted important issues, and because the Commission's approach to the management integrity issue since the end of the Licensing Board proceeding in 1981 has been a piecemeal one. Each time evidence of a new transgression has come to light the Commission has chosen to deal with that particular issue in isolation. While acknowledging that a pattern of misbehavior would be significant, the Commission has refused to see such a pattern in the history of GPU's actions or inactions. See, Slip op. at 27. Even in considering the various individual parts of the puzzle, the Commission has ignored the fact that there continue to be pieces missing which leave gaps in our information and preclude us from discerning the whole picture. The Commission has been satisfied with shuffling around individuals as a solution to GPU's problems. This approach quite simply begs the central question in this proceeding.

The character, integrity and attitude of our licensees is a matter of fundamental importance. The Commission's limited resources preclude 100 percent inspection of an operating plant. The Commission's role is, therefore, limited to one of auditing only a small portion of the acitivities of the licensees. Since licensees are in direct control of the plant, they must be relied upon to provide the first line of defense to ensure the safety of the public. The Commission must be able to rely on the licensees to provide accurate and timely information. A lack of candor or truthfulness in licensee submittals to the NRC undermines NRC regulation and poses a threat to the public health and safety. The Commission must also be able to rely upon licensees to have the commitment and willingness

to implement their programs in an effective manner and with a commitment to safety as the first priority. As our Appeal Board noted in the Midland case, "[u]nless there is a willingness -- indeed a desire -- on the part responsible officials to carry it out to the letter, no program is likely to be successful." Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-106, 6 AEC 182, 184 (1973). Finally, the Commission must be able to rely upon a licensee to comply with NRC requirements. A consistent pattern of violating Commission regulations may show a lack of corporate integrity such that future compliance can not be assured, thus demonstrating that the licensee can not be relied upon to act in accord with a commitment to the public health and safety. See for example, X-ray Engineering Company, 1 AEC 466 (1966).

What does an examination of the actions and inactions of GPU over the past six years show us? This is a licensee which had the worst accident in the history of nuclear power in this country. One would expect that such a licensee would learn from its mistakes and would want to strive for excellence in order to avoid even the possibility of such an accident ever occurring again at one of its plants. Instead, the history shows us a licensee which has been unwilling or unable to provide to the Commission accurate and complete information on significant safety issues. It shows us a licensee which has been unwilling or unable to recognize its own problems, to acknowledge responsibility for its missteps and to take quick, effective action to uncover the causes of those problems and to resolve them. It shows us a licensee with a pattern of violating Commissior

regulations for the sake of expediency, a pattern which began before the accident and which continues even to this day.

One of the most significant licensee missteps the Commission has discovered is the subject of the Hartman allegations. Prior to the accident at TMI-2, this licensee engaged in widespread falsification of leak rate tests at TMI-2. The company failed to have a valid leak rate test in place and then falsified results to avoid having to shut the plant down for repairs. The utility's response to allegations of leak rate falsifications was first to deny any such occurrences. After being indicted for criminal violations of the Atomic Energy Act, the utility ultimately pleaded guilty or no contest to several counts of the indictment which charged leak rate falsification and violations of NRC requirements. A guilty plea is considered an admission of guilt, yet even at the court hearing on the plea GPUN's representatives tried to avoid admitting culpability.

The Commission also discovered that after the accident the licensee made a material false statement to the NRC in responding to the notice of violation resulting from the accident. After initially denying any wrongdoing, the licensee took action to remove individuals responsible for making the material false statements to the Commission, but only when it became apparent that the presence of such individuals might further delay restart of TMI-1. However, licensee did not admit wrongoing in shifting the responsible individuals around; these individuals are still a part of the GPU organization, and there does not appear to be any legal bar to the

licensee using those people to operate TMI-1 once the plant is permitted to restart.

One of the most significant post-accident failures by GPUN was the cheating incident. As virtually all of the investigations of the TMI-2 accident have recognized, one of the root causes of the accident was human error, caused in large part by plant operators who were not trained to deal with the conditions present during the accident. How GPUN has chosen to deal with this fundamental deficiency in its prior operations provides a clear test of its competence and integrity, and its commitment to safety requirements. By any standard, GPUN fails that test.

Even though the company apparently had what appeared on paper to be an adequate training program (See, Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), LBP-81-32, 14 NRC at 478, (1981)), the licensee failed to carry out that program in an effective manner. Most notable was the licensee's unwillingness or inability to instill in its employees a respect for NRC safety requirements and a commitment to meet those requirements in every respect. This failure by GPUN led to widespread disrespect for the program and to cheating on NRC and company operator license examinations. When confronted with evidence of widespread cheating the licensee's response can charitably be described as poor. The licensee's investigation into the cheating incidents was barely adequate according to the Licensing Board, and poor according to the Special Master. Metropolitan Edison Co. (Three Mile Island, Unit 1), LBP-82-56, 16 NRC 281 (1982) and LBP-84-343, 15 NRC 918 (1982). Not until after GPUN could no

longer deny the problem and not until it became apparent that this issue might further delay restart and become the subject of a hearing would the licensee take significant actions both to ensure that the training program was upgraded to an acceptable level and to ensure that cheating would not recur. Only in order to reach a settlement with the Commonwealth of Pennsylvania would the licensee take any action against individuals who were involved in the cheating incidents (other than those designated as O and W in the reopened hearing). The Licensing Board has recently concluded that GPUN finally has responded to the problem and has an adequate training program. Metropolitan Edison Co. (Three Mile Island, Unit 1), Licensing Board decision, May 3, 1985. However, the fact remains that this is not because licensee made a decision to accept responsibility for this fundamental failure leading to the TMI-2 accident and to create a training program to be proud of. Rather, licensee's recent progress is largely due to outside pressure and a realization that continued failures in their training program could further delay the restart of TMI-1.

The licensee's repeated failures to build a first-class operator training program, its failure to instill in its employees a respect for training and operator licensing requirements, and its failure to acknowledge and deal forthrightly with the widespread cheating incidents and other weaknesses in its training program present a damning picture of GPUN's commitment to safety. It would be difficult, if not impossible, to condone these repeated failures by any NRC nuclear powerplant licensee. In the case of the licensee for the TMI units they are simply inexcusable.

Licensee management also knowingly and intentionally certified to the Commission that one employee had completed the necessary prerequisites for taking an NRC reactor operator examination when licensee knew that that employee cheated on the licensee's qualifying examinations. 16 NRC 352.

The NRC staff has also concluded that licensee failed to file with the Licensing Board reports (BETA and RHR) relevant to an ongoing proceeding before that Licensing Board. Staff further concluded that GPU had not provided them to the Commission in a timely manner. NUREG-0680, Supplement No. 5 (July 1984).

Even staff recognized, in its July 1984 re-evaluation of the licensee's management integrity, a pattern in the above occurrences of activity by the licensee which, had it been known by the staff at the time the staff formulated its position on management in the restart proceeding, "would likely have resulted in a conclusion by the staff that [the licensee] had not met the standard of reasonable assurance of no undue risk to the public health and safety." NUREG-0680, Supp. No. 5, p. 2-2. The staff went on to conclude, however, that the licensee's present organization was acceptable. Id. That judgment was based upon a variety of factors: the staff's finding on the significance and extent of licensee participation in the pattern of events which the staff identified as the basis for its change in position; the staff's finding that the pattern of events which it identified as significant was all-inclusive; the staff's finding that the present licensee organization was a new organization in

all significant respects, and the staff's finding regarding subsequent performance of the licensee's new organization.

The Commission agrees with the staff and concludes that all of the integrity issues are thus resolved. But does the more recent history of the organization show a licensee striving for excellence? No, it does not. Unfortunately the Commission's conclusion fails to consider more recent occurrences which indicate that this "new" organization suffers from many of the same problems as did the old. Further, the record upon which the Commission makes its decisions is far from complete.

Under the "new" organization, procedural and safey violations continue to be a problem. A former Bechtel start up and test engineer, Mr. Richard Parks, made allegations that licensee's contractor for the TMI-2 cleanup violated safety and quality assurance procedures. Further, Mr. Parks alleged that he was fired as a direct result of his raising safety concerns about the TMI-2 Recovery Program. The Department of Labor investigated Parks' discrimination complaint and substantiated it. Our Office of Investigations (OI) investigated the safety and procedural concerns raised by Parks and concluded that they were not only substantiated but that the allegations were merely illustrative of the problem and not exhaustive. Memo from Ben B. Hayes, Director, OI, to Chairman Palladino dated September 1, 1983, "Three Mile Island Nuclear Generating Station, Unit 2 - Allegations Regarding Safety Related Modifications and Quality Assurance Procedures." OI went on to conclude that:

> Senior licensee management was continually advised by TMI Quality Assurance and inhouse management of Bechtel's noncompliance with

> applicable procedures and safety misclassifications. The failure of senior licensee management to responsibly monitor Bechtel's work and hold Bechtel accountable is the underlying cause of the TMI-2 procedural problems. Id. at p. 2.

On October 29, 1984 staff agreed with OI's conclusions that TMI senior personnel were aware of the need to comply with GPUN administrative procedures, that they did not do so even though they were evidently aware that such compliance was an NRC requirement, and that the circumvention of requirements was "at least to some degree deliberate" and that "their motivation appeared to be expediency rather than confusion." Memo from W. J. Dircks, EDO, to the Commission dated October 29, 1984, "Investigation of TMI-2 Polar Crane Allegations." Once again licensee failed to exhibit a willingness or capability to carry out its own programs in an effective and safe manner or to adhere to NRC regulations. And when licensee or contractor personnel attempted to raise safety concerns, licensee's response was not to examine those concerns and to make a reasoned response; it was to get rid of the complainer.

One would think that after this OI report identified such serious concerns with the TMI-2 Recovery Program, this licensee would ensure that such violations did not recur. However, we have additional information which indicates that similar procedural and safety violations have occurred at TMI-2 once again. Obviously, GPUN has been either unwilling or unable to take adequate measures to ensure that its own program will be carried out and that NRC requirements will be complied with.

Even more disturbing than this, however, is the licensee's record on environmental qualification of electrical equipment (better known as EQ). Such qualification is necessary to ensure that safety equipment will perform its intended function in the harsh environments resulting from a serious accident like that which occurred at TMI-2. Again, one would expect GPUN, because of its TMI-2 experience to make every effort to understand the issue and to ensure that its equipment at TMI-1 is fully qualified. But is that the case? No, it is not. Staff responsible for EQ has told us at a recent Commission meeting, that GPUN has been the most difficult licensee it has had to deal with on this important safety issue. The limited certification of equipment qualification necessary for restart has taken almost a year for the staff to accomplish because GPUN seemed not to know what was required of it. Instead of being in the forefront of industry efforts to assure equipment qualification, GPUN proves to be the worst performer in the nation. Once again this licensee has exhibited its failure to understand and to implement NRC regulations.

The licensee has, then, a consistent pattern of violating Commission regulations. The most recent evidence seems to show that this patterr has continued rather than that it has been broken as the Commission concludes. I recognize that there have been many personnel and organizational changes at TMI-1. However, given the history and the seeming continuation of an inadequate commitment to safety by this corporation, I am unable to conclude that GPUN has the requisite corporate integrity and competence such that we can have reasonable assurance that GPUN can be relied upon in

the future to comply with NRC requirements and to act in accordance with a commitment to the public health and safety.

I am also unable to conclude that there is reasonable assurance that this utility has the requisite corporate character and integrity because there are significant gaps in the record of this proceeding. On those issues which the Commission has considered and which have not been considered by a licensing board, the Commission's basic approach has been to treat each issue in isolation. The solution to each issue has been to allow GPUN to transfer those individuals primarily responsible for various licensee failures to other parts of the GPU organization not responsible for the actual physical operation of the TMI-1 plant. 2/ By following this piecemeal approach, the Commission has refused to take a larger view of the licensee's corporate character or address the root causes of GPUN's problems in the area of corporate character. The Commission has instead been satisfied with band aid, short term fixes. The Commission has not addressed the issue of why this licensee continues in its pattern of failing to adhere to requirements or whether the band aid fixes really solve the underlying problems. I recognize that this broader integrity question is not an easy issue to address. What is needed is an integrated

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2/ With the exception of a few employees directly involved in the leak rate falsification at TMI-2, the Commission has not even required that those transfers be made permanent. There is no legal bar to licensee using those people in TMI-1 operations other than a requirement that a few employees get Commission permission before being allowed to work in operational or significant management positions. Further, some of those transferred still work at TMI-1. The Commission's solution -- out of sight, out of mind -- thus does not forthrightly face up to the issue. It merely postpones it -- presumably until after restart.

look at all of these integrity issues to determine: what are the root causes, why does this corporation seem to be unwilling or unable to comply with regulations and what remedial actions are necessary to ensure future compliance? The sub-issues are many and complex, and there are massive amounts of information which must be considered, experts to be consulted. The Commission is not really equipped to do all of this, but licensing boards are particularly useful in and perfectly capable of performing this function. The Commission seems to have recognized this when it established this proceeding in 1979 and decided to have a licensing board consider the issues intitially. In the interest of expediency, however, the Commission has chosen now not to follow this more reasonble approach and allow the licensing board to consider all of the relevant information on this issue.

A further benefit to a hearing would be that the gaps in the formal, adjudicatory record would be cured. Much of the information relied upon by the Commission in making its immediate effectiveness decision and its decision on whether further hearings are necessary has never been the subject of a formal hearing as the Commission said its decision would be when it set up the proceeding in 1979. Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-79-8, 10 NRC 141(1979). While we have much information and the staff's conclusions about present management, the Licensing Board has never been given an opportunity to hear the information and the parties have not been given an opportunity to test that information in an adjudicatory setting. Written comments on written reports are hardly an adequate substitute for the in-depth treatment these issues would receive in a hearing. I previously identified several issues

which I believe specifically ought to be heard by the Licensing Board to make the record complete. This would further enable the Licensing Board to address the issue of whether all necessary remedial actions have been taken to ensure licensee competence and integrity. See, Dissenting Views of Commissioner Asselstine, CLI-85-2, 21 NRC at 342 (1985).

A particularly significant gap not only in the record but also in our information base to be used in making this decision is the lack of information on the leak rate falsification issues. There has never been a complete, public investigation of this matter. The Office of Investigations (OI) did not complete its investigation of this issue, and the information available to the grand jury is not available to us for evaluation. We have some information which clearly indicates that at least at TMI-2 the leak rate falsification was widespread and condoned, if not encouraged, by first level management. However, we do not know who precisely was involved. Nor do we know whether anyone above the first level of management should be held responsible. We do not know, therefore, whether all necessary remedial actions have been taken. Without such information I am unable to reach a conclusion on management competence and integrity. See Id. at 346-49 for a more complete discussion of this issue.

A further benefit of a hearing on these issues would be to increase public confidence in our decisionmaking, and in the safety of the plant. The people of central Pennsylvania are not unreasonable. All most of them want before TMI-1 is permitted to restart is to know that the NRC carefully considered all of the evidence and did the best it could to ensure that

TMI-1 will be operated safely. Having been forced to endure one serious nuclear powerplant accident, the people of central Pennsylvania deserve nothing less than a full and searching inquiry into every relevant safety issued before TMI-1 is allowed to restart. Above all else, the Commission owes it to them to make every effort to ensure that TMI-1 will be operated safely. Unfortunately, by its actions today, the Commission is turning its back on that responsibility. The Commission's decisionmaking process, and its refusal to allow further hearings has not promoted public confidence. Rather, it has only served to harden opposition to restart and to cause needless distress for the people of the TMI area.

Because it has now concluded that all questions about GPUN's competence and integrity have been resolved, the Commission has chosen to do little in the way of providing additional oversight and safeguards for this troubled plant. In recognition of the fact that this utility has not operated TMI-1 for six years, the Commission provides for some additional NRC oversight. However, this oversight of TMI-1 operations is vaguely defined at best, limited in time, and largely left to the discretion of the staff. Given the questions still remaining about this licensee, the Commission should have required more, both to ensure that the Commission can have confidence that the plant will be operated safely and to help increase public confidence. Such additional measures could provide some early warning of safety weaknesses in TMI-1 operation. The Commission should at least require the following:

(1) There should be continuous NRC resident inspector coverage at TMI-1 -- 24 hours a day, 7 days a week for a period of not less than one year. Additional NRC inspectors could be drawn from Regior I and other regions.

(2) There should be a special inspection program for TMI-1 including: performance appraisal team inspections every 6 months, intensive periodic regional inspections and a systematic assessment of the licensee's performance every 6 months, for at least one year. The staff should then meet with the Commission after each review so that the Commission can personally monitor TMI-1 operations.

(3) There should be special safety awareness training for all TMI-1 employees, including senior GPU management. These training sessions should be conducted by the NRC Director of Inspection and Enforcement and the Administrator of Region I. The purpose should be to reemphasize to licensee the importance of carrying out safety programs in a marrer designed to protect the public health and safety, the importance of proper training and the importance of complying with GPUN procedures and NRC requirements.

(4) In order to increase public confidence further, the Commission should provide an opportunity for the Commonwealth of Pennsylvania to appoint an onsite representative who would have access to all GPUN-NRC safety information. The state

representative could ask reasonable questions of NRC and bring safety issues to the attention of the Commission. This opportunity should continue for as long as the Commonwealth finds it useful.

(5) The Commission should also require an addition to the GPUN Board of Directors and the GPUN Safety Oversight Committee. This new director should be selected by the Commission, should be someone not affiliated with the nuclear industry and should be someone who possesses a high degree of public credibility.

(6) The Commission should quarantine by license condition from participation in <u>any</u> TMI-1 related activities all those individuals already quarantined voluntarily by GPU or by the Commission by license condition as well as the following:

a. H. M. Dieckamp

b. M. J. Ross

c. B. Mehler

In order to restore any quarantined individual to TMI-1 related activities, a hearing should be required to specifically consider whether that individual possesses the requisite competence and integrity to be involved in TMI-1 related activities.

7. There should be a specific requirement that licensee hold the plant at 25% power for a period of at least six months. Commission approval should be required at the end of that time before further power ascension is permitted. This is similar to the operational restrictions previously recommended by the staff. The licensee has not operated this plant for more than six years, and many of its personnel lack operating experience with the plant. A period of limited power operation would permit a better assessment of the licensee's capabilities under actual operating conditions. At the same time, the limited power level would reduce accident risk somewhat by providing greater response times to deal with problem conditions should they arise. 3/

Without the completion of hearings on certain management competence and integrity issues (as I have outlined above and in my dissent on CLI-85-2) and the imposition of more specific additional safeguards, I am unable to conclude that there is reasonable assurance that GPUN will operate TMI safely. Given an opportunity through further hearings on these issues, it

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3/ Although both a Licensing Board and an Appeal Board have concluded that the corrosion of the steam generators has been adequately addressed by the licensee, I am not convinced that we have seen the last of the corrosion problems resulting from the licensee's introduction of thiosulfate into the reactor coolant system. The corrosion event creates some degree of uncertainty about the quality of the materials, both in the steam generators and in other portions of the primary system, including the pressure vessel internals. Because this is a novel problem, there is an added advantage of a 25% limit on power operation in providing additional protection while gaining more experience with the adequacy of these remedial actions.

is possible that GPUN could provide sufficient evidence to establish that its present organization has the requisite competence and integrity to operate TMI-1 in a safe manner. But since the Commission has refused to hold further hearings, I must reach my decision on the record now before us. The present record leads to one clear and inescapable conclusion: this licensee has failed to demonstrate that it is fit to hold an NRC license to operate a nuclear powerplant. I cannot, therefore, join the Commission's order which permits restart of TMI, Unit 1.

May 29, 1985

Separate Views of Commissioner Bernthal

This decision today on TMI-1 restart, and the Commission's earlier vote on Feb. 13, represents the most visible failure to date of that elusive ideal -- the collegial decision-making process. It is not the first example of failure in that process, but it is far and away the most important, one which shows in embarrassing detail how the people of Pennsylvania and the people of this country, whether supporters or opponents of TMI, have been robbed of what they deserve -- a truly collegial decision by the Commission.

It has been evident for more than a year that the basis existed for a Commission consensus decision on this issue. Unfortunately, the decision-making process, as contrived by your Congress and your Commission, permits such an outcome only as a long-shot random-chance coincidence in views among Commissioners.

What the Commission and the public have lost as the Commission wandered down this unwise and ill-considered path toward the restart vote today is the opportunity to see a job done convincingly and right. Instead, the Commission has in all likelihood set the stage for endless wrangling over what is done and what is undone, what is known and what is unknown, what is true and what is untrue in these six years and thousands of pages of on-the-record and off-the-record TMI proceedings.

I have repeatedly said that it is in the public interest to have a thorough airing of all the remaining issues and questions related to the unfortunate accident at TMI-2. I have repeatedly urged my colleagues, right up to the 11th hour, to reconsider this ill-advised path toward restart. I find the Commission's methodology for restart to be crudely insensitive to what should be a paramount concern -- public confidence. The Commission majority's path for restart runs contrary to the broad public interest in knowing all that can be learned about the events leading up to and following the accident at TMI.

I recognize that legitimate concerns can attach to the needless imposition on this licensee of burdensome, confidence-diminishing measures proposed by some as a condition for restart. But the Commission should also display equal concern, prudence, and foresight in assessing the need for the public to know. Where the Commission should have gone the extra mile -- in the case of providing support for the Pennsylvania Dept. of Health's long-term health-effects study, in its receptiveness to the urgent pleas a few weeks ago of the TMI Advisory Panel to serve as a conduit for public concerns, in the far-reaching decision in February not to clear the air on all remaining questions outstanding -- the Commission has instead chosen to go only the extra inch.

Indeed, the history of TMI has been a history of such mistakes. No one would argue about the mistakes that led to the accident itself. But early on, in the wake of the accident, there should have been less concern in all circles, local, state, and national, for the possible

consequences of a utility bankruptcy, and more concern for an expeditious cleanup of the world's worst nuclear accident.

The Congress failed to act first, and determine responsibility later, in getting about the urgent business of cleanup. What other country in the world, given the circumstances, would have haggled over responsibility or even dollars first, and have then left cleanup of the worst commercial nuclear powerplant accident to an uncertain future in the hands of an uncertain utility?

Then the Commission itself contrived an ill-conceived hybrid proceeding, neither fish nor fowl, neither adjudicatory nor enforcement, a proceeding that virtually precluded any possibility of orderly and timely resolution of the issues.

Nor have I particular admiration for the way this licensee conducted many of its affairs before, during, or since the accident. In a real-world, competitive market, unprotected by regulation at all levels of government, such grievous mistakes would cost you the store.

Nevertheless, despite the occasional desires of some Commissioners to act as a surrogate Board of Directors for this licensee, that is emphatically not the function of the Commission. For all the breast-beating that has gone on over the last several years about management competence and integrity, it is still wonderfully strange that no Commissioner has ever raised more than a half-hearted, second-thought question as to the same management's credentials and abilities to operate another plant at Oyster Creek -- and no Commissioner has ever mounted a serious attempt to shut down or prohibit further operations at that site. One is led to suspect that the much discussed questions about management integrity and competence have more to do with suspicions than with supportable basis in fact.

Almost a year ago, I urged the Commission to appoint, even at what appeared to be that late date, a Special Master to carry out all remaining hearings before the Commission itself, so that those issues could be closed once and for all. What appeared then to be a late date has turned out not to have been so late after all. And instead, the Commission has now spent exactly one more year trying to justify and procedurally legitimize its decision not to pursue further the issues I had previously identified. And so goes the still unconcluded history of the TMI accident and aftermath.

While I could continue at length to analyze and ponder and pontificate on which issues are closed, half-closed, or open, that would now serve little useful purpose. Whether this or that action, inaction, deed, or misdeed renders GPU management fit or unfit, better or worse than average will now assuredly be debated for years. Not one member of the Commission sitting here today was present at the creation of this thing, and I find no reason in the Commission's action of Feb. 13 for optimism that anyone here today will see it brought to an end.

But before the arguing and recriminations ensue, the public deserves to know whether, by objective evaluation of the physical preparation of this

plant, and by all reasonable measures of licensee management, personnel and capability, I find that TMI-1 can and will, with reasonable assurance (and then some, one must add for the case of TMI), be operated in conformance with the requirement to preserve the public health and safety.

On February 13, the majority of this Commission decided, in CLI-85-2, that no further hearings were required as a part of the TMI restart proceeding. I agreed with the majority at that time that further hearings were not required as a legal matter. I believed at that time and still believe that it is important, indeed critical, that our decision be one that will pass legal muster. However, there is and always has been more involved in this matter than strict legality.

Like it or not, the accident at TMI-2 has been responsible for increased skepticism concerning the nuclear energy option on the part of a significant segment of our fellow citizens. Thus, the way in which the Commission decides to handle the restart matter affects not only the licensee and the citizens of Middletown, or even just the citizens of Pennsylvania. It is a decision which will have a great deal to do with how people across the country will view both this Commission and the nuclear energy option in general. Therefore, while a legally defensible position is critical, equally important in this, of all cases, is public confidence in the fact that the Commission has exhausted all reasonable avenues of inquiry which can shed further light on the events associated with the country's worst commercial nuclear power accident. These considerations formed the basis for my disagreement with the majority position in February.

This restart proceeding has occupied an extraordinarily long period of time and has generated a massive record which constitutes the most in-depth look at a facility and its management in the Commission's history. It is precisely because so much time and so many resources have been devoted to the technical review of this facility and examination of its management that it is a shame to jeopardize public confidence in the ultimate decision by failing to resolve several issues about which there are still nagging doubts on the part of significant segments of the interested public. I still dissent from my colleagues' choice to forego any further consideration of those issues (CLI-85-2).

At the same time, however, no available information leads me to believe that a decision otherwise favorable to restart would be impacted, as a legal matter, by further examination of the issues identified either by me or by my colleague, Commissioner Asselstine. More importantly, although sound public policy considerations dictate to me that further hearings should have been held, I firmly believe that, as a technical matter, this facility can now be operated in a manner wholly consistent with public health and safety.

Technical judgments, that is, judgments regarding the actual safety of a particular facility, can only be made in comparison to accepted standards of safety at other plants which the Commission has licensed to operate. Technical issues of safety at TMI-1 are, for the most part, very similar to issues at other pressurized water reactors, and in particular, to

other Babcock and Wilcox plants now operating. In so far as the procedures, systems and operating crews are similar to other licensed facilities, the important question becomes whether these procedures, systems, management and operating teams are equal to or better than that which is accepted and consistent with safe operation of other plants. All available information suggests that TMI-1 measures up very well to that standard.

Nevertheless, there are certain unique technical aspects to the restart of TMI-1 which could have a significant impact on safety, and which must be carefully considered in making this decision. First, one must consider the steam generator tube degradation and the unique tube repair technique which was utilized by the licensee. There is near universal agreement among technical experts that the steam generator repairs have restored the steam generators to their original licensing basis. This matter has been thoroughly litigated and has resulted in a decision by the licensing board favorable to the licensee. Further, even though steam generator tube performance will be carefully monitored by GPU and NRC, one must keep in mind that the steam generator tube rupture event has been taken off the list of unresolved generic safety issues, because the public health and safety consequences of such an event are now generally conceded to be small.

The second unique feature which must be considered with regard to TMI-1 is the fact that it has been idle for six years. Although maintenance of equipment at the plant has been extensive since it was shut down in 1979, problems can be expected in systems that have been out of normal service for such a long time. However, in anticipation of possible restart problems the planned startup will be unusually cautious and deliberate, with many hold points on the way to full power. Power ascension activities will be carefully monitored by round-the-clock presence of NRC staff personnel -- an extraordinary policy for either initial startup or restart of any reactor.

A third possible concern is the fact that there have been numerous changes in operations and management personnel, and that this turnover has disadvantages due to the fact that potentially valuable experience has been lost. However, an extensive training program, reviewed and approved in protracted hearings should serve to alleviate that concern. The staff has been consistent and clear in its opinion that the present management and operating team at TMI-1 have the capability and commitment to operate the facility safely.

In addition, the concern has been raised that operation of TMI-1 with the TMI-2 cleanup continuing a short distance away will pose significant safety problems. However, all of the information at the Commission's disposal indicates that the two operations can be conducted concurrently, consistent with public health and safety, and that in fact there is little or no association between the two.

Finally, it should be noted that, although several Category A deficiencies were originally found by FEMA as a result of emergency planning exercises, those deficiencies have been corrected, and emergency planning is now found to be fully acceptable for TMI-1. For all of the

above reasons, I believe that as a technical matter TMI-1 can and will be operated in a manner fully consistent with public health and safety.

Having said this, I must also say that, to the extent I can do so consistent with my mandate to protect public health and safety, I do not intend to hold an otherwise appropriate Commission decision hostage to the mistakes and poor judgment of this or previous Commissions. It is also in the public interest that the six-year suspension of operations at TMI-1 be lifted when it is safe to do so -- indeed the law requires the Commission to do so. There is clearly no reconciling that fact with my dissatisfaction over the tortuous path the Commission has chosen to take us from June 1984 to June 1985 and beyond.

By now, it is quite clear where the Commission decision today is headed, and although I take strong exception to the Commission's disregard for what I consider to be elementary and neglected public policy considerations, it is also essential that where confidence is deserved in this decision, confidence should be fostered.

The action of the Commission majority in closing the record in this case may not inspire much public confidence in the wisdom of the Commission. But the public can and should have confidence that this plant is indeed ready for operation -- that it meets or exceeds the standards the Commission has laid down and requires at 93 other plants in this country, from San Onofre to St. Lucie, from Grand Gulf to Oyster Creek. I therefore will lend my concurrence to the vote of the majority today in so finding.

ADDITIONAL VIEWS OF CHAIRMAN PALLADINO ON TMI-1 RESTART

The decision on whether or not to lift the immediately effective shutdown orders placed on Unit One at Three Mile Island in 1979 has not been on easy one for me. Extensive expressions of concern have been raised by many local citizens and political leaders. Last week, the Commission heard many of these concerns re-expressed in oral presentations on TMI-1 restart. As a Pennsylvanian I know first-hand the reaction of some of the public during the stressful days following the accident at TMI-2.

The Commission has given careful consideration to public concerns through its attention to the underlying health and safety questions in this case. Indeed, the Congress in the Atomic Energy Act, has directed the NRC to make decisions regarding the licensing of nuclear reactors, such as this one, on the basis of its own expert health and safety judgment and analysis of whether the detailed regulatory requirements of the Commission have been satisfied. Thus, while we are aware of the sentiment of many members of the public, the Commission must base its decision to authorize restart on its conclusion that there is reasonable assurance that this plant will be safely operated.

I am voting to lift the shutdown orders and allow operation of Three Mile Island, Unit 1 because I am confident that GPU Nuclear can and will abide by NRC requirements and will operate Unit 1 so that public health and safety will be adequately protected. My confidence is based on: (1) the four favorable partial initial decisions of the Licensing Board after extensive public hearings; (2) the NRC staff's review and conclusion, sustained in the hearings, that the shutdown orders should be lifted; and (3) my own review of the available information as discussed in the proposed order.

My confidence is bolstered by the greater-than-usual NRC regulatory scrutiny that will be given to this licensee and this plant during initial startup. Our inspectors will be there to oversee the licensee's activities during this important time period.

I continue to believe that the Commission was correct in its February 1985 decision not to hold more hearings on additional topics. There already have been more than 150 days of hearings. In addition, the Commission itself has spent countless hours on the TMI-1 restart matter, including sessions in Harrisburg.

It is important to recall that in 1979 the Commission stated that the public hearing called for in the shutdown orders was

to resolve concerns so as to provide reasonable assurance that the facility could be operated without endangering the health and safety of the public.

Thus, the question that needed to be answered about the additional topics for hearings was whether or not the topics would bear upon a decision to keep Unit 1 shut down. The information that was considered by the Commission in making its decision not to hold further hearings and the reasons for the decision are public, and I believe they support that decision.

The Commission's February 1985 order addressed specific matters proposed for further hearings at that time. These included: (1) the likely change in the staff's position in Supplement 5 of its Safety Evaluation Report; (2) the handling of allegations by Mr. Richard Parks, a former Bechtel Operations Engineer, regarding violation of TMI-2 cleanup procedures; (3) the Hartman allegations of TMI-2 leak-rate falsification; and (4) allegations of TMI-1 leak-rate falsification. I believe a brief comment on each of these items is in order.

With regard to the question of the likely change of the staff's position, there were four issues raised by the staff. The Commission's February 1985 order explained the reasons for concluding that none of the issues posed a significant safety issue. Two of the issues relate to items on which we held

hearings and the remaining two items hold no continuing significance because they relate to individuals who no longer are involved in operating TMI-1.

With regard to the Parks matter, this had to do with TMI-2. The facts were investigated and harassment of Mr. Parks was found. However, no widespread pattern of discrimination, harassment or intimidation was shown and the major GPU Nuclear official involved is no longer with TMI-1 or GPU Nuclear organizations. Thus, it is a TMI-2 issue.

With regard to the Hartman matter, as a separate item, we have ordered that all individuals who were suspect in the TMI-2 leak-rate falsification are to be covered by a future hearing, with the exception of those individuals that were found by the U.S. Attorney to not have participated in, directed, condoned, or been aware of the acts, or omissions, that were the subject of the Hartman indictment. We also found, on the basis of a separate NRC investigation that it was unlikely Mr. Ross knew of or was involved in TMI-2 leak-rate falsification. Thus, the Hartman matter, as a restart issue, has been dealt with.

The TMI-1 leak-rate falsification allegations have been investigated by NRC; no pattern of deliberate falsification was found. The Commission found that there were no significant factual disputes concerning leak-rate practices at TMI-1, and

that the facts as currently known did not raise a significant safety issue which might have led the Licensing Board to reach a different result.

I believe that the major management faults which existed in 1979 have been corrected. The current organization is a different and improved organization from the one which operated Three Mile Island in 1979. It is a significantly improved organization in terms of personnel, organizational structure, procedures and resources. I am satisfied that the pre-accident management faults have been corrected.

Public confidence is a key issue for GPU Nuclear and TMI-1, and for nuclear energy and its regulators. Public confidence must be earned over and over again. In the case of TMI-1, public confidence was damaged by events surrounding the accident at TMI-2. GPU Nuclear has publicly stated that excellence is its standard and has made changes aimed at fulfilling that goal. The NRC and, I am sure, the public will be monitoring their performance closely.

I have read both the long and short versions of Commissioner Asselstine's dissenting views, and I feel compelled to make the following additional comments on three of his points.

First, I do not agree with Commissioner Asselstine's statement that the Commission is turning its back on its responsibility to make every effort to ensure that TMI-1 will be operated safely. The question of whether or not this reactor can and will be operated safely has been of significant concern to the Commission since NRC shut the reactor down in 1979. It was the NRC which kept TMI-1 shutdown after the 1979 accident. It was NRC that conducted the extensive series of hearings on the adequacy of TMI-1 and its management. And, it is the NRC which plans to take extra precautions during the startup and power ascension phases. Thus, we have not turned our back on our safety responsibilities; rather, we have fulfilled them in an extra-ordinarily comprehensive manner for TMI-1.

Second, Mr. Asselstine criticizes the Commission for having addressed management competence and integrity in a piece meal fashion without examining the pattern established by individual actions. While, of necessity, individual flaws in TMI management had to be treated one-by-one, because they did not all arise at the same time, significant management changes were made to restore our confidence in overall management competence and integrity. I do not believe that those were trivial changes or merely "shuffling around individuals" as Mr. Asselstine suggests.

The management faults which existed in 1979 have been corrected. The present organization is different from and improved over the one that operated Three Mile Island at that time.

Third, I believe Mr. Asselstine is wrong in saying that the Commission has chosen to do little in the way of providing additional oversight and safeguards for restart of the plant. On the contrary, the Commission has set forth two important conditions that speak to this point:

(1) To ensure a safe return to operation, licensee is to submit a power ascension schedule, with hold points as necessary at appropriate power levels, to the NRC staff for staff's approval. The plant cannot be restarted prior to staff approval of such a schedule; and

(2) The NRC staff prior to restart is to provide to the Commission for its information a general description of a program to provide increased NRC oversight at TMI-1 during the period of start-up and power ascension, beginning with initial criticality, and any time period thereafter staff feels to be appropriate.

The staff does not take lightly such Commission direction. I am sure that it recognizes the importance of this task and based on past performance will not overlook necessary actions to fulfill these conditions.

In closing let me reiterate my view that the 1979 shutdown orders should be lifted, thus allowing TMI-1 to resume operation subject to the conditions set forth in this order; I believe that this can and will be done with reasonable assurance that public health and safety will be adequately protected.

Statement of Commissioner Roberts on TMI-1 Restart

In August 1979 the Commission ordered TMI-1 to remain shutdown and a hearing to be held to determine whether its further operation should be allowed. At the time they ordered the hearing the five Commissioners who then held office anticipated that a decision on restart could be reached in approximately one year. See the Attachment to CLI-79-8, 10 NRC 141 (1979). That assumption turned out to be overly optimistic. Almost six years have elapsed and now that hearings on all issues believed by a majority of the presently incumbent Commissioners to be material to a restart decision have been completed, no one who was a Commissioner at the time a hearing was ordered is a Commissioner.

The record of the proceeding is a massive one. The Licensing Board charged by the Commission with taking evidence and reaching an initial decision has made findings favorable to restart. Moreover, the Appeal Board and the Commission have completed appellate review of all hardware/design issues, all emergency planning issues, and all management issues except the training and mailgram issues considered by the Licensing Board on remand. Only if we have sufficient remaining concerns regarding favorable resolution of the training and mailgram issues to warrant maintaining the effectiveness of the shutdown order can we legitimately do so, since the law requires the lifting of an immediately effective license suspension once the concerns that justified imposing it have been adequately resolved. That being so and having neither found nor been provided any legitimate reason to delay any longer a decision on lifting the immediate

effectiveness of the license suspension imposed in July 1979, I believe the Commission has a duty to make its decision now.

Therefore, although I do not doubt the sincerity of the concerns expressed by those who oppose a restart decision now and am aware of but cannot agree with the fears of those who believe the plant should never restart, I will vote to allow restart.

I also join in the comments made by the Chairman in response to the dissenting views of Commissioner Asselstine.

STATEMENT BY COMMISSIONER ZECH:

Six years ago, the accident at Three Mile Island Unit Two changed the course of commercial nuclear power. The accident that was not supposed to happen did happen. During the first few hours and days of the accident, there was considerable confusion as to the danger presented by the damaged Unit Two nuclear plant. The citizens of Pennsylvania became the victims of lack of information, poor communications and ineffective licensee and governmental actions. Even though our best evidence now indicates that there were no adverse radiation effects as a result, the emotional impact on the public was substantial. The accident generated widespread fear and a deep mistrust of the licensee and the responsible regulatory agency--the Nuclear Regulatory Commission.

During those early days of uncertainty, as a precaution, and a proper one in my view, the undamaged nuclear plant at Three Mile Island--Unit One--was ordered shut down by the Commission. The Commission then decided that TMI-1 should remain shutdown until the problems which led to the TMI-2 accident were identified, debated in a public hearing, and adequately resolved. There has been six years of adjudication, investigation, analysis, monitoring, a Presidential inquiry, as well as other actions. As a result of the accident, many lessons have been learned and applied to TMI-1 over the past six years. The adequacy of the many changes that have taken place as a result of these lessons has been argued in extensive public hearings held by this Commission's Licensing and Appeal Boards. I believe that as a result we now have the necessary information to decide whether it is proper to allow the undamaged Unit One to restart.

While many changes in personnel, procedures and equipment at Three Mile Island and elsewhere have been put in place to enhance safety of operations and to minimize the possibility of another Three Mile Island accident, the question we are facing today is have all the necessary changes been accomplished at Three Mile Island to permit the restart of Unit One?

It is important, I believe, to separate where possible, the issues involving undamaged Unit One and those involving the cleanup of the damaged Unit Two. It is my opinion that the cleanup of Unit Two could have been managed more efficiently and more effectively. However, it now seems to be progressing in a satisfactory manner and in any event the evidence leads me to conclude that cleanup of TMI-2 will not interfere with the safe operation of Unit One.

In addition, a very serious consideration must be for the views of the people of central Pennsylvania. Although it appears that many citizens favor starting up the Number One Unit, it also appears that many do not favor a restart and are genuinely concerned for their health and safety.

While respecting this concern, we, as regulators, are faced with a personal responsibility, under the law, which requires that, if we are reasonably assured that the public health and safety will be protected, we must lift the order suspending the license to operate TMI-1. Attempting to arrive at this personal decision concerning the health and safety of our fellow citizens places a very heavy burden of responsibility on each Commissioner. In the case of Three Mile Island, I believe we have a special responsibility. The issues of management competence and integrity have been central in this

proceeding. I believe them to be the most important considerations in deciding whether to authorize a restart.

I do not condone some of the conduct or the practices which have occurred at the Three Mile Island site in the past. However, the crux of the matter for me is whether these past occurrences continue to create doubt about the technical competence and integrity of the licensee's present TMI-1 management team. Both the parent corporate entity and the management team responsible for the operation of TMI-1 have changed substantially. The licensee's current organizational structure strikes me as sound, with provisions for sufficient check points to assure that safety is paramount. I have given careful consideration towards forming a judgment concerning the technical competence and integrity of the individuals in positions of responsibility. My conclusion is that I have confidence in them in both areas. I emphasize that I have no reservations about the competence and integrity of the people who are directly responsible for the safe operation of TMI-1. If I did, I could not support resumed operation. However, if subsequent events change my judgment, I will dedicate my efforts to prompt correction.

Unfortunately, despite six long years of NRC deliberations and licensee management and organizational changes, public confidence in this licensee has not been fully restored. In my judgment, it will be up to the licensee through sustained excellent performance to earn the confidence and respect of Pennsylvania's citizens. While that performance record is being accumulated, continuing vigilance and dedication by both the licensee and regulator will be required to assure the licensee carries out its primary responsibility to provide reasonable assurance that the public health and safety is protected

throughout the life of the license. I am satisfied that the licensee has the team in place to provide that assurance. I will do all that I can as a regulator to see that the licensee maintains the requisite competence and integrity. I am also satisfied that all other concerns have been adequately addressed.

My conclusion, after reviewing the record and with the staff's certification that all Nuclear Regulatory Commission requirements have been met, is that Three Mile Island Unit One can be operated with reasonable assurance that the public health and safety will be protected. General Public Utilities has an obligation to ensure, not only now but during the term of the license, that TMI is operated with the greatest of care and with every regard for the public health and safety, that all involved with TMI perform in the most competent manner possible and that they take every measure to earn the special trust and confidence, not only of the citizens of Pennsylvania but of all the citizens of the United States.

I vote for restart of Three Mile Island Unit One.

In addition, I agree completely with the Chairman's comments on Commissioner Asselstine's dissent.