ADJUDICATORY ISSUE

(Affirmation)

February 22, 1983 SECY-83-74

COMMISSION LEVEL
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For: The Commission

From: Martin G. Malsch
Deputy General Counsel

John E. Zerbe
Director, OPE

Subject: REVIEW OF ALAB-698 -- IN THE MATTER OF METROPOLITAN EDISON COMPANY

Facility: Three Mile Island Nuclear Station, Unit 1

Purpose: To advise the Commission of an Appeal Board decision [which, in our view,

Review Time Expires: March 18, 1983, as extended.

Petitions for Review: NRC Staff

Discussion: On October 22, 1982, the Appeal Board issued two decisions on emergency planning at the Three Mile Island Nuclear Station, Unit No. 1. This paper concerns the second of those decisions, ALAB-698.1/ [We recommend that the]

1/ The first decision, ALAB-697, was discussed in SECY-83-6. That decision concerned the emergency preparedness concerns raised by the Aamodts. The division of emergency planning issues by the Appeal Board resulted from Judge Gotchy's recusal from the Aamodt appeal.

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EX 5

1. Summary of ALAB-698

There were two issues raised by the parties in ALAB-698: (1) Licensee challenged the Licensing Board's requirement that an Emergency Support Director, with full authority to make PARs, be available in the Emergency Operations Facility (EOF) within one hour after declaration of a site emergency; and (2) the Commonwealth of Pennsylvania (Commonwealth) asserted that the Licensing Board erred in failing to order the distribution of permanent record thermoluminescent dosimeters (TLDs) to state and local emergency workers prior to restart. The Appeal Board affirmed the Licensing Board on the dosimeter issue, but modified the Licensing Board's decision regarding the Emergency Support Director. Judge Edles in a separate opinion would have required another emergency exercise prior to restart.

With regard to staffing of the EOF, licensee agreed in the hearings to have six members of its TMI organization available to activate the EOF within an hour after declaration of a site

EX.5

emergency and to have all communications and data links operational within that time. However, licensee did not want any of these six individuals to make PARs to the Commonwealth. Licensee believed that PARs, due to their importance and political sensitivity, should be made only by its most senior officials. Accordingly, licensee proposed that during the interim period before the Emergency Support Director (probably Mr. Arnold or Mr. Clark) arrived at the EOF from company headquarters in Parsippany, N.J., decisional responsibility for PARs would be in the hands of the Emergency Director (the shift supervisor, probably Mr. Hukill or Mr. Toole), who is the company's senior onsite official and who would be stationed in the control room. Licensee further offered to have its Emergency Support Director at the EOF within four hours.

Both the NRC staff and the Commonwealth argued that PARs should be made by the EOF Director (Emergency Support Director to the licensee) and that that person should be available in the EOF within one hour after the declaration of an emergency. The Licensing Board agreed.

Following issuance of the Licensing Board's decision, the licensee modified its emergency plan by assigning managerial responsibility for the EOF to an Assistant Emergency Support Director until the Emergency Support Director arrived at the EOF. This satisfied the Licensing Board's concern that a senior manager be in the EOF within one hour. The only remaining dispute was that licensee wanted the Emergency Director in the control room to make PARs during the early hours after an accident while the Licensing Board insisted that it be the Emergency Support Director in the EOF. The Appeal Board reversed the Licensing Board because it found the licensee's proposal to be a more logical approach to managing PARs. The Appeal Board, because of the special organizational structure established by this licensee, found insignificant the staff's concern about the

potential for confusion if too many responsibilities resided within the control room during the early hours of an emergency. In this regard, the Appeal Board believed that acquiring information on the present and future condition of the reactor is the most important factor in making PARs, and that this information can best be acquired in the control room. The Appeal Board also rejected the Commonwealth's assertion that face-to-face contact with licensee officials in the EOF was necessary for the Commonwealth to obtain important information underlying the licensee's PARs.

Nonetheless, the Appeal Board, believing that licensee must make some effort to have the Emergency Support Director at the site as early as possible, required that the Emergency Support Director be notified upon declaration of any alert, and that he arrive at the EOF within four hours after declaration of a site emergency. The Appeal Board also imposed a staffing condition to ensure there would always be adequate personnel available onsite in order to accord the Emergency Director the needed time to make any necessary PARs until the Emergency Support Director arrived.

At oral argument before the Appeal Board, the Commonwealth argued that to determine whether the presence of the Emergency Support Director in the EOF is critical would require another drill at which the Director would not arrive until some later time. Under the previous drills, PARs were made from the EOF during the first four hours rather than from the control room. The Appeal Board (Mr. Edles dissenting) rejected this suggestion as unnecessary and possibly counterproductive. The Appeal Board stated that a single test should not be the final determinant, that licensee's plan has merit and licensee "should be given a chance to perfect its procedures as long as the first trial shows reasonable results." Slip Op. at 39. The Appeal Board also noted its concern that such a drill might conflict with FEMA's 1983 schedule for emergency exercises or delay

restart. The Appeal Board, noting that it would like to see an exercise as soon as practicable, directed that such an exercise be conducted at the next available opportunity, but left the timing of the exercise to the discretion of the licensee, FEMA and the other parties. Thus the next exercise will probably be the annual exercise in mid-1983.

Judge Edles dissented from the approval of the licensee's plan to have PARs made by the Emergency Director in the control room until the Emergency Support Director arrived. Judge Edles, noting that there has been no test of the plan as now revised, argued that the licensee had not met its burden of demonstrating that the plan will work. Judge Edles would have ordered a new drill prior to restart.

With regard to the second issue, whether TLDs should be required, the Commonwealth argued that (1) permanent record dosimetry for each emergency worker in the TMI-1 plume EPZ is required by the NRC's regulations, at least as construed by relevant interpretive guidelines and by FEMA's findings, and (2) even if not required by the regulations, there is no reliable evidence to demonstrate that any alternative means of radiological exposure control for emergency workers can and will be implemented. The Appeal Board first explained that FEMA's findings and interpretations and documents such as NUREG-0654 are not binding requirements, and that whether TLDs are required depends ultimately on whether they are necessary to provide reasonable assurance that emergency workers will be protected. The Appeal Board then found that the planned distribution of two self-reading dosimeters to each worker, with the specific instructions given to workers in the emergency plan, was sufficient to assure reasonable protection for emergency workers. The Board, although it did not require that TLDs be provided, did nonetheless urge all affected interests to work together to provide TLDs for offsite emergency workers.

The Appeal Board in ALAB-698 sua sponte discussed two other issues: (1) the adequacy of the NRC incident response plans; and (2) the Commonwealth's basis for calculating projected radiation doses. With regard to the adequacy of the NRC response plans, the Appeal Board stated that, although it had found a well-developed record on the emergency plans of the licensee, the Commonwealth, the five counties at risk, and FEMA, it had found very little information concerning the NRC incident response plans. Hence, the Board had on June 29, 1982 issued an order requesting additional information. After reviewing staff's response, the Appeal Board identified three specific areas of concern with the staff's response plans: (1) delays in completing NRC plans and procedures and coordinating them with the TMI Program Office, Region I and with NRC headquarters, and with the licensee, the Commonwealth, and the counties; (2) lack of specific criteria defining the respective roles of the NRC and the licensee in making PARs and in command procedures; and (3) unclear NRC staff duties and personnel locations in an actual emergency. Accordingly, the Appeal Board required staff to clarify these ambiguities and to supply licensee and the Commonwealth with final, complete response plans prior to restart.

Finally, the Appeal Board questioned the methodology of predicting releases of radiation in certain types of loss of coolant accidents. The Appeal Board evidenced strong interest in the licensee's testimony that, even with severe core uncovering and containment cracking, very little radioiodine or other aerosols would be released offsite because of such phenomena as "gravity, basic aerosol physics, chemical solubility, chemical reactivity, physical plate-out, and adsorption." ALAB-698 at 52. The Appeal Board was particularly impressed with the evidence from actual reactor accidents. The Appeal Board noted that if these conclusions are correct, there may be unnecessary evacuations during emergencies and urged the

Commission to expedite its consideration of the issue.

2. Petitions for Review

Originally both the NRC staff and the Commonwealth petitioned for review. The Commonwealth argued that TLDs should be distributed prior to restart. However, the licensee and the Commonwealth have now reached an agreement under which the licensee will fund the procurement of 6500 TLDs for TMI-1 emergency workers, and the Commonwealth has moved to withdraw its petition for review.

The sole issue presented by the NRC staff was whether the Appeal Board erred in finding that responsibility for radiological assessment and PARs could reside in the Emergency Director in the control room during the first four hours after declaration of a site or general emergency. We note here that the Appeal Board did not mention radiological assessment. Therefore staff must be construing the Board's opinion as reversing the Licensing Board's condition that radiological assessment be removed from the control room within one hour. The staff disagreed with the Appeal Board's conclusion. The staff argued that the additional burdens on the Emergency Director of making PARs would impair his ability to concentrate on accident mitigation and operational matters and that he already has so many responsibilities that he would not be able to devote sufficient attention to making PARs. Staff also noted that making PARs in the EOF would provide a better interface between the licensee and state officials. Staff concluded that the Appeal Board's decision "will significantly weaken the protection which the Commission sought to provide for the public health and safety in its emergency planning regulations."

Licensee had no objection to staff's petition for review, and requested that the Commission establish a schedule for the filing of briefs.

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Attachments:
(1) Proposed Order
(2) ALAB-698
(3) NRC petition for review
(4) Licensee's response

Commissioners' comments should be provided directly to the Office of the Secretary by c.o.b. Tuesday, March 8, 1983.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Tuesday, March 1, 1983, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional time for analytical review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

This paper is tentatively scheduled for affirmation at an Open Meeting during the Week of March 14, 1983. Please refer to the appropriate Weekly Commission Schedule, when published, for a specific date and time.

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Attachment 1

Attachment 2

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ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Gary J. Edles, Chairman
Dr. John H. Buck
Dr. Reginald L. Gotchy

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

Mr. Robert E. Zahler, Washington, D.C. (with whom George F. Trowbridge, Thomas A. Baxter, and Delissa A. Ridgway, were on the brief), for the licensees.

Mr. Robert W. Adler, Harrisburg, Pennsylvania (with whom Michele Straube, was on the brief), for the Commonwealth of Pennsylvania.

Mr. Joseph R. Gray, (with whom James M. Cutchin, IV, Jack R. Goldberg and Mary E. Wagner, were on the brief), for the Nuclear Regulatory Commission staff.

DECISION

October 22, 1982

(ALAB-698)

This decision, together with a companion decision issued today, examines various aspects of the emergency response plan for the Three Mile Island Nuclear Station. At issue in these particular appeals are (1) the Commonwealth of Pennsylvania's claim that the Licensing Board erred in failing to order the distribution of permanent record

thermoluminescent dosimeters (TLDs) to state and local emergency workers prior to the restart of Unit 1 of the Three Mile Island Nuclear Station, and (2) the licensee's claim that the Board improperly required that an Emergency Support Director, with full authority to make protective action recommendations, be available within one hour after the declaration of a site emergency. These two issues are among only a handful of matters regarding emergency planning that were not resolved to the satisfaction of all the parties by the Licensing Board in that portion of its partial initial decision devoted to emergency planning. LBP-81-59, 14 NRC 1211, 1455-1707 (1981) (PID ¶¶1330-2011). A brief review of emergency planning issues, along with a more general discussion of the overall background of this case, is contained in the companion opinion issued today. See ALAB-697, 16 NRC ___, ___ (1982) (slip opinion pp. 1-6).

The NRC staff supports the Licensing Board's disposition of both issues. The licensee and Commonwealth oppose each other's appeal. For the reasons discussed below, we affirm the Board's decision not to require the predistribution of permanent record dosimeters, but modify its decision regarding the Emergency Support Director. We also address two matters considered by the Licensing Board [1/] but not

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1/ See 14 NRC at 1489-1490, 1669.

raised on appeal. One is the relationship and coordination between the licensee's emergency response plan and those of the Commission itself, the Commonwealth, and the Federal Emergency Management Administration (FEMA). The other is the weight to be given certain testimony concerning the quantity of fission products likely to be released in an accident and possible implications for the Commonwealth's choice of protective actions.

I. DISTRIBUTION OF DOSIMETERS

The Commission's emergency planning regulations provide generally that no license may be issued unless a finding is made that the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. They require, more specifically, that (1) a range of protective actions be developed for emergency workers operating in the plume exposure pathway emergency planning zone (plume EPZ), [2/] (2) means for

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2/ 10 CFR 50.47(b)(10). The plume exposure EPZ is the geographic area surrounding the plant in which the risk of whole body and inhalation exposure to radioactivity would be greatest in the event of an accident. Ordinarily, the plume exposure EPZ is about 10 miles in all directions but its exact size and configuration may change depending on demography, topography, or local emergency response needs and capabilities. 10 CFR 50.47(c)(2).

controlling radiological exposure to emergency workers be established which are consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides (PAGs), [3] and (3) equipment be available at the site for personnel monitoring. [4] The licensee, the Commonwealth, and local governments plan to comply with these requirements through, among other things, the distribution of dosimeters.

Dosimeters are devices used to determine the radiological dose received by an individual. Dosimetry is the method used to determine the cumulative exposure a worker has received at any time, "specifically for purposes of advising the worker to leave the plume exposure pathway emergency planning zone ('plume exposure EPZ') once a predetermined level of exposure has been reached." [5]

3/ 10 CFR 50.47(b)(11).

4/ 10 CFR 50.47(b)(8),(9) and 10 CFR Part 50, Appendix E, Section IV.E.1.

5/ Commonwealth Brief at 5 (March 10, 1982). See also Commonwealth Ex. 2a; Appendix 16, Section V. B. Commonwealth Ex. 2a is the state emergency plan for nuclear facility incidents.

Another function of dosimetry, the Commonwealth suggested at oral argument --

> is to establish an accurate, reliable, permanent record of the dosage accumulated by each individual emergency worker. This is critical in terms of medical records and in terms of receiving medical treatment following the emergency . . . 6/

There are no explicit regulatory requirements that mandate use of dosimeters. Thus, there are no formal regulations regarding the number or type of dosimeters to be distributed, or when they should be distributed. But NUREG-0654 7/ recommends that each emergency organization -- i.e., licensee, state, and various local governments -- provide its own emergency workers with both self-reading and

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6/ App. Tr. 44-45.

7/ NUREG-0654, FEMA-REP-1, Rev-1, is the current version of a document entitled "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," prepared jointly in 1980 by the NRC staff and FEMA. It is incorporated by reference into Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Rev. No. 2 (October 1981), and is designed to provide guidance and criteria for the development of radiological emergency plans. NUREG-0654 is included in the record as Staff Ex. 7.

permanent record dosimeters (such as TLDs).[8] The licensee has complied with this recommendation. The state and local governments will provide two self-reading dosimeters to each emergency worker and all parties agree that there are adequate supplies of these dosimeters available.[9] One dosimeter, model CDV-730, has a range of 0 to 20 roentgen (R) but cannot be read below 0.4 R; the other, model CDV-742, has a range of 0 to 200 R but cannot be read below 4 R. Together, they provide for coverage ranging from 0.4 to 200 R and overlapping coverage between 4 R and 20 R. As explained below, emergency workers are instructed to leave

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8/ A self-reading dosimeter contains an encapsulated air chamber and a moveable fiber. The dosimeter is electrically charged initially, which displaces the fiber. When the dosimeter is exposed to ionizing radiation, charge is removed and the fiber moves toward its original position. Movement of the fiber is proportional to the radiation dose. The dosimeter is read by looking through a lens at one end at the fiber superimposed on a scale of radiation exposure.

TLDs contain a crystalline material, most often lithium fluoride, that absorbs and stores energy when exposed to ionizing radiation. To measure the radiation dose, the material is heated and the stored energy is released as visible light. The amount of light released is proportional to the radiation dose.

9/ In fact, during the time between the June 2 and the August 29, 1981 radiological emergency exercises, those dosimeters were distributed to the level of local emergency response organizations. Tr. 22,385-87; Staff Exs. 21 and 24a.

the area when either of their self-reading dosimeters reaches the 15-20 R range.

There are insufficient supplies of TLDs currently available to supply all state and local offsite emergency workers. The state and local governments could, of course, bring themselves easily into full accord with NUREG-0654 by buying or leasing TLDs for their workers. However, they are unwilling or unable to do so. Counsel for the Commonwealth at oral argument indicated that the state government did not appropriate money to obtain TLDs. 10/ The Commonwealth nonetheless argues that distribution of TLDs prior to an actual accident (i.e., predistribution) is essential to the safety and protection of emergency workers, and urges us to require predistribution as a condition of restart. Presumably, such a requirement would place some pressure on the licensee or the Federal government to provide the funds to obtain dosimeters for state and local emergency workers.

The issue before us on appeal is whether predistribution of TLDs is necessary to insure compliance with Commission regulations or to provide adequate protection of

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10/ App. Tr. 46. It appears that the "shortage" may be at least partially attributable to FEMA's recommendation (with which the Commonwealth agrees) to predistribute TLDs, instead of stockpiling them at a central location to supply all nuclear plants in the state in the event of an emergency, as called for in the Commonwealth's original plan. See Staff Ex. 21, Section K, at 20.

emergency workers. The Commonwealth asked the Licensing Board to find either that predistribution of TLDs was required by regulation or that there was some reasonable assurance of satisfactory alternative means of radiation monitoring. The Board did not directly address this issue except with respect to agricultural workers in York County. There, it took note of the York County plan to provide agricultural workers with both self-reading dosimeters and TLDs and found that the emergency plan was adequate despite the existing shortage of TLDs. 14 NRC at 1678-79. It declined to require the predistribution of TLDs as the Commonwealth had requested.

The thrust of the Commonwealth's argument on appeal, as we understand it, is two-fold; first, it argues that permanent record dosimetry for each emergency worker in the TMI-1 plume EPZ is required by the NRC's emergency planning regulations, at least as those regulations are construed by relevant interpretive guidelines. Second, it contends that, even if not required by the regulations, there is no reliable evidence to demonstrate that any alternative means of radiological exposure control for emergency workers can and will be implemented. We disagree with the Commonwealth

and therefore affirm the Board's result. 11/

A. Regulatory Requirements

As a threshold matter, we reiterate that the Commission's emergency planning regulations do not specify that any particular type of dosimetry be provided. The Commonwealth, however, relies on three interpretive documents to support its argument that the Licensing Board should have directed the predistribution of TLDs to state and local emergency workers.

First, it relies on the "findings and determinations" made by the Federal Emergency Management Agency. FEMA is the federal agency with the lead responsibility for offsite

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11/ In its proposed findings to the Licensing Board the Commonwealth asked only that "[t]o the extent that sufficient supplies of permanent record dosimetry have not been predistributed, state and county plans include other means to provide reasonable assurance that the health and safety of emergency workers will be protected." It repeats that request in terms on brief to us. See Commonwealth Brief at 17-18. Its exception to the Licensing Board's decision, however, asserts that the Board erred as a matter of law "in not concluding that adequate supplies of permanent record dosimeters are required to be predistributed to the TMI-1 risk counties prior to TMI-1 restart . . ." See Commonwealth Brief at 4. Its brief is directed principally to the issue of predistribution of dosimeters, not "other means" to assure reasonable protection of emergency workers. Moreover, at oral argument Commonwealth counsel urged us to find that TLDs are required. App. Tr. 46.

nuclear emergency planning and response. 12/ The Commission's rules provide that FEMA findings constitute a rebuttable presumption on the issue of the adequacy of state and local emergency plans. 13/ FEMA issued its findings and determinations for TMI on June 16, 1981; following a test on August 29, 1981 involving York County, FEMA issued a supplemental report. 14/ It found (Staff Ex. 21):

> (1) "[T]here [are] insufficient quantities of needed equipment on hand to allow for predistribution where it is recommended and planned for. . . . There are insufficient thermoluminescen[t] dosimeters (TLD) for permanent record dosimetry of emergency workers. [The Pennsylvania Emergency Management Agency (PEMA)] is in the process of securing them." (Section H, at H-1).
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> (2) "The state plan" requires that "Each emergency worker is supposed to be issued two self-reading and 1 TLD dosimeter (total of three)." Distribution of dosimeters would not begin until after an accident occurred (from Fort Indiantown Gap), and logistics problems may prevent distribution of TLDs within the three hours called for in the state plan. (Section K, at K-1).

12/ FEMA was established pursuant to Reorganization Plan No. 3 of 1978, and activated April 1, 1979 by Executive Order 12127, 44 Fed. Reg. 19367 (April 3, 1979). It was given responsibility for emergency planning in connection with nuclear power plant accidents by Executive Order 12241, 45 Fed. Reg. 64879 (Sept. 29, 1980).

13/ 10 CFR 50.47(a)(2). See generally 14 NRC at 1460-1466.

14/ Staff Ex. 21, June 16, 1981; Staff Ex. 24a, Sept. 18, 1981.

> (3) Predistribution of these state stocked items is not considered because statewide, with other plants operating in the state, a much larger quantity of this equipment would be required. "Regardless, FEMA feels most strongly that dosimetry equipment should be predistributed (most importantly TLDs and CDV 730s) to at least the emergency worker organization level, state and local, site-specific to each operating plant." (Section K, at K-1).

Second, the Commonwealth relies on NUREG-0654. 15/ That document indicates, in part, that each emergency response organization -- licensee, state, and local -- shall provide for "24-hour-per-day capability" to determine the radiological doses received by emergency workers. Each organization is to provide for the distribution of dosimetry, "both self reading and permanent record devices," and to ensure that "dosimeters are read at appropriate frequencies and provide for maintaining dose records for emergency workers involved in any nuclear accident." NUREG-0654, note 7, supra, Part II, Section K, at 67.

15/ See note 7, supra.

Finally, the Commonwealth points to FEMA-REP-2. 16/ This guidance, which was published subsequent to the interim version of NUREG-0654 and just before the current version, discusses some of the technical bases for the distribution of self-reading dosimeters and TLDs and the advantages and disadvantages of each. This guidance, however, would not mandate the use of both types of dosimeters. At one point, FEMA-REP-2 states:

> Direct reading personnel dosimetry that accurately measures whole-body gamma radiation dose below the minimum detectable level of the 0-20 roentgen direct reading pocket ionization chamber (i.e., about 400 mR) is not considered essential for emergency workers such as police, firemen, etc., who are not likely to ever be involved in another abnormal exposure to radiation.
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> In view of the above, it is recommended that all local emergency workers be equipped with two direct reading gamma dosimeters; one with a range of 0 to 20 R and one with a range of 0 to 200 R. These two dosimeters should provide for continuous coverage from 0.4 to 200 R which is well beyond any anticipated whole-body gamma exposure. They will also provide some redundancy by their overlapping ranges (0.4 to 20 R and 4.0 to 200 R). To offset the disadvantages of the direct reading dosimeter, all emergency workers could be provided with a thermoluminescent dosimeter as well as the two direct reading dosimeters. This dosimeter would

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16/ "Guidance on Offsite Emergency Radiation Measurement Systems, Phase 1 - Airborne Release" (September 1980). Although FEMA-REP-2 was not itself introduced into evidence, it is listed as a reference document in Appendix 16 of the Commonwealth's Emergency Plan. Commonwealth Ex. 2a, at 16-1. It is also relied on in the Commonwealth's brief. See Commonwealth Brief at 11.

> also measure whole-body gamma radiation dose for the dual purpose of (1) providing a redundant measurement of the accrued dose, and (2) providing a measurement of the accrued dose of less than as well as in excess of the range of the direct reading dosimetry (0.4 to 200 R).

FEMA-REP-2, at 5-8 through 5-9 (emphasis added). Elsewhere it states that a thermoluminescent dosimeter

> should be provided for each emergency worker. It is highly desirable that this be incorporated as part of the exposure record documentation.

Id. at 7-[illegible].

The Licensing Board ruled that whatever presumptive weight the FEMA findings and determinations are required to be given under Commission regulations dissolved during the course of the hearings in light of the evidence actually introduced. It did not accord the FEMA findings and determinations any weight beyond that to which the testimony would be entitled by virtue of the expertise of the witnesses and the bases presented for their views. 14 NRC at 1460-1466. It also concluded that NUREG-0654 should be treated as regulatory guidance rather than a legally binding regulation. Id. at 1460. Parties in this case were permitted to demonstrate that compliance with NUREG-0654 was either not necessary or not sufficient and the Licensing Board essentially reached its overall conclusions on the basis of the evidentiary record, of which both the FEMA determinations and NUREG-0654 were simply a part.

Significantly, no party objected to the Board's rulings in this regard. 17/

We agree that documents such as the FEMA findings and determinations, NUREG-0654, and FEMA-REP-2, somewhat like the Regulatory Guides, do not rise to the level of regulatory requirements. Neither do they constitute the only method of meeting applicable regulatory requirements. Cf. Fire Protection for Operating Nuclear Power Plants (10 CFR 50.48), CLI-81-11, 13 NRC 778, 782 n.2 (1981); Gulf States Utilities Company (River Bend Station, Units 1 & 2), ALAB-444, 6 NRC 760, 772-773 (1977). In the absence of other evidence, adherence to regulatory guidance may be sufficient to demonstrate compliance with regulatory requirements. Petition for Emergency and Remedial Action, CLI-78-6, 7 NRC 400, 406-407 (1978). Generally speaking, however, such guidance is treated simply as evidence of legitimate means for complying with regulatory requirements, and the staff is required to demonstrate the validity of its guidance if it is called into question during the course of litigation. Vermont Yankee Nuclear Power Corp. (Vermont

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17/ We note that Regulatory Guide 1.101, supra, note 7, incorporates and endorses the use of NUREG-0654 as a means of complying with the standards of 10 CFR 50.47. In addition, the interim version of NUREG-0654 is actually referred to in a footnote in 10 CFR 50.47(b). The Commonwealth does not argue, however, that this accords it any heightened importance. Commonwealth Brief at 9.

Yankee Nuclear Power Station), CLI-74-40, 8 AEC 809, 811 (1974). As we explained in Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-644, 13 NRC 903, 937 (1981):

> The guides, advisory rather than obligatory, explain on their face that they "are issued to describe and make available to the public methods acceptable to the [NRC] Regulatory staff of implementing specific parts of the Commission's regulations, to delineate techniques used by the staff in evaluating specific problems or postulated accidents, or to provide guidance to applicants. Regulatory Guides are not substitutes for regulations and compliance with them is not required. Methods and solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission." (footnote omitted).

Compliance with NUREG-0654, FEMA-REP-2, and the FEMA findings and determinations is thus not required by the Commission's emergency planning regulations. 18/ This being so, whether TLDs are required depends ultimately on whether they are necessary to provide reasonable assurance that emergency workers will be protected.

18/ The Commonwealth suggests that the Commission has nonetheless stated its intent to be guided by FEMA's judgment in NUREG-0654 as to how to implement the emergency regulations, citing the Commission's opinion in Final Rule on Emergency Planning, CLI-80-40, 12 NRC 636, 638 (1980). The Commission's statement in that opinion, however, was limited to FEMA's judgment as to times and systems feasible to implement the so-called "15-minute rule" contained in 10 CFR Part 50, Appendix E, Section IV.D.3.

B. Assurance of Adequate Protection

We believe that the distribution of the two self-reading dosimeters, under the specific instructions given to emergency workers in the emergency plans, is sufficient to assure reasonable protection for emergency workers. The Commonwealth's Emergency Plan provides:

> Each emergency worker is to be provided two self-reading dosimeters which will enable the worker to "read" at any time during the incident how much, if any, radiation he/she has received. Each emergency worker should read the dosimeters at least once each thirty minutes. The emergency worker protective action guide for whole body exposure used by BRP is 25 Rems; therefore an emergency worker should seek to be replaced or complete the assigned task and evacuate to a mass care center for personnel monitoring when either of the self-reading dosimeters indicates a total dose in the 15-20 R range.
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> * * *
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> Further, each emergency worker operating in the plume exposure pathway EPZ will be provided with a TLD (Thermoluminescent dosimeter) . . . which will allow precise measurement of radiation exposure at some time after the exposure has been incurred. 19/

The plans for each county provide that each emergency worker will be provided with a "Dosimetry Report Form" which each worker will complete during the course of his or her duties. Each worker enters the reading from the self-reading dosimeters before and after the mission to obtain the total for the mission. By adding up the mission totals, he or she can also use the self-reading dosimeters to determine the overall dose accumulated. Workers and their supervisors are

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19/ Commonwealth Ex. 2a, Appendix 16, at 16-6 to 16-7.

reminded to ensure that the doses received, in the aggregate, do not exceed 25 rem. 20/ As is clear, primary reliance for worker protection during the emergency is placed on the self-reading dosimeters. TLDs are intended essentially as record-keeping devices for use after the emergency is over and as a more precise but redundant measure of radiation exposure. 21/ Reliance on self-reading dosimeters is sufficient, in our view, to assure that emergency workers will be adequately protected and that a reasonable method, other than the use of TLDs, exists for measuring the worker's accumulated exposure to radiation. In this connection, we note that the FEMA witnesses, although preferring predistribution of TLDs, uniformly testified that the shortage of TLDs did not render the offsite emergency response plans inadequate. 22/

20/ See, e.g., Board Ex. 5, York County Emergency Plan, Annex R, Appendix 3, at 10.

21/ TLDs cannot be read by the workers themselves; they must be returned to a central location where special reading devices are available.

22/ Tr. 22,687 (Dickey); Tr. 22,765 (V. Adler). See also Tr. 22,476-78 (Bath). The issue of the need for permanent record dosimeters arose during the course of the hearing when FEMA submitted its findings and determinations. The issue therefore was not subject to the normal process of discovery, nor was it dealt with in great detail in prefiled direct testimony.

We recognize that permanent record dosimeters have a special value in one situation where self-reading dosimeters would not be sufficient -- i.e., where emergency workers receive unexpected or unplanned life threatening radiation exposures beyond the 200 roentgen range of the self-reading dosimeters. There is no testimony regarding the possibility of large unexpected releases of radioactivity during emergency missions. FEMA-REP-2, however, suggests that offsite releases likely to result in whole body gamma exposure in excess of 200 R are unlikely. More importantly, the Commonwealth's emergency plan instructs emergency workers to report to a medical facility for radiological assessment and possible decontamination and treatment whenever their dosimetry indicates an exposure of 25 R or more.23/ Therefore, any emergency worker whose accumulated exposure might exceed 200 R would likely be hospitalized and provided with all the available diagnostic tests to

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23/ People who require medical treatment for radiation injury will manifest certain observable symptoms, such as nausea and vomiting, within a few hours after exposure, followed by clinically observable depression of certain white blood cells. See generally V.P. Bond, et al., Mammalian Radiation Lethality (1965); A.P. Casarett, Radiation Biology (1968); U.S. NRC, WASH-1400, "Reactor Safety Study", Appendix VI, Chapter 9 and Appendix F (1975).

determine his or her precise needs, regardless of whether there is a TLD record of actual dose. While TLDs might serve as a useful diagnostic aid, we do not find that the absence of TLDs is likely to compromise the safety of emergency workers.

C. Improvement in the Emergency Plan

We agree fully with the Commonwealth and FEMA that permanent record dosimeters nonetheless represent a useful added measure of protection for emergency workers. They clearly would facilitate more accurate permanent recordkeeping, as well as diagnosis in special cases. Under the recommendations contained in NUREG-0654, the Commonwealth and the local governments should provide TLDs for their emergency workers. 24/ Although we do not believe that predistribution of TLDs should be a condition for restart, we urge all affected interests to work together to make reasonable provision for distribution of TLDs for offsite emergency workers in the event of an emergency.

24/ There is some discrepancy over how many TLDs are actually required. A FEMA letter attached to the Commonwealth's brief indicates a need for 11,184 TLDs for the entire state to cover four nuclear power stations. The Commonwealth appears to suggest that approximately 9,000 TLDs are needed for TMI alone. App. Tr. 105.

II. LICENSEE'S EMERGENCY STAFFING AND FUNCTIONS [25]

A. Background

The Emergency Operations Facility (EOF) is the command center for the licensee's overall management of offsite activities during an emergency and is under the direction of the Emergency Support Director. It is located about half a mile from the plant. Importantly, it is the principal location for contact with the NRC staff and state and local officials.

The licensee originally proposed to have the facility fully functional and under the direction of its designated Emergency Support Director within six hours after declaration of a site emergency. It has designated several corporate officers from its New Jersey headquarters, including the GPU Nuclear Corporation president and certain of its vice presidents, to act as candidates for Emergency Support Director. But, toward the end of the hearings, it agreed to have six members of its TMI organization available to activate the facility within an hour and have all communications and data links operational within that time. [26]

25/ Mr. Edles dissents in part from the conclusion reached in Part II. See pp. 59-66, infra.

26/ See Licensee Ex. 30 at 4-7; Licensee Ex. 58.

The licensee nonetheless wants the responsibility for making the important and politically sensitive protective action recommendations to the Commonwealth of Pennsylvania in the hands of only its most senior officials. As a consequence, it objects to assigning interim responsibility for protective action recommendations to one of the six employees who will be stationed in the EOF. It has now committed, however, to having its Emergency Support Director at the EOF within four hours. During the interim period, decisional responsibility for protective action recommendations would be in the hands of the Emergency Director, who is the company's senior onsite official and is stationed in the control room. 27/ The licensee argues that its organizational plan is fully sufficient to comply with Commission requirements and assure adequate protection for the public. Indeed, it contends that its approach is highly desirable since protective action recommendations will be made at all times by the company's senior official at the site and will be based on up-to-the-minute information obtained directly from the control room.

At the urging of the staff and the Commonwealth, the Licensing Board rejected this aspect of the emergency plan and ordered that an individual qualified to serve as

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27/ See Licensee Ex. 30 at 5-8.

Emergency Support Director assume management responsibility at the EOF, including responsibility for protective action recommendations, within an hour.[28] The staff is concerned about the potential for confusion if too many responsibilities reside within the control room during the early hours of an emergency. The Commonwealth emphasizes the need for it to obtain accurate and up-to-the-minute information and argues that face-to-face contact with licensee officials in the EOF will help it obtain important information underlying the licensee's protective action recommendations. The Licensing Board was concerned over the apparent lack of a single manager for the EOF and believed that the absence of the Emergency Support Director for a four-hour rather than a one-hour period ran afoul of the provisions of NUREG-0654, NUREG-0696, [29] and the emergency planning rule that the EOF be fully staffed and operable within an hour of declaration of a site emergency. 14 NRC at 1478. Although recognizing the rationale behind the licensee's approach, the Board was plainly troubled by what it perceived as "the extent of the implied reliance of the Licensee during emergency conditions

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28/ 14 NRC at 1470-1479, 1705.

29/ Functional Criteria for Emergency Response Facilities. Draft Report for Interim Use and Comment (July 1980). NUREG-0696 is included in the record as Staff Ex. 8.

on persons located so far from the site. . . ." 14 NRC at 1479. The Board explained that, in the final analysis, the licensee had the burden of proving the workability and adequacy of its proposal and that, on balance, it had failed to meet that burden. 14 NRC at 1477-1478.

The licensee appeals from this aspect of the Board's decision. Its exception claims:

> The decision by the Licensing Board that certain of the functions of the Emergency Support Director, which initially are assumed by the onsite Emergency Director, be transferred within one hour after declaration of a site emergency to an individual located in the near-site Emergency Operations Facility is not supported by reliable, substantial and probative evidence, is based upon an erroneous legal analysis of the regulatory requirements for plant staffing during an emergency, and inappropriately disregards internal management decisions properly vested with licensee. 30/

Equally important, the licensee has proposed modifications to its plan. Most importantly, it has assigned managerial responsibility for the EOF to the Assistant Emergency Support Director until the Emergency Support Director arrives. The principal remaining difference between the licensee's proposal and the Board's requirements concerns which official will make protective action recommendations: the licensee prefers that it be the Emergency Director in the control room during the early hours after an accident,

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30/ Licensee's Brief on Exceptions (March 10, 1982) at 45.

while the Board insists that it be the Emergency Support Director in the EOF.

We find, in general, that the more important problems that led to the Licensing Board's result have now been ameliorated. As to the one principal matter that has not been changed, we believe that the licensee's proposal, given the staffing situation at TMI, presents a more logical approach to the management of protective action recommendations than does that ordered by the Licensing Board. It also has the advantage of being an integral part of the licensee's overall management philosophy. For these reasons, we reverse the Board's decision and approve the licensee's proposal subject to certain conditions.

B. Analysis

The Commission's regulations, 10 CFR 50.47 and 10 CFR Part 50 Appendix E, set out in very general terms the basic requirements for the structure of an emergency response organization. The Commission requires the establishment of two separate facilities -- one onsite, the other offsite -- for the management of accidents. Licensees must provide for "timely augmentation of response capabilities" and specify "the interfaces among various onsite response activities and offsite support and response activities." 10 CFR 50.47(b)(2). The EOF is expressly referred to as the place where licensees must accommodate state and local emergency response staff. 10 CFR 50.47(b)(3). There is no express

regulation, however, governing the location from which protective action recommendations must be made.

The precise means of implementing the Commission's emergency planning regulations require a high degree of judgment. The mere fact that the licensee's approach is somewhat different from the staff guidance does not, as we explained in Part I.A of this opinion, render it impermissible or necessarily inconsistent with the need to provide adequate protection for the public. See pp. 13-15, supra. The Licensing Board arrived at its conclusion only "[a]fter prolonged deliberation, accompanied by [its] initial reluctance to overrule the personnel management judgment of the Licensee. . . ." 31/

We believe the Board was properly concerned with a fundamental aspect of the licensee's original plan -- the apparent lack of supervision and coordination in the EOF and the potential for confusion in the control room during the four-hour period before the Emergency Support Director arrives from the corporate headquarters in New Jersey. Recently submitted information and clarifications made at oral argument convince us that the licensee's revised plan, with certain conditions, will now satisfy the Licensing Board's concern and adequately protect the public.

31/ 14 NRC at 1479.

In response to our request, the licensee submitted on June 16, 1982, an affidavit (the "Rogan" affidavit) which clarifies various matters concerning administration of the EOF during the first four hours following declaration of a site emergency. 32/ The affidavit makes clear that the Assistant Emergency Support Director (also called the Emergency Support Staff Member) would be responsible for activating the EOF and would be in charge of the facility until the permanent Emergency Support Director arrives. The Assistant Emergency Support Director would be the principal contact for NRC, state and local officials and would remain in contact with the Emergency Director. In other words, he would be in charge of the EOF and would carry out all of the duties of the Emergency Support Director except for making protective action recommendations. 33/ The Commonwealth's

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32/ Toward the end of the hearings, the licensee agreed to modify its emergency plan to reflect changes regarding activation of the EOF. See Licensee Ex. 58. The Rogan affidavit reflects those changes. Those changes, however, were not considered by the Licensing Board since they had not been completed at the time the record closed. The licensee seeks leave to file the affidavit in evidence. See Licensee's Response to Appeal Board Order of June 1, 1982 and motion for leave to file affidavit, June 16, 1982. No party objects. The request is granted.

33/ Tr. 14,767 (Rogan); Rogan Affidavit at 3-8.

fear that EOF operations would be "control by committee" [34] is thus no longer well founded. In our judgment, these modifications go a long way toward alleviating the concerns raised by the parties and the Licensing Board.

We have fully considered the Licensing Board's judgment that the delay in the arrival of a qualified Emergency Support Director could also result in some confusion in the control room if too many responsibilities reside there. The licensee emphasizes, however, that it has stationed a sufficient number of experienced employees in or around the Emergency Control Center during the early hours of an accident, and has delegated key responsibilities to them, so that the Emergency Director will be able to devote an adequate portion of his time to consideration of protective action recommendations. The licensee's emergency plan calls for twenty people onshift at all times instead of the minimum shift complement of ten suggested by NUREG-0654. [35] The control room will not be crowded in an emergency because, as the staff witnesses recognized, certain members

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34/ Commonwealth Reply Brief (May 10, 1982) at 18 n.4.

35/ Tr. 22,289-22,290 (Chesnut).

of the emergency team will be stationed in the Technical Support Center or the Operaticns Support Center. 36/

Equally important, responsibility is delegated in a way that permits the Emergency Director to exercise general oversight in all important emergency response areas without the task of personally administering the minute-by-minute response in any single area. The licensee has provided the Emergency Director with three principal assistants in the areas of plant operations (Operations Coordinator), technical and engineering support (Technical Support Center Coordinator), and radiological assessment (Radiological Assessment Coordinator), along with the Assistant Emergency Support Director responsible for supervising the EOF. The Operations Coordinator, for example, will be a licensed senior reactor operator (SRO) and will have primary responsibility for operating the plant in the control room -- a responsibility that, at other facilities, might be assigned directly to the Emergency Director. 37/ Similarly, the staff's witness recognized:

> [T]he fact [is] that the shift supervisor has at his disposal some senior radiological personnel who can

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36/ Tr. 15,472-15,482 (Grimes and Chesnut).

37/ Licensee Ex. 30 at 5-10 and 5-11, and Tr. 22,935-22,953 (Chesnut).

> practically completely let him concentrate more on operational matters. He has additional auxiliary operators who can take some of those responsibilities -- for notification, for instance -- allowing him more time to concentrate on operations matters for mitigating the accident. 38/

The witness characterized this delegation of responsibility among onsite staff as "one of the strong points of the emergency plan." 39/ We shall expressly condition approval of the plan on the maintenance of the proposed onsite organization and, as so conditioned, we are satisfied that the Emergency Director will have ample time to make any necessary protective action recommendations until relieved of that responsibility.

We have also considered the Commonwealth's argument that the presence of the Emergency Support Director in the EOF is necessary if the Commonwealth is to be able to obtain important information underlying the licensee's protective action recommendations. The Commonwealth's Bureau of Radiation Protection (BRP) employs a nuclear engineer who is responsible for communicating with licensee personnel to determine the operational status of the plant and the bases for licensee's protective action recommendations. The

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38/ Tr. 22,291 (Chesnut).

39/ Id.

Commonwealth hopes to dispatch the BRP nuclear engineer to the EOF for direct communication with the licensee's staff. 40/ Counsel for the Commonwealth characterized this contact with the licensee as a "critical" and "overriding" factor in the Commonwealth's emergency planning. 41/ The staff also views the coordination with offsite agencies as important and believes it should be available in the early hours of an accident. 42/ We note, however, that the Region I response time is expected to be two and one-half to three and one-half hours depending on the time of day; i.e., essentially the same response time as that of the Emergency Support Director. Tr. 15,091-92 (Chesnut). 43/

The Commonwealth's views reflect the opinion of its nuclear engineer, Mr. Dornsife, who participated in two emergency planning drills. For the first, he was stationed

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40/ Tr. 23,013-14, 23,035-36 (Dornsife).

41/ Tr. 22,982-83, 23,063 (R. Adler).

42/ Tr. 15,013 (Chesnut); Staff Brief (May 20, 1982) at 89.

43/ Region I is one of the five NRC regional offices. It is located in King of Prussia, Pennsylvania. See 10 CFR 1.3.

in the BRP headquarters in Harrisburg; for the second, he was stationed at the EOF, which was fully functional within half an hour with the Emergency Support Director in charge. He found the second situation clearly preferable. It is unclear, however, whether, or to what extent, the presence of the Emergency Support Director -- as opposed to Mr. Dornsife's presence at the EOF, or other improvements reflecting lessons learned at the first drill -- contributed to that result. 44/ While Mr. Dornsife expressed a "gut feeling" that the availability of the Emergency Support Director was an important ingredient, 45/ he recognized that the Emergency Director could have spoken to him by direct line if the Emergency Support Director had not been there 46/ and that even telephone communication with the BRP headquarters at the site would be sufficient to protect the public health and safety. 47/ Indeed, the Commonwealth relies on

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44/ See generally Tr. 23,013-23,036 (Dornsife).

45/ Tr. 23,028.

46/ Tr. 23,031.

47/ Tr. 23,032.

telephone information in connection with the other nuclear power facilities in Pennsylvania. 48/ In sum, the Commonwealth has not given us cause to believe that the absence of the Emergency Support Director will compromise its ability to obtain needed information.

In any event, we find that the licensee's current plan will substantially satisfy the Commonwealth's concerns. The Rogan affidavit now makes it clear that the BRP and other representatives at the EOF will have face-to-face contact with the Assistant Emergency Support Director (in the absence of the Emergency Support Director) and direct communication with the Emergency Director in the control room fo: consultation, if necessary. We fully appreciate that the Commonwealth would prefer face-to-face contact with the licensee's ultimate decisionmaker. However, the Emergency Support Director and Commonwealth officials in the EOF would be expected to rely on, or at least consult with, the control room personnel by telephone before making protective action recommendations or decisions. In such

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48/ Tr. 23,031-23,032 (Dornsife). Despite the Commonwealth's emphasis on the need for immediate face-to-face contact with the licensee's decisionmaker, the Commonwealth has not committed to send its nuclear engineer to the EOF within one hour (although it intends to get him there as soon as possible) and its BRP does not maintain 24-hour response coverage in case of an accident. Tr. 23,017-23,020 (Dornsife) and App. Tr. 90.

circumstances, we doubt that there is much practical difference between the proposals of the licensee and the Commonwealth as they have evolved.

One additional -- yet important -- consideration leads us ultimately to approve the licensee's plan. In its decision, the Licensing Board summarized the licensee's observation that two conflicting lessons were learned from the TMI-2 accident: first, attention must be given to stationing the person making protective action recommendations outside the control room so as to minimize the number of people and functions performed within the control room; second, attention should be given to stationing the person making protective action recommendations inside the control room so as to improve the timeliness of information and minimize the likelihood of error concerning plant operations or radioactive releases. 14 NRC at 1475-1476. In balancing these factors, the Licensing Board, relying on generalized staff guidance, ultimately favored having protective action recommendations made outside the control room in spite of staff testimony that knowledge of the present and future condition of the reactor is the most important consideration in making protective action recommendations. Tr. 15,034 (Grimes). We believe the best place to gain that knowledge during the early hours of an accident is the control room and certain staff testimony supports our view. Tr. 15,035, 15,040 (Grimes and

Chesnut). As pointed out earlier, we do not believe that the potential for confusion in the control room is significant in light of the special organizational structure established by this licensee. We do believe, however, that placing the responsibility for making protective action recommendations in the hands of a senior licensee official, and placing that official in the control room during the early hours of an emergency in order to minimize the potential for inaccurate information, is eminently sensible. In other words, on the specific record before us, we would balance the conflicting factors differently than the Licensing Board.

We cannot ignore that the Emergency Support Director remains a critical member of the emergency response team; indeed, upon his arrival, he assumes overall responsibility for the management of the offsite emergency response. We can appreciate the Licensing Board's desire to insure that the special talents, abilities, and experience that a senior corporate official is able to bring to the job of Emergency Support Director be available during the critical hours following onset of an accident. We must also recognize, however, that the experience, skill and judgment necessary to make the politically sensitive protective action recommendations that would be available from a senior GPU Nuclear official such as the company president or vice-president cannot be duplicated simply by artificially

assigning the role of Emergency Support Director to another, more junior employee.

We nonetheless believe that the licensee must make some effort to have its Emergency Support Director at the site as early as possible. Toward this end, we shall require that the Emergency Support Director be notified upon declaration of any Alert and that he immediately begin preparations to arrive at the EOF as soon as practicable, but in no event later than four hours after declaration of a Site Emergency. 49/ As so conditioned, we believe that the

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49/ An alert is declared when events are in progress or have occurred which involve an actual or potential substantial degradation of the level of plant safety. A site emergency is declared when events are in progress or have occurred which involve actual or likely major failures of plant functions needed for the protection of the public. NUREG-0654, pp. 1-8 to 1-14. The EOF generally need not be activated until the site emergency stage. NUREG-0696, p. 5. We fully appreciate that alerts rarely reach the site emergency stage at which actions to protect the public must be considered. Thus, there may be times when the Emergency Support Director arrives at the site only to discover that the emergency is over. In our judgment, such result is an inevitable outcome of the need to protect the public under the proposal recommended by the licensee. Our perusal of preliminary notifications of events or unusual occurrences to the NRC staff during the 18 month period ending June 30, 1982 shows that there were only eight alerts nationwide. In other words, they are sufficiently infrequent that our requirement should not be unduly disruptive to the ordinary corporate responsibilities of those individuals (Mr. Arnold or Mr. Clark) who are the licensee's principal choice for Emergency Support Director.

licensee's overall emergency organization -- onsite and offsite -- is adequate to permit effective decisionmaking without confusion. In such circumstances, we approve the licensee's approach.

C. A Test of Emergency Support Operations

The licensee argues that the utility of its approach has been proven at more than a dozen drills and that deficiencies were corrected in light of experience. 50/ Indeed, it was at the licensee's suggestion that the Commonwealth's nuclear engineer will now report to the EOF rather than remain at the BRP headquarters in Harrisburg. 51/ The Commonwealth argues that during various drills the availability of the Emergency Support Director for face-to-face dealings with Commonwealth officials was essential to the proper functioning of the overall emergency effort. 52/ As we noted earlier, it is not at all clear to us that the presence of the Emergency Support Director in the EOF was really critical. See pp. 30-32, supra. Counsel

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50/ Licensee's Brief at 58-60.

51/ Tr. 23,013,014 (Dornsife).

52/ Commonwealth Reply Brief at 11-17.

for the Commonwealth at oral argument recognized that any definitive answer to whether the presence of the Emergency Support Director is truly critical would require another drill at which the Commonwealth's officials report to the EOF but the Emergency Support Director does not arrive until some time later. 53/ Under this decision, the next test of the emergency response plan shall be done using the licensee's procedures in which the Emergency Support Director does not participate for the first four hours.

The development of the most effective emergency plan is an evolving and -- importantly -- cooperative process. On the basis of the current record, we find that the state of the licensee's onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of an emergency. As with previous exercises, we expect that tests under the licensee's plan will improve with practice but the first test should be carefully monitored to disclose any unexpected flaws in the licensee procedures. Obviously, this is a situation where a little more practical experience is worth far more than further adversary procedures.

53/ App. Tr. 102. See generally App. Tr. 91-102.

Drs. Buck and Gotchy note at this point Mr. Edles' partial dissent from the decision to approve the licensee's plan for the issuance of protective action recommendations in the early hours of an emergency.

With all due respect, we believe Mr. Edles' requirement for a full emergency plan test prior to restart, under the licensee's plan of emergency operation, is unnecessary and could be counterproductive. In addition, we believe our colleague overemphasizes the Commonwealth's argument while ignoring other pertinent facts. We consider it essential to discuss these points.

a. In present circumstances it appears that, if authorized to restart, TMI-1 could not begin operations prior to early 1983 largely because of steam generator repairs. The 1982 annual emergency plan exercise was held on August 11, 1982. Presumably, the exercise for 1983 will be held during mid-1983, possibly within three to four months after plant startup. While we would like to see an exercise as soon as practicable, we prefer to leave the timing of the 1983 Emergency Plan exercise to the discretion of the licensee, FEMA and the other parties. We are concerned that a special emergency plan test before startup may conflict with FEMA's 1983 schedule of emergency exercises, and could also delay restart by interrupting plant modifications, steam generator repair work, and

startup preparations. 54/ We again point out that major portions of the Plan have already been tested many times by the licensee.

In any case, we believe a single test should not be the final determinant. Our colleague has acknowledged (e.g., p. 65, infra) that lessons are learned from each successive test. Because we believe the licensee's plan has merit, the company should be given a chance to perfect its procedures as long as the first trial shows reasonable results.

b. While our colleague does not specifically mention it in his partial dissent, the Commonwealth's argument in support of the NRC staff's position (as ordered by the Licensing Board) appears to us to be based, to an inordinate degree, on the testimony of a single witness whose experience with emergency exercises at TMI represented only a small fraction of the licensee's cumulative experience. While we agree that face-to-face contact among the licensee, NRC, and Commonwealth and local authorities is desirable, we note once more that the face-to-face contact with the Emergency Support Director urged by the Commonwealth at TMI is, by its own admission, not now possible for other reactor

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54/ The best time to have run such a special test, if required, would have been before the Licensing Board's initial decision on the subject. However, the Licensing Board, despite its ambivalence toward the staff and licensee plans, did not request such a demonstration by the licensee.

sites in Pennsylvania. At the more distant sites, for at least a few hours, the Commonwealth must rely on telephone communication from licensees to its BRP headquarters. To a large extent, this would also be true for the NRC Region I emergency response efforts, because the geographic relationship between the Three Mile Island Program Office (TMIPO) and TMI-1 is a very special and temporary situation. 55/ As we have seen (pp. 31-32, supra), Commonwealth witness Dornsife testified that the telephone communication method adequately assures protection of the public health and safety at the more distant Pennsylvania reactors. No reason for this differentiation between TMI and the other sites is put forward by the Commonwealth, NRC staff, or our colleague.

We believe it essential to the accuracy of the communication that the licensee's decision-maker give his recommendations using the Radiological Line to the BRP

55/ The TMIPO was organized after the TMI-2 accident and serves as a place from which NRC personnel can direct Unit 2 clean up, review licensee activities and procedures, and provide radiological and environmental information. It is located in offices on-site and in Middletown, Pennsylvania. See U.S. NRC, 1981 Annual Report at 42.

assessment center in Harrisburg. 56/ If the BRP engineer is present in the EOF at the time (and the Commonwealth has given us no assurance that he will be), then he should be included in the conference call. 57/

III. OTHER EMERGENCY PLANNING CONCERNS

There remain two emergency planning matters of concern to us that were litigated to some extent below but not raised on appeal. They are the adequacy of the NRC staff's incident response plan and certain evidence bearing on the Commonwealth's use of the Environmental Protection Agency's Protective Action Guides. We address them here sua sponte in order to alert the Commission to the possible need for further consideration of these issues, and to direct the staff to complete its emergency response plans for TMI and remove present ambiguities in those plans.

A. The NRC Staff's Emergency Response Plan

While we find a well-developed record on the emergency plans of the licensee, the Commonwealth of Pennsylvania, the

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56/ "The Radiological Line is a dedicated telephone line . . . [that] permits the communication of plant radiological dose projections, offsite radiation monitoring results and liquid effluent release data to BRP and other key emergency response personnel." Rogan, et al., fol. Tr. 13,756, at 60-61.

57/ This is consistent with the licensee's Emergency Plan as modified by the Rogan Affidavit (at 7-8).

five risk counties and FEMA, very little information was provided on the staff's emergency response plan, in either the testimony or the initial decision. Because of this, on June 29, 1982 we issued an order requesting additional information from the NRC staff concerning the NRC incident response plan. The staff responded to our order on July 23, supplying the requested documents and current information. 58/ After reviewing these documents and the staff's response, we find that there still remain areas of uncertainty about NRC incident response plans and how these plans are to be coordinated internally and with other emergency response plans (i.e., those of licensee and the Commonwealth).

1. Concerning NUREG-0845, "Agency Procedures for the NRC Incident Response Plan," we note that the document is marked "For Interim Use and Comment." 59/ While other

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58/ We received the following documents: NUREG-0845, "Agency Procedures For the NRC Incident Response Plan," (March 1982); NRC Region I Incident Response Supplement; TMI Program Office Supplement; NRC Headquarters Incident Response Supplement; and the affidavits of Charles O. Gallina and Joseph E. Himes, dated July 23, 1982.

59/ Mr. Gallina and Mr. Himes describe the reason for labeling the document interim in their affidavits. They explain that the document was fully implemented as of March 28, 1982. It is "interim" for printing and distribution reasons, and "for comment" because licensee and state authorities had not yet commented on the material. Gallina Affidavit at 4; Himes Affidavit at 2-3.

parties made their final emergency plans available over a year ago, the labeling of the Commission's document as "interim" suggests, in our view, a delay in finalized response plans and the possibility that the plans are still subject to alteration or revision. 60/

A comparison of the documents submitted by the staff reveals some troublesome differences between NRC units (i.e., Headquarters, Region I, and the TMIPO) in their approach to the relationship between the licensee and the NRC, their respective roles in plant emergency response, and their coordination with state and county plans. Generally, it cannot be determined exactly how the TMIPO and Region I plans are specifically designed to complement the response procedures of NRC Headquarters, licensee, the Commonwealth and the counties. The voluntary conformance of licensee plans to NRC final plans (when they eventually issue) could also lead to confusion in an emergency. We believe this indicates a certain lack of preparedness by the NRC staff in TMI emergency response planning. See Gallina Affidavit at 10-15; Himes Affidavit at 4-7.

With regard to criteria for NRC response modes and for the transfer of command to the Director of Site Operations

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60/ Similarly, with regard to the NRC Region I Incident Response Supplement, we note that Procedure SP-A.2, "Management on Call," is still being written. Gallina Affidavit at 6.

(DSO), the use of different terminology by the NRC and licensee could be confusing. 61/ See Himes Affidavit at 22-24. In addition, there still exist no specific criteria for deactivation of the NRC response; the decision remains ad hoc and subjective. Id. at 24. There are also no specific criteria for decisions concerning the assumption of management control by the NRC, nor has the staff yet discussed this possibility with licensee. Id. at 29.

Although the staff's response is adequate with regard to training of the Director of Site Operations, we note that the name of the Deputy Director of the TMI Program Office is missing from the list of potential candidates. This must be reconciled with the TMIPO Supplement, which shows him in that role. See Gallina Affidavit, Attachments 3 and 4 and TMI Program Office Supplement, Attachment 2.1. See generally Gallina Affidavit at 34-36.

2. Our second concern involves the apparent difference in perception of the NRC and the licensee of their respective roles in making protective action recommendations and their overall concept of command procedures. It appears as though the staff may not fully understand its role in making protective action

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61/ The Director of Site Operations manages the NRC emergency response at the site. See NUREG-0845, Section T, at T-1 to T-8, for a detailed description of DSO duties and tasks.

recommendations, possibly failing to recognize licensee's primary responsibility in this area. See Himes Affidavit at 11-13, 29-33; Gallina Affidavit at 32-33. In NUREG-0845, the NRC Incident Response Plan, recommendations for actions to protect the public are discussed in Function 16 (at II-16 through II-18) as follows:

> The licensee is obligated to take whatever measures are necessary to control and mitigate the impact of a radiological emergency and recommend protective actions to offsite authorities. The NRC must monitor licensee measures and their impact to independently assess their adequacy, thereby providing an independent basis for advising offsite officials.

Id. at II-16 to I1-17 (emphasis added). We note that this statement generally follows the recommendation of the Report of the President's Commission on the Accident at Three Mile Island, 62/ which states (at 78):

> Since the utility must be responsible for the management of the accident, it should also be primarily responsible for providing information on the status of the plant to the news media and to the public; but the restructured NRC should also play a supporting role and be available to provide background information and technical briefings.

However, the Region I Incident Response Supplement, with regard to providing information to the public and formulating protective action recommendations, explains that the NRC plan "is intended to insure the NRC's preparedness:

62/ Report of the President's Commission on the Accident at Three Mile Island, John G. Kemeny, Chairman, October 30, 1979.

* * *

- to inform the public and others of plant status and technical details concerning the incident; [and]

- to recommend adequate protective actions to appropriate State agencies . . . ."

Section I, Part C, at 2-3. (The TMI Program Office Supplement does not detail all of the recommended NRC employee actions but refers to the Region I plan.)

What concerns us about these Region I instructions is that they imply that the NRC response team will initiate public information statements and recommend protective actions directly to state and local authorities without consultation with the licensee. See Region I Incident Response Supplement, Section II (Incident Response Procedures), IRIP-B.2.1, at 13-14. The Region I plan appears to depart from the NUREG-0845 recommendations. In our opinion, any such departure increases the likelihood that confusion similar to that experienced at TMI-2 will occur in the event of another accident.

3. Our final concern about the NRC Emergency Response Plan involves the staff duties and personnel locations in an actual emergency. At the hearing before the Licensing Board, the staff repeatedly emphasized the need to reduce crowding in the control room. 63/ The TMI Program Office

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63/ As indicated in our discussion at pp. 27-28, supra, we believe that the licensee's proposed emergency team will not overcrowd the control room.

and the Region I Response Plans indicate, however, that the staff intends to place four or more NRC personnel in the control room and its nearby Technical Support Center within about one hour after notification. 64/ In an Alert, the NRC site team will use the Technical Support Center as the focal point of its operations. 65/ The staff also stated that NRC inspectors in the control room may obtain necessary information either by observation or direct communication with licensee personnel, including the reactor operators. Gallina Affidavit (June 17, 1982) at 5.

We strongly recommend that the number of NRC personnel located in the onsite emergency operation centers be carefully monitored and controlled and that any direct communications with the reactor operators be restricted to situations in which such communications are specifically authorized by one of licensee's supervisory personnel (e.g., the shift supervisor). While we would expect all NRC

64/ See memorandum from Lake Barrett, Deputy Program Director, TMI Program Office, to TMI On-Site Staff dated September 22, 1981. This memorandum has attached various items which constitute the Program Office Emergency Plan. Attachment 2.1 is a chart of the Onsite Emergency Response Organization, and Attachment 3.3 specifies primary staffing and backup personnel.

65/ Region I Incident Response Supplement, Section II, IRIP-B.2, at 3.

employees to use discretion, we believe that clearly defined limitations on NRC personnel are necessary to avoid a situation which would permit unwarranted distraction or confusion in the control room and Technical Support Center. We urge the Commission to review the number and functions of NRC personnel assigned to onsite emergency operation centers, as well as the conditions under which they will be permitted to speak to the reactor operators.

In conclusion, we believe that the licensee and NRC emergency response plans should complement each other and be coordinated with the Commonwealth and FEMA plans. In making its emergency preparations, the licensee should have full knowledge of the NRC's response plans. At the moment, it appears that the NRC emergency response plan and its implementation details may be the weakest link in the overall emergency plan chain. We believe that in light of our concerns, the NRC staff must supply licensee and the Commonwealth with complete response plans as soon as possible but, in any event, prior to restart. Those plans should remove any ambiguity concerning the staff's functions during the progress of an emergency.

B. The Commonwealth's Use of Protective Action Guides

The Commonwealth's emergency plan provides for instructing the public to take protective action in accordance with the Environmental Protection Agency (EPA) "Protective Action Guides." Those guides recommend that the

general public be advised to take some sort of protective action at a projected whole body dose of 1 to 5 rem and a projected thyroid dose of 5 to 25 rem. Commonwealth Ex. 2a, Appendix 8, Section V, at V-1 to V-2. The choice of protective action depends on the "magnitude of the release, duration of the release, wind speed, wind direction, time of day and transportation constraints." Id., Section VIII, at VIII-1. At the lower end of the protective action guides (i.e., a projected dose of 1 rem whole body or 5 rem thyroid), "sheltering might be opted for even though evacuation might be feasible"; whereas at the upper end, evacuation would most likely be advised, so long as it is feasible. Tr. 18,147-48 (Reilly). 66/

66/ The Commonwealth's general guidelines for the choice of evacuation or sheltering are as follows:

A. Evacuation

This option will be considered when:

1. A core melt accident is underway, which involves or is expected to involve a loss of containment integrity by melt through or by direct release to the atmosphere; or,

2. Projected doses are expected to approach or exceed 1 Rem whole body or 5 Rem to the infant thyroid; or,

3. Release time is expected to be long (greater than 2 hours).

(FOOTNOTE CONTINUED ON NEXT PAGE)

We have no problem with these guidelines, but we do have a serious concern regarding the Commonwealth's basis for calculating projected doses. Commonwealth witness Reilly testified that the Pennsylvania Bureau of Radiation Protection (BRP) has developed accident assessment techniques using a simplified Reactor Safety Study (WASH-1400) fault tree analysis that can be used when the

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66/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

4. Evacuation could be well under way before plume arrival, based on wind speed and travel conditions.

5. Substantial dose savings can be made by avoiding exposure to residual radioactivity (surface deposition).

6. Evacuation appears to be the best option available.

B. Sheltering

1. Projected doses are expected to approach 1 Rem whole body or 5 Rem to the infant thyroid, but not exceed 5 Rem and 25 Rem respectively and

2. The combination of warning time, plume arrival time and release time is not long enough to effect evacuation; or,

3. Evacuation cannot be effected so as to avoid a significant fraction of expected exposure; and/or,

4. Sheltering appears to be the best option available.

Commonwealth Ex. 2a, Appendix 8, Section VIII, at VIII-1 to VIII-2.

type of accident is known, even if licensee provides no further details. Reilly, fol. Tr. 18,125, at 4. Usually, the BRP would have licensee's data on release rates to the containment, offsite radiation measurements from the licensee and the Commonwealth's own monitoring teams, and meteorological data from the licensee and the Commonwealth's Bureau of Air Quality. See generally Tr. 18,130-40 (Reilly). Ms. Reilly emphasized, however, that if the BRP were to be informed that the core was uncovered and there was some risk of breaching the containment, she would recommend immediate evacuation.

This was based on assumptions similar to those made by the staff, that such accidents would release large portions of the core's radioactive material to the atmosphere. 67/ Reilly, fol. Tr. 18,125, at 5-6; Tr. 18,140-45. Dr. Beyea, a witness for intervenor ANGRY, asserted that a release of 70 percent of the radioiodine in the core could produce a thyroid dose at a five mile radius of above 10,000 rem under typical weather conditions. Beyea, fol. Tr. 18,350, at n.9.

Licensee's testimony, however, provides a different perspective. First, licensee witnesses Jones and Keaton

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67/ The models used to estimate releases from the core generally assume that any melting of the reactor core will within minutes lead in all cases to a catastrophic failure of the pressure vessel and containment building. Levenson, fol. Tr. 19,525, Appendix A, at 10-11.

pointed out that, during the first 20 to 40 minutes of certain loss of coolant accidents, their analyses indicate that the top of the core may be uncovered for short periods of time without overheating the fuel. This would occur during the expected coolant inventory recovery process by the emergency cooling system and should not of itself be cause for ordering emergency evacuations. Tr. 10,661-64, 10,679, 10,700-01 (Jones and Keaton).

Second, in rebuttal to Dr. Beyea, the licensee introduced the testimony of Milton Levenson. This testimony concluded that, even with severe core uncovering and containment cracking, very little radioiodine or other aerosols would be released offsite. 68/ Mr. Levenson explained in detail that this was the result of such natural phenomena as "gravity, basic aerosol physics, chemical solubility, chemical reactivity, physical plate-out, and adsorption". Levenson, fol. Tr. 19,525, at 4. See Appendix A to his testimony (at 11-13) for a detailed discussion. He emphasized that

> The above phenomena all act in the same direction to reduce the magnitude of the predicted fission product release and change the character of the release in that iodine and particulates are greatly reduced relative to the noble gases. Both

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68/ See Testimony of Milton Levenson on Realistic Estimates of the Consequences of Nuclear Accidents For Use In Emergency Planning, fol. Tr. 19,525.

> changes reduce the consequences to the public in terms of acute and latent fatalities and greatly diminish the area around the reactor over which a serious threat may exist. None of these phenomena is dependent on somebody making the right decision, equipment functioning correctly, or power being available. They are always acting.

Levenson, fol. Tr. 19,525, Appendix A, at 13.

Mr. Levenson explained that his conclusions were based on the experimental results of a series of small and large containment experiments and, perhaps most persuasively, on the measurements of releases from several actual reactor accidents. Id. at 3-10. Mr. Levenson noted that Appendix A to his testimony was a paper written essentially as a follow-on to a similar paper by Campbell, Malinauskas and Stratton which treated the radioiodine reduction as the result of chemical linkage with cesium while still within the fuel rods. Tr. 19,579. 69/

Counsel for the NRC staff maintained that Mr. Levenson's testimony was not a proper subject for litigation because the Commission is still considering the matter by other means. Tr. 19,501 (Gray). However, he did question Mr. Levenson on the subject of NUREG-0772, a study of this

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69/ A compendium of eight papers on the general subject of radioactive emissions from a reactor accident was published in the May 1981 issue of Nuclear Technology, and the matter was briefed to the Presidential Nuclear Safety Oversight Committee (NSOC) on December 16, 1980. Levenson, fol. Tr. 19,525, at 3.

matter prepared for the NRC by Battelle Columbus Laboratories, Oak Ridge National Laboratory and Sandia National Laboratories. 70/ See generally Tr. 19,552-66. Mr. Levenson noted that this study was not an answer to either Campbell, et al., or his paper because it reused the same computer codes without checking the correctness of their assumptions about radiological releases from the reactor and reactor building and, predictably, got the same answers. Tr. 19,531-32 (Levenson). The study further ignored the "evidence arising from [reactor] accidents and big integral experiments by saying that the instrumentation for those projects was such that the data [were] not suitable for the computer analysis." Tr. 19,532 (Levenson).

This last point is important, because much of the credibility of Mr. Levenson's argument arises from his use of data from actual accidents. Accidents at Fermi Unit 1 (1966), the Experimental Breeder Reactor-1 in Idaho (1955), the Sodium Reactor Experiment (SRE) facility in California (1959), the NRX reactor in Chalk River (1952), and the Westinghouse Test Reactor (1960), all resulted in core damage but no significant release of radioactive material. Three major reactor accidents resulted in some radioactive releases, as discussed below. See Levenson, fol. Tr. 19,525, Appendix A, at 3-4.

70/ NUREG-0772, "Technical Bases for Estimating Fission Product Behavior During LWR Accidents" (June 1981).

a. In October 1957 the Windscale air-cooled reactor in England had a major fire which lasted two days. Despite the large inventory of iodine in the core, the lack of any water to absorb the iodine, the absence of a containment building, and the presence of high air velocities and high temperatures in the core, only a small fraction of the iodine was emitted from the stack. Id. at 3. 71/

b. On January 3, 1961, the SL-1 experimental reactor at the Idaho testing station experienced a sudden power excursion. About 19 percent of the core melted, but only about 20 curies of iodine (out of a core inventory of 28,000 curies) escaped. 72/ Similar results were noted for the escape of cesium and strontium relative to the core inventory. We note that this reactor was housed in a simple "drafty" sheet metal building. Id. at 3-4.

c. The TMI-2 accident in March 1979 released less than 1 part in ten million of the total iodine inventory and

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71/ Levenson indicates that the iodine attenuation factor from Windscale was about 10^3 as compared with the estimated attenuation factor of 1.5 used in the staff's computer code for light water cooled reactors. See Levenson, fol. Tr. 19,525, Appendix A, at 11 and Table 2. See also Tr. 19,587-88.

72/ The computer codes used for calculating the consequences of reactor accidents in WASH-1400 would overestimate this source term by a factor of about 300. Tr. 19,602 (Levenson).

about two percent of the noble gas inventory despite major core damage. Id. at 4.

In our opinion, the Licensing Board erred in selectively ignoring the Levenson testimony in its initial decision. However, we believe our review and discussion of Mr. Levenson's testimony cures this error. Mr. Levenson is a responsible witness 73/ who gave important uncontroverted testimony and was extensively cross-examined by the staff and the Commonwealth. Our concern over this omission is heightened by the fact that witnesses for both the staff and the Commonwealth at the TMI-1 restart hearing emphasized evacuation as the protective action of choice for major accidents. If Mr. Levenson's conclusions on the emission of radioactive releases from power reactors are reasonable representations of reality (and we believe they are), unnecessary evacuations are likely to occur. Unnecessary evacuation of a large number of the general public because

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73/ Mr. Levenson, a licensed Professional Engineer in the State of Illinois, holds a Bachelor's degree in Chemical Engineering from the University of Minnesota and a Master's degree in Business Administration from the University of Chicago. He has been Associate Laboratory Director for Energy and Environment, Argonne National Laboratories (1973); and Director of the Nuclear Division, Electric Power Research Institute (1973-81); and is currently Engineering Consultant and Special Assistant to the General Manager, Bechtel Power Corp. He is the current Vice President and President Elect of the American Nuclear Society. Levenson, fol. Tr. 19,525 (professional qualifications).

of unrealistic expectations of radiation dosage is not "conservative" and is likely to be counterproductive. 74/

We strongly urge the Commission to expedite its consideration of the data and arguments presented by Levenson, Campbell and others. We believe that the data from actual reactor accidents are too strong to be ignored.

Accordingly, the Licensing Board's decision with respect to the need for TLDs is affirmed. Its decision with respect to the staffing of the EOF is reversed and the licensee's proposal for staffing the EOF is approved subject to the following conditions:

1. Licensee must maintain a minimum onsite staff of 20 individuals at all times, including separate individuals trained to act as Emergency Director, Operations Coordinator, Technical Support Center Coordinator, and Radiological Assessment Coordinator. See Licensee Ex. 30, Table 12, at 1. Any change from the terms of this condition shall be permitted only after a determination by the NRC staff (with notification to the Commonwealth of Pennsylvania) that licensee's overall emergency response capability will not be diminished as a result of the proposed change;

74/ Our colleague refers to our discussion of the Board's action on Mr. Levenson's testimony as "not strictly necessary", p. 66, infra. We disagree. We believe the Licensing Board erred in not discussing the source terms to be used in deciding on protective actions. Since the NRC Commissioners now have this matter under consideration, the fact that important evidence on the subject was presented by the licensee in answer to an intervenor's contention should be made known to them. We are doing just that by this decision.

2. The Emergency Support Director shall be notified upon declaration of any alert and shall immediately begin preparations to arrive at the EOF as soon as practicable, but in no event later than four hours after the declaration of a site emergency.

3. A test of communications between the licensee, on the one hand, and Commonwealth and local officials, on the other, including the issuance of protective action recommendations by the Emergency Director, shall be conducted under the conditions discussed in this opinion at the next available opportunity, and the results of the test reported to the Commission.

Finally, insofar as the emergency plans are concerned, the Director of Nuclear Reactor Regulation may not authorize the restart of TMI-1 until the NRC staff's emergency response plans, as modified and completed in accordance with this decision, have been distributed in final form to the licensee and Commonwealth.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the
Appeal Board

The separate opinion of Mr. Edles follows.

Separate Opinion of Mr. Edles, concurring in part and dissenting in part:

I join fully in Part I of the Board's decision disposing of the exception filed by the Commonwealth of Pennsylvania regarding predistribution of dosimeters. I write separately to highlight the tentative nature of my endorsement of the licensee's plan for making protective action recommendations as disqussed in Part II of the Board's opinion and to explain why I join only in the result reached in Part III.

A. The Emergency Operations Facility (EOF) is the command center for the licensee's overall management of any emergency. Under the staff's approach, as approved by the Licensing Board, the EOF is to be supervised by an Emergency Support Director whose functions include setting up and coordinating activities at the EOF. He would also be responsible for making protective action recommendations to state and local officials. These matters are fully discussed in Part II of the Board's opinion.

The staff argued below that the licensee must have available to it a qualified individual who could act as Emergency Support Director within an hour of a declaration of a site emergency. Among other things, he must have responsibility for making protective action recommendations. As an alternative, the licensee proposed to assign several members of its response team to the EOF within an hour but

did not place any individual clearly in charge. Its plan was to have a headquarters officer from New Jersey come to the EOF in the event of an accident and assume the responsibilities of Emergency Support Director within four hours after declaration of a site emergency. During the interim, the licensee proposed that the Emergency Director, who is its senior official at TMI and would be located in the control room in the event of an emergency, would make protective action recommendations. The Licensing Board rejected the licensee's alternative. It explained that the licensee had the burden of proving the "workability and adequacy" of its proposal and that, on balance, it had failed to meet that burden. 14 NRC at 1477-1478. See generally 14 NRC at 1467-1479.

On appeal, an Appeal Board (acting for the Commission) may substitute its judgment for that of a Licensing Board where it believes that an alternate result is preferable. I believe we should ordinarily accord a Licensing Board deference in close cases where it has examined an issue fully, weighed and balanced various conflicting considerations, and reached a sensible result supported by the evidence. See Duke Power Co. (Catawba Nuclear Station, Units 1 & 2), ALAB-355, 4 NRC 397, 402-405 (1976). Absent changed circumstances, I would affirm the Board's decision.

After the Licensing Board's decision was issued, however, the licensee voluntarily made adjustments to its

plan to accommodate certain of the Board's concerns. Most importantly, it has now given the Assistant Emergency Support Director supervisory responsibility for activating and coordinating the EOF. He would not, however, have responsibility for making protective action recommendations. The licensee continues to argue that such responsibility should reside with the Emergency Director during the early hours following onset of an emergency. My colleagues agree. In their view, the licensee has properly placed ultimate decisional responsibility in the hands of its senior official at the site. They also believe that decisions should be made during those early hours from the control room, where accurate information will be more readily available. In addition, they impose two express conditions designed to insure that (1) there will always be adequate personnel available to accord the Emergency Director the needed time to make protective action recommendations and (2) any official arriving from New Jersey to reinforce the emergency effort will respond as soon as possible. In light of these factors, they reverse the Licensing Board and conclude that the licensee has now demonstrated that its plan is adequate despite the failure of a designated Emergency Support Director to arrive for up to four hours.

I am still unprepared to conclude on the record before us that the licensee has proven that its plan is satisfactory. I nevertheless believe that the new plan is

worthy of a test of its efficacy and reliability. In contrast to the majority, I believe such a test must be conducted prior to restart.

It is important, at the outset, to spell out three matters that I believe are not now in dispute. First, it is clear that the licensee has sufficient qualified personnel available at the site to cope with an emergency from the outset. Although the Licensing Board was troubled that the licensee may have been relying too heavily on personnel from its headquarters in New Jersey, the record makes clear that the licensee has available at the site an adequate number of qualified people, including individuals who can serve as Emergency Director and Emergency Support Director immediately. See 14 NRC at 1469-1471, 1477-1478. The headquarters officer who would become Emergency Support Director upon arrival would simply replace an otherwise qualified employee. Second, as my colleagues correctly point out, two lessons learned from the TMI-2 accident pose what is, in the final analysis, an irreconcilable decisional conflict. On the one hand, the licensee must take steps to insure that individuals responsible for making protective action recommendations base those recommendations on accurate and up-to-the-minute information. This argues in favor of placing the responsibility for making such recommendations initially with the Emergency Director in the control room, where he will have accurate and timely

first-hand information. On the other hand, the licensee should not place too many people in the control room nor require too many functions to be performed by control room personnel during an emergency. This argues in favor of removing the responsibility for making protective action recommendations promptly to the offsite facility -- an approach employed at many nuclear plants across the nation. 1/ Third, the issuance of protective action recommendations will be a cooperative effort in which officials in both the control room and the EOF must participate, irrespective of the specific division of responsibility or chain of command ultimately adopted.

The Licensing Board believed that, after one hour, any necessary protective action recommendations should be made by an Emergency Support Director in the EOF. The staff, which supports this result on appeal, would appear to be satisfied if the licensee would agree to designate any qualified employee -- presumably a junior employee -- as Emergency Support Director, with responsibility for making protective action recommendations from the EOF. The licensee would prefer that its Emergency Director be responsible for making protective action recommendations

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1/ Tr. 23,071 (Chestnut). See, for example, Cooper Nuclear Station Emergency Plan, Section 7.2.3, at 7-7 (Feb. 5, 1982) (on file, NRC Public Document Room).

until an officer from New Jersey arrives but is prepared, if necessary, to station its most senior official in the EOF with responsibility for making protective action recommendations, and assign the responsibilities of the Emergency Director to an otherwise qualified, but presumably junior official in the control room. This would bring the licensee into compliance with the Licensing Board's decision. As noted above, my colleagues endorse the licensee's approach; they would, however, allow protective action recommendations to be made by the Emergency Director during the first four hours only under conditions intended to prevent potential problems.

At oral argument, counsel for the Commonwealth offered what seems to me to be a sensible and preferable means of resolving the issue. He observed that, although numerous changes in the emergency plan had been made in light of experience obtained at various drills and exercises, there has been no test of how things would work if protective action recommendations were made by the Emergency Director in the control room in light of various improvements which resulted from earlier drills. App. Tr. 102. See generally App. Tr. 91-102. Needless to say, there has been no test of the emergency preparedness plan under the conditions imposed today by my colleagues. In such circumstances, the licensee has not, in my judgment, as yet met its burden of demonstrating that the plan, as it has evolved, will work.

If it nonetheless wishes to pursue its plan, I would adopt and expand the Commonwealth's suggestion and order a test of the plan as a condition of restart. The test would be conducted under both the changes proposed by the licensee following the Licensing Board's decision and mandated by the Board today. The results of the test could be reported to us or to the Commission by the licensee, the staff, and the Commonwealth.

As I read the record, the emergency response plan has improved with each succeeding drill or exercise. The Licensing Board rejected the licensee's original approach because the licensee had not met its burden of proving its "workability and adequacy." Various changes in the licensee's plan now seem to obviate certain of the Licensing Board's concerns. What I find lacking, however, is an opportunity to examine the adequacy of the new approach.

If, as I suspect and as my colleagues believe, a drill or exercise will demonstrate the strengths of the licensee's plan as it has now evolved, I would approve it. If, however, for reasons I am unable to foresee, the absence of the Emergency Support Director during the early hours following declaration of a site emergency compromises the efficacy or reliability of the overall emergency response in any significant way, I would withhold approval and instead require that the licensee have a qualified individual expressly designated as the Emergency Support Director

available within an hour as the Licensing Board insisted. (As an alternative, the licensee could comply with the Licensing Board's decision on an interim basis and conduct the test at the next practical opportunity.) I agree with my colleagues that this is one situation in which a little more practical experience will be worth months of further adversary procedures.

B. In Part III of the Board's decision, my colleagues raise on their own and discuss at some length a number of technical aspects of the staff's incident response plan and the Commonwealth's plan regarding protective action guides. In only two respects, however, do they order corrective action. 2/ In all other respects, their sua sponte discussion, while certainly appropriate, is not strictly necessary, for our task on a sua sponte review is to determine whether corrective action on our part concerning an unappealed Licensing Board determination is warranted. See, e.g., Commonwealth Edison Co. (Dresden Station, Units 2 & 3), ALAB-695, 16 NRC ___ (1982); Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 & 2),

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2/ The staff is explicitly directed to complete and distribute its emergency response plan prior to restart. It must also reconcile that plan with the TMIPO Supplement insofar as the Deputy Director of the TMI Program Office is listed as a potential Director of Site Operations in one but not the other. See pp. 44 and 48, supra.

ALAB-644, 13 NRC 903, 996 (1981). See generally, Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), ALAB-685, 16 NRC ___ (1982) (slip opinion at 4-6). Except with respect to the two items noted above, my review of unappealed portions of the emergency planning aspect of the decision below has not disclosed cause for an alteration in the result reached by the Licensing Board.

I agree fully with my colleagues that all emergency response plans should complement each other, that all emergency response efforts should be coordinated, and that the Commonwealth should rely on the best available scientific information in formulating protective action decisions. The debate over methods of implementing these principles is neither new nor unique to this proceeding. As a consequence, apart from the imposition of the two explicit conditions required by my colleagues, in which I am willing to join, I would not use this adjudication as a forum for suggesting how these principles should best be implemented.

Attachment 3

Release

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

NRC STAFF PETITION FOR REVIEW

Richard J. Rawson
Counsel for NRC Staff

November 12, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

NRC STAFF PETITION FOR REVIEW

The NRC Staff hereby petitions the Commission pursuant to 10 CFR § 2.786 for review of the decision of the Atomic Safety and Licensing Appeal Board (ALAB-698) reversing the Atomic Safety and Licensing Board's decision (LBP-81-59) as it related to Licensee's staffing plans for its Emergency Operations Facility. ALAB-698 is erroneous with respect to an important question of policy which could significantly affect the public health and safety. 10 CFR § 2.786(b)(1) and (b)(4)(i). Further, the Atomic Safety and Licensing Appeal Board has resolved a factual issue necessary to the decision in a clearly erroneous manner contrary to the resolution of that same issue by the Atomic Safety and Licensing Board. 10 CFR § 2.786(b)(4)(ii).

I. SUMMARY OF THE DECISION BELOW

On October 22, 1982, the Appeal Board issued two decisions (ALAB-697 and ALAB-698) examining various aspects of the emergency response planning for the Three Mile Island Nuclear Station. One issue resolved in the latter decision involved the adequacy of the Licensee's plans for emergency staffing and the assignment of emergency response functions.[1/]

1/ The decision of the Appeal Board on this issue was the majority opinion of Dr. Buck and Dr. Gotchy. Mr. Edles wrote a separate opinion dissenting from the majority's reversal of the Licensing Board's decision on this issue of emergency staffing and the assignment of emergency response functions.

NRC regulations require that "adequate emergency facilities and equipment to support the emergency response [be] provided and maintained. . ." (10 CFR § 50.47(b)(8)) and that "[a]dequate provisions shall be made and described for emergency facilities and equipment, including * * * a licensee near-site emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency" (10 CFR Part 50, Appendix E, § IV.E.8). The question of the appropriate staffing and assignment of emergency response functions to the TMI Emergency Operations Facility (EOF) was contested between the NRC Staff and the Commonwealth of Pennsylvania on the one hand and the Licensee on the other. The Staff and the Commonwealth took the position that Licensee should be required to man its EOF with a senior Licensee manager and to transfer to that manager from the Emergency Director in the control room the responsibilities for radiological assessment and protective action recommendations within one hour of declaration of a Site or General Emergency. Staff regulatory guidance documents (NUREG-0654 and NUREG-0696)[2/] on emergency planning and procedures embody this position.[3/] The Licensee, in contrast, was of the view that the transfer of responsibility for radiological assessment and protective action recommendations to a senior manager in the EOF need not occur until some four hours after

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2/ NUREG-0654 (Criteria for Preparation and Evaluation of Radiological Emergency Response and Preparedness in Support of Nuclear Power Plants) and NUREG-0696 (Functional Criteria for Emergency Response Facilities) were admitted into evidence as Staff Exhibits 7 and 8, respectively.

3/ Contrary to the suggestion of the Appeal Board majority (ALAB-698, slip op. at 33), the Staff and the Licensing Board did not arbitrarily apply generic criteria but rather evaluated the facts of Licensee's particular emergency staffing plans and decided that these criteria were appropriate in this specific case. See Tr. 22939-40 (Chesnut).

declaration of a Site or General Emergency, at which time Licensee's Emergency Support Director would arrive from offsite. LBP-81-59, 14 NRC 1211 at 1475.

The Licensing Board resolved this issue in a manner consistent with that urged by the Staff and the Commonwealth. A license condition was imposed as a prerequisite to restart of TMI-1 which would require early manning of the EOF and transfer of specific emergency response functions to the Emergency Support Director. Licensee appealed, asserting that the Licensing Board had erred because it had relied on generic guidance on EOF staffing (NUREG-0654 and NUREG-0696) and allegedly ignored the unique emergency management organization of the Licensee, thereby improperly disregarding internal management decisions properly vested with the Licensee.

The Appeal Board majority reversed the decision of the Licensing Board on this issue. New evidence submitted by Licensee relating to proposed modifications in the emergency staffing plan was found by the Appeal Board to have ameliorated "the more important problems that led to the Licensing Board's result . . . " ALAB-698, slip op. at 24. Specifically, managerial responsibility for the EOF has been assigned to a specific position, the Emergency Support Staff Member, until the Emergency Support Director arrives. As to the question of which official will make protective action recommendations, the Appeal Board reversed the Licensing Board's determination that it must be the Emergency Support Director in the EOF within one hour of declaration of a Site or General Emergency and adopted Licensee's proposal that such recommendations be the responsibility of the Emergency Director in the control room pending arrival of the Emergency Support Director within four hours of an emergency declaration.

II. ISSUE PRESENTED FOR REVIEW

The issue presented for review is:

Whether the Appeal Board erroneously reversed the Licensing Board by ruling that responsibility for radiological assessment and protective action recommendations should reside in the Emergency Director in the control room during the first four hours after declaration of a Site or General Emergency rather than the Emergency Support Director in the Emergency Operations Facility.

III. WHERE THE MATTER WAS RAISED BELOW

The matter was raised below by Licensee's Exception No. 3[4/] to the Licensing Board's Partial Initial Decision of December 14, 1981. The Licensee argued in its March 10, 1982 brief[5/] in support of exceptions that the Licensing Board erred in imposing the condition on EOF staffing. The Staff argued in its May 20, 1982 brief to the Appeal Board in response to the exceptions of the other parties that the Licensing Board had ruled properly on the emergency staffing issue after considering the staffing of Licensee's emergency management organization as well as evidence of potential problems with Licensee's specific EOF staffing proposal.[6/] The Staff elaborated on its position in its June 17, 1982 response to the Appeal Board's order of June 1, 1982.[7/]

4/ Licensee's Exceptions to the Atomic Safety and Licensing Board's Partial Initial Decision of December 14, 1981, dated February 8, 1982, at 2.

5/ Licensee's Brief in Support of its Exceptions to the Atomic Safety and Licensing Board's Partial Initial Decision on Plant Design and Procedures, Separation, and Emergency Planning issues, dated March 10, 1982, at 45-64.

6/ NRC Staff's Brief in Response to the Exceptions of Others to the Atomic Safety and Licensing Board's Partial Initial Decision on Plant Design and Procedures, Separation, and Emergency Planning Issues, dated May 20, 1982, at 81-93.

7/ NRC Staff Response to Appeal Board's June 1, 1982 Order Requesting Elaboration on Certain Emergency Planning Issues, dated June 17, 1982, at 3-12.

IV. WHY THE DECISION BELOW IS ERRONEOUS

The Appeal Board has overruled the best judgment of the Licensing Board and the Staff in deciding that it is acceptable for Licensee to retain the functions of radiological assessment and protective action recommendations in the Emergency Director in the control room until the arrival of the Emergency Support Director some four hours after declaration of a Site or General Emergency. In so doing, the Appeal Board discards procedures which have been shown to be successful in emergency response exercises at other facilities in favor of a scheme which is untested and deficient in important respects. The Appeal Board has erred in this ruling and this error, if uncorrected, could significantly affect the public health and safety.

The principal regulatory guidance in the area of emergency response is contained in NUREG-0654 and NUREG-0696. Those documents were the result of careful consideration of emergency planning issues in light of the TMI-2 accident and subsequent inquiries and findings. Applying the criteria contained in NUREG-0654 and NUREG-0696, the Staff concluded under the specific facts of this case that it is important that the radiological assessment and protective action recommendation functions be transferred to a senior Licensee manager in the EOF early in the course of an emergency so as to relieve the in-plant Emergency Director of those responsibilities and allow him to concentrate on plant operational matters and mitigation of the accident. Licensee's opposition to the Staff's position was based principally on its preference that the Emergency Support Director be one of two named individuals, either of whom would have to travel from Parsippany, New Jersey to TMI (a distance of some 150 miles) to act in that capacity. The Licensing Board found this an insufficient basis for Licensee's position:

> "After prolonged deliberation, accompanied by our initial reluctance to overrule the personnel management judgment of the Licensee, the Board finds that the Licensee must have available to it qualified individuals who could act as Emergency Support Director in the EOF in the interim (up to four hours) period prior to the arrival of the full off-site Emergency Support Organization without the need to transfer the Emergency Director from the control room to the EOF. Further, we are troubled at the extent of the implied reliance of the Licensee during emergency conditions on persons located so far from the site. It raises the issue of whether Licensee perceives, contrary to its stated position, that it has onsite only one or two persons it can entrust with the responsibilities of the Emergency Director and the Emergency Support Director."

14 NRC at 1479 (¶ 1396).

The Appeal Board rejected the Licensing Board's careful balancing of the competing factors involved and struck its own balance. The Appeal Board held that modifications initiated by Licensee will reduce the potential for confusion in the control room caused by the assignment of too many functions to the Emergency Director located there. ALAB-698, slip op. at 25-29.[8/] The Appeal Board also found it preferable that protective action recommendations come from within the control room during the early hours of an accident (Id. at 33-34) and weighed this consideration more heavily than the need for face-to-face contact between state officials and the Licensee decisionmaker responsible for protective action recommendations (Id. at 32-34). Finally, the Appeal Board accepted Licensee's argument that politically sensitive protective action recommendations should be made by a senior GPU Nuclear official rather than "another, more junior employee." Id. at 34-35.

Early staffing of the EOF and early transfer of the protective action recommendation function to the EOF is important to an effective emergency

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8/ The Appeal Board misconstrued Staff testimony which expressed a primary concern with the assignment of too many functions in the control room and a secondary concern with overcrowding of the control room as a recognition by Staff witnesses that "[t]he control room will not be crowded in an emergency. . . ." ALAB-698, slip op. at 27 (emphasis added). See Tr. 15472-15482 (Grimes and Chesnut).

response in that the Emergency Director in the control room is thereby allowed to concentrate more directly on accident mitigation and operational matters and a better interface is provided between the Licensee and state officials for the communication of protective action recommendations and the bases therefor. These important factors were too lightly dismissed by the Appeal Board and its decision is in error for this reason.

The Emergency Director in the control room should be relieved of the responsibility for performing emergency functions which can reasonably be performed elsewhere by other personnel. NRC Staff guidance in NUREG-0696 and the requirement in 10 CFR Part 50, Appendix E to establish an EOF separate from the control room was specifically designed to avoid the performance of too many functions in the control room. Tr. 15035-36 (Grimes). Licensee's emergency plan lists 12 separate actions which the Emergency Director is to take, as appropriate (Licensee Ex. 30, pp. 5-7, 5-8), and five separate responsibilities which the Emergency Director may not delegate (Licensee Ex. 30, pp. 5-8). In view of this myriad of responsibilities placed on the Emergency Director, and despite (and in part because of) the large staff provided to assist him,[9/] it is prudent to remove the burden of translating plant conditions and projected effluent releases into protective action recommendations for offsite authorities from the Emergency Director, who must at the same time try to solve the accident problem and mitigate the accident from the plant systems standpoint. Tr. 15025-26 (Grimes). Under the scheme approved by the Appeal Board, the Emergency Director may

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9/ The modifications detailed in the June 16, 1982 Rogan affidavit, relied upon by the Appeal Board, do not ameliorate the fundamental problem with Licensee's emergency plans: the imposition of ultimate responsibility for a large number of functions on the Emergency Director during the critical early hours of an emergency. This problem is exacerbated by locating the Emergency Director and other support functions in the control room rather than the Technical Support Center.

be unable to devote sufficient attention to formulating protective action recommendations and communicating them, as well as the bases therefor, in a timely manner to offsite authorities. The likelihood of this is reduced if the time-consuming and effort-consuming burden of formulating protective action recommendations is shifted to the Emergency Support Director in the EOF as early as practicable, thereby relieving the Emergency Director in the control room of or. ny or responsibility and allowing him to devote all his efforts, oversight and direction to plant-related functions.10/

Finally, Licensee's position (accepted by the Appeal Board) that protective action recommendations are politically sensitive and should be made by a senior GPU Nuclear official, while understandable, is not a sufficient reason to overturn the Licensing Board's rejection of this aspect of Licensee's emergency response plan. Licensee's preference must give way to the greater importance of ensuring that the Emergency Director is not overburdened with responsibility for too many functions while trying

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10/ The Appeal Board's comment (slip op. at 36) that "it is not at all clear to us that the presence of the Emergency Support Director in the EOF was really critical" is made in the context of the need for direct contact between Licensee and State officials concerning protective action recommendations. While the State position concerning face-to-face contact is supportive of the Staff, a clear need for the early transfer of responsibility to the EOF exists irrespective of whether the State is afforded the opportunity for face-to-face contact with the Emergency Support Director. The Staff submits that the presence of the Emergency Support Director in the EOF is certainly critical insofar as it permits the Emergency Director to focus his efforts on plant operations and accident mitigation, reduces potential overcrowding and disruption in the control room, and allows protective action decisions to be made (by the Emergency Support Director in the EOF) in an environment more conducive to the weighing and balancing of all the factors (e.g., plant conditions, projected doses, evacuation time estimates, weather conditions) involved in protective action decisionmaking. Knowledge of the condition of the reactor, the point emphasized by the Appeal Board to justify its preference that the Emergency Director in the control room maintain responsibility for formulating protective action recommendations (slip op. at 33), is adequately communicated by the information and data links provided to the EOF. See Staff Ex. 8, at pp. 4, 16, 22.

to oversee the plant response to an accident. As the Licensing Board pointed out, the extent of the implied reliance of the Licensee during an emergency on persons located so far from the site is troubling.[11/] 14 NRC at 1479 (¶ 1396).

In sum, the Licensing Board carefully balanced the competing considerations and properly decided that Licensee must have an Emergency Support Director available in the EOF within one hour of declaration of a Site or General Emergency and must transfer to that official the responsibility for radiological assessment and protective action recommendations. The Appeal Board's reversal of this decision is erroneous and unwise. If uncorrected, it will result in the impairment of the Emergency Director's ability adequately to perform all of the functions under his charge during the first, critical hours of an emergency.

V. WHY COMMISSION REVIEW SHOULD BE EXERCISED

The precedent established by the decision of the Appeal Board as it relates to Licensee's emergency staffing and the assignment of emergency response functions will significantly weaken the protection which the Commission sought to provide for the public health and safety in its emergency planning regulations. Failure to uphold the decision of the Licensing Board in this matter will adversely affect the Staff's ability to assure that the Commission's necessarily general emergency planning regulations are effectively implemented. The Appeal Board's erroneous

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11/ The Staff does not believe that the condition imposed by the Appeal Board -- that the Emergency Support Director be notified upon declaration of an Alert and that he immediately begin preparations to arrive at the EOF as soon as practicable but not later than four hours after declaration of a Site Emergency -- is an adequate response to this problem.

resolution of this issue in ALAB-698 thus presents an important question of policy which could significantly affect the public health and safety.

ALAB-698 resolves the issue of the adequacy of Licensee's staffing plans for its Emergency Operations Facility in a clearly erroneous manner contrary to the resolution of that same issue by the Licensing Board. The Appeal Board's decision goes too far in accommodating Licensee's desire to station four hours from TMI those individuals upon whom it intends to rely for performance of important safety functions in an emergency. The additional burdens imposed on the Emergency Director under ALAB-698 are likely to impair his ability either to respond to the needs of the plant in an accident situation or to make and explain proper protective action recommendations. In either case, the degree of protection of the public health and safety is needlessly diminished.

Respectfully submitted,

Richard J. Rawson

Richard J. Rawson
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 12th day of November, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF PETITION FOR REVIEW" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, by deposit in the Nuclear Regulatory Commission's internal mail system, this 12th day of November, 1982:

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Attachment 4

Release C

COLLECTED
Lic 11/29/82

'82 NOV 30 A10:21

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

SECRETARY
DOCKETING & SERVICE
BRANCH

BEFORE THE COMMISSION

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

LICENSEE'S RESPONSE TO NRC STAFF'S PETITION FOR REVIEW OF ALAB-698

On October 22, 1982, the Atomic Safety and Licensing Appeal Board ("Appeal Board") issued ALAB-698 in the above-captioned proceeding. Acting on Licensee's Exception No. 3 to the December 14, 1981 partial initial decision of the Atomic Safety and Licensing Board ("Licensing Board"), the Appeal Board ruled, subject to certain specified conditions, that the function of making protective active recommendations could reside with Licensee's Emergency Director located in the control room during the first four hours after declaration of a site area emergency. On November 12, 1982, the NRC Staff filed a petition seeking Commission-level review of this Appeal Board ruling.

Licensee has previously informed the Commission in the course of oral argument on November 9, 1982, that Licensee will abide by the Licensing Board's decision pending disposition of the Appeal Board decision by the Commission. Accordingly, Licensee has no objection to the Staff's petition for review. Pursuant to 10 C.F.R. 2.786 (b)(6) Licensee requests the Commission to establish a schedule for the filing of briefs on the issue raised by the Staff's petition. Licensee understands that the Staff is prepared to file a further substantive brief on the matter and suggests that the briefing schedule provide for a reply brief by Licensee.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

By: George F. Trowbridge
George F. Trowbridge

Dated: November 29, 1982

Lic 11/29/82

'82 NOV 30 A10:21

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

SERVICE LIST

I hereby certify that copies of:

(1) "Licensee's Opposition to Commonwealth of Pennsylvania's Petition for Review of ALAB-698" and

(2) "Licensee's Response to NRC Staff's Petition for Review of ALAB-698"

were served upon those persons on the attached Service List by deposit in the United States mail, postage prepaid, this 29th day of November, 1982.

Delissa A. Ridgway
Delissa A. Ridgway

Dated: November 29, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

'82 NOV 30 A10:21

In the Matter of)
)
METROPOLITAN EDISON COMPANY)
)
(Three Mile Island Nuclear)
Station, Unit No. 1))

Docket No. 50-289
(Restart)

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