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NUCLEAR REGULATORY COMMISSION ISSUANCES

July 1985



U.S. NUCLEAR REGULATORY COMMISSION

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NUCLEAR REGULATORY COMMISSION ISSUANCES

July 1985

This report includes the issuances received during the specified period from the Commission (CLI), the Atomic Safety and Licensing Appeal Boards (ALAB), the Atomic Safety and Licensing Boards (LBP), the Administrative Law Judge (ALJ), the Directors' Decisions (DD), and the Denials of Petitions for Rulemaking (DPRM).

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or to have any independent legal significance.

U.S. NUCLEAR REGULATORY COMMISSION

Prepared by the Division of Technical Information and Document Control,
Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555
(301/492-8925)

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Commission
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COMMISSION

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

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

In the Matter of

Docket Nos. 50-352-OL
50-353-OL

PHILADELPHIA ELECTRIC COMPANY
(Limerick Generating Station,
Units 1 and 2)

July 24, 1985

The Commission reviewed the Limerick Ecology Action's comments on effectiveness of the Second and Third Partial Initial Decisions of the Licensing Board (LBP-84-31, 20 NRC 446 (1984), and LBP-85-14, 21 NRC 1219 (1985)). These comments addressed delegation of issues to the Staff through license conditions, need for local organizations to approve their emergency plans, adequacy of surveys of transport-dependent individuals, possible measures to mitigate severe accidents, and procedural rulings. The Commission also reviewed the Licensing Board decisions *sua sponte*. The Commission determined that neither the comments nor the decisions warranted staying the effectiveness of the decisions. This Memorandum did not affect the Commission's prior determination that questions involving hearing rights of the inmates at the State Correctional Institution at Graterford, Pennsylvania, warrant staying effectiveness of the authorization for issuance of a full-power operating license.

MEMORANDUM

Pending before the Nuclear Regulatory Commission ("NRC" or "Commission") are comments by intervenor Limerick Ecology Action ("LEA") on whether the Commission should make effective the Atomic Safety and Licensing Board's ("Licensing Board") Partial Initial Decisions LBP-84-31, 20 NRC 446 (1984), and LBP-85-14, 21 NRC 1219 (1985), which would constitute part of any decision to authorize the Director, Office of Nuclear Reactor Regulation ("Director") to issue to the applicant Philadelphia Electric Company ("PECo") a full-power license for the Limerick Generating Station ("Limerick").

By a separate Memorandum and Order, CLI-85-11, 21 NRC 1585 (1985), the Commission declined to authorize issuance of a full-power operating license pending further consideration of the hearing rights of one of the parties, the inmates at the State Correctional Institution at Graterford, Pennsylvania.

This Memorandum does not affect that determination. Rather, the purposes of this Memorandum are to advise LEA and the other parties of the Commission's view that: (1) the concerns expressed by LEA do not appear to warrant staying the effectiveness of the Licensing Board's Partial Initial Decisions; and (2) no other aspect of those Partial Initial Decisions appears to warrant a stay of effectiveness.

In conducting an immediate effectiveness review, the Commission applies the criteria in 10 C.F.R. § 2.764(f)(2)(i) to parties' comments to determine whether to stay the effectiveness of a Licensing Board's decision.¹ The Commission has applied these criteria to the comments which LEA has submitted pursuant to § 2.764(f) and, for the reasons stated below, finds nothing in those comments which would warrant staying the effectiveness of the Licensing Board's decisions.

LEA has challenged the following Licensing Board actions: (1) post-hearing verification by the NRC Staff that license conditions on traffic control and staffing needs have been satisfied; (2) the finding of adequate assurance that the radiological emergency response plans will be implemented; (3) the use of survey rather than census data to determine the number of transportation-dependent individuals; (4) the refusal to admit contentions to additional measures to mitigate the consequences

¹ The criteria in § 2.764(f)(1)(i) are:

1. the gravity of the substantive issue;
2. the likelihood that it has been resolved incorrectly below;
3. the degree to which correct resolution of the issue would be prejudiced by operation pending review; and
4. other relevant public interest factors.

of a severe accident; and (5) various procedural rulings on time for cross-examination and consideration of evidence. The Commission has reviewed LEA's comments based on the criteria in § 2.764(f)(2)(i) and finds, for the reasons below, that a stay of effectiveness is not warranted.²

First, LEA contended that its rights to a hearing under § 189a of the Atomic Energy Act were denied by the license conditions imposed by the Licensing Board. Those conditions left to the NRC Staff the responsibility to make post-hearing verifications that post-accident traffic control measures have been implemented and that emergency planning staffing has been accomplished. The Commission's preliminary review of those conditions indicates that areas of concern are quite narrow and are arguably within the scope of matters which can be left to post-hearing verification by the NRC Staff. Therefore, the issues are neither grave nor substantially likely to have been incorrectly resolved by the Licensing Board, and operation pending review will not prejudice further review.

Second, LEA contended that the record does not support a finding of adequate assurance that the radiological emergency response plans will be implemented because some of the local organizations have not adopted the plans. However, LEA acknowledged that formal plan adoption is not required by the NRC's emergency planning regulations. The Licensing Board determined that the plans can be implemented and that the local organizations have agreed that they will implement a plan. Based on our preliminary review we are not prepared to say that the Board was incorrect in its analysis of this issue. Moreover, we believe that operation pending the review will not prejudice further review.

Third, LEA contended that transport-dependent individuals were not adequately identified by survey data. The Licensing Board appears to have adequately explained the adequacy of such data. Therefore, this issue does not appear substantial. Moreover, licensing will not prejudice any appeals of this issue.

Fourth, LEA contended that the Final Environmental Statement for Limerick is incomplete for failure to consider design alternatives to mitigate the risk of severe accidents. This issue does not raise serious safety concerns because the Licensing Board has found that the public's health and safety is adequately protected by the equipment already incorporated into the Limerick facility for mitigating the effects of severe accidents.

² The Commission notes that Atomic Safety and Licensing Appeal Board ("Appeal Board") has reviewed these same issues in denying LEA's stay request pending the resolution of the appeal and determined that LEA did not make a strong showing on any of these arguments. ALAB-808, 21 NRC 1595, 1600 (1985).

Moreover, at oral argument before the Appeal Board, LEA conceded that this issue could be resolved after licensing. Therefore, there is no dispute that even if the Licensing Board's decision is found to be incorrect, correct resolution of the issue would not be prejudiced by operation pending review.

Finally, LEA contended that the Licensing Board made some incorrect procedural rulings. These rulings do not appear to raise grave issues and our preliminary review does not suggest any substantial likelihood that the rulings were incorrect.

LEA has also alleged that a stay would not adversely affect the Applicant because a shortage of cooling water currently would prevent the plant from going to full power; and a stay would not affect the public because sufficient inexpensive electricity is already available. In view of our analysis of the other factors, these arguments do not support a stay.

For the foregoing reasons, the Commission has determined that nothing in LEA's comments would warrant staying the effectiveness of the Licensing Board's Partial Initial Decisions, LBP-84-31 and LBP-85-14. The Commission has also reviewed these decisions *sua sponte* and finds nothing in them which would warrant staying their effectiveness. This conclusion is without prejudice to the Appeal Board's pending review of these issues.

For the Commission

SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, D.C.,
this 24th day of July 1985.

Atomic Safety and Licensing Appeal Boards Issuances

ATOMIC SAFETY AND LICENSING APPEAL PANEL

Alan S. Rosenthal, Chairman
Dr. W. Reed Johnson
Thomas S. Moore
Christine N. Kohl
Gary J. Edles
Dr. Reginald L. Gotchy
Howard A. Wilber

APPEAL BOARDS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Christine N. Kohl, Chairman
Dr. W. Reed Johnson
Howard A. Wilber

In the Matter of

Docket No. 50-382-OL

LOUISIANA POWER & LIGHT
COMPANY

(Waterford Steam Electric Station,
Unit 3)

July 11, 1985

The Appeal Board denies most of Joint Intervenors' motion to reopen the record in this operating license proceeding on issues of quality assurance and management character and competence and refers the remainder to the Commission, insofar as it raises issues that may relate to matters under investigation by NRC's Office of Investigations. The Appeal Board also denies as moot Joint Intervenors' motion for a protective order.

RULES OF PRACTICE: REOPENING OF RECORD

A successful motion to reopen the record of an adjudicatory proceeding must be timely, address a significant safety or environmental issue, and show that a different result might have been reached had the newly proffered material been considered initially. Bare allegations or the simple submission of new contentions is not enough. *Louisiana Power & Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-786, 20 NRC 1087, 1089 (1984). See also *Pacific Gas and Electric Co.* (Diablo

Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-5, 13 NRC 361, 363 (1981).

RULES OF PRACTICE: REOPENING OF RECORD (SPECIFICITY)

At a minimum, the new material in support of a motion to reopen must be set forth with a degree of particularity in excess of the basis and specificity requirements contained in 10 C.F.R. § 2.714(b) for admissible contentions. It must be tantamount to evidence and possess the attributes set forth in 10 C.F.R. § 2.743(c) defining admissible evidence for adjudicatory proceedings. Specifically, the new evidence supporting the motion must be relevant, material and reliable. *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-775, 19 NRC 1361, 1366-67, *aff'd sub nom. San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984), *vacated in part and reh'g en banc granted on other grounds*, 760 F.2d 1320 (1985). See also *id.* at 1367 n.18.

RULES OF PRACTICE: REOPENING OF RECORD

A motion to reopen that raises previously uncontested issues must also satisfy, in addition to other requirements, the standards for admitting late-filed contentions embodied in 10 C.F.R. § 2.714(a)(1). *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-82-39, 16 NRC 1712, 1714-15 (1982).

RULES OF PRACTICE: REOPENING OF RECORD

The burden of satisfying all of the requirements of a motion to reopen that raises previously uncontested issues is a heavy one. See *Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 NRC 320, 338 (1978). See also *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-85-7, 21 NRC 1104, 1106 (1985).

ATOMIC ENERGY ACT: SAFETY FINDINGS

Neither the Atomic Energy Act of 1954, as amended, nor the Commission's implementing regulations mandate a demonstration of error-free construction. What they require is simply a finding of reasonable

assurance that, as built, the facility can and will be operated without endangering the public health and safety. 42 U.S.C. §§ 2133(d), 2232(a); 10 C.F.R. § 50.57(a)(3)(i). See also *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 346 (1983).

ADJUDICATORY HEARINGS: SCOPE OF REVIEW

In examining claims of quality assurance deficiencies, one must look to the implication of those deficiencies in terms of safe plant operation. To determine if the requisite reasonable assurance exists, two questions must be addressed: (1) whether all ascertained construction errors have been cured, and (2) even if so, whether there has nonetheless been so pervasive a breakdown in the quality assurance procedures as to raise legitimate doubt about the overall safety of the facility. *Ibid.*

RULES OF PRACTICE: REOPENING OF RECORD

The considerations that must be addressed in examining claims of quality assurance deficiencies — i.e., whether all ascertained construction errors have been cured, and if so, whether there has nonetheless been so pervasive a breakdown in the quality assurance procedures as to raise legitimate doubt about the overall safety of the facility — are also pertinent to the disposition of a motion to reopen on quality assurance. See *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-750, 18 NRC 1205, 1209-11 (1983); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-756, 18 NRC 1340, 1344-45 (1983), *aff'd sub nom. San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984), *vacated in part and reh'g en banc granted on other grounds*, 760 F.2d 1320 (1985); *Diablo Canyon*, ALAB-775, 19 NRC at 1367.

QUALITY ASSURANCE: REQUIREMENTS

The importance of "managerial attitude" to an applicant's quality assurance program — i.e., the willingness of company officials to implement the program to the fullest — has long been recognized. *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-106, 6 AEC 182, 184 (1973).

OPERATING LICENSE PROCEEDINGS: APPLICANT'S CHARACTER AND COMPETENCE (REMEDIAL EFFORTS)

Remedial measures directed to construction and related quality assurance deficiencies may be considered as part of the appraisal of an applicant's character and competence. *Houston Lighting & Power Co.* (South Texas Project, Units 1 and 2), ALAB-799, 21 NRC 360, 371-74 (1985).

RULES OF PRACTICE: REOPENING OF RECORD

The untimely listing of historical examples of alleged construction quality assurance deficiencies is insufficient to warrant reopening of the record on the issue of management character and competence. *Diablo Canyon*, ALAB-775, 19 NRC at 1369-70.

RULES OF PRACTICE: REOPENING OF RECORD (NATURE OF SUPPORTING EVIDENCE)

Documents or portions of documents generated by an applicant or the staff in connection with the construction and regulatory oversight of a facility are acceptable evidence in support of a motion to reopen. *Diablo Canyon*, CLI-81-5, 13 NRC at 363.

QUALITY ASSURANCE: REQUIREMENTS

The NRC relies upon an applicant's quality assurance program, and its implementation, to ensure that a nuclear power plant and its component parts are designed to acceptable criteria and standards, and that the plant and its components are constructed or fabricated in accordance with their design. See 35 Fed. Reg. 10,498 (1970); 10 C.F.R. Part 50, Appendix B.

QUALITY ASSURANCE/QUALITY CONTROL: REQUIREMENTS (DELEGATION OF FUNCTIONS)

Delegation of quality assurance activities is acceptable under the NRC's regulations, so long as an applicant bears the ultimate responsibility for quality assurance performance and is able to assure itself that its delegate is performing adequately. 10 C.F.R. Part 50, Appendix B, Criterion I; *Commonwealth Edison Co.* (Byron Nuclear Power Station, Units 1 and 2), ALAB-793, 20 NRC 1591, 1598 (1984).

RULES OF PRACTICE: REOPENING OF RECORD (NATURE OF SUPPORTING EVIDENCE)

Serving up exhibits in support of a motion to reopen without citation to pertinent portions or an explanation of the purpose of the exhibits contributes nothing of value to a proceeding.

QUALITY ASSURANCE/QUALITY CONTROL: AUDIT REQUIREMENTS

Although audits are an important element of an applicant's overall program and are required by 10 C.F.R. Part 50, Appendix B, Criterion XVIII, they provide but a third level of assurance. The principal levels of assurance are provided by, first, quality craftsmanship and, second, quality inspections.

QUALITY ASSURANCE/QUALITY CONTROL: DOCUMENTS

Proper dispositioning of documents generated in a quality assurance program to identify and record discrepant or changed conditions is a vital part of a quality assurance program, because it is through this process that the suspect condition is eventually corrected or, in some cases, judged by a qualified person to be acceptable in spite of the discrepancy. See 10 C.F.R. Part 50, Appendix B, Criteria XV, XVI. In addition, certain of these documents must be evaluated for reportability to the Commission under 10 C.F.R. § 50.55(e) and 10 C.F.R. Part 21.

ADJUDICATORY BOARDS: ROLE

Lengthy discussion of charges devoid of merit is unnecessary. See *San Luis Obispo Mothers for Peace*, 751 F.2d at 1320-21.

RULES OF PRACTICE: REOPENING OF RECORD (NATURE OF SUPPORTING EVIDENCE)

Exhibits that are unintelligible, are submitted without citation to pertinent portions, are out of date, have no apparent relation to a specific charge, and generally do not support the point for which they are offered, do not constitute the "relevant, material and reliable" evidence required to support a motion to reopen. *Diablo Canyon*, ALAB-775, 19 NRC at 1366-67.

RULES OF PRACTICE: REOPENING OF RECORD (NATURE OF SUPPORTING EVIDENCE)

A draft is a working document and it is entirely reasonable that it will go through several revisions before it appears in final form and presumably reflects the actual, intended position of the preparer. As such, it is not a particularly useful item on which to rely in support of a motion to reopen.

RULES OF PRACTICE: EX PARTE COMMUNICATIONS

A board may not rely upon ex parte information, presented in camera by the Office of Investigations, in making licensing decisions. See *Statement of Policy; Investigations, Inspections, and Adjudicatory Proceedings*, 49 Fed. Reg. 36,032, 36,033 (1984).

ATOMIC ENERGY ACT: LICENSEE'S CHARACTER

The NRC's dependence on a licensee for accurate and timely information about its facility makes candor an especially important element of management character. See *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1)*, ALAB-772, 19 NRC 1193, 1208 (1984), *rev'd in part on other grounds*, CLI-85-2, 21 NRC 282 (1985). See also *id.*, CLI-85-9, 21 NRC 1118, 1136-37 (1985); *South Texas*, 21 NRC at 371 (nexus of particular character trait to particular performance standards contemplated by Atomic Energy Act and NRC regulations is required).

RULES OF PRACTICE: REOPENING OF RECORD (NATURE OF SUPPORTING EVIDENCE)

Evidence consisting of the views of an individual submitted in affidavit form in support of a motion to reopen should be submitted in an affidavit by that individual and not by counsel. *Diablo Canyon*, ALAB-775, 19 NRC at 1367 n.18.

QUALITY ASSURANCE/QUALITY CONTROL: DEFICIENCIES (RESOLUTION)

Because the Commission must necessarily depend heavily on a permittee or licensee to report important information and to assume a role of at least partial self-policing, it is essential that the motivation to discover, analyze, and correct potentially safety-significant problems originate with plant management.

OPERATING LICENSE PROCEEDINGS: APPLICANT'S CHARACTER AND COMPETENCE

It is entirely appropriate to consider an applicant's successful remedial efforts in connection with claims that it lacks the necessary character and competence to operate a plant safely. *See South Texas*, 21 NRC at 371-74. Not to do so would have the undesirable effect of discouraging applicants and licensees from promptly undertaking such corrective measures.

ADJUDICATORY BOARDS: ROLE

The adjudicatory boards are not obliged to do a party's research for it. *See Louisiana Power & Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-801, 21 NRC 479, 483-84 (1985); *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-804, 21 NRC 587, 592 & n.6 (1985).

RULES OF PRACTICE: LITIGABILITY OF ISSUES

A contention challenging the adequacy of the staff's review of an application is not litigable in an operating license proceeding. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-728, 17 NRC 777, 807, *review declined*, CLI-83-32, 18 NRC 1309 (1983). This follows logically from the fact that it is the applicant that ultimately bears the burden of proving its entitlement to the privilege of an operating license. *See Consumers Power Co.* (Midland Plant, Units 1 & 2), ALAB-315, 3 NRC 101, 103 (1976).

ADJUDICATORY BOARDS: DELEGATED AUTHORITY (RELATION TO NRC STAFF)

The NRC's adjudicatory boards are not empowered to direct the staff in the conduct of its inspection and investigatory duties. *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516-17 (1980).

RULES OF PRACTICE: RESPONSIBILITIES OF STAFF

The staff's review of contested technical issues is a significant ingredient of NRC licensing proceedings, even though its adequacy cannot be litigated per se, as a contention.

TECHNICAL ISSUES DISCUSSED:

- Construction Quality Assurance (QA)
- Staffing
- Welding
- Audits
- Inspector Qualifications
- Welder Qualifications
- QA Documentation
- Pipe Supports.

APPEARANCES

Lynne Bernabei and **George Shohet**, Washington, D.C., for joint intervenors Oystershell Alliance and Save Our Wetlands, Inc.

Bruce W. Churchill, **Dean D. Aulick**, and **Alan D. Wasserman**, Washington, D.C., for applicant Louisiana Power & Light Company.

Sherwin E. Turk and **Bernard M. Bordenick** for the Nuclear Regulatory Commission staff.

DECISION

The last matter pending before us in this operating license proceeding is Joint Intervenors' fifth motion to reopen the record.¹ Filed on November 8, 1984, this 62-page motion, accompanied by 62 exhibits, seeks a hearing on three broad, new contentions.² Contention A alleges a systematic breakdown in the construction quality assurance (QA) program of applicant Louisiana Power & Light Company (LP&L). Joint Intervenors argue that, as a consequence of this breakdown, LP&L cannot

¹ A number of reported decisions issued over the last two years reflect the history of this proceeding. See ALAB-732, 17 NRC 1076 (1983); ALAB-753, 18 NRC 1321 (1983); ALAB-786, 20 NRC 1087 (1984); ALAB-801, 21 NRC 479 (1985). Just this past April, we denied another motion to reopen, concerning the adequacy of the concrete basemat of the facility. See ALAB-803, 21 NRC 575 (1985). The Commission has declined review of each of these decisions. See Notices from the Secretary (September 14, 1983; November 20, 1984; May 9, 1985; May 17, 1985); CLI-85-3, 21 NRC 471, 473 n.1 (1985).

² In ALAB-792, 20 NRC 1585 (1984), *clarified*, ALAB-797, 21 NRC 6 (1985), we explained, in response to arguments made by Louisiana Power & Light Company and the NRC staff, why we have jurisdiction to consider the entirety of the instant motion to reopen. The Commission has also declined review of these decisions. See Notice from the Secretary (March 22, 1985).

show that it can operate the plant safely. Contention B states that LP&L does not have the character and competence to operate Waterford in accordance with the Commission's safety requirements. Contention C claims that the NRC staff's inspection and investigation efforts at Waterford are not adequate to ensure that potentially safety-significant deficiencies have been corrected and the plant can operate safely.

LP&L and the staff filed lengthy replies in opposition to Joint Intervenor's motion. Because of significant deficiencies in both the form and substance of the staff's reply, however, we found it necessary to strike all but a small portion of it from the record. ALAB-801, *supra* note 1, 21 NRC at 482-84. At the same time, we explained why staff input on certain matters with a potential impact on plant safety is essential to our disposition of Joint Intervenor's motion. *Id.* at 482, 485-86. We therefore requested the staff to provide additional, clarifying information and offered both LP&L and Joint Intervenor the opportunity to file further comments as well. *Id.* at 486-87. All parties have responded and, except for possibly relevant matters under investigation by the NRC's Office of Investigations (OI) (*see pp. 45-47, infra*), the record is now complete. For the reasons set forth below, we deny Joint Intervenor's November 8 motion to reopen the record in all respects save one: insofar as the motion raises issues that may relate to matters under investigation by OI, we are unable to rule and therefore leave that part of the motion for the Commission's resolution.³

I.

With the relatively recent plethora of motions to reopen, in both this proceeding and others, we have had frequent occasion to discuss the criteria that a movant must satisfy. The motion

must be timely and address a significant safety or environmental issue. It must also show that a different result might have been reached had the newly proffered material been considered initially.

³ In CLI-85-3, 21 NRC 471, the Commission authorized the issuance of a full-power license to LP&L to operate Waterford. The Commission explicitly stated that its decision was without prejudice to our consideration of this motion to reopen (as well as another then-pending motion concerning the base-mat). *Id.* at 472. *See also* 10 C.F.R. § 2.764(g). Accordingly, we have given no weight to the Commission's prior license authorization in deciding to deny Joint Intervenor's motion.

Joint Intervenor subsequently petitioned for judicial review and a stay of the Commission's decision. *Oystershell Alliance v. NRC*, No. 85-1182 (D.C. Cir. filed March 25, 1985). In an order issued April 3, 1985, the court denied the motion for stay.

ALAB-786, *supra* note 1, 20 NRC at 1089. "[B]are allegations or simple submission of new contentions" is not enough. *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-5, 13 NRC 361, 363 (1981).

At a minimum, . . . the new material in support of a motion to reopen must be set forth with a degree of particularity in excess of the basis and specificity requirements contained in 10 C.F.R. 2.714(b) for admissible contentions. . . . [I]t must be tantamount to evidence . . . [and] possess the attributes set forth in 10 C.F.R. 2.743(c) defining admissible evidence for adjudicatory proceedings. Specifically, the new evidence supporting the motion must be "relevant, material, and reliable."

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-775, 19 NRC 1361, 1366-67, *aff'd sub nom. San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984), *vacated in part and reh'g en banc granted on other grounds*, 760 F.2d 1320 (1985). See also *id.* at 1367 n.18.

A motion to reopen that raises previously uncontested issues — such as Joint Intervenors' motion here — must also satisfy the Commission's standards for admitting late-filed contentions. *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-82-39, 16 NRC 1712, 1714-15 (1982).⁴ The burden of satisfying all these requirements is heavy indeed. See *Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 NRC 320, 338 (1978). See also *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-85-7, 21 NRC 1104, 1106 (1985).

Because Joint Intervenors' motion raises quality assurance and management character and competence issues, it must also be considered in light of the guidance on those special issues provided in several recent decisions. For example, in *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 346 (1983), we pointed out that

[I]n any project even remotely approaching in magnitude and complexity the erection of a nuclear power plant, there inevitably will be some construction defects tied to quality assurance lapses. It would therefore be totally unreasonable to hinge the grant of an NRC operating license upon a demonstration of error-free construction.

⁴ Those five standards, embodied in 10 C.F.R. § 2.714(a)(1), are:

- (i) Good cause, if any, for failure to file on time.
- (ii) The availability of other means whereby the petitioner's interest will be protected.
- (iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.
- (iv) The extent to which the petitioner's interest will be represented by existing parties.
- (v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

Nor is such a result mandated by either the Atomic Energy Act of 1954, as amended, or the Commission's implementing regulations. What they require is simply a finding of reasonable assurance that, as built, the facility can and will be operated without endangering the public health and safety. 42 U.S.C. §§ 2133(d), 2232(a); 10 C.F.R. § 50.57(a)(3)(i). Thus, in examining claims of quality assurance deficiencies, one must look to the implication of those deficiencies in terms of safe plant operation. [Footnote omitted.]

To determine if the requisite reasonable assurance exists, two questions must be addressed: (1) whether all ascertained construction errors have been cured, and (2) even if so, whether there has nonetheless been so pervasive a breakdown in the QA procedures as to raise legitimate doubt about the overall safety of the facility. *Ibid.* Although these considerations were initially enunciated in the context of an appeal from a licensing board decision rendered after a hearing on QA, they are just as pertinent to the disposition of a motion to reopen on QA. See *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-750, 18 NRC 1205, 1209-11 (1983); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-756, 18 NRC 1340, 1344-45 (1983), *aff'd sub nom. San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984), *vacated in part and reh'g en banc granted on other grounds*, 760 F.2d 1320 (1985); *Diablo Canyon*, ALAB-775, 19 NRC at 1367.

We also had recent occasion to address the relationship between quality assurance deficiencies and the overall competence and character of an applicant's management.⁵ In *Houston Lighting & Power Co.* (South Texas Project, Units 1 and 2), ALAB-799, 21 NRC 360, 371-74 (1985), we expressly approved consideration of remedial measures directed to construction and related QA deficiencies as part of the appraisal of an applicant's character and competence. Further, the untimely listing of "historical examples" of alleged construction QA deficiencies has been found insufficient to warrant reopening of the record on the management character and competence issue. *Diablo Canyon*, ALAB-775, 19 NRC at 1369-70.

Keeping the requirements for motions to reopen and our own recent precedents on QA and management character and competence in mind, we now turn to Joint Intervenor's three proposed contentions and the numerous individual allegations offered as substantiation for each.

⁵ More than a decade ago, however, we recognized the importance of "managerial attitude" to an applicant's QA program — i.e., the willingness of company officials to implement the program to the fullest. *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-106, 6 AEC 182, 184 (1973).

II.

In ALAB-801, we noted "our preliminary view . . . that much of Joint Intervenors' motion to reopen falls of its own weight." 21 NRC at 481. Our further review of the matter confirms this. Although Joint Intervenors have attempted to support most of their individual charges with documentation, these exhibits are frequently lacking in substance or are deficient in some other respect. Many charges concern events that occurred years ago, and no effort has been made to show good cause why they were not raised earlier or to establish that the alleged problem was left uncorrected and continues today. Such charges could be rejected on the basis of untimeliness alone. Nonetheless, because of the overall seriousness of Joint Intervenors' allegations, our principal focus as to most of the individual charges, as well as the three broad proposed contentions, has been on their safety significance — i.e., the second of the traditional reopening criteria.

A. Quality Assurance

Joint Intervenors' first proposed contention states:

LP&L has failed to establish and implement an adequate quality assurance program in accordance with 10 CFR Part 50, Appendix B, throughout the life of construction of Waterford, which led to a serious, systematic breakdown of quality assurance. LP&L cannot now provide the required assurance that Waterford 3 has been constructed in accordance with all NRC requirements or that Waterford's construction is verified to be of adequate quality to protect the public health and safety. Therefore, the Commission cannot make the finding required by 10 CFR 50.57(a) necessary for issuance of an operating license for Waterford 3.

Joint Intervenors' Motion to Reopen (November 8, 1984) [hereafter, "Joint Intervenors' Motion"] at 4. Joint Intervenors advance 12 groups of charges in support of this contention, purportedly illustrating how LP&L's QA program, as implemented, has failed to satisfy all but two of the Commission's 18 quality assurance criteria in 10 C.F.R. Part 50, Appendix B. There are a total of 73 individual charges specifically linked to this contention, but essentially no argument is presented, presumably in the belief that the examples presented are self-explanatory.⁶ Each charge

⁶ We continue here the practice of referring to the specific allegations in Joint Intervenors' motion to reopen as "charges" and identify them by the same letter and number designations used by Joint Intervenors. See ALAB-801, 21 NRC at 485 n.15.

Charge A(1)(g) is addressed in our discussion of charge B(1) at pp. 45-47, *infra*, inasmuch as both concern matters possibly related to OI investigations. On the other hand, parts II.D and II.E of Joint Intervenors' motion contain argument that concerns construction QA at Waterford. Hence, we include these latter parts of the motion here, in our discussion of contention A, relating to quality assurance.

contains references to one or more of the exhibits filed with the motion to reopen. These exhibits consist primarily of documents or portions of documents generated by LP&L or the staff in connection with the construction and regulatory oversight of Waterford.⁷ Also included are three affidavits by persons employed at the plant during construction.⁸

On the surface, this marshaling and organization of materials in support of reopening on the quality assurance contention seem to satisfy the format standards we have suggested for such filings. See *Diablo Canyon*, ALAB-775, 19 NRC at 1368 n.22. But many of the individual charges have little or nothing to do with the Appendix B criteria with which they are matched in the 12 broader groupings of allegations. Other charges are related to one another or are duplicative. In order to facilitate our task in addressing all of Joint Intervenor's claims, we have considered each charge without regard to the particular Appendix B criterion or criteria with which it is linked. (In other words, Joint Intervenor's failure to connect a charge with the correct criterion is not fatal to their case.) We have also grouped for discussion those charges that are obviously related or raise the identical issue.

With respect to the substance of Joint Intervenor's QA charges, we have found that they fall into three categories: (1) those that portend a serious breakdown in LP&L's construction QA program; (2) those that could be indicative of QA failures, but upon analysis appear to be without merit or are isolated events of no generic or safety significance; and (3) those that, for a variety of reasons, are unsupported on their face. In the following sections, we discuss each category in turn and conclude that the record need not be reopened to explore LP&L's quality assurance program. As explained below, the evidence before us does not indicate either the existence of significant uncorrected construction errors,

⁷ This type of material is acceptable evidence in support of a motion to reopen. *Diablo Canyon*, CLI-81-5, 13 NRC at 363.

⁸ Because the three affiants wish to remain anonymous, the copies of their affidavits served on the parties have all identifying information expunged. The Board's three copies of each, however, are unexpurgated and have been kept under seal. Joint Intervenor also filed, simultaneously with their motion to reopen, a Motion for a Protective Order, under which complete copies of the affidavits would be made available to representatives of the parties on a restricted basis.

Although the staff contends that Joint Intervenor has not established a sufficient basis for a protective order, it does not object to the entry of such an order. NRC Staff's Response (December 21, 1984) at 1 n.2. Although a protective order would have permitted disclosure of more detailed information about the background of the allegations, it would not have significantly enhanced the substance of the charges themselves. As a consequence, LP&L has responded quite fully to most of the charges in the anonymous affidavits, and it opposes Joint Intervenor's request. Applicant's Response to Motion for Protective Order (November 30, 1984).

We commend Joint Intervenor for their handling of this matter in accordance with *Diablo Canyon*, ALAB-775, 19 NRC at 1367 n.18. In view of our decision denying almost the entirety of their motion to reopen, however, we need not decide whether the entry of a protective order would have been warranted here. Joint Intervenor's motion for a protective order is therefore denied as moot.

or a breakdown of the overall QA program sufficient to raise a legitimate doubt as to the capability of Waterford to be operated safely. See p. 15, *supra*.

1. The NRC relies upon an applicant's quality assurance program, and its implementation, to ensure that a nuclear power plant and its component parts are designed to acceptable criteria and standards, and that the plant and its components are constructed or fabricated in accordance with their design. See 35 Fed. Reg. 10,498 (1970); 10 C.F.R. Part 50, Appendix B. As a result of certain events and their subsequent investigation by the NRC staff, deficiencies were found in several fundamental areas of the LP&L quality assurance program at Waterford — hence raising a potentially significant safety problem. Relying largely on the staff documents that set forth these deficiencies, Joint Intervenor present a series of charges that depict a serious breakdown in the LP&L program. Specifically, these are: (1) inadequate QA staffing; (2) LP&L's abdication of responsibility for QA to contractors; (3) inadequate qualification of quality control (QC)⁹ and QA inspectors; (4) failure to identify trends indicative of generic quality problems; (5) failure to perform effective audits of QA performance; and (6) failure to manage and "to disposition" properly Nonconformance Reports (NCRs) and other types of deficiency reports.¹⁰

a. Because these charges derive their principal support from NRC staff documents, it is appropriate to review briefly the circumstances from which those documents originated. In the spring of 1982, LP&L was preparing to accept the first turnovers of plant systems from its architect-engineer and construction manager, Ebasco Services, Inc. The LP&L construction QA organization found serious QA deficiencies in the four systems in question and in the accompanying QA records. LP&L reported this "significant construction deficiency" to the NRC. Following an inspection, the Commission issued a Notice of Violation and imposed a \$20,000 civil penalty on LP&L, citing inadequate control of activities affecting quality — a violation of 10 C.F.R. Part 50, Appendix B, Criterion II. In particular, the Commission found a breakdown in the quality assurance chain involving LP&L, Ebasco, and the subcontractor whose work and quality control was in question, Mercury Company

⁹ "Quality control" is included within quality assurance and concerns "those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control [their] quality . . . to predetermined requirements." 10 C.F.R. Part 50, Appendix B, Introduction.

¹⁰ As is evident from the following discussion, some of these deficiencies are necessarily interrelated. For example, the fact that LP&L's own construction QA staff was not adequate was partly responsible for all of the other problems cited here.

of Norwood, Inc. But the Commission also took note of the corrective action (including training for Mercury craft and QA personnel) already initiated by LP&L. *JI Exh. 6, Inspection Report No. 50-382/82-14* (December 6, 1982) at 8-12, 13;¹¹ *NRC Staff's Response* (April 22, 1985) [hereafter, "Staff Response to ALAB-801"], *Constable Affidavit, Exh. 2* (Notice of Violation). LP&L's problems with Mercury continued, however, and in late 1983 the contract with Mercury was terminated, and Ebasco completed the remaining work of that subcontractor. *Staff Response to ALAB-801, Harrison Affidavit* at 7.

Early in 1984, as part of a series of plant inspections undertaken by the NRC's Office of Inspection and Enforcement (I&E), a Construction Appraisal Team (CAT) visited the Waterford site. This group found the areas inspected to be generally in accordance with safety requirements, but noted some quality assurance deficiencies — namely, the failure to take proper corrective action on problems previously identified by the NRC's Regional Office. *See JI Exh. 23, CAT Inspection Report No. 50-382/84-07* (May 14, 1984). At about the same time that the CAT was conducting its routine inspection of the plant, the NRC received approximately 350 allegations of construction and quality assurance deficiencies. The staff developed a Management Program to address the technical issues raised by those allegations. It also organized a Task Force of 40 persons who spent six weeks onsite, beginning in April 1984. *Board Notification No. 84-170* (October 12, 1984), *Waterford Safety Evaluation Report, Supplement No. 7* (September 1984) [hereafter, "SSER-7"], *Appendix J* at 2-3.¹²

By May this group had resolved most of the allegations, but there remained 23 issues with "potential safety implications" requiring further input from LP&L and review by the staff. These 23 issues are set forth in a June 13, 1984, letter from D. G. Eisenhut (then NRC Director of Licensing) to J. M. Cain, President and Chief Executive Officer of LP&L [hereafter, "Eisenhut Letter"]. *See JI Exh. 9*. Although the deficiencies that make up the 23 residual problem areas involve a wide range of activities and organizations at Waterford (i.e., LP&L, Ebasco, and various subcontractors), 10 of them relate to the work of Mercury, the subcontractor that had been the focus of the 1982 civil penalty

¹¹ "JI Exh." refers to exhibits submitted with Joint Intervenor's November 8, 1984, motion to reopen. "LP&L Exh." refers to those submitted with Applicant's Answer to Joint Intervenor's Motion to Reopen (November 30, 1984) [hereafter, "Applicant's Answer"], and "LP&L Supp. Exh." denotes those filed with Applicant's Supplemental Comments (April 10, 1985).

¹² The Task Force also included members of an NRC Inquiry Team organized in the summer of 1983 to investigate QA allegations reported in a local New Orleans weekly. *SSER-7, Appendix J* at 3. *See id.*, Attachment 6, Appendix A at 1.

action. LP&L and the staff held several meetings during the summer of 1984, and by December 1984, LP&L had, in the staff's view, adequately answered the 23 remaining questions. Staff Response to ALAB-801, Harrison Affidavit at 13-14. The staff's evaluation of the LP&L responses, Supplement No. 9 to the Waterford Safety Evaluation Report [hereafter, "SSER-9"], was made available in January 1985. See Board Notification No. 85-006 (January 14, 1985).¹³

Two other staff documents have a bearing on the matters raised by Joint Intervenor's motion. The Waterford Task Force issued Inspection Report No. 50-382/84-34 (July 20, 1984). See JI Exh. 5. There the staff noted LP&L's past problems, but concluded that its QA program is generally adequate except for several items also raised in the Eisenhower Letter and still "open" at that time. In SSER-7, the staff reported its findings on the some 350 allegations brought to its attention in early 1984. Most items were resolved in a manner acceptable to the staff and closed out — again, except for those related to matters discussed in the Eisenhower Letter and those that were referred to OI. See, e.g., ALAB-801 21 NRC at 485-86.

b. In the following pages we explore the various major problem areas that resulted in the apparent breakdown in LP&L's quality assurance program.

(1) *Staffing*: In A(1)(b), Joint Intervenor's charge that LP&L failed to maintain adequate QA staffing during the construction of Waterford, despite warnings about this potential problem in an internal audit. See also Joint Intervenor's Response to ALAB-801 (May 6, 1985) at 15-17. They rely on four exhibits for support: (1) a July 31, 1979, draft of a report prepared by Management Analysis Company ("MAC Report") and internal memoranda discussing the report — JI Exh. 1; (2) Waterford Task Force Inspection Report No. 50-382/84-34 — JI Exh. 5; (3) Inspection Report No. 50-382/82-14 — JI Exh. 6; and (4) a February 16, 1978, internal LP&L memorandum suggesting the addition of another QA engineer — JI Exh. 7.¹⁴

There is no real dispute that LP&L's construction QA staff was not large enough for the task it faced. Further, the MAC Report apprised LP&L of the disadvantages of this situation, but LP&L took no action

¹³ In ALAB-801, 21 NRC at 485, we noted the relevance of SSER-9 to many of the issues raised in this proceeding and requested the staff's affidavit attesting to the validity of the factual material contained in this document. The staff subsequently provided this, and vouched for SSER-7 as well. See Staff Response to ALAB-801, Crutchfield Affidavit at 5.

¹⁴ Joint Intervenor's have failed to provide specific page references to JI Exhs. 1, 5, and 6. See p. 42, *infra*. Nonetheless, we were able to locate the sections of each document pertinent to charge A(1)(b). As for JI Exh. 7, Joint Intervenor's do not explain what difference one more person would have made to LP&L's rather lean construction QA staff.

until the breakdown involving Ebasco and Mercury was clearly identified. Indeed, had there been greater attention to the warnings of the MAC Report earlier, the breakdown likely would not have occurred and the 1982 civil penalty action would not have been necessary. See JI Exh. 5 at II-13 to II-14, V-4 to V-7; Staff Response to ALAB-801, Harrison Affidavit at 46-47, Constable Affidavit at 2-11. See also JI Exh. 6 at 8, 12.¹⁵

LP&L, however, cannot turn back the clock and enlarge the QA staff that oversaw construction at the Waterford site. Our focus, then, must be on whether any significant construction deficiencies resulted and remain as a consequence of LP&L's inadequate staffing, and whether LP&L has taken steps to prevent understaffing in the future. As explained below, we are persuaded by the record here that there are no significant construction defects at the Waterford facility. Further, LP&L now appears to be more sensitive to the need for an adequate in-house QA staff and has accordingly increased its construction and, more important, its operational QA staff. See Staff Response to ALAB-801, Harrison Affidavit at 47-48. See also pp. 53-54, *infra*. Thus, although inadequate staffing has been a root cause of many of LP&L's QA problems, this seems to be a "lesson learned." See LP&L Supp. Exh. 1, Attachment, Table 2, Issue 23c.

(2) *Abdication of Responsibility*: Joint Intervenor's charge A(1)(h) states that, as is evident from the problems in the first systems turnover packages, LP&L effectively abdicated its QA responsibilities to Ebasco during early design and construction work at the plant. As support for this charge, they rely on Inspection Report No. 50-382/82-14, where the turnover problems are described. See JI Exh. 6 at 8-12.¹⁶

Delegation of QA activities is acceptable under the NRC's regulations, so long as an applicant bears the ultimate responsibility for QA perform-

¹⁵ Joint Intervenor's place undue weight, however, on the MAC Report itself, in connection with this and other charges. It is, of course, noteworthy that LP&L did not heed the recommendations of its own consultant. But the MAC Report, though broad in scope, is limited in specifics. It is a 30 man-day study, only seven pages in length. Its importance should not be elevated above what is warranted.

Joint Intervenor's also err in suggesting that LP&L should have disclosed the MAC Report to the NRC under 10 C.F.R. § 50.55(e). See Joint Intervenor's Response to ALAB-801 at 16 n.9. That provision requires the reporting of construction and design deficiencies (including a significant breakdown in the QA program) that, if left uncorrected, could affect the safe operation of the plant. But the MAC Report is simply a collection of 15 "Observations and Recommendations" on the broad topic of "Construction Monitoring." It does not identify any specific construction deficiency subject to the reporting requirements of 10 C.F.R. § 50.55(e).

¹⁶ Joint Intervenor's also rely on JI Exh. 3, Ebasco's Quality Assurance Manual for Waterford, dated October 15, 1975. The exhibit is lengthy and no particular portion of it has been called to our attention. See p. 42, *infra*. Further, Joint Intervenor's have failed to explain what purpose the exhibit is to serve or what point is made in relying on it. Serving up exhibits in this fashion — as Joint Intervenor's have done in numerous instances in connection with their motion to reopen — contributes nothing of value to the proceeding.

ance and is able to assure itself that its delegate is performing adequately. 10 C.F.R. Part 50, Appendix B, Criterion I; *Commonwealth Edison Co.* (Byron Nuclear Power Station, Units 1 and 2), ALAB-793, 20 NRC 1591, 1598 (1984). As a consequence of its inadequate construction QA staff, discussed above, until 1982 LP&L was forced to rely heavily for QA performance on its construction manager, Ebasco. In and of itself, this heavy reliance does not present a QA problem. But the Mercury breakdown showed that Ebasco had failed to implement its own QA program fully. Thus, LP&L could not provide the assurance that its delegate was performing properly. See Staff Response to ALAB-801, Harrison Affidavit at 48-49; JI Exh. 6 at 8-12. Although this was serious enough to lead to LP&L's 1982 civil penalty for failure to control its QA activities (Criterion II), it does not demonstrate an abdication of QA responsibility by LP&L (Criterion I). See Staff Response to ALAB-801, Constable Affidavit, Exh. 2.

For one thing, it was LP&L's QA staff that discovered and reported to the NRC the deficiencies in the four turnover packages from Ebasco. *Id.*, Harrison Affidavit at 49; JI Exh. 6 at 10.¹⁷ As corrective action, LP&L organized a Task Force to review the safety-related work of all contractors in addition to Mercury. These contractors and Ebasco each performed 100 percent walkdowns of all systems prior to turnover, and LP&L performed sampling inspections of all systems during walkdowns. Deficiencies discovered during the walkdowns were documented and later corrected. Staff Response to ALAB-801, Harrison Affidavit at 34-36. Thus, although it originally relied too heavily on Ebasco, LP&L's QA staff ultimately performed its function of identifying and correcting deficiencies in the quality of construction at the facility. We are therefore unable to find any basis in this record for Joint Intervenor's charge that LP&L "abdicated" its QA responsibilities to Ebasco.¹⁸

(3) *Qualification of Inspectors.* In charge A(1)(c), Joint Intervenor's question the qualifications and training of QA and QC personnel employed during construction at Waterford. They rely on the Eisenhower Letter as support for this charge.¹⁹ Although Joint Intervenor's have not

¹⁷ LP&L's role in bringing this problem to the NRC's attention led to the assessment of a penalty one-half the amount that ordinarily would have been levied. Staff Response to ALAB-801, Constable Affidavit, Exh. 2 at 2.

¹⁸ Although Joint Intervenor's limit charge A(1)(h) to construction activities, we also see no evidence of an abdication of QA responsibilities by LP&L at the operational phase. Indeed, LP&L's management now appears to recognize the need for active involvement in QA oversight. See *id.*, Harrison Affidavit at 44-45; LP&L Supp. Exh. 1, Attachment, "Operational Phase QA Program Assessment."

¹⁹ Joint Intervenor's also rely on an affidavit of an anonymous former construction worker at Waterford (see note 8, *supra*) and the transcript of a public meeting held on August 17, 1984, between the NRC staff and representatives of LP&L to discuss LP&L's response to the Eisenhower Letter. See JI Exhs. 8, (Continued)

specified the parts of that letter pertinent here, Issues 1, 10, and 20 concern the qualifications of various inspection personnel. See JI Exh. 9, Enclosure at 1, 7-8, 12. In part D(2) of their motion, Joint Intervenor raises a related objection to the manner in which LP&L proposed to (and did) respond to Issues 1, 10, and 20. Joint Intervenor asserts that LP&L would rely on contractor certification or background checks, rather than formal QA documentation, to verify the credentials of the QA/QC inspectors employed by LP&L, Ebasco, and their subcontractors. They also claim that LP&L refused to perform 100 percent reinspection of work previously inspected by personnel who could not be shown to be qualified. According to Joint Intervenor, the staff's acceptance of the verification program proposed by LP&L in response to the Eisenhower Letter results in the use of a more lenient standard at Waterford than applied to plants with assertedly similar QA problems, such as Zimmer and Midland. Joint Intervenor's Motion at 37-38. See also Joint Intervenor's Motion for Leave to File Reply (January 25, 1985) [hereafter, "Joint Intervenor's Reply"] at 15-19.²⁰

The significance of Joint Intervenor's arguments is that an inspection by an unqualified person may be tantamount to no inspection at all, and thus, the quality of the work inspected is indeterminate. See, e.g., JI Exh. 9, Enclosure at 1. Issues 1, 10, and 20 of the Eisenhower Letter set forth certain discrepancies or deficiencies found by the staff in the qualifications of some inspection personnel relied on by LP&L during the construction of Waterford. *Id.* at 1, 7, 12. According to LP&L, the cause of these problems was the inconsistent and often undocumented application of the qualification standard that permits substitution for education and experience, ANSI [American National Standards Institute] N45.2.6-1973. LP&L Exh. 12 (rev.) at 1-5. As corrective action, the staff required LP&L to "(1) verify the professional credentials of 100% of the site QA/QC personnel, including supervisors and managers, (2) reinspect the work performed by inspectors found unqualified, and (3) verify the proper certification of the remaining site QA/QC personnel to ANSI N45.2.6-1973." JI Exh. 9, Enclosure at 1. See also *id.* at 8, 12.

10. Neither, however, provides any support for charge A(1)(c). The affidavit contains allegations concerning the lack of qualifications of certain personnel (e.g., welders and maintenance workers), and assertions about inadequacies in QC coverage. But we see nothing in the affidavit about the qualifications of inspection personnel. As for the transcript, once again Joint Intervenor has failed to refer to the particular portions of this 171-page document that assertedly support charge A(1)(c). See p. 42, *infra*. This is despite the fact that, prior to the filing of Joint Intervenor's motion to reopen, we criticized the staff for submitting this same document to us without an explanation of its purpose and relevance to the matters then before us. See ALAB-786, 20 NRC at 1092 n.8.

²⁰ In ALAB-801, 21 NRC at 488, we granted Joint Intervenor permission to file this pleading to the extent it contained comments on Issues 1, 6, and 22 in the Eisenhower Letter and SSER-9. We also accepted the staff's and LP&L's responses to same.

LP&L submitted extensive replies to this staff request. See LP&L Exhs. 7, 12 (rev.), 17 (rev.). The staff likewise undertook a comprehensive review of LP&L's program to address the inspector qualification matters raised by the Eisenhut Letter. The staff concluded that LP&L had identified all unqualified site QA/QC inspection personnel, and that, where necessary, appropriate corrective action was taken. No significant rework, however, was required. See SSER-9, Appendix J at 7-18, 51-52, 75-76.

Contrary to Joint Intervenor's claims, the credentials of 100 percent of the persons who performed safety-related QA/QC inspections onsite were reviewed under LP&L's program, as required by the Eisenhut Letter. Background checks with former employers, schools, etc., were made, but for the purpose of verifying further or supplementing site personnel files that were no longer complete because the construction workforce was largely demobilized. Once the personal data were collected from the best available sources, they were measured against the appropriate standard and individual inspectors were judged qualified or unqualified. See LP&L Exh. 12 (rev.) at 1-1 to 1-4. See also Applicant's Answer to Joint Intervenor's Motion (November 30, 1984), Responses to Specific Allegations [hereafter, "LP&L's Responses to Specific Allegations"] at 81.

Although the staff initially required LP&L to "reinspect the work performed by inspectors found unqualified," actual reinspection was determined not to be necessary in all cases. See JI Exh. 9, Enclosure at 1. See also NRC Staff's Further Response (February 28, 1985), Harrison Affidavit at 15-16. Where records revealed that duplicate inspections by qualified inspectors had been performed, there was no need for yet another reinspection. See, e.g., SSER-9, Appendix J at 51; LP&L Exh. 17 (rev.) at 10-4. A sampling approach was used with respect to nine unqualified inspectors responsible for QA on structural welding of HVAC (heating, ventilating, and air conditioning) duct supports. The work on all reinspected welds in a sample of 220 was found acceptable providing a sufficient level of confidence to the staff that the remainder of the work covered by these inspectors was adequate. See SSER-9, Appendix J at 17; NRC Staff's Further Response, Harrison Affidavit at 26. See also LP&L Exh. 12 (rev.) at O-2. In other instances, actual testing and non-destructive examination of the hardware or system, along with the nature of the work actually performed and the on-the-job training of the individuals who conducted the inspection, were considered by the staff. See, e.g., SSER-9, Appendix J at 12-13; NRC Staff's Further Response, Harrison Affidavit at 20-21. See also LP&L Exh. 12 (rev.) at I-2 to I-3.

On the other hand, 100 percent of the "N1" instrument tubing installed by Mercury — the principal source of the QA problems identified in 1982 — was reinspected. Only minor discrepancies, requiring little rework, were found in this instrumentation, which is vital to the safe shutdown of the plant. SSER-9, Appendix J at 13. With respect to the "N2" installations — which are required to maintain pressure boundary integrity but otherwise are not directly safety-related — the staff noted that 100 percent of those installed before July 1982 had already been reinspected. Although some inspectors whose qualifications were in question might have participated in those reinspections, the favorable results of the N1 reinspection program provide additional assurance of the quality of Mercury's N2 installations. Still further, the systems containing this equipment were tested and independently inspected, with acceptable results. *Id.* at 13-14; NRC Staff's Further Response, Harrison Affidavit at 21-22.

As a result of the work discussed above, we are not persuaded by Joint Intervenor's criticism of LP&L's verification program and the staff's acceptance of it, as described in SSER-9. *See* Joint Intervenor's Reply at 15-19.²¹ They have taken statements out of context or given them a strained reading in order to support their thesis that adequate reinspections have not been performed.²² The effort undertaken by LP&L to verify the qualifications of the QA/QC inspectors at Waterford and, where that was not possible, to verify the quality of their work, was extremely thorough. Its submission to the NRC — LP&L Exhs. 7, 12 (rev.), and 17 (rev.) — essentially includes an evaluation of the work of every inspector (or group of inspectors) whose qualifications could not be documented. The staff's own assessment of this material is likewise extensive. We see no basis for Joint Intervenor's claim that the staff has applied more lenient standards than applied at other plants such as Zimmer and Midland. Indeed, the comparison is inapt because, unlike the situation at Waterford, the QA deficiencies identified at those facilities extended well beyond primarily documentation problems to actual hardware deficiencies, requiring significant rework. NRC Staff's Further Response, Harrison Affidavit at 13-14, 26. *See, e.g., Cincinnati Gas & Electric Co.* (William H. Zimmer Nuclear Power Station), CLI-82-33, 16 NRC 1489 (1982). Accordingly, on the basis of the record here, we

²¹ The staff's response to this criticism is exceptionally detailed and convincing. *See* NRC Staff's Further Response, Harrison Affidavit at 15-27.

²² Joint Intervenor's also complain that SSER-9 does not indicate the percent of inspectors in each category that were found to be unqualified. We agree with the staff that, regardless of whether it is one or 100 percent, the important thing is that all these individuals have been identified and appropriate corrective action has been taken. *Id.* at 17.

share the staff's conclusion that the matter of inspector qualifications has been satisfactorily resolved. This is not a significant matter warranting reopening of the record.

(4) *Trends*: In several charges — A(1)(p), A(10)(c) (in part), and A(10)(e) — Joint Intervenor assert that LP&L failed to trend QA problems so as to identify pervasive or generic deficiencies in the quality assurance program. They cite, without specific page references, to CAT Inspection Report No. 50-382/84-07 and the Eisenhower Letter as support for this claim. See JI Exhs. 23, 9.²³

Since 1974, LP&L has had in effect a three-phase program, under the responsibility of Ebasco, to analyze Nonconforming Condition (or Nonconformance) Reports (NCRs) for repetitive and widespread QA problems. LP&L's Responses to Specific Allegations at 18-20. The CAT Inspection Report, on which Joint Intervenor rely, found this program to be generally adequate. See JI Exh. 23 at VIII-3, VIII-4.²⁴ Issue 23 of the Eisenhower Letter, however, notes that LP&L's failure to determine the root cause of the Ebasco-Mercury breakdown allowed QA problems to continue. JI Exh. 9, Enclosure at 14. Compare SSER-7, Appendix J at 85, with *id.* at 98, 100. See also Staff Response to ALAB-801, Harrison Affidavit at 5-6.

Despite these problems in LP&L's trending program, the staff now "is satisfied that deficiencies in the performance of trending during construction did not have an impact on either the quality of construction or the safety of the plant." *Id.* at 59. The staff's satisfaction is based on the fact that nonconforming conditions were identified by the QA program and ultimately resolved properly. *Ibid.* See pp. 29-31, *infra.* Furthermore, LP&L considers this a major lesson learned. LP&L Exh. 5 at 23-9, 23-10. Consequently, it has improved and incorporated trending procedures in its operational QA program. It is noteworthy that, under these procedures, LP&L's senior management — i.e., its General Vice President for Nuclear Operations — oversees this program through

²³ Joint Intervenor also rely on JI Exh. 12, another affidavit from an anonymous former worker at Waterford, a QA engineer. Nothing in this affidavit, however, concerns LP&L's alleged failure to trend QA problems.

²⁴ The only references to trending of QA problems that we could locate in the CAT Inspection Report are in Section VIII. (The principal concern of this report is LP&L's failure to take corrective action in five areas previously identified as problems by the NRC. We discuss this matter in connection with Joint Intervenor's charge B(4) at pp. 51-53, *infra.*) Section VIII of the report briefly addresses a three-month lapse in the procedures for trending NCRs. The CAT concludes that this is not a major concern because the NCRs in question eventually did become part of the data base for the Ebasco quarterly trend analysis. JI Exh. 23 at VIII-3. The report also notes that Discrepancy Notices (DNs) and the like were not included at all in the data base. Although no omitted item was found to have safety significance, the CAT observes that "some repetitive problems may not be analyzed to preclude recurrence." *Id.* at VIII-4.

review of quarterly trending reports. LP&L Supp. Exh. 1, Attachment, "Operational Phase QA Program Assessment" at 16-18. The staff has reviewed LP&L's operational QA trending program and "believes that this program affords the necessary controls, during the operations phase for the proper trending of nonconformance, audit and other data. Staff Response to ALAB-801, Harrison Affidavit at 51. In these circumstances, there is no basis for reopening.

(5) *Audits:* Joint Intervenors contend that the audits of construction work at Waterford were ineffective for several reasons: they were not documented properly, not conducted in accordance with specified procedures, and, in some cases, not done at all. See charges A(12)(a), A(12)(b), and A(12)(c). Joint Intervenors find support for these charges in Inspection Report No. 50-382/82-14, which was the basis of the 1982 civil penalty assessed against LP&L for the Ebasco-Mercury QA breakdown. See JI Exh. 6 at 7-10.

There is little doubt that the implementation of LP&L's audit program was lacking and led to the 1982 QA breakdown. Mercury's audits were not comprehensive and did not pick up failures in QA and construction procedures. Ebasco did not recognize trends in the Mercury nonconformances and inadequacies in the Mercury audits. LP&L, because of its staffing problems (see pp. 20-21, *supra*), only belatedly came to realize its contractors' deficiencies. Further, even after 1982, problems persisted and some corrective actions were insufficient. Staff Response to ALAB-801, Harrison Affidavit at 4-7, 17-18. Although Joint Intervenors do not rely on them, the Eisenhower Letter (Issue 23) notes these auditing problems, and SSER-7 (allegation A-48) documents the details of the auditing program failures. JI Exh. 9, Enclosure at 14; SSER-7, Appendix J at 96-100.

Given these serious deficiencies, two pertinent questions arise. Are the auditing failures responsible for actual hardware or workmanship deficiencies that may remain unidentified and uncorrected? What assurance is there that these auditing failures will not recur? In addressing LP&L's submission on Issue 23 of the Eisenhower Letter, the staff concluded generally that the "shortcomings" that existed in LP&L's QA program have been identified and adequately remedied. SSER-9, Appendix J at 85. In response to our request in ALAB-801, 21 NRC at 485-87, for further clarification on this conclusion, the staff has elaborated.

Focusing on the work of Mercury, the staff states that virtually all of the auditing deficiencies identified in SSER-7 were substantiated. Staff Response to ALAB-801, Harrison Affidavit at 17. Nonetheless it concludes "that these issues do not have safety significance." *Id.* at 18. The principal reason for the staff's conclusion is the extensive reinspection

of Mercury's work, which resulted in only "discretionary rework" to correct "minor problems." *Id.* at 18-19. See p. 25, *supra*. The staff also finds additional assurance of the quality of Mercury's work in, among other things, still more inspections and QA documentation reviews performed by qualified Ebasco personnel, the several NRC inspection teams, and the independent Authorized Nuclear Inspector (ANI);²⁵ plant system walkdowns; and satisfactory completion of various tests of Mercury systems. Staff Response to ALAB-801, Harrison Affidavit at 20.

With respect to the work of subcontractors other than Mercury, the staff "determined that these audit programs were generally effective, unlike the audit programs for Mercury installations." *Id.* at 21. They identified problems, which led, in turn, to timely corrective action. Ebasco's audits of these contractors were found to be "generally adequate," and LP&L's audits — while not in full compliance with the schedule and commitments set by LP&L itself — provided further assurance of the quality of the work of these subcontractors. The staff's overall conclusion, reflected in several specified staff inspection reports, is that the audits of these QA programs were effective. *Id.* at 21-23. As for the operations phase at Waterford, the staff is satisfied that "a comprehensive QA audit program is in place and that a realistic audit schedule is being implemented." *Id.* at 52. See LP&L Supp. Exh. 1, Attachment, "Operational Phase QA Program Assessment" at 3-7, 24-25.

Audits are an important element of an applicant's overall QA program and are required by 10 C.F.R. Part 50, Appendix B, Criterion XVIII. Nonetheless, as the staff has explained, through the systematic sampling of various work and the QA documentation for it, audits provide but a third level of assurance. The principal levels of assurance are provided by, first, quality craftsmanship and, second, quality inspections. Staff Response to ALAB-801, Harrison Affidavit at 16-17. The record here shows that auditing deficiencies existed only with respect to the work performed by Mercury. But as to that work, the first and second levels of assurance were, in fact, provided. This is demonstrated by the absence of significant safety deficiencies in the improperly audited Mercury work, as revealed by the major reinspection of that work that was undertaken by qualified personnel. Further, there is no basis for assuming that the implementation of future audits under LP&L's auspices will reflect the same failures associated with the audits of Mercury's work. Ac-

²⁵ The ANI is the agent of a state, municipality, or insurance company authorized to write boiler and pressure vessel insurance, and is qualified to conduct specified inspections. See ASME [American Society of Mechanical Engineers] Boiler and Pressure Vessel Code, Section III, Article NCA-5000 (July 1983).

cordingly, we conclude that Joint Intervenors' charges in connection with LP&L's audit program do not warrant reopening of the record.

(6) *NCRs*: Nonconformance Reports (NCRs) and other documents such as Discrepancy Reports (DRs), Engineering Deficiency Notices (EDNs), Field Change Requests (FCRs), and Design Change Notices (DCNs) are generated in a QA program to identify and to record discrepant or changed conditions. In general, these documents result from the work of QC inspectors. Proper dispositioning of these reports is a vital part of a QA program, because it is through this process that the suspect condition is eventually corrected or, in some cases, judged by a qualified person to be acceptable in spite of the discrepancy. See 10 C.F.R. Part 50, Appendix B, Criteria XV, XVI. For example, a weld that is undersized according to a governing standard may nevertheless be determined by analysis to be adequate for the particular service intended, and hence properly dispositioned "use-as-is."

The organizational level at which a deficiency may be dispositioned is governed by QA program procedures. Under certain circumstances, a condition first noted as a discrepancy (to be resolved perhaps by a subcontractor) must be upgraded to an NCR (resolvable only by the construction manager). In general, upgrading to a higher level means that more documentation and analysis are required for disposition. In addition, certain NCRs must be evaluated for reportability to the Commission under 10 C.F.R. § 50.55(e) and 10 C.F.R. Part 21. Failing to upgrade when required is itself a program nonconformance and, more important, involves the risk that a discrepant condition will not be properly evaluated and corrected.

Joint Intervenors raise several charges related to LP&L's treatment of NCRs and the like, relying on the Eisenhower Letter, presumably Issues 4, 6, and 13. See JI Exh. 9, Enclosure at 2-4, 5-6, 9.²⁶ In charges A(10)(a), A(10)(b), A(10)(c) (in part), and A(10)(f), they claim that LP&L failed to identify, through NCRs, serious nonconforming conditions; to upgrade lower-tier documents to NCR status; and to disposition NCRs properly. Joint Intervenors also assert, in charges D(3) and D(4), that LP&L's response to the Eisenhower Letter did not constitute an adequate review of the pertinent documentation or meet even the NRC's

²⁶ Joint Intervenors also cite two other exhibits. One, JI Exh. 40, is a one-page, illegible, handwritten memorandum from an unidentified source. The only words discernible are "loss of coal dust." Obviously, we can give this "document" no weight. The other exhibit, JI Exh. 43, is a 1977 NCR for certain piping material. Joint Intervenors offer no explanation of the purpose this single exhibit is to serve. Thus, it too is accorded no weight. See also LP&L's Responses to Specific Allegations at 53.

minimal requirements. Joint Intervenor's Motion at 38-39; Joint Intervenor's Reply at 19-21.²⁷

SSER-9 thoroughly addresses the NCR-related concerns raised by Joint Intervenor's charges and first described in the Eisenhut Letter. In Issue 4, the staff documented a number of examples of lower-tier documents that were not upgraded to NCRs — as they should have been. See JI Exh. 9, Enclosure at 3-4. The staff initially requested LP&L to review all of the pertinent lower-tier documents to assure that proper corrective action (including reporting to the NRC) was taken. *Id.* at 4. But LP&L proposed a modified sampling approach, which the staff found to be "conservative" and acceptable. SSER-9, Appendix J at 25-26.²⁸ Further, the staff considered LP&L's review team to be experienced and competent. Although LP&L acknowledged that there had been procedural and misinterpretation problems in the handling of hardware discrepancies, the staff found good engineering practice, appropriate corrective action where necessary, and no actual hardware deficiencies that raise a safety concern. *Id.* at 26. See generally LP&L Exh. 9.

Issue 6 of the Eisenhut letter involves mainly the dispositioning of Ebasco NCRs. The staff's random review of these documents revealed that about one-third contained "questionable dispositions." JI Exh. 9, Enclosure at 5. The staff again provided examples of problem documents, including 23 Mercury NCRs. Consequently, the staff directed LP&L to propose a program to assure that all NCRs and DRs had been properly upgraded and dispositioned, and to correct any problems discovered. *Id.* at 5-6. Although the staff subsequently agreed to accept less than a 100 percent detailed review of these reports, after problems were encountered in the review process, LP&L then examined *all* NCRs (including over 7000 generated by Ebasco). Depending on the type of problem identified, some NCRs received a further in depth review. NRC Staff's Further Response, Harrison Affidavit at 28-29. A sampling approach was used for the lower-tier DRs, however. But of the 2,029 DRs reviewed, only 33 problems were identified and they were all administrative in nature. *Id.* at 29-30.

The staff found that program deficiencies did exist: the whole NCR system was complicated, the guidelines for implementation were not specific enough, and some documentation was lacking or indeterminate.

²⁷ Joint Intervenor's also casually allege in this section of their motion to reopen that LP&L has made efforts to undermine an unspecified OI investigation. Joint Intervenor's Motion at 39. They neither explain nor support this accusation. It therefore warrants no discussion.

²⁸ LP&L's review included all of the lower-tier documents specifically identified by the staff and approximately 900 of 32,000 other documents. This sample included only safety-related components, but otherwise was random. LP&L Exh. 9 at 4-3, 4-4.

SSER-9, Appendix J at 32-35.²⁹ Notwithstanding these deficiencies, the staff concluded that "the problems with NCRs and DRs have been identified and properly resolved." *Id.* at 35. The key to this finding was the absence of hardware problems and safety-significant issues. *Ibid.* See generally LP&L Exh. 8.

Thus, although substantial problems in the implementation of LP&L's NCR system existed, the review of the documentation generated by that system has been extensive. Where a sampling approach, rather than a complete review, was undertaken, it was justified, given the total number of documents potentially involved and the absence of any serious safety problems in even the documents originally identified by the staff as questionable. Further, the programmatic deficiencies that were discovered are addressed by LP&L's newly revised operational QA program. See LP&L Supp. Exh. 1, Attachment, "Operational Phase QA Program Assessment" at 10-15. In the circumstances, we have no cause to reopen the record for further pursuit of this matter.

2. In the second category of charges in contention A are those that ostensibly might indicate some quality assurance failures. However, after closer analysis of these charges themselves, as well as the rejoinders of LP&L and the staff (including SSER-9), we conclude that they are meritless. Further, even if these charges were to have substance, they are but isolated incidents of no generic or safety significance. As in the case of the more serious charges discussed in part II.A.1, we have grouped related or identical charges and discuss each grouping below.

a. Charges A(1)(d) (in part), A(7)(e), and A(7)(f) assert that special processes like welding were not performed in accordance with proper procedures. For example, Joint Intervenors claim that half of the welding on some two million feet of stainless steel tubing for the containment instrument lines was not "purged" of atmospheric contamination. As a consequence, "sugaring" (oxidation) formed on weld surfaces, leading to possible future cracking of the weld itself. Joint Intervenors also allege that welds were not cooled sufficiently between "passes" because of management pressure to speed up. The principal support for these charges of welding deficiencies is the affidavit of a former worker at the site. See JI Exh. 8 at 5-6.³⁰

²⁹ Issue 13 of the Eisenhut Letter specifically addressed the matter of missing NCRs. JI Exh. 9, Enclosure at 9. But the NCRs identified as missing had, in fact, been entered into the NCR system and were adequately dispositioned. The initial inability to locate them was attributed to the cumbersome NCR procedures. SSER-9, Appendix J at 59-60.

³⁰ Joint Intervenors also rely on the MAC Report, JI Exh. 1. But this document makes only the briefest reference to a general need for LP&L to assure that any problems with welding be resolved.

We note at the outset that the reliability of the alleged's claims is somewhat suspect. The informer's assertion that there are about two million feet of stainless steel tubing for the containment instrumentation is greatly overstated. The total amount of stainless steel tubing is actually about 121,000 feet, of which only 12,000 feet is safety-related tubing located in the containment building. Second, purging of the tubing is not required before welding in this instance. Mercury initially purged the tubing but discontinued this practice because it was unnecessary for the socket welds in question: the geometry of this type of weld does not expose the molten metal to the air inside the tube during the welding process. Further, sugaring was minimized by the use of special portable welding equipment with a very stable electrical current output. In the relatively few instances where some sugaring was detected, the welds were cut out and replaced. There is also no specific requirement for a certain amount of time to elapse between each welding pass. The only requirement is that the temperature not exceed 350°F before the second pass. This can be achieved within a few seconds. LP&L's Responses to Specific Allegations at 42a-42b (renumbered per revision attached to Letter to Appeal Board from B. W. Churchill (December 18, 1984)).³¹

It is also important to note, in this connection, that Mercury's work on the instrumentation lines here in question has been subjected to extensive reinspection and testing with satisfactory results. See pp. 25, 27-28, *supra*.

b. Joint Intervenors, in charges A(1)(d) (in part), A(1)(m) (in part), and A(7)(a), contend that welding and instrumentation work were not performed by qualified individuals. In particular, they claim that welders were not tested onsite and that pipefitters were substituted for welders. See JI Exh. 8 at 3, 10.³² See also Joint Intervenors' Reply at 21; Joint Intervenors' Response to ALAB-801 at 4-5.

Joint Intervenors fail to explain the significance of offsite testing of welders. LP&L acknowledges that this occurred, explaining that offsite testing was often more efficient and is acceptable under the ASME (American Society of Mechanical Engineers) Code. LP&L also states that some pipefitters are skilled and qualified to perform welding, but only those who passed welding tests were permitted to weld. LP&L's Responses to Specific Allegations at 40. With respect to instrumentation, union craftsmen, extensively trained onsite in an apprentice program,

³¹ We note that the NRC's Regulatory Guide 1.44, "Control of the Use of Sensitized Stainless Steel" (May 1973), at 1.44-2 lists the limiting of interpass temperature as just one of several techniques recommended to control the sensitization of stainless steel during welding.

³² Joint Intervenors again rely on the MAC Report, JI Exh. 1, but it contains no discussion of welder qualifications.

performed this work. It was also inspected and audited by site QA and QC personnel. *Id.* at 14.

The subject of welders' qualifications was reviewed in depth by the staff and LP&L because of concerns identified by the staff in Issues 9 and 22 of the Eisenhut Letter. See JI Exh. 9, Enclosure at 7, 13. Issue 9 involved missing documentation for some support welds on instrumentation cabinets, raising the question of whether all of the welders who performed this work were qualified. In response to the staff's request, LP&L reinspected 17 of the 18 cabinets and located some of the missing documentation. The staff then reviewed a sample of LP&L's work. The results of the reinspection and review showed that the welding was adequate to meet all expected loadings and that no rework was necessary. The staff also concluded that the generic aspects of this matter were adequately evaluated. SSER-9, Appendix J at 49-50.

Issue 22 reflected the staff's concerns that, due to documentation deficiencies, some Mercury welders did not appear to be qualified, and that code requirements for the control of weld filler material had not been met. LP&L performed a review of Mercury welders' qualifications and found that all were qualified except one, a nonconformance that had been properly dispositioned in an NCR. See LP&L Exh. 6 at 22-1 to 22-2. The staff's review confirmed that, although Mercury's records contained numerous clerical errors and were not maintained according to procedures, its welders were qualified for the various welding jobs performed. (For example, welders qualified to make groove welds were also qualified to make fillet welds, but not vice versa.) As for the control of filler material, the staff determined that the redrying process used by LP&L instead of the re-baking required by the American Welding Society and ASME Codes was an acceptable deviation and provided satisfactory results to ensure the necessary elimination of moisture. Consequently, the staff found this had no safety significance or impact on plant hardware. SSER-9, Appendix J at 79-8. See also NRC Staff's Further Response, Harrison Affidavit at 30-32; Staff Response to ALAB-801, Harrison Affidavit at 33. All welders thus appear to have been qualified for the work they performed. We also take note once again of the successful results of the reinspection and testing program for Mercury's work. See pp. 25, 27-28, *supra*.

c. Joint Intervenor charge that Ebasco procurement personnel were not adequately trained, especially in quality assurance. See charges A(1)(f) and A(3)(e). They have supplied five exhibits to support these charges, but none is of probative value. JI Exhs. 18, 19, 20, and 31 are various notes on, and listings of, audit items generated from 1976 to 1978. Joint Intervenor have made no effort to direct our attention to

the particular parts of these documents that supposedly support their charge, and our perusal of them is unavailing. LP&L notes one item of possible relevance — an NCR stating that there was no record of training for one Ebasco senior buyer — but points out that corrective action was taken on this matter and the NCR was closed out in 1977. LP&L's Responses to Specific Allegations at 13, 27. See JI Exh. 20 at 3. The fifth "supporting" document, JI Exh. 21, is a March 1981 NRC "Preliminary Notification" concerning the arrest of eight construction workers (none involved with either QA/QC or procurement) for possession and sale of marijuana. Obviously, this exhibit has nothing to do with the adequacy of the training of Ebasco's procurement employees.

d. In charge A(1)(n), Joint Intervenors allege that alcohol and drug abuse was common at the Waterford site. An informer's affidavit claims that not only was such abuse common, it was condoned and even participated in by management. JI Exh. 8 at 4. Joint Intervenors again cite JI Exh. 21, concerning the 1981 arrest of eight construction workers for the possession and sale of marijuana, but this time in a more relevant context.

LP&L denies that drug and alcohol abuse was common at Waterford. It points out that the allegations in JI Exh. 8 are vague and nonspecific.³³ It also notes that LP&L management cooperated fully with local law enforcement officials in the four-month undercover investigation that led to the arrest of the eight construction workers discussed in JI Exh. 21. LP&L describes its policy on drug and alcohol abuse — a policy strengthened after the 1981 arrests. This policy applies to LP&L and contractor employees alike, and it provides for disciplinary action against employees found in possession of a controlled substance, even during off-duty hours. Unannounced searches, urinalysis, and observation by security personnel and timekeepers are means used to detect the use of unauthorized substances. The policy also includes measures to educate and to assist employees with substance-abuse problems. LP&L's Responses to Specific Allegations at 15-17.

The staff confirms LP&L's work with local law enforcement to minimize drug use onsite. Following a recent review of LP&L's drug program, the staff concluded that it was better than the industry average and appeared to be implemented effectively. Hence, the staff has no concerns of this nature about the fitness of Waterford's operating staff. NRC Staff's Response, *supra* note 8, Crossman Affidavit at 2, Enclosure I.³⁴

³³ The unexpurgated copy of this exhibit (see note 8, *supra*) contains no additional details on this point.

³⁴ This was one of the staff responses that we did not strike in ALAB-801. See 21 NRC at 484.

e. Charges A(1)(o) and A(8)(a) concern an alleged lack of QC coverage for night shift construction work at Waterford. Joint Intervenor rely on the statement of a former worker, who claims that in 1982 Ebasco had no QC coverage on the night shift and that, according to a co-worker, Mercury had "only" one or two QC inspectors for 10 to 12-person night crews. See JI Exh. 8 at 6-7.³⁵

The allegations of the former worker are so nonspecific that they fail to provide any serious or credible support for the charge of no QC coverage at night. For instance, the work supposedly lacking in such coverage is not even described, and an inspector/crew ratio acceptable to Joint Intervenor is not specified. Nonetheless, LP&L conducted a sample survey of 1982 Ebasco and Mercury work schedules. The survey results show that, depending on the amount of work under way, Mercury had from one to 24 inspectors on the night shift. Also contingent on the amount of work involved, Ebasco had from one to four inspectors assigned to the night shift. LP&L's Responses to Specific Allegations at 17-18. Charges A(1)(o) and A(8)(a) are thus without merit.

f. Joint Intervenor rely on other allegations in JI Exh. 8 (at 4-5) to support charges A(2)(d) and A(2)(e). They claim that whip restraints and temporary hangers were installed first and design drawings were done later to conform to the actual installation. They also assert that design drawings did not accurately reflect interferences between pipe hangers and instrumentation.

LP&L replies that whip restraints and temporary hangers were installed at Waterford in accordance with regulatory requirements and accepted industry practice. It explains that temporary *construction* hangers are used only to hold piping in place while permanent hangers are installed; design drawings would serve no useful purpose and thus are not made for this type of hanger. Temporary *testing* hangers, on the other hand, provide additional pipe support during testing and are preceded by design drawings. Where field changes were necessary for this type of hanger, field or design engineering personnel were authorized, pursuant to approved procedures, to "redline" changes directly onto the design drawing. LP&L also points out that it is not uncommon to discover interferences in actual installation that were not contemplated by the design drawing. LP&L suggests that the alleged may have observed such

³⁵ Joint Intervenor also rely on JI Exhs. 1 and 22, the MAC Report and an August 1979 memorandum on the MAC recommendations. The latter contains no reference to QA/QC coverage at night, and the MAC Report itself makes only a passing reference to a likely future need for "covering the around-the-clock work that lies ahead." JI Exh. 1 at 2. Thus, neither adds support to these charges.

changes without understanding the differences in hangers or the propriety of making drawing changes in the field. LP&L's Responses to Specific Allegations at 22-23.

Although Joint Intervenor's do not rely on it here, we note that the CAT Inspection Report discusses various discrepancies between as-built drawings and the actual installation of supports and restraints. The CAT concluded that, although no extensive structural integrity problems were identified, LP&L's inspection efforts in this area had not been totally effective. JI Exh. 23 at III-5 to III-9. As a result, LP&L performed two 100 percent reinspections of pipe supports and restraints. The staff reviewed this work and found only minor deficiencies, none of safety significance. Staff Response to ALAB-801, Mullikin Affidavit at 5-6. See p. 52 and note 63, *infra*.

g. Affidavits from two former workers at Waterford provide the basis for Joint Intervenor's charge A(2)(f), concerning the allegedly improper installation of Hilti bolts. The alлегers claim that, although design drawings required four such bolts on baseplates, often only two were used; welding to the bottom of the baseplate was done but not permitted; and bolts shorter than authorized were used on occasion. See JI Exh. 8 at 6, 10-11; JI Exh. 27 at 6-7.

LP&L has extensively addressed the informers' allegations, including those not explicitly encompassed within charge A(2)(f). It first notes generally that, whenever it was necessary to deviate from design requirements for the installation of Hilti expansion bolts (used to install anchor plates to existing concrete structures), engineering approval was obtained. More specifically, LP&L points out that there are numerous instances, involving both safety- and nonsafety-related hardware, where the approved designs called for two, rather than four, Hilti bolts in the anchor plate. With respect to the claim that such bolts were welded to the bottom of baseplates, LP&L states that this would be extremely unlikely, inasmuch as this procedure would be more difficult than that authorized and would have been discovered through QC inspections or supervisor observation. The use of bolts shorter than required would be readily detected during testing because they could not withstand the torque applied at installation. One such case was, in fact, identified and dispositioned in an NCR. LP&L adds further that Hilti bolts are conservatively designed and have substantial reserve capacity. Thus, in the event of the isolated incidents described in the affidavits, there would be no danger to the structural integrity of the plant. LP&L's Responses to Specific Allegations at 23-25.

h. In charges A(3)(g), A(5)(b), and A(10)(h), Joint Intervenor's complain that there was inadequate control of design documents. For

example, design errors assertedly went uncorrected because it was not cost-beneficial to correct them, and labeling errors and the like made retrieval and maintenance of these documents difficult. Joint Intervenors rely on a letter (undated, but probably written in late 1979) from LP&L to Ebasco concerning certain errors on drawings. See JI Exh. 26.³⁶

While LP&L's letter describes the drawing errors as "significant," the attachments to the letter listing the errors show that virtually all involve either the same misspelling ("extration steam" rather than "extraction steam") or wrong cross-reference numbers. *Id.* at 1, attachments. As LP&L explains, these discrepancies appeared on appliques or stickers affixed to drawings received by the project to facilitate distribution and review. The errors did not appear on the drawings themselves and did not affect the design information. They also did not affect document maintenance or retrieval. Thus, they can properly be considered minor (see note 36, *supra*), particularly because all items involved were classified as nonsafety and nonseismic. Nevertheless, this matter was addressed as an audit item, followed by corrective action and eventual closeout. LP&L's Responses to Specific Allegations at 29-30. See also *id.* at 36, 54.

i. Charges A(3)(h), A(3)(i), and A(10)(g) (in part) concern alleged deficiencies in LP&L's records management system. Joint Intervenors argue that LP&L resisted recommendations to establish a suitable computerized records system, and that the contractor hired for this job quit as a result. They submit as support for these charges three September 1978 internal LP&L memoranda, reflecting one individual's views on the recommendations of a task force on records management. See JI Exhs. 32, 33, 34. Another document, JI Exh. 35, is an April 1980 letter to the Waterford project manager from the contractor for the records system, expressing that firm's difficulties in installing and implementing the Master Tracking System (MTS) at the site.³⁷

LP&L strongly defends its records management system. It notes that the computer system recommended by the author of JI Exhs. 32, 33, and 34 was, in fact, installed and used by LP&L. It also states that, despite some initial problems and complaints from the contractor concerning installation of the MTS at Waterford, the work was completed in 1980 by that contractor and the system remains in use today. LP&L's

³⁶ They also refer to an October 1979 handwritten memorandum from and to unidentified persons about errors on manufacturers' drawings. This document is largely illegible and unintelligible, although it characterizes the errors in question as "minor." See JI Exh. 25 at 2.

³⁷ JI Exhs. 1 and 5 — the MAC Report and the NRC's Waterford Task Force Inspection Report — are also cited by Joint Intervenors. Our attention is directed to no particular portion of these documents that might support the charges in question, and none is apparent.

Responses to Specific Allegations at 30-31. There is thus no basis to Joint Intervenor's charges.

j. Joint Intervenor's express a concern, based on a former worker's statement, that the safety of the plant may be affected by the alleged continuing use of temporary pipe supports. In charge A(4)(e), they claim that possibly more than 300 such supports have not been replaced with permanent hangers, which have a greater allowance for thermal expansion. See JI Exh. 8 at 4.

But as we noted earlier, pipe supports were extensively examined during several walkdowns and reinspections, and no significant safety deficiencies were found. See p. 36, *supra*. See also LP&L's Responses to Specific Allegations at 34-35. We note further that the satisfactory performance of pipe supports and restraints was verified during the Pre-Core Hot Functional Thermal Monitoring Program. See SSER-9, Appendix J at 16-17. Thus, Joint Intervenor's concern about thermal expansion has been addressed.

k. Joint Intervenor's assert in charges A(6)(a) and A(10)(g) (in part) that LP&L failed to establish an adequate and consistent components numbering system.³⁸ They rely on JI Exh. 39, two November 1978 memoranda that simply suggest a particular numbering and identification scheme. The exhibit thus does not establish Joint Intervenor's point. Indeed, as LP&L points out, the system recommended in these memoranda was employed for plant startup and continues in use today, during the operations phase. LP&L's Responses to Specific Allegations at 37.

l. Charge A(6)(b) states that LP&L failed to ensure that safety-related pipe hangers were fabricated from the correct steel and included all necessary parts. JI Exh. 8, a former worker's affidavit upon which Joint Intervenor's rely, contains nothing directly on this point. There is, however, a related allegation that the metal used for some safety-related work at the plant lacked the proper identification and markings (e.g., heat numbers), precluding traceability in the event of a defect. JI Exh. 8 at 9.

³⁸ In addition to this allegation and another (see p. 37-38, *supra*), charge A(10)(g) also includes a claim that LP&L never corrected certain problems identified by the MAC Report (see JI Exh. 1 at 6) and various audits. Joint Intervenor's refer to JI Exh. 5, the July 1984 Waterford Task Force Inspection Report, to support this charge further. Although they have once again failed to specify the applicable portion of this lengthy report, Section V is addressed to Joint Intervenor's apparent concern. There the staff notes LP&L's staffing and auditing problems and its failure to respond promptly enough to the MAC Report recommendations. See JI Exh. 5 at V-4 to V-7. We have already considered these matters at pp. 20-21, 27-29, *supra*, and need not review them again in the context of omnibus charge A(10)(g). We add, however, that the Task Force Report considered this item to be "closed." JI Exh. 5 at V-7.

LP&L replies that hangers were not required to have heat numbers; rather, this hardware was accompanied by certificates of compliance with the appropriate specifications, provided by the suppliers. LP&L's Responses to Specific Allegations at 38. The staff addressed a similar issue in SSER-7, allegation A-126. It noted that, in 1978, changes were made in the traceability system at Waterford, but implementation problems occurred. As a result, these changes were abandoned in late 1983. The steel certification program, however, had continued in effect throughout this time, and the staff found that it met the NRC's requirements. Moreover, the individual who originally brought this concern to the staff's attention was satisfied with the certification procedures and the staff's conclusions. SSER-7, Appendix J at 135-36. It is also worth noting, once again, the favorable results of the several walkdowns and reinspections of the pipe hangers and supports at the facility. See p. 36, *supra*.

m. Joint Intervenor raise essentially the same objection in charges A(6)(c), A(7)(c), and A(7)(d) — that weld rod traceability records were not reliable. They point to JI Exh. 8 at 9, where a former worker avers that, because the weld rod room was not open during the night shift, workers themselves filled out weld rod forms. These forms supposedly show that more weld rods were used than was in fact the case. This lack of accurate records, in the affiant's view, means there is no assurance that proper weld rods were used.

LP&L denies the charge, stating that there were detailed procedures for the storage, issuance, and control of welding materials at the plant site. It describes the special welding requisition forms and notes that these, along with a "weld traveller package," are stored in permanent files to assure traceability. LP&L acknowledges that Ebasco's weld rod room was locked during nights and weekends when less work was in progress, but this was to prevent unauthorized entry. If welding material was needed, an attendant who could be easily summoned was available. Other contractors maintained a full-time attendant whenever welding was being done. This system and the relevant documentation were audited several times over the years and found acceptable. LP&L's Responses to Specific Allegations at 39-40. LP&L has thus effectively rebutted Joint Intervenor's charge.³⁹

n. Charges A(8)(d) and A(8)(e) assert that, contrary to existing documentation, QC inspectors failed to perform adequate inspections of safety-related work, such as main steam valves and fit-ups on Mercury instrumentation tubing. See JI Exh. 8 at 7-8, 10.

³⁹ We think it noteworthy in this regard that JI Exh. 27, an affidavit from a former welder at Waterford, does not identify any problems related to weld rod traceability.

In denying this charge, LP&L describes the procedures for inspection and maintenance of valves. It also refers to one instance where the QA program found that the Main Steam Isolation Valve had *not* been inspected properly. This was written up in an NCR, the valve was reinspected, and no deficiencies were found. In LP&L's view — and we agree — this shows that the QA program was functioning properly. LP&L also adds that each valve has been stroked (closed, then opened) and verified as correctly installed and operable.

With respect to the alleged problems with fit-ups in Mercury tubing, LP&L explains why this charge is not credible. Assuring a proper fit-up gap is a relatively simple procedure; on the other hand, an attempt to deceive a QC inspector by erroneous external markings (as JI Exh. 8 asserts) would be more difficult and time-consuming. If the gap in the tubing were not sufficient, the weld would likely crack and be immediately detected and repaired. Further, because the purpose of the gap is to facilitate proper welding, once a weld is completed and found acceptable, the size of the gap is no longer significant. LP&L's Responses to Specific Allegations at 45-47. We need only repeat that Mercury's work has been extensively reinspected with favorable results. See p. 25, *supra*.

o. Joint Intervenor's argue, in charges A(1)(m) (in part), A(9)(a), A(9)(b), and A(9)(c), that LP&L failed to establish and follow procedures (including the improper use of unqualified personnel) to control the handling, storage, cleaning, and maintenance of electrical equipment, valves, etc. They mention, in particular, two 1981 incidents of flood damage to electrical equipment and suggest that it may not have been reinspected and retested. These charges are based on allegations in a former worker's statement. See JI Exh. 8 at 3-4, 8-9.⁴⁰

LP&L states in response that there were two flooding incidents in October 1981. One was in a nonsafety-related area (the Turbine Building) and resulted in no damage to safety-related equipment. The other was in the Reactor Auxiliary Building and was caused by the failure of a valve to operate during pneumatic testing — not by unqualified workers. The emergency diesel generator control panels incurred substantial damage and consequently were completely replaced. This incident was documented and resolved, to the NRC staff's satisfaction, through the NCR system. LP&L's Responses to Specific Allegations at 47-48.

Speaking more generally to the charges, LP&L explains the care and maintenance procedures for equipment employed during the construction phase. Valves are not ordinarily stroked during this period because

⁴⁰ We note that there are some inconsistencies between JI Exh. 8 and Joint Intervenor's actual charges. For example, the affidavit refers to flood damage in 1982, rather than 1981. See JI Exh. 8 at 8.

dust and construction debris could damage them. As part of the startup process, however, all valves are tested, the results are documented, and repairs are made. These procedures were audited and, despite minor deficiencies, found adequate. *Id.* at 48-49. LP&L also explains its procedures for hiring, training, supervising, and testing maintenance workers. It points out that some maintenance positions require no prior experience. Thus, the use of former cab drivers and bartenders, as alleged, would not be improper for some work. *Id.* at 14-15.

p. In part D(1) of their motion to reopen, Joint Intervenor's complain that LP&L's corrective action for Issue 5 in the Eisenhut Letter — "Vendor Documentation - Conditional Releases" — is not adequate. See JI Exh. 9, Enclosure at 4-5. In their view, this issue concerns the lack of visual inspection of safety-related equipment by either vendor or site personnel at the time of receipt; i.e., documentation was checked, but not the quality of the equipment or workmanship. LP&L's sample review of vendor documentation, according to Joint Intervenor's, cannot substitute for visual inspection. Joint Intervenor's Motion at 36-37. See JI Exh. 10 at 136-38.

As LP&L points out, Joint Intervenor's misunderstand the concern raised by the staff in Issue 5. See LP&L's Responses to Specific Allegations at 80-81. The staff had found certain deficiencies in the handling of conditional certifications of equipment supplied by Combustion Engineering (the vendor of the nuclear steam supply system for Waterford) — namely, QA documents (as-built drawings, material certifications, and fabrication plans) apparently missing since 1976. The staff considered this documentation deficiency safety-significant because problems with vendor QA records could affect installed safety-related equipment. The staff therefore directed LP&L to review its records to determine if such conditional certifications were identified and resolved. JI Exh. 9, Enclosure at 4-5. Thus, this issue has nothing to do with visual inspection of equipment at the time of receipt; rather, it is essentially another missing records problem.

In any event, LP&L has responded adequately to the matter raised by Issue 5. In its submission to the staff, LP&L acknowledged that some conditional certifications from Combustion Engineering were not formally tracked, but this was because the conditional nature of the certification was thought to reflect incompleteness of purchase orders, rather than hardware or software deficiencies. LP&L re-reviewed the records associated with Combustion Engineering material and equipment, as well as those of other manufacturers, and found no matters that would adversely affect plant safety. In addition, LP&L has taken steps to assure that conditional certifications will be formally tracked in the future, and it

has made a commitment to review all Combustion Engineering conditional certifications to determine if the conditions noted could affect the operability of the equipment. LP&L Exh. 16 at 5-1 to 5-3. The staff as well reviewed a sufficient sample of purchase orders and Material Receiving Inspection Reports. It concluded that LP&L's identification of, and corrective action taken on, the conditional releases of equipment satisfactorily resolved any concerns about vendor-supplied safety-related equipment. SSER-9, Appendix J at 27-28.

q. Charges A(4)(b) and A(8)(c) and part E of Joint Intervenor's Motion (at 39-44) all concern the concrete basemat on which the Waterford facility rests and the backfill surrounding it. We previously addressed this matter at length in three decisions — ALAB-753, 18 NRC at 1324-29, ALAB-786, 20 NRC at 1090-95, and, most recently, ALAB-803, 21 NRC at 578-86, where we concluded that "no significant safety issue exists as to the basemat."⁴¹ Joint Intervenor's raise no basemat-related arguments in the instant motion to reopen that we have not already considered. Indeed, many of the exhibits on which they rely are rather familiar documents (e.g., JI Exhs. 41, 59, 60, 61, 62), and others are illegible and unintelligible or provide no support for the argument that LP&L has failed to identify, analyze, and correct problems connected with the basemat (e.g., JI Exhs. 37, 38, 40, 56). We remain convinced of the adequacy of the basemat and reiterate that "any QA problems associated with [it] have been satisfactorily resolved." ALAB-803, 21 NRC at 586 n.21.

3. A number of other QA charges in Joint Intervenor's contention A still remain. But although we have considered each individually, they are so devoid of merit for one or more "generic" reasons that no lengthy discussion of them is warranted. See *San Luis Obispo Mothers for Peace*, 751 F.2d at 1320-21.

In some cases, the exhibits on which Joint Intervenor's rely are simply of no probative value because they are illegible, unintelligible, or unmarked, or they fail to identify their source.⁴² Joint Intervenor's also rely on certain large documents but fail to cite to the specific pages or portions assertedly pertinent to the charge, likewise making them of no value. See ALAB-801, 21 NRC at 483-84. See also p. 54, *infra*.⁴³ As noted earlier, some charges and their corresponding exhibits are years old, yet Joint Intervenor's make no attempt to establish that the alleged QA defi-

⁴¹ No party petitioned the Commission for review of any of these decisions.

⁴² See charges A(1)(e), A(1)(k), A(2)(a), A(2)(b), A(2)(c), A(3)(c), A(8)(b), A(10)(h).

⁴³ See charges A(1)(a)(i), A(1)(a)(ii), A(1)(a)(iii).

ciencies have not been remedied and thus continue to the present.⁴⁴ In other cases, the exhibits have no apparent relation to the specific charge, or the particular nature of the QA problem alleged is neither evident nor explained in the motion.⁴⁵ Finally, Joint Intervenor at times rely on documents that, in fact, refute the corresponding charge or, at best, provide no support for it.⁴⁶ Thus, Joint Intervenor have failed to supply, for these charges, the "relevant, material, and reliable" evidence required to support a motion to reopen. *Diablo Canyon*, ALAB-775, 19 NRC at 1366-67.

4. The extensive record compiled in connection with Joint Intervenor's motion to reopen unequivocally demonstrates that a quality assurance breakdown did, in fact, occur in the LP&L-Ebasco-Mercury chain. The breakdown was due in large measure to LP&L's inadequate staffing and a cumbersome NCR system, which in turn created problems in implementation of the QA auditing program and difficulties in trending deficiencies. SSER-7 (allegation A-48) and the Eisenhower Letter document these problems. See SSER-7, Appendix J at 96-100; JI Exh. 9. Some of these problems also prevented LP&L from initially acting as promptly as it should have, when various QA problems began to crop up during the major period of plant construction.

On the other hand, the more serious QA lapses (e.g., in the inspector qualification area) involved the work of primarily one subcontractor — Mercury. To be sure, the work of other subcontractors was not without irregularities; but they were shown to be largely isolated instances and typical of problems found at other nuclear plants under construction. See Staff Response to ALAB-801, Harrison Affidavit at 10.⁴⁷ No serious hardware or system defects were discovered in any of the work, despite

⁴⁴ See charges A(1)(a)(i), A(1)(a)(ii), A(1)(i), A(1)(k), A(2)(a), A(3)(b), A(3)(f), A(4)(a), A(5)(a), A(5)(c), A(7)(b), A(10)(d), A(11)(a), A(11)(b), A(11)(d).

⁴⁵ See charges A(1)(f), A(1)(j), A(3)(c), A(4)(a), A(4)(c), A(4)(d), A(5)(c), A(11)(a), A(11)(b), A(11)(c).

⁴⁶ See charges A(1)(e), A(1)(i), A(3)(a), A(3)(b), A(3)(d), A(3)(f), A(5)(a), A(10)(d).

⁴⁷ Joint Intervenor argue that a May 1984 draft of SSER-7 (allegation A-48) shows that there was a "complete" breakdown of "all QA functions." Joint Intervenor's Response to ALAB-801 at 3 & n.1. We disagree. In the first place, a draft is just that — a working document. It is entirely reasonable that a document like SSER-7 would go through several revisions before it appears in final form and presumably reflects the actual, intended position of the preparer(s). In the absence of a legitimate reason to doubt that SSER-7, as published, represents the staff's position — and Joint Intervenor have supplied none — the draft is not a particularly useful item on which to rely. See Staff Response to ALAB-801, Crutchfield Affidavit at 4-5. This is true whether the draft document is a technical or investigatory report, a litigant's brief, or a judge's decision.

Second, the specific portion of the draft Joint Intervenor have called to our attention is entitled "Assessment of Allegation." Read in context, it does not represent the staff's findings, evaluation, or conclusions — which are set forth in subsequent portions of the discussion of allegation A-48. Further, we do not find the differences between the draft and the final version of SSER-7 so compelling. Both tell us what we already know from the substantial additional information available: there was a QA breakdown in the LP&L-Ebasco-Mercury chain.

an extensive reinspection and document review effort. Indeed, the QA documentation — originally suffering from numerous infirmities itself — is now materially complete and reflects the as-built condition of the facility. In short, the problems that existed either have been corrected or are without significance insofar as the safe operation of the plant is concerned. *See Callaway*, ALAB-740, 18 NRC at 346.

Moreover, LP&L's QA program has shown considerable improvement in the last two years. LP&L's management responded convincingly to the several NRC inspections and investigations into its QA program during this time; its submissions in response to the Eisenhut Letter (and the actual work they represent) are impressive. Further, LP&L has incorporated the lessons it has learned from its past quality assurance failures into what appears to be an effective QA program for future operation, so as to prevent a recurrence of the deficiencies revealed in this record.

Thus, the questions we posed in ALAB-801, 21 NRC at 486-87, have been fully and satisfactorily answered. *See generally* Staff Response to ALAB-801, Harrison Affidavit at 15-45. The record shows that no safety-related construction errors remain uncorrected, and the breakdown in LP&L's QA procedures has not been shown to be complete, systemic, or so pervasive as to raise legitimate doubt about the safe operation of the plant. *See Diablo Canyon*, ALAB-756, 18 NRC at 1344-45. Reasonable assurance that the plant can be operated safely exists, and, hence, there is no ground for reopening on 'Joint Intervenor's' contention A.⁴⁸

⁴⁸ The staff recently informed us and the parties of its proposed \$130,000 civil penalty against LP&L for various failures in 13 areas of its construction QA program. Board Notification No. 85-062 (June 4, 1985). The staff considers the violations to be Severity Level III — Level I being the most serious and Level V the least serious from a safety standpoint. *See* 10 C.F.R. Part 2, Appendix C, Supplement II. The Notice of Violation and accompanying letter request an extensive response (which may incorporate by reference previous submittals) from LP&L within 60 days.

The request for more information from LP&L and some of the language in the staff's letter and Notice are somewhat curious in light of the staff's recent strong endorsement, in filings before us, of both LP&L's corrective actions and its operational QA program. Nonetheless, the issues raised by the Notice of Violation are all derived from SSER-7, SSER-9, and various earlier inspection reports; nothing new is presented or revealed. Indeed, the proposed civil penalty appears to be simply the culmination of the staff's various inspection efforts over the last few years and was suggested in several reports. *See, e.g.*, SSER-7, Appendix J at 15; SSER-9, Appendix J at 5; JI Exh. 5, Appendix B; JI Exh. 23 at B-1 to B-2. Thus, we fully expected that some enforcement activity (including the imposition of a punitive monetary fine) was likely to result from the deficiencies the staff identified in LP&L's construction QA program. In other words, even if the full amount of the proposed penalty is ultimately exacted, neither it nor the events on which it is based would alter the outcome of our ruling here.

B. Management Character and Competence

The second proposed contention on which Joint Intervenor seek reopening states:

LP&L does not have the necessary character and competence to operate Waterford 3 in accordance with all NRC requirements and in a manner which protects the public health and safety. Therefore, the Commission cannot make the findings required by 10 CFR 50.57(a) needed to issue a license to operate Waterford 3.

Joint Intervenor's Motion at 15. Joint Intervenor argue that LP&L's lack of character and competence is demonstrated in essentially six ways: (1) pending investigations by the NRC's Office of Investigations into allegations of falsification of records and harassment of QA/QC personnel at the site; (2) misstatements and misleading statements by LP&L to the Securities and Exchange Commission (SEC) about the status and schedule of the plant; (3) inaccurate and misleading statements by LP&L in an April 27, 1984, letter to the NRC staff; (4) LP&L's historical failure to comply with NRC regulations and to correct noncompliances adequately; (5) LP&L's failure to upgrade its staff; and (6) LP&L's failure to ensure the competence of Ebasco site management.

Again, in considering Joint Intervenor's claims, we have focused on whether these charges raise a significant safety issue. We conclude that charges B(2) through B(6) do not, either individually or collectively. Thus, there is no justification for reopening the record on these grounds to explore LP&L's character and competence at an adjudicatory hearing. As for charge B(1), however, the state of the record does not permit us to make a judgment one way or the other. The unusual problems presented by this charge compel us to leave the matter for the Commission's resolution.

1. Joint Intervenor's first ground for challenging LP&L's character and competence is the pendency of several OI investigations into alleged records falsification and harassment of QA personnel.⁴⁹ They provide a

⁴⁹ In charge A(1)(g), Joint Intervenor claim that LP&L took retaliatory action against QA personnel who adhered strictly to QA procedures. They rely on JI Exh. 12, an affidavit from an anonymous former QA engineer at the plant, who avers that he was terminated from his position for voicing concerns about quality assurance. The staff initially advised us only that OI was "reviewing issues in this area." NRC Staff's Response, Crutchfield Affidavit, Attachment 1 (Matrix) at 1. Because of the lack of specificity in the publicly available version of the affidavit (see note 8, *supra*), OI cannot state whether this particular allegation is encompassed within the matters it is investigating in connection with the Waterford facility. OI acknowledged, however (in a letter it made public), that one of those investigations "addresses the issue of the alleged harassment and intimidation of QA/QC personnel." Letter to Appeal Board from B. B. Hayes (April 12, 1985) at 1. We have therefore grouped charges A(1)(g) and B(1) together for the purpose of our discussion here.

transcript of a July 13, 1984, meeting between staff and OI personnel and officers of LP&L. The purpose of that meeting was to discuss LP&L's program plan for responding to the 23 issues raised in the Eisenhower Letter, and the credibility of the LP&L personnel responsible for implementing that plan. See JI Exh. 46, Tr. 3. Relying on an article from the *Wall Street Journal*, Joint Intervenors claim that OI is ready to refer "over four cases" to the Department of Justice (DOJ) for criminal prosecution. Joint Intervenors' Motion at 15; JI Exh. 45.

LP&L replies that an OI investigation is conducted to determine if a problem exists. Thus, the validity of any allegation that prompted an investigation is indeterminate until an investigatory finding is made. Without knowing any of the details of the investigations, LP&L is unable to respond more specifically. It strongly asserts, however, that its management has demonstrated the commitment, sincerity, and involvement necessary to operate Waterford in a safe manner. Applicant's Answer, *supra* note 11, at 23-24.

Because of the dearth of publicly available information concerning OI's investigations (see, e.g., SSER-7, Appendix J at 15), we solicited more details directly from OI. Order of December 19, 1984 (unpublished). Recognizing OI's likely desire to keep sensitive investigative material confidential, however, we invoked the Commission's special policy for handling the inevitable conflicts that arise when investigations are conducted in areas with potential relevance to a pending adjudication. See 49 Fed. Reg. 36,032 (1984). Under this policy, our subsequent communications with OI have been on an ex parte, in camera basis. See Notices of March 22, May 2, and June 4, 1985 (unpublished).⁵⁰

Unfortunately, those communications have not been fully productive. We solicited specific information from OI, in both written and oral form — the kind of specific information we need "to determine the relevance of material to [this] adjudication, and whether that information must be disclosed to the parties." 49 Fed. Reg. at 36,033. Despite our efforts, complete, usable information has not been forthcoming. Some of the information does not yet exist; i.e., although the investigations were begun in 1983 or 1984, most are not yet complete, and they will not be until late summer at the earliest. Further, OI is generally reluctant to provide anyone with information that it considers incomplete. In addition, the OI personnel who responded to our requests did not have first-hand knowledge of the subjects of our inquiry, or they were not ade-

⁵⁰ Joint Intervenors recognize that we are bound by the Commission's policy, but formally note their objection to, and seek to participate in, such briefings pursuant to a protective order. Joint Intervenors' Response to ALAB-801 at 11-12.

quately prepared; i.e., neither were they the actual investigators who conducted the interviews, nor had they read the notes or transcriptions of the interviews.⁵¹

To remedy this information gap — where it was apparent that information on a particular subject did indeed exist but OI was unable to describe or to summarize it for us — we took the unusual step of reviewing some of the investigative documents ourselves, in the NRC Regional Office where they are located. Nothing we have seen gives us cause for significant concern about the integrity of LP&L's management.⁵² On the other hand, we cannot rule out all possible grounds for Joint Intervenor's charges. But OI's position is that, until its investigation is truly complete (which may include consultation with DOJ), it opposes the release of information to the parties, even under a protective order. If the information is not available to the parties, however, we cannot rely on it in making our decision. *Ibid.* Simply stated, we have no expectation of getting adequate information from OI, which we can share with the parties and on which we can rely in making a decision, within a reasonable, definite period of time. In this circumstance, neither a denial nor a grant of the motion to reopen would be sustainable or fair. Thus, we are at an impasse.

Only the Commission, it would appear, can obtain full access to the information discovered by OI and thus determine its relevance to Joint Intervenor's motion. And, under the Policy Statement, only the Commission can decide if and when that information is to be released to the parties. *See id.* at 36,034. Our experience here convinces us that there is a fundamental and philosophical conflict between the mission and duties of OI and those of the adjudicatory boards.⁵³ The Commission alone is in the position to resolve this conflict. We thus have no real option but to leave this matter for the Commission to resolve.⁵⁴

⁵¹ These circumstances are no doubt attributable to the limited resources of, and many demands made on, OI.

⁵² We have been scrupulous in the protection of the information OI has provided us. We do not feel constrained, however, from "revealing" the following. There is no basis for Joint Intervenor's claim that over four cases have been referred to DOJ. OI has advised us that it has referred only one case so far, and DOJ declined to prosecute. Letter to Appeal Board from B. B. Hayes, *supra* note 49. A number of cases involve allegations of QA records falsification and harassment and intimidation. *See* note 49, *supra*. Some of them, however, appear to be isolated or anecdotal examples of QA problems already and fully addressed elsewhere. Several cases have been closed, with findings that do not reflect adversely on LP&L.

⁵³ A licensing board recently experienced similar difficulties. *See Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1)*, LBP-85-18, 21 NRC 1637, 1643-44 (1985).

⁵⁴ We believe it would be futile to pursue the further procedures outlined in the Policy Statement, 49 Fed. Reg. at 36,034. Those measures focus on disclosure to the parties. We are not even at that point yet; the problem here is disclosure to this Board of possibly relevant information, within a reasonable time period. We have attempted to obtain information from OI since February 1984. Our efforts have

(Continued)

2. Joint Intervenor assert that "LP&L has made a significant number of misstatements and misleading statements in financial statements submitted to the [SEC] about the status and schedule of the Waterford project." Joint Intervenor's Motion at 16. They cite seven instances, during February-July 1984, in which LP&L made these statements.³⁵ According to Joint Intervenor, LP&L's estimated time of receipt of an operating license in these documents was disingenuous, given that the NRC staff had already informed LP&L that alleged construction QA deficiencies would have to be resolved before license issuance. And, in their view, LP&L's misleading statements to the SEC show "its lack of honesty with regulatory bodies" and inability to be trusted with regard to statements about the safety of Waterford. *Id.* at 21.

We do not and cannot properly decide if LP&L's filings with the SEC and related issuances to stockholders are "misleading" for the purposes of the securities laws. But neither do we disclaim entirely any interest in how LP&L portrays its dealings with the NRC in public documents — as did the staff in its submission stricken in ALAB-801. See NRC Staff's Response, Crutchfield Affidavit at 4. For, if LP&L's statements to the SEC and stockholders were to be so at odds with the facts as we know them, there would be room for legitimate concern, and possibly further inquiry, about LP&L's honesty with the NRC. The NRC's dependence on a licensee for accurate and timely information about its facility makes candor an especially important element of management character. See *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), ALAB-772, 19 NRC 1193, 1208 (1984), *rev'd in part on other grounds*, CLI-85-2, 21 NRC 282 (1985). See also *id.*, CLI-85-9, 21 NRC 1118, 1136-37 (1985); *South Texas*, 21 NRC at 371 (nexus of particular character trait to particular performance standards contemplated by Atomic Energy Act and NRC regulations is required).

We have scrutinized each of the seven statements cited by Joint Intervenor. To be sure, the drafters of the statements chose their words care-

been largely unsuccessful: what we have learned has come only after considerable prodding on our part. Further, the last two years of this proceeding have been characterized by extreme, albeit often unavoidable, delays. We are not willing to incur further delay in the disposition of Joint Intervenor's motion while ... completes its work. In this decision, we rule on all other matters before us. We believe it is both logical and more efficient for the Commission to address this remaining, unique matter in the context of its consideration of our opinion here.

³⁵ (1) LP&L 1983 Annual Report (February 23, 1984) — JI Exh. 47; (2) SEC Form 10-K (for fiscal year ended December 31, 1983; filed March 30, 1984) — JI Exh. 48; (3) Preliminary Prospectus (May 25, 1984) — LP&L Exh. 10; (4) Prospectus (filed June 7, 1984) — JI Exh. 50; (5) Amendment to Registration Statement (July 24, 1984) — LP&L Exh. 11; (6) Middle South Utilities, Inc. (the parent of LP&L), Memorandum to Members of the Financial Community (July 30, 1984) — JI Exh. 51A; (7) Middle South Utilities, Inc., Report to Stockholders (July 1984) — JI Exh. 52.

fully, including appropriate qualifying words and phrases, as necessary.⁵⁶ As events developed and the NRC's inspection efforts intensified, the language in the statements was modified on the basis of the best information available at the time.⁵⁷ The statements indeed reflect an attitude of optimism, but it is sufficiently tempered by reality. They also show LP&L's confidence in its Waterford facility — a view naturally expected from the management of an organization. But we cannot conclude, as Joint Intervenor urge, that the statements are either misleading or inaccurate, so as to cast serious doubt on LP&L's willingness and ability to deal honestly with the NRC.

3. Joint Intervenor allege that LP&L made inaccurate and misleading statements to the NRC as well in an April 27, 1984, letter. Joint Intervenor's Motion at 21-26. This letter was LP&L's formal response to an April 2, 1984, letter, in which the staff set forth some 39 allegations of improper construction practices at Waterford. See JI Exhs. 54 and 53. Joint Intervenor claim five of LP&L's 39 responses were "false statements." Joint Intervenor's Motion at 21-26.

Joint Intervenor's arguments are without merit. As "proof" of the falsity of LP&L's April 27 response, Joint Intervenor rely on several

⁵⁶ For example, LP&L's 1983 Annual Report states that "[s]ubject to the timely issuance of the necessary license by the [NRC], fuel is *scheduled* to be loaded into the reactor during the second quarter of 1984, and commercial operation is *anticipated* by the end of 1984." JI Exh. 47 at 3 (emphasis added). The 10-K statement explicitly notes that, although LP&L "currently expects to receive an operating license from the NRC in April 1984," the opposition of "anti-nuclear groups" can result in "regulatory delays." The statement goes on to set forth the estimated additional financing charges that would be incurred were such delay to occur — again explicitly acknowledging that possibility. JI Exh. 48 at 6. Virtually identical language appears in the May 1984 Preliminary Prospectus, June 1984 Prospectus, and July 1984 Registration Statement amendment. See LP&L Exh. 10 at 5; JI Exh. 50 at 5; LP&L Exh. 11 at 5.

⁵⁷ In the Preliminary Prospectus, LP&L no longer states when it expects to receive a license; rather, it "anticipates that Waterford 3 will be *ready for fuel loading* in late May 1984." LP&L Exh. 10 at 5 (emphasis added). The Prospectus filed on June 7 states that LP&L "believes" the plant is ready for fuel loading. JI Exh. 50 at 5. Six weeks later, the amendment to the Registration Statement discusses the June 13, 1984, Eisenhower Letter. It notes that the NRC required these issues to be resolved before licensing, that LP&L had submitted a program plan for resolution of the issues, and that it was involved in continuing discussions with the staff on these matters. It also mentions commencement of a program of ultrasonic testing of the basement "for the purpose of providing final assurances" of the mat's structural integrity. The statement cautions that license issuance "should not be expected before possibly late August or September 1984." LP&L Exh. 11 at 5. The Middle South memorandum to the financial community, issued one week later, reflects an upbeat attitude but is also consistent with LP&L's SEC filings. See JI Exh. 51A.

Joint Intervenor argue that LP&L essentially knew that its problems were more significant than its filings reflected. But in support of this, they *repeatedly* rely on documents that were prepared or events that occurred *after* the issuance of the particular statements in question or the time period they were intended to cover. For instance, LP&L's 10-K filing expressly covered the year ending December 31, 1983, and it was filed March 30, 1984. See JI Exh. 48. Yet Joint Intervenor rely on a letter from the NRC to LP&L — dated April 2, 1984, and requesting additional information on 39 issues — as an indication that LP&L's 10-K statement of an expectation of license issuance in April 1984 was misleading. Joint Intervenor's reliance is all the more misplaced in view of the staff's request for the additional information by April 18, "[i]n order to maintain the scheduled licensing decision date of late April or early May." JI Exh. 53.

NRC-generated documents, which identify certain problems in LP&L's construction QA program.⁵⁸ These documents, however, were not even in existence at the time of the April 27 letter.⁵⁹ More important, the 39 allegations in the staff's letter — described as having been "received over the last several months" — were broad and unspecific. See JI Exh. 53.⁶⁰ Further, LP&L had a limited time in which to respond to the staff (less than a month). It is thus not surprising that LP&L's response was lacking in detail.

It is also clear from the staff's letter that the review of the QA allegations was then at a relatively early stage and was expected to continue for some time. See *ibid.* Consequently, there is no indication that the staff either viewed LP&L's April 27 reply as the final word on the matters set out in the staff's letter, or was misled by it. Indeed, this was the first of several exchanges of correspondence, with each round becoming more focused on particular, asserted construction or QA deficiencies.

⁵⁸ See Eisenhut Letter (June 13, 1984) — JI Exh. 9; Waterford Task Force Inspection Report No. 50-382/84-34 (July 20, 1984) — JI Exh. 5; Robert E. Phileo, "Evaluation of Concrete Construction Adequacy in the Basemat" (May 18, 1984), attached to NRC Staff's Motion for Additional Extension of Time (June 14, 1984) — JI Exh. 41; CAT Inspection Report No. 50-382/84-07 (May 14, 1984) — JI Exh. 23; viewgraphs from staff meeting with LP&L (August 17, 1984) — JI Exh. 56.

Joint intervenors also rely on an affidavit from their counsel, dated September 24, 1984 (JI Exh. 55). The purpose of the affidavit is not clear, other than to show that certain documents were lost during part of 1983 and 1984 — a fact no one disputes. The affidavit refers to the findings of George Hill, the former head of a document review team at Waterford. Any views held by Mr. Hill, however, should have been submitted in an affidavit by him, not Joint intervenors' counsel. *Diablo Canyon*, ALAB-775, 19 NRC at 1367 n.18.

⁵⁹ The only matter cited by Joint intervenors that predates the April 27 letter is NCR W3-7549 (February 1, 1984). Joint intervenors state that this NCR recorded many of the same problems identified by the staff in Item (11) of the April 2 letter (i.e., extra supports for instrumentation cabinets were allegedly made from materials with no heat numbers, completed by uncertified welders, and examined by uncertified inspectors). See Joint intervenors' Motion at 25-26. Joint intervenors thus suggest that LP&L did not respond entirely truthfully when it described this allegation, in its April 27 letter, as "[p]artially valid." See JI Exh. 54, Attachment, Item (11). LP&L agrees that the NCR and Item (11) concern essentially the same thing, but states that the "disposition of the NCR at the time was the same as in the April submittal." It subsequently supplemented the NCR, and the matter was closed as part of SSER-9/Issue 9. LP&L's Responses to Specific Allegations at 71.

⁶⁰ The five items of concern here to Joint intervenors demonstrate the unparticularized nature of the allegations in the staff's April 2 letter:

1. It has been alleged that civil/structural and piping QC inspectors were not certified in accordance with the appropriate requirements.
6. It has been alleged that basemat concrete was not placed in accordance with the ACI [American Concrete Institute] Codes.
7. It has been alleged that a complete (100%) review of all concrete placement packages was not performed thoroughly in that all NCR's, Nasty Grams, EDN's and letters were not included in the review.
11. It has been alleged that the extra supports for instrumentation cabinets covered by an FCR that were mounted on gratings inside containment were fabricated with materials for which there is no heat numbers traceability by uncertified welders and examined by uncertified inspectors [sic].

21.b. It has been alleged that . . . [w]elders and QC weld inspectors were not adequately qualified. JI Exh. 53, Enclosure. The subjects raised by these allegations are addressed above in our discussion of Joint intervenors' contention A and in our decisions concerning the basemat, ALAB-753, ALAB-786, and ALAB-803.

Nor is there any evidence that LP&L did not supply the best answers possible in the circumstances at that time. Much closer review of more specific allegations by LP&L later, at the staff's urging, did bring to light correspondingly more accurate (and sometimes less favorable to LP&L) information than that provided in LP&L's April 27 letter. But that fact does not fairly raise "doubts about LP&L's forthrightness and honesty with the staff" in the April 27 letter. Joint Intervenor's Motion at 25. We therefore reject Joint Intervenor's argument that this letter was either inaccurate or misleading.

4. In further support of their challenge to LP&L's management character and competence, Joint Intervenor's allege that "LP&L historically has failed to comply with NRC regulations and when cited by the NRC has failed adequately to respond to correct noncompliances and prevent their recurrence." Joint Intervenor's Motion at 26. They cite generally to Issue 23 in the Eisenhower Letter, concerning the QA program breakdown between Ebasco and Mercury (see JI Exh. 9, Enclosure at 14), and to five particular items listed in the CAT Report as matters LP&L failed to correct despite its previous commitments to the NRC to do so.⁶¹ In their supplementary comments, Joint Intervenor's stress that LP&L's asserted failure to correct these QA problems, until after the NRC's repeated urgings, shows a lack of initiative and absence of basic managerial capabilities. Joint Intervenor's Response to ALAB-801 at 13-14.

We agree with Joint Intervenor's that it is undesirable for the NRC routinely to be the principal stimulus in getting a licensee to correct previously identified deficiencies. The Commission must necessarily depend heavily on a permittee or licensee to report important information and to assume a role of at least partial self-policing. See p. 48, *supra*. It is therefore essential that the motivation to discover, analyze, and correct potentially safety-significant problems originate with plant management.

We are unable to conclude here, however, that LP&L lacks either the willingness or desire to correct deficiencies that could affect the safe operation of the Waterford plant. With respect to Joint Intervenor's reliance on Issue 23 in the Eisenhower Letter, we have already discussed in part II.A, *supra*, the fact that a serious breakdown in a portion of

⁶¹ Although Joint Intervenor's repeatedly refer to "Exhibit 24" as CAT Inspection Report No. 50-382/84-07, it is in fact their Exhibit 23. The five items concern (1) heating, ventilating, and air conditioning and electrical raceway seismic supports, (2) as-built verification of pipe supports and whip restraints, (3) maintenance of safety-related motors, (4) structural steel welding by Peden Steel, and (5) the clearance between piping and adjacent structures. See JI Exh. 23 at II-4 to II-5, III-5 to III-9, II-13 to II-15, IV-10 to IV-11, III-1 to III-5, VIII-5 to VIII-6.

LP&L's construction QA program indisputably occurred. Further, this breakdown was, in part, a consequence of applicant's failure to respond fully to the 1982 Notice of Violation. But it is also true that LP&L's QA program first reported this situation. More important, the record shows that significant matters have not gone uncorrected and the breakdown was not so pervasive as to raise a legitimate concern about overall plant safety. See pp. 43-44, *supra*.

Moreover, the five particular matters highlighted in the CAT Report as remaining uncorrected despite previous citations from the agency must be viewed in their proper perspective.⁶² In the first place, the CAT Report itself notes that the underlying cause of these deficiencies was LP&L's "difficulties in implementing an effective in-process quality assurance program." JI Exh. 23 at A-1. Our conclusion that LP&L now appears to have remedied that more fundamental problem (see pp. 43-44, *supra*) logically suggests that significant improvement in LP&L's corrective action program will follow. In fact, LP&L has already acted to strengthen its "Licensing Commitment Tracking Program." The staff (including members of the CAT) has reviewed the revised program and concludes that it is adequate and, if implemented adequately, "there should be no future concern that NRC-identified problems will not be corrected." Staff Response to ALAB-801, Mullikin Affidavit at 4. Moreover, the five instances of uncorrected deficiencies identified in the CAT Report and relied on by Joint Intervenor were the *only* such instances found by the CAT. *Ibid*. The CAT did followup inspections as to each and determined that all of its concerns were satisfactorily resolved, despite some minor problems that were identified. *Id.* at 4-8.⁶³

Thus, while LP&L did fail to correct certain deficiencies identified by the NRC in earlier inspections, the record does not establish a pattern of recalcitrance on the part of LP&L so as to suggest the continuance of a historical trend. LP&L eventually — albeit at the staff's urging — addressed and corrected the identified deficiencies. See LP&L's Responses to Specific Allegations at 77-78. But more important, it has acted to

⁶² In addition to these five items, Joint Intervenor refers as well to Issue 16 in the Eisenhower Letter, which concerns LP&L's asserted failure to pursue vigorously surveys and exit interviews it conducted with QA personnel in early 1984. Because this was not a matter previously identified by the NRC as requiring corrective action, which LP&L failed to undertake, the relevance of Issue 16 to Joint Intervenor's specific argument here is unclear. Rather, Issue 16 seems more pertinent to LP&L's responsibility to identify possibly programmatic QA deficiencies. See pp. 26-27, *supra*. In any event, despite its earlier criticism in the Eisenhower Letter, the staff now finds LP&L's QA interview program — initially undertaken voluntarily — to be significantly improved and working well. SSER-9, Appendix J at 65-68. Staff Response to ALAB-801, Crutchfield Affidavit at 6-11. We have been given no cause to conclude otherwise.

⁶³ For example, in one case, "a minor procedural violation" concerning documentation was discovered, and "minor rework" of no safety significance was required on about one-ninth of the 3,600 pipe supports/restraints. Staff Response to ALAB-801, Mullikin Affidavit at 6.

assure better tracking of such matters in the future.⁶⁴ In these circumstances, we have no reasonable basis to doubt LP&L's management character or competence in this regard. See generally *Diablo Canyon*, ALAB-775, 19 NRC at 1369-70.

5. Joint Intervenor separately raise another example of LP&L's asserted failure to correct a problem identified previously by the NRC: "LP&L failed to take necessary action to upgrade its staff after repeated warnings by the NRC that its staffing was too low and affected the readiness of the utility to begin operations." Joint Intervenor's Motion at 28.⁶⁵ They rely on two NRC documents as support for this charge. One is a memorandum, dated May 7, 1981, in which the NRC's Division of Human Factors Safety states that it could not complete an audit at the site because the level of staffing and management readiness was so low at that time. JI Exh. 57. The other is an August 4, 1981, memorandum from a staff member to the Advisory Committee on Reactor Safeguards (ACRS), comparing the organizational structure and staff of several plants. He observed that there was little commercial nuclear operating experience at Waterford and that many plant and corporate support positions needed to be filled. JI Exh. 58 at 3.

Joint Intervenor's exhibits, however, do not tell the whole story. They offer only a snapshot glimpse of the status of the plant's operations staff in mid-1981, without providing any relevant developments since then. To begin with, the NRC's appraisal of the operating staff level at Waterford in 1981 was made on the basis of LP&L's "overly optimistic," then-scheduled fuel load date of October 1982. Staff Response to ALAB-801, Constable Affidavit at 12-13. More significant, however, is the fact that, after being advised of the NRC's concerns, LP&L quickly acted to alleviate them. By December 1981, the staff found that LP&L had already "taken positive steps to significantly improve its organization." *Id.* at 13. These changes, including substantial increases in experienced personnel, were implemented from January 1982 to December 1984. *Id.* at 14. In March 1982, the ACRS, as well, was able to report that, contrary to its concern seven months earlier, LP&L's organization and staffing would be adequate to operate Waterford in a safe manner by the then-projected fuel load date of January 1983. LP&L Exh. 15. The staff continued to monitor LP&L's progress in this regard up to the time LP&L

⁶⁴ It is entirely appropriate that we consider an applicant's successful remedial efforts in connection with claims that it lacks the necessary character and competence to operate a plant safely. See *South Texas*, 21 NRC at 371-74. Not to do so would have the undesirable effect of discouraging applicants and licensees from promptly undertaking such corrective measures.

⁶⁵ At pp. 20-21, *supra*, we have discussed Joint Intervenor's related charge in connection with contention A — i.e., A(1)(b) — that LP&L failed to maintain adequate staffing for its QA program during construction of the plant.

was actually ready (and later authorized) to load fuel and to operate at low power. It concluded in December 1984, and still maintains, that LP&L has adequately upgraded its staff. Staff Response to ALAB-801, Constable Affidavit at 15-16. Its operational QA staffing levels, in particular, now compare favorably to those of other plants. *Id.*, Harrison Affidavit at 54-55.

Joint Intervenor has thus failed to show that LP&L did not address a significant matter brought to its attention by the NRC. Indeed, the record shows that LP&L responded promptly to the Commission's expressed concerns that the plant might not be staffed adequately, in terms of both manpower and experience, by the time of fuel load. A skilled workforce cannot be hired overnight. Given that inherent constraint, LP&L actively recruited personnel and steadily increased its operations staff in the three years since the NRC first brought the matter to its attention. No more could reasonably be expected from LP&L's management.

6. Joint Intervenor's last argument in support of its claim that LP&L lacks the character and competence to operate Waterford safely concerns Ebasco's site management. Joint Intervenor relies on the fact that, in May 1983, Ebasco assigned Robert Marshall, a former Kaiser Construction superintendent at the Zimmer nuclear plant in Ohio, to Waterford as site manager. They refer to some ten QA problems allegedly associated with Mr. Marshall and discussed in a November 1981 NRC inspection report on the Zimmer facility. Joint Intervenor's Motion at 29-32. Joint Intervenor thus suggests that, in permitting Mr. Marshall to serve at Waterford, "LP&L failed to ensure that Ebasco site management was competent, trustworthy, and dedicated to quality principles" *Id.* at 29.

Joint Intervenor has not provided any documentary support for their allegation — specifically, neither the Zimmer inspection report on which they so heavily rely, nor even any page citations to it. At a minimum, Joint Intervenor was obliged to direct our attention to the specific portions of the report that ostensibly support their serious charges against Mr. Marshall. Their having failed to do so, we are not obliged to do Joint Intervenor's research for them. See ALAB-801, 21 NRC at 483-84; *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-804, 21 NRC 587, 592 & n.6 (1985).⁶⁶

⁶⁶ This is particularly true here because the Zimmer inspection report in question is about 420 pages long (including exhibits) and our copies are all on microfiche, making review of the report extremely difficult. (Due to space limitations, readily available copies of older NRC inspection records are now retained only on microfiche. Moreover, the Zimmer construction permit has been revoked and the operating license proceeding terminated. See *Cincinnati Gas & Electric Co.*, Docket No. 50-358, Order Revoking Construction Permit (May 16, 1985).)

More important, Joint Intervenor fail to link Mr. Marshall's brief tenure at Waterford to any particular problem at that site. They allege that "[a]fter NRC complaints about Mr. Marshall circulated at Waterford, he was removed from his position and moved to Ebasco corporate headquarters . . ." but, as noted above, they neither cite to nor submit any support whatsoever for this charge. See Joint Intervenor's Motion at 29 n.2. LP&L, on the other hand, strongly denies the allegation, asserting that Mr. Marshall was only temporarily assigned to Waterford to complete the last phase of construction. When that was essentially accomplished by May 1984, "Ebasco requested that he be released to assume his role as Vice President, Nuclear and Defense for Ebasco Constructors in . . . New Jersey." LP&L's Responses to Specific Allegations at 76. Joint Intervenor have thus clearly failed to satisfy their burden of showing that the employment of Robert Marshall at Waterford raises significant questions about LP&L's management competence and integrity.

C. The Adequacy of the NRC Staff's Inspections and Investigations

Joint Intervenor's third proposed contention states:

The NRC Staff's special CAT inspection, Special Inquiry Team inspection, Task Force inspection and Office of Investigation inquiry, and the corrective action, including reinspection and rework, which the Staff has required of LP&L, are not adequate to ensure that construction deficiencies of potential safety significance at Waterford have been resolved and that LP&L will be able to operate Waterford 3 in accordance with all regulatory requirements and to protect the public health and safety.

Joint Intervenor's Motion at 32. The contention reflects Joint Intervenor's general dissatisfaction with the staff's efforts at Waterford and its treatment of the allegations addressed in SSER-7. Joint Intervenor are similarly dissatisfied with LP&L's response to the QA problems identified by, and of concern to, the staff. See *id.* at 32-36, 46a-49, 51-57.⁶⁷

Insofar as Joint Intervenor seek to litigate the adequacy of the staff's work in connection with the Waterford facility, they propose a conten-

⁶⁷ The structure of Joint Intervenor's motion — organized around the proposed contentions — starts to break down with contention C. Nonetheless, we attempt to address their arguments in the context where they most logically seem to fit. The motion also contains two pages numbered "46;" we have renumbered the second "46a."

tion that is not litigable.⁶⁸ "[I]n an operating license proceeding . . . , the applicant's license application is in issue, not the adequacy of the staff's review of the application. An intervenor . . . may not proceed on the basis of allegations that the staff has somehow failed in its performance." *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-728, 17 NRC 777, 807, *review declined*, CLI-83-32, 18 NRC 1309 (1983). This follows logically from the fact that it is the *applicant* that ultimately bears the burden of proving its entitlement to the privilege of an operating license. See *Consumers Power Co.* (Midland Plant, Units 1 & 2), ALAB-315, 3 NRC 101, 103 (1976). Moreover, the NRC's adjudicatory boards are not empowered to direct the staff in the conduct of its inspection and investigatory duties. *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516-17 (1980). Absent such authority, it would make little sense to litigate the adequacy of the staff's independent performance.

This is not to say, however, that the staff's review — and, necessarily, its adequacy — play no role at all in a licensing proceeding. They do indeed, as is evident from this very case. In ALAB-801, for instance, we explained why "thorough staff input" is essential to our resolution of certain "important matters [raised by Joint Intervenors' motion] that could bear directly on plant safety." 21 NRC at 482. See also ALAB-786, 20 NRC at 1091 & n.7. We would be less than candid were we to deny that the adjudicatory boards have traditionally found it useful and desirable to rely on the staff's expertise for an evaluation of contested issues, especially technical ones. See, e.g., *Florida Power and Light Co.* (St. Lucie Nuclear Power Plant, Unit No. 2), ALAB-553, 10 NRC 12, 14 n.7 (1979). See also *South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-663, 14 NRC 1140, 1156 (1981), *review declined*, CLI-82-10, 15 NRC 1377 (1982). This is particularly true where, as here, the primary basis for the proposed contentions is a series of findings that resulted from staff inspections and investigations. Thus, the staff's review is a significant ingredient of NRC licensing proceedings, even though its adequacy cannot be litigated *per se*, as a contention.

⁶⁸ To the extent that contention C challenges the adequacy of both the corrective actions required by the staff and LP&L's response — in general and with regard to specific allegations (e.g., NCRs) — we have already addressed these matters in our discussion of contentions A and B. Our determination that neither of these proposed contentions raises a significant issue warranting reopening of the record (with the exception of the matters relating to OI investigations) necessarily required our consideration of the adequacy of the corrective action for identified deficiencies.

Because we have concluded that Joint Intervenor's contention C, challenging the adequacy of the staff's work at Waterford, does not raise a litigable issue, we need not address any of the reopening criteria with regard to this contention. Nevertheless, some comment on Joint Intervenor's criticism of the staff is warranted. On the one hand, they characterize the staff's recent inspections in connection with the plant as "unprecedented" and "comprehensive" and refer to the "increasingly strict reinspection programs" imposed on LP&L by the staff. Joint Intervenor's Motion at 32, 33, 46a. But on the other, Joint Intervenor is quite critical of the staff's efforts, particularly in comments directed at staff work not yet completed by early November 1984, when Joint Intervenor filed this motion to reopen. See, e.g., *id.* at 52, 55-57.⁶⁹

We believe that Joint Intervenor's criticism of the staff is not deserved. It undoubtedly could be fairly argued that greater NRC staff oversight throughout the construction of Waterford might have prevented or lessened the QA problems that were later revealed. But once the allegations began to mount, the staff devoted rather substantial resources to assuring that the facility was constructed properly and will operate safely. See Staff Response to ALAB-801, Constable Affidavit at 10-11; *id.*, Constable Exh. 3, Attachment at 1.⁷⁰ The staff's efforts included, where necessary, walkdowns and actual inspections of plant systems, as well as extensive records reviews. See, e.g., *id.*, Harrison Affidavit at 36-38, 41-42. See also note 48, *supra*. Thus, even if contention C were litigable, Joint Intervenor has failed to show here that the staff's inspection efforts raise a significant safety issue.

As we have seen, many of Joint Intervenor's charges concerning failures in LP&L's construction QA program are substantiated by various NRC inspection reports and other documents. But the thousands of pages that make up the record for this one motion to reopen also show that LP&L eventually acted to assure that all significant deficiencies

⁶⁹ Joint Intervenor also fire other assorted and random shots at the staff. For example, they claim that the staff has put many of the individuals who originally made allegations about the quality of construction at Waterford on the NRC's payroll. Joint Intervenor suggest that this has compromised the alleged independence. Joint Intervenor's Motion at 56. Joint Intervenor offer no corroboration whatsoever for this charge. Moreover, the "continued independence" of the alleged is beside the point. What is important is whether there is any basis to the allegations as made and, if so, whether proper corrective action has been taken.

⁷⁰ It is important to distinguish the staff's considerable inspection activity itself from its written presentations to us concerning that activity. Our rather harsh criticism of the staff in ALAB-801, 21 NRC at 482-87, was limited to the staff's failure, up to that point, to communicate effectively the reasons for its conclusions. As is evident from principally our discussion in part II.A.1, *supra*, this problem has been cured by the staff's supplementary filing in response to ALAB-801.

were corrected. It is also clear from the record that, after extensive reinspection and document review efforts, only minor hardware problems with no safety significance were discovered. The underlying causes of the identified deficiencies have been addressed as well, and there is therefore no reason to expect a recurrence in the future of these quality assurance failures.

Many of Joint Intervenors' other charges are unsubstantiated. Myriad accusations in their filings lack any corroboration whatsoever, or the support offered is of no value. We have addressed the most significant of the charges. Those remaining are so without merit as to warrant no discussion, or they have not been presented in a cogent enough fashion to permit a response. In conclusion, except for matters that may involve OI investigations, Joint Intervenors have failed to meet their burden of showing the existence of a significant safety issue warranting the reopening of the record.⁷¹

Joint Intervenors' November 8, 1984, motion to reopen on construction quality assurance and management character and competence is *denied*, except insofar as it raises issues that may relate to matters under investigation by the NRC's Office of Investigations; to that extent, the motion is *referred to the Commission*. Joint Intervenors' motion of the same date for a protective order is *denied as moot*.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the
Appeal Board

⁷¹ In light of this conclusion, we need not decide if Joint Intervenors have satisfied the other requirements for reopening. See pp. 13-14 and note 4, *supra*.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Alan S. Rosenthal, Chairman
Thomas S. Moore
Howard A. Wilber

In the Matter of

Docket Nos. 50-413-OL
50-414-OL

DUKE POWER COMPANY, *et al.*
(Catawba Nuclear Station,
Units 1 and 2)

July 26, 1985

The Appeal Board affirms three Licensing Board partial initial decisions that together authorize full-power operation of the two-unit Catawba facility, but leaves for resolution in a separate decision all questions pertaining to that part of the Licensing Board's authorization permitting the receipt and storage at Catawba of spent fuel generated at the applicants' Oconee and McGuire facilities.

ATOMIC ENERGY ACT: SAFETY FINDINGS

Neither the Atomic Energy Act of 1954, as amended, nor the Commission's implementing regulations mandate a demonstration of error-free construction. What they require is simply a finding of reasonable assurance that, as built, the facility can and will be operated without endangering the public health and safety. 42 U.S.C. §§ 2133(d), 2232(a); 10 C.F.R. § 50.57(a)(3)(i). *See also* Union Electric Co. (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 346 (1983).

ADJUDICATORY HEARINGS: SCOPE OF REVIEW

In examining claims of quality assurance deficiencies, one must look to the implication of those deficiencies in terms of safe plant operation. This inquiry necessitates careful consideration of whether all ascertained construction errors have been cured and whether there has been a breakdown in quality assurance procedures of sufficient dimensions to raise legitimate doubt as to the overall integrity of the facility and its safety-related structures and components. *Ibid.*

RULES OF PRACTICE: BRIEFS

The Commission's Rules of Practice require an appellant to identify clearly in its brief the errors of fact or law that are the subject of the appeal. For each issue appealed, the precise portion of the record relied upon in support of the assertion of error must also be provided. 10 C.F.R. 2.762(d)(1).

RULES OF PRACTICE: BRIEFS

A party's failure to submit a brief containing sufficient information and argument to allow the appellate tribunal to make an intelligent disposition of the issues presented by its appeal is tantamount to their abandonment. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 413 (1976).

RULES OF PRACTICE: BRIEFS

A mere reference in a brief to previously filed proposed findings of fact and conclusions of law without further illumination as to why the proposed findings are correct will not suffice to show why a board's contrary determination is erroneous.

RULES OF PRACTICE: APPELLATE REVIEW (SCHEDULING DECISIONS)

Because licensing boards must be vested with considerable latitude in determining the course of the proceedings which they are called upon to conduct, an appeal board will review licensing board scheduling rulings only to the extent necessary to insure that no party has been denied a fair opportunity to advance its cause. *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-212, 7 AEC 986, 991 (1974). See also *Public Service Co. of Indiana* (Marble Hill

Nuclear Generating Station, Units 1 and 2), ALAB-459, 7 NRC 179, 188 (1978).

RULES OF PRACTICE: APPELLATE REVIEW (CROSS-EXAMINATION RULINGS)

A mere showing that a licensing board erred by curtailing cross-examination is not sufficient to warrant appellate relief. In addition, the complaining party must demonstrate actual prejudice — i.e., that the ruling had a substantial effect on the outcome of the proceeding. *Houston Lighting & Power Co.* (South Texas Project, Units 1 and 2), ALAB-799, 21 NRC 360, 376-77 (1985), citing *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-788, 20 NRC 1102, 1151 (1984). See also *Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1096 (1983); *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-673, 15 NRC 688, 697 & n.14, *aff'd*, CLI-82-11, 15 NRC 1383 (1982).

EMERGENCY PLANNING: FEMA FINDING (NEED FOR FINAL FINDINGS)

It is now well-settled that the issuance of the Federal Emergency Management Agency's (FEMA) final findings on the adequacy of offsite emergency plans and preparedness is not a prerequisite to the authorization of a full-power operating license. Rather, preliminary FEMA reviews and interim findings are sufficient as long as such information permits the Licensing Board to conclude that offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-775, 19 NRC 1361, 1379 (1984), citing *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-717, 17 NRC 346, 380 n.57 (1983); *Cincinnati Gas & Electric Co.* (Wm. H. Zimmer Nuclear Power Station, Unit No. 1), ALAB-727, 17 NRC 760, 775 n.20 (1983). See also *Detroit Edison Co.* (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-730, 17 NRC 1057, 1066-67 (1983).

RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS

A licensing board is required to consider all five factors specified in 10 C.F.R. 2.714(a)(1) before admitting a late contention, even if the contention is based on previously unavailable information. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045 (1983).

ATOMIC ENERGY ACT: RIGHT TO A HEARING

Section 189a of the Atomic Energy Act does not provide members of the public with an unqualified right to a hearing. Rather, the Act permits the establishment of reasonable threshold requirements for the admission of contentions to NRC licensing proceedings. *Id.* at 1045-47.

RULES OF PRACTICE: LITIGABILITY OF ISSUES

The Commission has provided by rule that neither need-for-power nor financial qualifications questions are to be explored in certain operating license proceedings. See 10 C.F.R. 51.106(c) (need for power); 10 C.F.R. 2.104(c)(4), as amended effective October 12, 1984, 49 Fed. Reg. 35,747, 35,752, as corrected, 49 Fed. Reg. 36,631 (1984) (financial qualifications).

RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS

In meeting factor three of 10 C.F.R. 2.714(a)(1) for late-filed contentions, a bare assertion of the past effectiveness of a party's participation in proceedings, unsupported by specific information from which a board could draw an informed inference that the party can and will make a valuable contribution on a particular issue in the proceeding, will not suffice. See *Washington Public Power Supply System* (WPPSS Nuclear Project No. 3), ALAB-747, 18 NRC 1167, 1181 (1983); *Mississippi Power & Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-704, 16 NRC 1725, 1730 (1982).

RULEMAKING: EFFECT ON ADJUDICATION

An appeal board is required on appeal of a licensing board decision to apply the Commission's regulations in effect at the time of the appeal. *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 82-83 (1974).

TECHNICAL ISSUE DISCUSSED:

Intergranular Stress Corrosion Cracking (IGSCC).

APPEARANCES

Robert Guild, Columbia, South Carolina, for the intervenor Palmetto Alliance (with whom **Jesse L. Riley**, Charlotte, North Carolina, was on the brief for the intervenor Carolina Environmental Study Group).

J. Michael McGarry, III, Washington, D.C. (with whom **Anne W. Cottingham** and **Mark S. Calvert**, Washington, D.C., and **Albert V. Carr, Jr.**, Charlotte, North Carolina, were on the brief), for the applicants Duke Power Company, *et al.*

George E. Johnson for the Nuclear Regulatory Commission staff.

DECISION

Before us are the consolidated appeals of intervenors Palmetto Alliance and Carolina Environmental Study Group from three Licensing Board partial initial decisions issued in this operating license proceeding involving the two-unit Catawba Nuclear Station located in York County, South Carolina. To the extent here pertinent, the first of these decisions resolved in the applicants' favor numerous quality assurance issues raised by the intervenors.¹ In the second decision, the Licensing Board approved the applicants' emergency response plans subject to the fulfillment of certain imposed conditions within a specified time.² Finally, the third decision focused upon a relatively narrow quality assurance issue over which the Licensing Board had retained jurisdiction in the first deci-

¹ LBP-84-24, 19 NRC 1418 (1984). As employed in our decision, the term "quality assurance" encompasses "quality control" as well. See 10 C.F.R. Part 50, Appendix B, Introduction.

² LBP-84-37, 20 NRC 933 (1984). While of no operative significance here, we note in passing that this decision was rendered by a different Licensing Board specially convened for the purpose of hearing and determining the emergency planning issues alone. The transcript of that hearing will be referred to in this opinion as "EP Tr.," in distinguish it from the separately numbered transcript of the hearing on all other issues ("Tr.").

sion.³ This issue also was resolved in the applicants' favor and the third decision concluded with an authorization for the Director of Nuclear Reactor Regulation (NRR) to allow full-power operation of the Catawba facility once the applicants satisfy the conditions previously imposed by the Board.⁴

In their brief and at oral argument, the intervenors advanced myriad claims of substantive and procedural error addressed to the three partial initial decisions and several interlocutory rulings as well.⁵ Upon full consideration of these claims, we conclude that there is no warrant for upsetting the authorization of full-power Catawba operation. We leave for resolution in a separate decision, however, all questions pertaining to that part of the Licensing Board's authorization to the NRR Director permitting the receipt and storage at Catawba of spent fuel generated at the applicant Duke Power Company's Oconee and McGuire nuclear power facilities.⁶

I. QUALITY ASSURANCE

A condition precedent to the issuance of an operating license for a nuclear power facility is a finding that there is reasonable assurance that the facility has been properly constructed and can be operated without endangering the public health and safety.⁷ To this end, a utility that is constructing such a facility must establish and carry out a quality assurance program designed to provide "adequate confidence" that those systems, structures and components having safety-related functions "will perform satisfactorily in service."⁸

Before the Licensing Board, the intervenors maintained that there were "systematic deficiencies in plant construction" and "company pressure to approve faulty workmanship," preventing a finding that the plant can safely operate.⁹ This contention brought under scrutiny the suf-

³ LBP-84-52, 20 NRC 1484 (1984). Characterized as "foreman override," the issue grew out of allegations that welders had been instructed by foremen to do their work in a manner contrary to prescribed procedures or sound welding practices.

⁴ *Id.* at 1507. In the first decision, the Board had authorized the NRR Director to issue a license permitting low-power testing (up to five percent of rated power) of Unit 1. LBP-84-24, 19 NRC at 1585.

⁵ A separate timely notice of appeal was filed from each partial initial decision. On the motion of intervenors, however, all briefing was held in abeyance to await the rendition of the last decision. Thus, the intervenors, applicants and NRC staff each filed a single brief.

⁶ These questions were the subject of supplemental memoranda and oral argument.

⁷ 10 C.F.R. 50.57(a).

⁸ 10 C.F.R. Part 50, Appendix B, Introduction. That Appendix contains the general quality assurance criteria for nuclear power plants.

⁹ See LBP-82-107A, 16 NRC 1791, 1795 (1982).

iciency of the applicants' quality assurance program. That scrutiny, in turn, was governed by our *Callaway* decision.¹⁰ As there observed,

[i]n any project even remotely approaching in magnitude and complexity the erection of a nuclear power plant, there inevitably will be some construction defects tied to quality assurance lapses. It would therefore be totally unreasonable to hinge the grant of an NRC operating license upon a demonstration of error-free construction. Nor is such a result mandated by either the Atomic Energy Act of 1954, as amended, or the Commission's implementing regulations. What they require is simply a finding of reasonable assurance that, as built, the facility can and will be operated without endangering the public health and safety. 42 U.S.C. §§ 2133(d), 2232(a); 10 C.F.R. § 50.57(a)(3)(i). Thus, in examining claims of quality assurance deficiencies, one must look to the implication of those deficiencies in terms of safe plant operation.

Obviously, this inquiry necessitates careful consideration of whether all ascertained construction errors have been cured. Even if this is established to be the case, however, there may remain a question whether there has been a breakdown in quality assurance procedures of sufficient dimensions to raise legitimate doubt as to the overall integrity of the facility and its safety-related structures and components. A demonstration of a pervasive failure to carry out the quality assurance program might well stand in the way of the requisite safety finding.¹¹

Applying those principles, the Licensing Board found that, although there were some quality assurance deficiencies, they did not amount to a pervasive breakdown in Catawba's quality assurance program.¹² Further, in its principal quality assurance decision, the Board found that, with very few exceptions, the applicants had taken "reasonably prompt action to correct confirmed deficiencies" and that all significant technical discrepancies had already been or were being corrected.¹³

On appeal, the intervenors attack the Licensing Board's substantive conclusions and also argue that, by virtue of various interlocutory rulings, they were unfairly denied the opportunity to develop fully their quality assurance claims.

A. In their brief, the intervenors maintain that "known, yet uncorrected construction defects" exist at Catawba and that there have been "systematic and willful circumventions" of quality assurance requirements.¹⁴ These are indeed serious claims. But that is all they are — claims. The brief does not refer us to any evidence of record that might

¹⁰ *Union Electric Co. (Callaway Plant, Unit 1)*, ALAB-740, 18 NRC 343 (1983).

¹¹ *Id.* at 346 (footnote omitted).

¹² LBP-84-24, 19 NRC at 1433-34, 1440.

¹³ *Id.* at 1505. In its later decision on "foreman override," the Board at least implicitly determined that no ascertained safety-significant defects had gone uncorrected. LBP-84-52, 20 NRC at 1502-06, 1507.

¹⁴ Brief of Appellants Palmetto Alliance and Carolina Environmental Study Group (Jan. 9, 1985) [hereafter "Intervenors' Brief"] at 5, 6.

support these broad assertions.¹⁵ In the circumstances, we need not, and will not, pursue them further.¹⁶

As for their remaining substantive quality assurance claims, the intervenors assert that, because the quality assurance inspectors at Catawba lacked sufficient independence from production and cost pressures, they could not be relied upon to assure proper plant construction and may have overlooked certain construction deficiencies. We are told that this asserted lack of independence is reflected by (1) widespread harassment against quality assurance inspectors by production workers, and retaliatory acts by construction management against those inspectors for properly carrying out their inspection functions, and (2) the organizational relationship between the quality assurance personnel and the Construction Department management.¹⁷ Our examination of this line of argument persuades us that the intervenors have done no more than rehearse claims advanced before and rejected by the Board below, without directing our attention to supporting record evidence.

1. At the hearing, the Licensing Board explored averments that construction management personnel had retaliated against welding inspectors for voicing grievances, expressing concerns to this agency, and conducting strict inspections. The Board also examined allegations that welding inspectors were harassed by craftsmen and foremen whose work they were examining.

As to the first claim, the Board found that one welding inspector (Mr. Ross) had suffered retaliation at the hands of management. He had received a low job evaluation because he and his crew had adhered strictly to quality assurance procedures and had expressed safety concerns to management.¹⁸ But, according to the Board, this apparently was an isolated episode and Mr. Ross and his crew had not allowed it to affect their job performance.¹⁹ Similarly, the Board determined that, considering the

¹⁵ At oral argument, intervenors asserted that there may be uncorrected defects in piping and other components resulting from "arc striking" (the inadvertent striking of a welding electrode against an unintended part of a component) or "cold springing" (the practice of aligning by force pipes to be joined together). App. Tr. 14-18. Their counsel failed, however, to cite any specific defects that were not properly remedied. On the contrary, he conceded that he could not "state as a matter of fact that any of those [referring to welding defects not identified in the normal course of the applicants' quality assurance program] remain uncorrected as of this date." App. Tr. 19.

¹⁶ The Commission's Rules of Practice require an appellant to identify clearly in its brief "the errors of fact or law that are the subject of the appeal. For each issue appealed, the precise portion of the record relied upon in support of the assertion of error must also be provided." 10 C.F.R. 2.762(d)(1). Some time ago, in the construction permit proceeding involving this very facility, we pointed out that "a party's failure to submit a brief containing sufficient information and argument to allow the appellate tribunal to make an intelligent disposition of the issues [presented by its appeal] is tantamount to their abandonment." ALAB-355, 4 NRC 397, 413 (1976).

¹⁷ Intervenors' Brief at 9-13.

¹⁸ LBP-84-24, 19 NRC at 1441-42, 1513-20.

¹⁹ *Id.* at 1518 n.27, 1519-20.

size and duration of the construction project, the number of significant incidents of harassment against the welding inspectors was small. Additionally, none of the inspectors had been deterred from the fulfillment of their duties by such incidents.²⁰

If these findings have adequate record support, it follows that the Board below was justified in concluding that the carrying out of the quality assurance program for welding activities was not seriously affected by retaliation against or harassment of diligent inspectors.²¹ But in their brief, the intervenors point to no evidence demonstrating that there was a pattern of retaliation or harassment that had an intimidating effect upon the inspectors. They seemingly are content to leave it to us to conduct an independent examination of the testimony of the inspectors. Although we are under no obligation to do so,²² our examination of the record confirms that the Licensing Board accurately summarized the testimony, with the consequence that its determination on this matter must be upheld.²³

2. Historically, applicant Duke's Vice President for Engineering and Construction served also as the company's Quality Assurance Manager.²⁴ Some years ago, in the construction permit proceeding involving another Duke nuclear facility, we questioned whether this arrangement conformed to the requirements of Appendix B to 10 C.F.R. Part 50.²⁵ As a consequence, in 1974, prior to the issuance of a construction permit for Catawba, Duke appointed a separate quality assurance manager.²⁶ Since that time, Duke's Construction and Quality Assurance Departments have been headed by separate independent managers, who report to a single high-level executive.²⁷ Until 1981, however, the quality assurance inspectors still were located "administratively" in the Construction Department, albeit subject to the "functional" control of the Quality

²⁰ *Id.* at 1444, 1531.

²¹ *Id.* at 1520, 1531.

²² See *Louisiana Power & Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 54 (1985); *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-804, 21 NRC 587, 592 & n.6 (1985).

²³ See, e.g., with respect to retaliation, Tr. 5930-31 (Burr), 6343 (Rockholt); and, with respect to harassment, Tr. 5800 (Deaton), 6883-84 (Langley), 8307-08 (Godfrey), 8428 (Crisp), 8685-86 (Reep). It should be noted that several inspectors testified that they did not believe that any other welding inspectors had been deterred from performing adequately as a result of incidents of harassment. Tr. 6314-15 (Rockholt), 6965 (Ross), 8428 (Crisp), 8308 (Godfrey).

²⁴ LBP-84-24, 19 NRC at 1459.

²⁵ See *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 & 2), ALAB-128, 6 AEC 399, 410 (1973).

²⁶ LBP-84-24, 19 NRC at 1459.

²⁷ *Ibid.*

Assurance Manager.²⁸ In 1981, those inspectors were transferred to the Quality Assurance Department, which assumed control over them for all purposes.²⁹

The propriety of the quality assurance organizational structure in place between 1974 and 1981 was litigated and resolved in favor of the applicants in the construction permit proceeding for the Catawba facility.³⁰ Nonetheless, the intervenors argued below that the quality assurance personnel did not enjoy sufficient independence vis-a-vis the Construction Department — i.e., that the power to control the inspectors was inherent in the Construction Department's power to hire, fire, set schedules, etc. In response, the Licensing Board stated:

As a matter of practical experience, we think there is some merit in this claim. Furthermore, we believe that the QA function at Catawba would have been performed somewhat more independently if the present organizational structure had obtained throughout construction. We also believe, however, that the effect of the functional-administrative dichotomy on inspector performance cannot be quantified but probably was not very great. In any event, that very dichotomy had at least the implied blessing of this agency in the CP proceeding, LBP-75-34, *supra*, 1 NRC at 649, 650. In these circumstances, absent a showing that safety was compromised, a showing not made here, we can only regret that the dichotomy was not abolished earlier than it was.³¹

Although dissatisfied with this outcome, the intervenors call no specific record evidence to our attention that suggests that safety was compromised as a result of the historical position of the quality assurance personnel within Duke's overall organizational structure. This being so, we see no cause to disturb the Board's conclusion.

3. Criterion V in Appendix B to 10 C.F.R. Part 50 provides that "[a]ctivities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings." Criterion XVII specifies that "[s]ufficient records shall be maintained to furnish evidence of activities affecting quality."

To comply with these requirements, the applicants instituted a system of documentation that utilized, among others, a Deficiency Report

²⁸ *Ibid.* The "administrative" control by the Construction Department over the inspectors covered personnel matters such as timekeeping and payroll, the authority to hire and fire, and, apparently, at least indirect authority to schedule daily work. *Id.* at 1459-60. The "functional" control exercised by the Quality Assurance Manager included technical and policy direction, training and certification of inspectors, and establishment of quality assurance procedures. *Id.* at 1460.

²⁹ *Id.* at 1459.

³⁰ LBP-75-34, 1 NRC 626, 546-50 (1975). The intervenors did not include the quality assurance organization issue in their appeal from that decision. See ALAB-355, 4 NRC 397 (1976).

³¹ LBP-84-24, 19 NRC at 1460.

Form (R-2A) and a Nonconforming Item Report (NCI). The R-2A is used to document minor discrepancies where technical construction personnel prescribe the corrective action to be taken but quality assurance personnel must approve the corrected work. For its part, the NCI is employed when the discrepancy is more significant and not readily resolved by an R-2A or other method.³²

At the hearing below, the Licensing Board considered the intervenors' charge that the practice of "verbal voiding" — i.e., the return of an NCI to the originator quality assurance inspector with an oral explanation rather than its incorporation into permanent records — was being utilized for the purpose of circumventing the critical document requirements reflected in the specific provisions of Duke's own quality assurance program.³³ The evidence on the matter persuaded the Board that, while there had been instances of verbal voiding, "[s]o few NCIs were handled in this manner in relation to the number originated that it could not have served to conceal faulty workmanship or significantly diminish the number of nonconformances that were documented."³⁴

Beyond a sweeping assertion that the Licensing Board manifested "a disturbing casualness for strict adherence to the Commission's clear quality assurance requirements," we are not told specifically what is wrong with that analysis.³⁵ Nor has our independent look at the evidence provided us with cause to upset the Licensing Board's rejection of the intervenors' position on the documentation question. In this connection, apart from the relative paucity of NCIs that were verbally voided (over 17,000 NCIs were prepared by quality assurance personnel), the evidence disclosed that the NCI procedure was but one of several available means of recording discrepancies. It also showed that Duke's Quality Assurance Department (in the estimation of an NRC Resident Inspector at Catawba) had documented "thousands" of quality assurance deficiencies on several other forms.³⁶

4. During the initial hearings below on quality assurance, a Board witness testified that there had been occasions where the foremen had ordered welders to perform work "in a manner contrary to prescribed

³² *Id.* at 1480.

³³ *Id.* at 1479-89.

³⁴ *Id.* at 1484-85.

³⁵ Intervenor's Brief at 24.

³⁶ Tr. 9777-79 (Van Doorn). In their appellate brief, the intervenors also mention the use by welding inspectors of "black books" (apparently a personal work diary) instead of quality assurance forms to document the surveillance of welding activities. On this score as well, the intervenors fail to explain adequately why this practice constituted a pervasive quality assurance breakdown. Such an explanation was plainly in order, given the NRC Resident Inspector's testimony that the failure to use the forms was not a serious violation. Tr. 9298.

procedures or to the welder's ideas of correct welding."³⁷ This testimony prompted investigations of the so-called "foreman override" practice by both the staff and (at the staff's request) the applicants. The fruits of the investigations, which in the applicants' case involved the receipt of affidavits from over 200 Duke employees, were considered in a separate hearing where a number of present and former Duke employees testified. In its November 1984 decision, the Board found that there had been only isolated instances of foreman override involving violations of quality assurance or construction procedures, and that these had not compromised plant safety.³⁸ In this connection, the Board pointed out that only eight of the hundreds of foremen at the site had engaged in the practice, and five of them were involved in a single incident. Moreover, the foreman involved in most of the override incidents as well as his superior had been relieved of supervisory responsibilities at the site.³⁹

We have examined the assigned bases for the intervenors' insistence that the foreman override practice was more pervasive and safety-significant than found by the Licensing Board. None of those bases is meritorious.

To begin with, the record does not support the intervenors' claim that twenty-three foremen were involved in the practice. On this score, we agree with the Licensing Board's analysis of the evidence on the matter,⁴⁰ which has not been shown by intervenors to be faulty.

Second, there is no substance to the intervenors' argument that the true extent and significance of foreman override will never be known because the staff delegated its inspection responsibility to the applicants. Prior to requesting the applicants to undertake an investigation of the foreman override concerns, the staff conducted its own extensive investigation.⁴¹ Moreover, the staff closely monitored the applicants' investigation. Such monitoring included visits to the site to make sure that the proper atmosphere was maintained, and staff interviews of both the applicants' interviewers and some of the individuals from whom the applicants had obtained affidavits.⁴² Staff witnesses also testified that, based on their own investigation as well as their review of the results of the applicants' investigation, foreman override was not a pervasive practice.⁴³

³⁷ LBP-84-24, 19 NRC at 1562.

³⁸ LBP-84-52, 20 NRC at 1507.

³⁹ *Id.* at 1502, 1507.

⁴⁰ *Id.* at 1501-02.

⁴¹ See, e.g., Tr. 13,882-83, 13,911-12 (Uryc).

⁴² Tr. 13,848-50, 13,865-66 (Uryc, Blake).

⁴³ Tr. 13,883 (Uryc, Blake); 13,912-13 (Uryc).

Third, the intervenors also claim that there were serious methodological flaws in the applicants' investigation. Specifically, they allege that the applicants' interviews with only a small percentage of the power house mechanics, electricians and steel workers provide no basis for drawing any general conclusion that foreman override was not a problem. Further, according to the intervenors, the questions posed to the workers sought "high risk" information that, if supplied, might adversely affect them. For this reason, and because the questioners were employed by Duke,⁴⁴ the intervenors maintain that the reliability of the inquiry was compromised.

These arguments are not new; they were presented to and rejected by the Licensing Board.⁴⁵ The intervenors do not explicitly address the reasoning underlying that rejection. Rather, they merely refer us to the proposed findings of fact and conclusions of law submitted below.

This will not do. All that the reference tells us is that the intervenors disagree with the Licensing Board's findings; it provides no illumination as to why the proposed findings are correct, as claimed, and the Licensing Board's determination is wrong. Nonetheless, we have reviewed the record on our own initiative and are satisfied that the intervenors' attack upon the applicants' investigation is wide of the mark. Each of the intervenors' allegations was rebutted by applicants' expert witness, Dr. John E. Hunter. He testified that, based on the sample of nonwelders interviewed, the applicants properly inferred that instances of foreman override were rare outside of the welding area.⁴⁶ Dr. Hunter also stated that the questions asked were appropriately phrased so as to elicit the necessary information.⁴⁷ Further, he expressed the opinion that the reliability of the investigation was not affected by the fact that Duke personnel conducted the interviews and sought the disclosure of "high-risk" information. As he pointed out, the interviewers were not in a position of power relative to the interviewees, but were from an "external department" and in other situations had served in an "ombudsman role for worker grievances."⁴⁸ Moreover, Dr. Hunter stated that revealing an instance of foreman override would have had adverse implications only

⁴⁴ More particularly, it appears that they were employee relations personnel. Applicants' Exh. 116, Duke Power Company's Investigation of Issues Raised by the NRC Staff in Inspection Reports 50-413/84-31 and 50-414/84-17, (admitted at Tr. 13,144) at 10.

⁴⁵ LBP-84-52, 20 NRC at 1490-94.

⁴⁶ Tr. 14,340-49.

⁴⁷ Tr. 14,311-12, 14,327-32.

⁴⁸ Applicants' Exh. 120, Testimony of Dr. John E. Hunter (admitted at Tr. 14,295) at 4.

for the foreman, not the craftsman who had been simply following orders.⁴⁹

Finally, intervenors take issue with the Licensing Board's disposition of the matter of the welding of stainless steel piping in derogation of established procedures. In order to lessen the likelihood that the heat-affected zone of stainless steel welds would become sensitized and, thus, made potentially susceptible to intergranular stress corrosion cracking, Duke procedures specify that welds should cool to 350°F between welding passes.⁵⁰ Numerous welder allegations of interpass temperature violations surfaced during the staff's and the applicants' investigations of foreman override concerns. The applicants thereupon undertook laboratory and field tests to determine whether welds had become sensitized as a result of these alleged violations. Although the results of these tests were inconclusive, the Board concluded that violations of interpass temperature requirements had not significantly affected the quality of construction.⁵¹

We find that the evidence in the record supports this conclusion. Witnesses for the applicants and the staff testified without contradiction that, in order for intergranular stress corrosion cracking to occur, sensitization of the metal alone is insufficient. Rather, there must also be stress and a sufficiently aggressive environment.⁵² While sensitization and stress may be present at Catawba, these witnesses agreed that the safety-related welds that may have been exposed to high interpass temperatures are not associated with such an environment. This is because those welds are on components of the primary cooling system. That system normally handles only noncorrosive fluids and it is very unlikely that any contaminant will be introduced into the system.⁵³ Therefore, even if excess interpass temperatures occurred, intergranular stress corrosion cracking is not expected to result at Catawba, and there is reasonable assurance that the welds will remain safe in service.⁵⁴

B. We now turn to the intervenors' assertions of procedural error in connection with the quality assurance issues. They maintain that the

⁴⁹ *Ibid.* Dr. Hunter's testimony was corroborated by the testimony of several interviewees to the effect that they had not felt intimidated or pressured during the interviews. See, e.g., Tr. 14,042, 14,222-23 (Carpenter), 14,142-43 (McCall), 14,187-88 (Braswell).

⁵⁰ Applicants' Exh. 116, Attachment A at 1-5.

⁵¹ LBP-84-52, 20 NRC at 1506.

⁵² See, e.g., Tr. 13,606 (Ferdon), 13,907 (Czajkowski).

⁵³ Tr. 13,609-14 (Ferdon, Kruse), 13,907-09 (Czajkowski). These witnesses testified that pressurized water reactors, such as Catawba, tend not to have stress corrosion cracking in the primary system due to oxygen suppression. They also testified that strict controls at Catawba keep contaminant levels below that at which intergranular stress corrosion cracking would occur.

⁵⁴ Tr. 13,609-14 (Ferdon, Kruse), 13,873, 13,909 (Czajkowski).

Board was unduly influenced by the applicants' projected fuel loading dates and their plans for commencement of plant operation. As a consequence, according to the intervenors, the Board improperly limited (1) their right to conduct discovery, (2) the length of time that was allotted to them for the cross-examination of witnesses, and (3) the number of witnesses that could testify on their behalf.

It does appear that, in accordance with the Commission's 1981 Statement of Policy on Conduct of Licensing Proceedings,⁵⁵ the Licensing Board kept a watchful eye upon applicants' construction schedule.⁵⁶ At the same time, however, the intervenors have not established that, contrary to the further directive in that Policy Statement,⁵⁷ the Board "compromise[d] the Commission's fundamental commitment to a fair and thorough hearing process."

1. In a March 5, 1982 order, the Licensing Board conditionally admitted the intervenors' quality assurance contention and indicated that discovery on it could commence.⁵⁸ Two and one-half months later, because of a challenge to the admission of this contention (among others), the Board suspended discovery activities.⁵⁹ On December 1, 1982, the Board admitted a revised version of the quality assurance contention and reopened discovery.⁶⁰

Later that month, the Board announced its expectation that the evidentiary hearing on the various contentions before it would commence the following fall.⁶¹ In this connection, the parties were asked to submit "detailed proposed schedules leading to a hearing . . ."⁶² Both the applicants and the staff complied with that request; the intervenors did not (although, at a January 20, 1983 prehearing conference, they objected to looking to the applicants' anticipated plant completion date in determining the hearing schedule).⁶³ On February 2, 1983, the Board directed that discovery would end on May 20, 1983, and the hearing would be held that October.⁶⁴

⁵⁵ CLI-81-8, 13 NRC 452.

⁵⁶ See, e.g., Tr. 659-61, 701-02, 11,218; Memorandum and Order of June 13, 1983 (unpublished) at 4.

⁵⁷ 13 NRC at 453.

⁵⁸ LBP-82-16, 15 NRC 566, 577, 591.

⁵⁹ Memorandum and Order of May 25, 1982 (unpublished). See also LBP-82-51, 16 NRC 167, 178-79 (1982).

⁶⁰ LBP-82-107A, 16 NRC at 1795, 1810. In the interim, for reasons unimportant here, we reversed the conditional admission of the intervenors' initial quality assurance contention. ALAB-687, 16 NRC 460 (1982), *rev'd in part on other grounds*, CLI-83-19, 17 NRC 1041 (1983).

⁶¹ LBP-82-116, 16 NRC 1937, 1953 (1982).

⁶² *Ibid.*

⁶³ Memorandum and Order of February 2, 1983 (unpublished) at 6-7, 10.

⁶⁴ *Id.* at 11.

As thus seen, between March 1982 and May 1983, the intervenors had a total of over seven months to conduct discovery on their quality assurance concerns. Moreover, after the close of discovery in May 1983, the Board granted the intervenors an additional twenty-five day period in which to take the depositions of Duke and NRC employees on certain welding quality assurance matters that the intervenors maintained had first come to their attention late in discovery.⁶⁵ To be sure, the intervenors had desired a longer discovery period, as well as a later hearing date.⁶⁶ And it may be, as they suggest, that their requests for that relief would have fallen on more sympathetic ears had not construction of the facility seemingly been so close to completion. But of itself that consideration scarcely provides a sufficient basis for overturning the Board's discovery orders.

As we long ago observed, "licensing boards must be vested with considerable latitude in determining the course of the proceedings which they are called upon to conduct."⁶⁷ Consequently, "we are entirely disinclined to assume the role of a *post hoc* overseer of the discharge by licensing boards of their scheduling functions [and] will enter that arena only to the extent necessary to insure that no party has been denied a fair opportunity to advance its cause."⁶⁸ Accordingly, it was incumbent upon the intervenors to demonstrate that the discovery period accorded to them was so inadequate as to deprive them of procedural due process. This burden manifestly has not been met. In short, despite considerable rhetoric on the subject of deprivation of hearing rights, the intervenors do not explain why the eight months of allowed discovery (almost two-thirds of which followed the admission of the revised contention) was insufficient to obtain the information necessary to flesh out their quality assurance concerns.⁶⁹

⁶⁵ Memorandum and Order of June 13.

⁶⁶ See Palmetto Alliance Motion to Establish Discovery Schedule on Its Quality Assurance Contention 6 (May 25, 1983) at 15 and Attachment 1.

⁶⁷ *Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3)*, ALAB-212, 7 AEC 986, 991 (1974).

⁶⁸ *Ibid.* See also *Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2)*, ALAB-459, 7 NRC 179, 188 (1978) ("[W]e enter the scheduling thicket . . . only to entertain a claim that a board abused its discretion by setting a hearing schedule that deprives a party of its right to procedural due process.")

⁶⁹ After the staff and the applicants submitted their reports on the foreman override issue (see pp. 69-70, *supra*), the intervenors moved for leave to conduct discovery on that issue. Motion by Palmetto Alliance and Carolina Environmental Study Group for the Conduct of Further Proceedings to Consider Evidence of Foreman Override (Sept. 17, 1984). The Board granted a limited period for such discovery, which was geared to the hearing schedule established at the same time. Tr. 12,840-53. Although intervenors complain to us that the allotted period was inadequate, they told the Licensing Board that, while they were not happy with it, the discovery/hearing schedule seemed "doable." Tr. 12,910-11. Having ac-

(Continued)

2. The quality assurance hearings commenced on October 4, 1983. The first of six panels of applicant witnesses took the stand the following day⁷⁰ and, after a short direct examination, was made available for cross-examination by the intervenors.⁷¹ That cross-examination consumed the balance of that day and all of October 6.

After the luncheon recess on October 7, the intervenors commenced cross-examination of the second panel, which consisted of the two members of the first panel and two additional individuals.⁷² When this cross-examination had extended for over two hearing days, the Board stepped in and advised the intervenors' counsel that his cross-examination had to be concluded by noon the following day.⁷³

Counsel observed this deadline. The Board then expressed its concern respecting the length of time the intervenors might take in examining the remaining witnesses (both those testifying in panels and those welding inspectors and supervisors testifying individually).⁷⁴ After hearing from the parties, the Board adopted a "flexible" schedule. Under that schedule, the intervenors were given approximately two days to interrogate each of the remaining panels, with the understanding that the deadlines would not necessarily be rigidly enforced.⁷⁵ As it turned out, the intervenors finished the questioning of those witnesses within the allotted time.⁷⁶

Insofar as the individual witnesses are concerned, the intervenors were permitted to cross-examine all fifteen of the welding inspectors and supervisors who testified. On appeal, they cite one specific instance in which that examination was cut short by the Board. They do not explain, however, why the Board was wrong in concluding that three and one-half hours was a reasonable period for the interrogation of the inspector in question.⁷⁷ Nor do they provide illumination on what might

quiesced in the schedule, they may not now claim the Board below erred in adopting it. In any event, we are satisfied that it did not offend due process.

We likewise conclude that the Board did not abuse its broad discretion in the conduct of the proceeding when it declined in December 1983 to reopen discovery in the wake of (1) the issuance of the Institute of Nuclear Power Operations report, which contained the results of the applicants' self-initiated evaluation of Calawba's construction program (in camera Tr. 948-51); and (2) the testimony of certain in camera Board witnesses (Tr. 11,217-21). Suffice it to say that we have examined the reasons assigned by the Licensing Board for its rulings in this regard and find them adequate.

The intervenors' other discovery complaints have been considered and found without merit.

⁷⁰ Tr. 1888.

⁷¹ Tr. 1917.

⁷² Tr. 2310.

⁷³ Tr. 2813-16.

⁷⁴ Tr. 2839-42.

⁷⁵ Tr. 3744-52.

⁷⁶ See Tr. 5715-16.

⁷⁷ Tr. 6086.

have been elicited from the inspector had they been allowed to examine him at still greater length.

These shortcomings are dispositive of intervenors' cross-examination claims. As we had occasion to reemphasize earlier this year, a showing that the Licensing Board erred by curtailing cross-examination "is not sufficient to warrant appellate relief." In addition, "[t]he complaining party must demonstrate actual prejudice — i.e., that the ruling had a substantial effect on the outcome of the proceeding."⁷⁸

3. The intervenors initially proposed to call sixty employee witnesses to testify at the hearing a year later on the foreman override issue. The Licensing Board ordered the list reduced to fifteen on the ground that the testimony of any larger number would be "cumulative."⁷⁹ Although the intervenors do not appear specifically to challenge that action, they do complain that only five of these witnesses actually testified. Contrary to the impression that they endeavor to leave, however, we find nothing in the record to indicate that the Board refused to allow them to present more than five witnesses. Nor does the record reflect the intervenors' required proffer of testimony setting forth the substance of each witness's proposed testimony.⁸⁰ If, in fact, they did offer a witness whom the Board declined to permit to testify, it was incumbent upon the intervenors — at bare minimum — to say so explicitly in their brief and to inform us respecting (1) which witness or witnesses were not allowed to testify; (2) the reasons assigned by the Board; and (3) the substance of the precluded testimony. Having been provided none of this information, we need not pursue the matter further.

II. EMERGENCY PLANNING

In LBP-84-37, the Licensing Board examined in considerable detail the numerous contentions advanced by the intervenors with respect to the sufficiency of the emergency response planning for the Catawba facility. On the basis of that examination, the Board concluded that the emergency response plans meet all regulatory requirements and provide "reasonable assurance that adequate protective measures can and will be

⁷⁸ *Houston Lighting & Power Co. (South Texas Project, Units 1 and 2)*, ALAB-799, 21 NRC 360, 376-77 (1985), citing *Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1)*, ALAB-788, 20 NRC 1102, 1151 (1984). See also *Louisiana Power and Light Co. (Waterford Steam Electric Station, Unit 3)*, ALAB-732, 17 NRC 1076, 1096 (1983); *Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3)*, ALAB-673, 15 NRC 688, 697 & n.14, *aff'd*, CLI-82-11, 15 NRC 1383 (1982).

⁷⁹ Tr. 13,306-07.

⁸⁰ See note 78, *supra*.

taken in the event of a radiological emergency."⁸¹ Before us, the intervenors challenge only the Licensing Board's findings respecting the sirens that are a part of the applicants' public alert and notification systems. On that score, the Licensing Board found that the alert system would prove adequate with the inclusion of ten additional sirens.⁸² The intervenors insist, however, that such a finding cannot be made in advance of the final review of the system by the Federal Emergency Management Agency (FEMA).⁸³

A. The applicants' principal witness on the siren question was Dr. M. Reada Bassiouni, a mechanical engineer who has specialized in the field of acoustics and has conducted analyses of the sirens associated with the emergency response planning of several other nuclear power facilities.⁸⁴ He testified that, at the applicants' behest, he first made acoustical measurements of selected sirens in operation. Then incorporating those measurements in an analytic model of the entire siren system, he ascertained that, with the addition of ten sirens at specified locations, the system would meet the FEMA criteria for alerting the public to a radiological emergency. The significance of that assessment is that FEMA will use these same criteria in making its final finding on the adequacy of the sirens.⁸⁵

The FEMA criteria do not require that the sirens reach every person in the plume EPZ — a practical impossibility.⁸⁶ (Similarly, and for the same reason, there is no NRC requirement along that line.)⁸⁷ To supplement the siren system, the applicants have provided tone alert radios for such institutions as schools, hospitals, nursing homes, day care centers

⁸¹ 20 NRC at 1007. The Board did, however, impose two additional emergency planning conditions upon the operating licenses. *Id.* at 1008.

⁸² *Id.* at 978.

⁸³ FEMA has given conditional approval to the system (in the form of interim findings) founded upon both its scrutiny of the portion of the emergency response plans relating to the sirens and its preliminary assessment of a field exercise conducted in February 1984. Staff Exh. EP-3, Memorandum from Major P. May to Richard W. Krimm (April 18, 1984) and Attachment at 2 (admitted at EP Tr. 1468). At some future point, however, FEMA will make certain acoustical measurements. Additionally, following another sounding of the sirens, FEMA will conduct a survey to confirm that the persons within the ten-mile plume emergency planning zone (EPZ) heard the siren and understood its significance. EP Tr. 1570-81.

⁸⁴ Applicants' Exh. EP-17, Vita of Dr. M. Reada Bassiouni, attached to Applicants' Testimony on Emergency Planning Contention 9 (April 16, 1984), admitted at EP Tr. 1825.

⁸⁵ EP Tr. 1571, 1834-35.

⁸⁶ See FEMA-43, "Standard Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," (September 1983) at E-4 to E-5. The criteria set forth therein are in the nature of guidelines addressed to the fulfillment of the requirements of FEMA's regulations regarding alert and notification systems (found in 44 C.F.R. Part 350). FEMA-43 at 1.

⁸⁷ NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (November 1980) at 3-1. This joint NRC/FEMA document contains guidance for all aspects of emergency response planning. *Id.* at 1.

and industrial facilities with twenty or more employees.⁸⁸ Further, the emergency response plans call for "route alerting"; i.e., in the event of an emergency, assigned individuals will proceed on predetermined routes to alert persons by a variety of means.⁸⁹ We agree with the Licensing Board that these supplemental measures provide a satisfactory complement to the sirens.⁹⁰ Thus, there is an adequate foundation for the Board's ultimate conclusion on the sufficiency of the entire alert and notification system.

B. Despite the evidence and the findings of fact based thereon, the intervenors claim the Licensing Board was required as a matter of law to await the final FEMA finding on sirens before approving the emergency response plans. This claim manifestly is without merit.

It is now well-settled that the issuance of FEMA's final findings on the adequacy of offsite emergency plans and preparedness is not a prerequisite to the authorization of a full-power operating license. Rather, "preliminary FEMA reviews and interim findings presented by FEMA witnesses at licensing hearings are sufficient as long as such information permits the Licensing Board to conclude that offsite emergency preparedness provides 'reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.'"⁹¹ The recent decision of the Court of Appeals for the District of Columbia Circuit in *Union of Concerned Scientists v. NRC*,⁹² relied upon by the intervenors, is not to the contrary. That decision focused upon a Commission rule to the effect that licensing boards need not consider the results of emergency preparedness exercises in a licensing hearing before authorizing the issuance of a full power license. The Court of Appeals determined that the rule violated section 189a(1) of the Atomic Energy Act of 1954, as amended,⁹³ in that it denied "a right to a hearing on a material factor relied upon by the Commission in making its licensing decisions."⁹⁴ In reaching this conclusion, however, the court neither held nor implied that a licensing board must invariably place in limbo an

⁸⁸ EP Tr. 1873. A tone alert radio will provide both an alert signal and the notification message over the Emergency Broadcast System. *Ibid.*

⁸⁹ EP Tr. 1885, 1888-89, 1911-12.

⁹⁰ LBP-84-37, 20 NRC at 974-75.

⁹¹ *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-775, 19 NRC 1361, 1379 (1984), citing *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-717, 17 NRC 346, 380 n.57 (1983); *Cincinnati Gas & Electric Co.* (Wm. H. Zimmer Nuclear Power Station, Unit No. 1), ALAB-727, 17 NRC 760, 775 n.20 (1983). See also *Detroit Edison Co.* (Entsco Fermi Atomic Power Plant, Unit 2), ALAB-730, 17 NRC 1057, 1066-67 (1983).

⁹² 735 F.2d 1437 (1984).

⁹³ 42 U.S.C. 2239(a)(1).

⁹⁴ 735 F.2d at 1438.

operating license proceeding in which emergency preparedness issues are contested to await the final FEMA findings.⁹⁵

III. DIESEL GENERATORS

A. All nuclear power facilities are required to have an onsite electric power system to permit the "functioning of structures, systems, and components important to safety" in the event that the facility's offsite electric power system is inoperative.⁹⁶ To fulfill this requirement at Catawba, the applicants, *inter alia*, installed diesel generators manufactured by Transamerica Delaval Incorporated (TDI). While the hearing was in progress on the intervenors' quality assurance contention, the parties learned of the discovery of defects in TDI diesel generators at other nuclear power facilities through the board notification process.⁹⁷ Prompted by this information, the intervenors sought to litigate the adequacy of Catawba's compliance with the onsite power system requirement by presenting a three-part contention challenging the reliability of its TDI diesel generators.⁹⁸

In determining whether to accept the intervenors' late-filed contention, the Board below applied the five-factor test of 10 C.F.R. 2.714(a)(1).⁹⁹ On a balancing of those factors, it concluded that the first part of the contention dealing with crankshaft design should be admitted on the condition that the intervenors later demonstrate their ability to contribute to the resolution of the issue — the third lateness factor.¹⁰⁰

⁹⁵ As earlier noted, in this case an emergency preparedness field exercise took place in February 1984. The intervenors do not claim that they were precluded from exploring at the hearing the results of that exercise.

⁹⁶ 10 C.F.R. Part 50, Appendix A, General Design Criterion 17.

⁹⁷ Board Notification 83-160 (October 21, 1983). See also Board Notification 83-160A (November 17, 1983).

⁹⁸ Tr. 9659-75. As paraphrased by the Board, the contention stated:

The Applicants have not demonstrated a reasonable assurance that the TDI emergency diesel generators at the Catawba Nuclear Station can perform their safety function in service because of: (1) inadequate design of the crankshafts; (2) deficiencies in quality assurance at TDI; (3) operating performance history of TDI generators at other nuclear facilities.

Memorandum and Order of February 23, 1984 (unpublished) at 4.

⁹⁹ Tr. 9624-25, 9659-75; Memorandum and Order of February 23 at 3. Those factors are:

- (i) Good cause, if any, for failure to file on time.
- (ii) The availability of other means whereby the petitioner's interest will be protected.
- (iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.
- (iv) The extent to which the petitioner's interest will be represented by existing parties.
- (v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

¹⁰⁰ Memorandum and Order of February 23 at 6.

The Board, however, rejected the other two parts of the contention.¹⁰¹ Thereafter, the Licensing Board dismissed the conditionally-accepted "crankshaft" contention because the intervenors had failed to establish (by supplying the Board with the name of a qualified expert who would assist them) that they could make a substantial contribution to the record on the issue.¹⁰²

In the interim, the applicants notified the Licensing Board of a number of problems encountered with the Catawba generators.¹⁰³ This disclosure prompted the Board, on its own motion pursuant to 10 C.F.R. 2.760a, to pose the problems as an issue in the proceeding.¹⁰⁴ Upon review, the Commission found that the matters raised by the Board *sua sponte* did not constitute a serious safety matter and it dismissed the issue.¹⁰⁵

Following this development, the intervenors then sought the admission of the same issue as a late-filed contention. Applying the five section 2.714(a)(1) factors to the contention, the Licensing Board determined that the "balancing process" clearly favored its admission, provided that the intervenors demonstrated that they could make a substantial contribution to its resolution.¹⁰⁶ In the words of the Licensing Board:

As we have made clear in the past, we do not believe the present Intervenor can make a substantial contribution to these technical issues unless they are prepared to present expert testimony or at least have expert assistance in their cross-examination. The Intervenor has repeatedly indicated that they will be able to produce experts; so far, however, they have not done so. Now that the Intervenor has in hand the Applicants' report on site-specific problems at Catawba, they should be in a position to move quickly to obtain the appropriate expert assistance. In these circumstances, our admission of this late contention is conditioned upon the Intervenor's serving by July 6, 1984 their designation of a named diesel generator expert or experts, along with a description of qualifications (resume). Failure to meet this condition will result in dismissal of this contention. Conversely, if this condition is met, Factor 3 will favor admission of the contention.¹⁰⁷

¹⁰¹ *Id.* at 6-7. The Licensing Board also referred a portion of its ruling to us, but we declined to accept the referral. See ALAB-768, 19 NRC 988 (1984).

¹⁰² Order of April 13, 1984 (unpublished).

¹⁰³ Letter from J. Michael McGarry, III, to Licensing Board (February 17, 1984). See also letter from J. Michael McGarry, III, to Licensing Board (March 29, 1984).

¹⁰⁴ Memorandum and Order of February 27, 1984 (unpublished).

¹⁰⁵ Order of June 8, 1984 (unpublished).

¹⁰⁶ LBP-84-24, 19 NRC at 1586 n.50. As conditionally admitted, the contention read:

Whether there is a reasonable assurance that the TDI emergency diesel generators at the Catawba Station can perform their function and provide reliable service because of the problems that have arisen in the course of testing and inspection of such generators, such as the problems reported in the Applicant's letter to the Board of February 17, 1984.

¹⁰⁷ *Ibid.*

In an attempt to meet the Board's condition, the intervenors designated Dr. Robert Anderson, a professor of metallurgy at San Jose State University, as their "source of expert assistance."¹⁰⁸ According to the intervenors, Dr. Anderson was then serving as a consultant on TDI diesel generator issues to intervenors in the *Shoreham* proceeding.¹⁰⁹ On the basis of a subsequent telephone conference, however, the Licensing Board concluded that serious doubt existed as to the level of assistance Dr. Anderson would provide the intervenors in this case. This was because the intervenors were unable to state whether Dr. Anderson would appear as their witness or even be present at the hearing to assist them with cross-examination of the staff's and applicants' expert witnesses.¹¹⁰ Thus, the Board ordered the intervenors to certify that their expert would review the principal documents and the other parties' prefiled direct testimony and be present at the hearing to assist in the intervenors' cross-examination on this issue. Alternatively, the Board gave the intervenors the option of taking additional time and submitting a detailed statement, prepared with the assistance of qualified experts, that outlined their disagreement with the other parties' technical reports and explained how the intervenors would substantiate their position.¹¹¹

The intervenors advised the Licensing Board that they were unable to certify that Dr. Anderson would be available to review the principal documents and prefiled testimony or be present at the hearing because of his conflicting obligations in the *Shoreham* proceeding.¹¹² Instead, they submitted a purported statement of their technical position and attached to it the prefiled direct testimony of a group of witnesses from the *Shoreham* proceeding.¹¹³ The Licensing Board then found, *inter alia*, that the intervenors' statement failed to reflect any review by a qualified expert of the applicants' and staff's reports on the Catawba diesels and contained no explanation from a qualified expert of how the proffered *Shoreham* testimony was relevant to the conditionally admitted contention. Thus, the Board concluded that the statement did not comply with its directive and that the intervenors had failed to demonstrate that they would be able to make a significant contribution to the record. Consequently, it dismissed the contention.¹¹⁴

¹⁰⁸ Letter from Robert Guild to Licensing Board (July 6, 1984) at 2.

¹⁰⁹ *Ibid.*

¹¹⁰ Tr. 12,749.

¹¹¹ Memorandum and Order of July 20, 1984 (unpublished) at 4-5.

¹¹² Letter from Robert Guild to Licensing Board (August 1, 1984).

¹¹³ Letter from Robert Guild to Licensing Board (August 16, 1984).

¹¹⁴ Order of August 22, 1984 (unpublished); Memorandum and Order of September 4, 1984 (unpublished).

B. Before us the intervenors assert that the dismissal of their contention improperly deprived them of the right to a hearing on the issue conferred by section 189a of the Atomic Energy Act of 1954, as amended.¹¹⁵ First, they argue that it was error for the Licensing Board to apply the five section 2.714(a)(1) factors in evaluating the admissibility of their diesel generator contention. Second, they claim that, even if the Licensing Board acted correctly in imposing those requirements, the Board's unjustified scheduling actions prevented the intervenors from obtaining the services of the necessary experts.

1. The intervenors bring their first claim to the wrong forum. As they themselves recognize,¹¹⁶ their argument has already been considered and rejected by the Commission in this very proceeding. In CLI-83-19, the Commission ruled that a licensing board is required to consider all five section 2.714(a)(1) factors before admitting a late contention, even if the contention is based on previously unavailable information.¹¹⁷ In this connection, the Commission ruled that, contrary to the intervenors' assertion, section 189a of the Atomic Energy Act does not provide members of the public with an unqualified right to a hearing. Rather, the Act permits the establishment of reasonable threshold requirements for the admission of contentions to NRC licensing proceedings and, in the Commission's view, the five-factor test represents a permissible exercise of that authority.¹¹⁸ Inasmuch as the adjudicatory boards must adhere to the Commission's mandates, the Licensing Board thus necessarily was correct in balancing all of the section 2.714(a)(1) factors in assessing the admissibility of the intervenors' diesel generator contention.

2. The intervenors' second argument likewise must fail. The intervenors do not explicitly challenge the rejection of their purported technical statement by the Licensing Board. Rather, they insist before us that the Board should have heeded their objections and postponed the hearing on the diesel generator contention until after the completion of the hearing on diesel generators in the *Shoreham* proceeding. According to the intervenors, "[s]uch scheduling . . . served to deprive us of Dr. Anderson's expert assistance, and ultimately, our right to a hearing on these serious diesel generator claims."¹¹⁹ But when the Licensing Board solicited the views of the parties on the hearing schedule before setting the final hearing dates, the intervenors did not object to the schedule on the

¹¹⁵ 42 U.S.C. 2239(a).

¹¹⁶ Intervenors' Brief at 55-56.

¹¹⁷ 17 NRC at 1045.

¹¹⁸ *Id.* at 1045-47.

¹¹⁹ Intervenors' Brief at 60.

grounds that their expert would be unavailable. Rather, they objected to the *Catawba* hearing preceding other hearings involving diesel generators on the general grounds that it would waste the parties' time, effort and energy when similar issues would be more thoroughly aired in the *Shoreham* case.¹²⁰ Without having explicitly linked the *Catawba* hearing schedule with the unavailability of their expert witness in their objection before the Licensing Board, the intervenors may not now claim for the first time on appeal that the Board below erred in establishing the hearing schedule.

Nor did the Licensing Board err by not postponing the hearing when the intervenors informed the Board of Dr. Anderson's unavailability because of his conflicting commitment in the *Shoreham* proceeding. Once again, the intervenors failed to move for a continuance and to place the issue properly before the Board. In any event, as earlier noted, we will overturn a scheduling decision only when we find that a licensing board set a schedule that deprives a party of its right of procedural due process.¹²¹ We do not find that here.

As the Board pointed out, the intervenors had not made any unequivocal commitments on the availability of Dr. Anderson. Thus, whether the intervenors could count on his assistance even after the termination of his services in connection with the *Shoreham* proceeding was uncertain at best. Beyond that, we subscribe to the Licensing Board's observation that the intervenors had ample time to prepare for the hearing and obtain the assistance of experts had they made diligent efforts to do so.¹²² As the Board also noted, given the Commission's policy on timely completion of operating license proceedings,¹²³ it would have required a much better reason than the intervenors supplied to justify a delay of this proceeding to await the conclusion of a hearing of uncertain duration being held in an entirely different proceeding.¹²⁴

¹²⁰ Tr. 12,730-33.

¹²¹ See p. 74, *supra*. See also *South Texas*, 21 NRC at 379.

¹²² Memorandum and Order of September 4 at 5-7.

¹²³ CLI-81-8, 13 NRC at 452.

¹²⁴ Memorandum and Order of September 4 at 6.

We need not dwell upon the intervenors' claim (Intervenors' Brief at 60) that they were entitled to "mak[e] out our case [on the diesel generator issue] entirely through cross-examination if we choose." Had the contention been accepted for litigation, that no doubt would have been so. But, as we have seen, the contention was not accepted because the intervenors did not satisfy the section 2.714(a) test.

IV. MISCELLANEOUS ISSUES

The intervenors also complain of the Licensing Board's rejection of a number of their other contentions. None of their protests in this regard has substance.

A. The Licensing Board was clearly correct in declining to accept the intervenors' contentions seeking to litigate both the need for the power to be generated by Catawba and the financial qualifications of the municipalities that are co-owners of the facility.¹²⁵ The Commission has provided by rule that neither need-for-power nor financial qualifications questions are to be explored in an operating license proceeding such as the one at bar.¹²⁶ Needless to say, in the absence of any endeavor by intervenors to seek a waiver of, or an exception to, the operation of these rules in this proceeding,¹²⁷ the Board below was obliged to apply them.¹²⁸

B. On April 12, 1984, the intervenors submitted a contention to the effect that the applicants had failed adequately to correct certain identified control room design deficiencies.¹²⁹ Applying the five section 2.714(a)(1) lateness factors, the Board rejected the contention because the intervenors had failed to establish either good cause for their tardiness or their ability to make a substantial contribution to the resolution of this issue.¹³⁰

We see no reason to overturn that result. Inasmuch as the information underlying their control room design claims had been made available in

¹²⁵ LBP-82-107A, 16 NRC at 1801 (need for power); LBP-84-24, 19 NRC at 1425 n.3 (financial qualifications).

¹²⁶ See 10 C.F.R. 51.106(c) (need for power); 10 C.F.R. 2.104(c)(4), as amended effective October 12, 1984, 49 Fed. Reg. 35,747, 35,752, as corrected, 49 Fed. Reg. 36,631 (1984) (financial qualifications).

The Licensing Board's action on the intervenors' financial qualifications contention had been based upon an earlier (1982) rule that, to the extent relevant here, was essentially identical to the 1984 rule. See 47 Fed. Reg. 13,750, 13,755 (1982). Although, upon judicial review, it was remanded to the Commission for further consideration, the 1982 rule remained in effect pending the completion of the remand and the publication of the 1984 rule. See 49 Fed. Reg. 24,111 (1984), interpreting *New England Coalition on Nuclear Pollution v. NRC*, 727 F.2d 1127 (D.C. Cir. 1984). The current rule has also been the subject of a judicial challenge, which is now pending in the District of Columbia Circuit. *New England Coalition on Nuclear Pollution v. NRC*, No. 84-1514 (D.C. Cir. filed Oct. 15, 1984), consolidated with *Coalition for the Environment v. NRC*, No. 84-1313 (D.C. Cir. filed July 12, 1984).

¹²⁷ See 10 C.F.R. 2.758(b).

¹²⁸ In connection with their need-for-power claims, intervenors asserted below that the staff's draft environmental impact statement should have included construction costs in its cost/benefit assessment. We have not been enlightened by intervenors respecting why the analysis underlying the Licensing Board's rejection of their assertion was faulty. See LBP-82-16, 15 NRC at 584; LBP-82-107A, 16 NRC at 1801. We thus are constrained to observe once again that it is not enough simply to declare flatly that a particular Board ruling was in error. Rather, it is incumbent upon the appellant to confront directly the reasons assigned for the challenged ruling and to identify with particularity the infirmities purportedly inherent in those reasons.

¹²⁹ See Palmetto Alliance and Carolina Environmental Study Group Motion to Readmit Contentions Regarding Severe Accidents, Control Room Design Deficiencies and Lack of Financial Qualifications (April 12, 1984) [hereafter "Intervenors' Motion to Readmit Contentions"].

¹³⁰ LBP-84-24, 19 NRC at 1425 n.3.

the applicants' Final Control Room Review sent to them on June 1, 1983,¹³¹ the intervenors were not entitled to await the issuance of the staff's Safety Evaluation Report on March 9, 1984 before filing the contention.¹³²

Moreover, intervenors did not establish that they would make a substantial contribution to development of the record. Their single assertion in this regard was that the past effectiveness of their participation (both on other issues in this proceeding and in other proceedings) provided a basis upon which the Board could and should conclude that they would assist in developing a sound record on the control room design matter.¹³³ Such a bare assertion, unsupported by specific information from which a Board could draw an informed inference that the intervenors can and will make a valuable contribution on a particular issue in this proceeding, will not suffice.¹³⁴

C. Among the intervenors' originally filed contentions were those concerned with the consequences of an explosive hydrogen-oxygen reaction within the Catawba ice condenser containment following a loss-of-coolant accident. Relying on the proposition that contentions that are the subject of general rulemaking by the Commission should not be accepted in individual licensing proceedings, the Licensing Board rejected the intervenors' contentions. It noted in this regard that hydrogen generation in ice condenser containments such as that at Catawba was being addressed in an ongoing rulemaking proceeding.¹³⁵ The Board also noted that, although the Commission previously had held that the hydrogen issue could be litigated in individual proceedings where a credible loss-of-coolant accident scenario entailing hydrogen generation and certain other consequences were pled, no such scenarios were set forth in the intervenors' contentions.¹³⁶

Subsequently, the intervenors filed four purported accident scenarios as contentions, in the guise of objections to the Board's order rejecting the contentions. Only three of these scenarios, however, concerned the generation of hydrogen and its consequences, and the Board again reject-

¹³¹ See letter from Albert V. Carr, Jr., to Licensing Board (June 8, 1983).

¹³² See CLI-83-19, 17 NRC at 1045.

¹³³ Intervenors' Motion to Readmit Contentions at 6.

¹³⁴ See *Washington Public Power Supply System* (WPPSS Nuclear Project No. 3), ALAB-747, 18 NRC 1167, 1181 (1983); *Mississippi Power & Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-704, 16 NRC 1725, 1730 (1982).

¹³⁵ LBP-82-16, 15 NRC at 584. See *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-718, 8 AEC 79, 85 (1974).

¹³⁶ LBP-82-16, 15 NRC at 584. See *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-16, 11 NRC 674, 675 (1980).

ed them as barred by the pending rulemaking.¹³⁷ In doing so, the Board noted that the rulemaking directly addressed the intervenors' hydrogen concerns and would be completed before Catawba was licensed. It also observed that the intervenors were free to file comments on the proposed rule.¹³⁸

Over a year later and after the applicants sought authority to conduct low-power testing, the intervenors once more moved to have their hydrogen contentions admitted. They claimed that the premise for the Board's earlier ruling, i.e., that the rulemaking would be completed before Catawba was ready to be licensed, had proved wrong. Without addressing the criteria for late-filed contentions, the Board rejected the intervenors' contentions for a third time, finding that Commission action on a final rule dealing with the generic hydrogen generation issue was expected before full-power authorization of the applicants' facility.¹³⁹

We have examined the intervenors' hydrogen control contentions and find that, in the circumstances presented, the Licensing Board was correct in rejecting them because they were the subject of an ongoing rulemaking. Moreover, even if we disagreed with the Board, the result would not change. On appeal, we are required to apply the Commission's regulations in effect at the time of the appeal.¹⁴⁰ Because the Commission's hydrogen control rule is now final¹⁴¹ and sets forth specifically what measures are required in the case of Catawba, in all events we now would have to reject the intervenors' proffered contentions as an impermissible attack on the Commission's regulations.¹⁴²

For the foregoing reasons, the Licensing Board's authorization of the issuance of full-power operating licenses for the Catawba facility is *affirmed*, except insofar as those licenses permit the receipt and storage on the facility site of spent fuel generated at other nuclear facilities.¹⁴³ As earlier noted, the issues pertaining to such receipt and storage will be

¹³⁷ LBP-82-107A, 16 NRC at 1807-10. The Board found that the intervenors' fourth accident scenario, i.e., the scenario that did not involve the generation of hydrogen, had already been litigated in the construction permit proceeding and thus was barred from further litigation in the operating license proceeding. *Id.* at 1808.

¹³⁸ *Id.* at 1809-10.

¹³⁹ LBP-84-24, 19 NRC at 1425 n.3.

¹⁴⁰ *Douglas Point*, 8 AEC at 82-83.

¹⁴¹ 50 Fed. Reg. 3498 (1985), codified at 10 C.F.R. 50.44(c)(3).

¹⁴² 10 C.F.R. 2.758.

¹⁴³ In this connection, we have considered all of the intervenors' other claims and have found them insubstantial. Additionally, we have examined on our own initiative the portions of the Licensing Boards' decisions not embraced by the appeals. This examination disclosed no error warranting corrective action.

considered in a subsequent opinion. Pending the issuance of that opinion, the applicants shall not receive at Catawba spent fuel generated elsewhere without reasonable prior notice to this Board.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the
Appeal Board

Atomic Safety and Licensing Boards Issuances

ATOMIC SAFETY AND LICENSING BOARD PANEL

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Hugh K. Clark, Chairman
Dr. George A. Ferguson
Dr. Oscar H. Paris

In the Matter of

Docket No. 50-462-OL

ILLINOIS POWER COMPANY, *et al.*
(Clinton Power Station, Unit 2)

July 11, 1985

The Licensing Board grants Applicants' motion to terminate the proceeding for an operating license for Unit No. 2 of the Clinton Power Station, subject to certain conditions.

MEMORANDUM AND ORDER
(Terminating Proceeding)

INTRODUCTION

On May 17, 1985, Illinois Power Company (IPC) filed a Motion to Terminate Proceeding (Motion) on the grounds of mootness and requested this Board to authorize the Director, Office of Nuclear Reactor Regulation (NRR), to rescind the construction permit, CPPR-138, issued for Clinton Power Station (CPS) Unit 2. On May 29, 1985, the People of the State of Illinois (State) filed an answer to IPC's Motion (State Response), stating that it did not object to the termination of the proceeding, *per se*, but requesting the Board to order an environmental,

safety, and cost assessment of IPC's proposed method for remediation of the Unit 2 excavation area. On June 6, 1985, the NRC Staff (Staff) responded to IPC's Motion (Staff Response) stating that it had concluded, largely on the basis of photographs, that IPC need not fill the Unit 2 excavation at this time, but Staff set forth certain actions for environmental protection that it proposed to require of IPC as a condition to the licensing of CPS Unit 1.

On June 11, 1985, the Board issued a Memorandum and Order (Requesting Additional Information on Unit 2 Excavation) (unpublished) indicating that it wanted additional information about the Unit 2 excavation before rendering a decision on IPC's Motion and that it believed the information needed could be obtained from the photographs discussed in the Staff Response. The Board had concerns about possible safety matters associated with the unfilled excavation and noted that the Staff Response did not address safety matters. Therefore the Board ordered the Staff to provide it with copies of the photographs and indicated that copies should be made available, also, to any party that wished to examine them.

Subsequently, Staff advised the Board that the photographs were made with a Polaroid camera, and consequently negatives, from which copies could readily be made, were not available. Therefore the Board decided to examine the original photographs in a round-robin fashion. It issued a Memorandum and Order (Concerning Request for Photographs) on June 13, 1985 (unpublished), stating that it would make the photographs available for inspection by the parties upon request, provided that such request were filed with the Board by July 1, 1985. No request to inspect the photographs having been received, we shall now render our decision on IPC's Motion.

BACKGROUND

The U.S. Nuclear Regulatory Commission (NRC) received an application for operating licenses for CPS Units 1 and 2, two boiling water nuclear reactors located in Harp Township, DeWitt County, approximately 6 miles east of Clinton, Illinois, on September 8, 1980. The application for Unit 1 was filed by Illinois Power Company on behalf of itself and Soyland Power Cooperative, Inc., and Western Illinois Power Cooperative, Inc. (Applicants), but IPC is the sole owner and applicant of CPS Unit 2. Unit 1 was originally scheduled for completion in 1983, and Unit 2 was scheduled for completion in 1995.

Petitions requesting a hearing and the right to intervene were filed on October 27, 1980, by the Prairie Alliance and by the Illinois Attorney

General on behalf of the People of the State of Illinois. This Atomic Safety and Licensing Board was established by order issued November 7, 1980. On May 29, 1981, the Board issued an order admitting PA as an Intervenor and the State as an Interested State pursuant to 10 C.F.R. § 2.715(c).

On November 13, 1981, the Board granted an unopposed motion by the Applicants for Severance and Stay of proceeding as to Unit 2 (Docket No. 50-462-OL), and by unpublished order dated February 14, 1985, the proceeding for Unit 1 (Docket No. 50-461-OL) was terminated. On October 18, 1983, IPC notified the Board and parties by letter that CPS Unit 2 had been cancelled, and subsequently there was no further activity in that Docket. On April 9, 1985, IPC wrote to the Director, NRR, formally verifying the prior notice of cancellation of Unit 2, withdrawing its application for Unit 2, and requesting that the Director cancel the construction permit for Unit 2.

DISCUSSION

In the Staff Response to IPC's Motion, Staff indicated that it had conducted a review to determine whether any provisions for the protection of the environment should be required at the Unit 2 site and concluded that certain conditions for environmental redress of the site should be required by this Board as conditions for the dismissal of this proceeding. Staff did not, however, address the question of whether there were any safety concerns associated with the Unit 2 excavation, a matter of concern to the State and to this Board. In the discussion to follow, we deal first with the safety issue, and then return to consider environmental redress.

The Unit 2 site lies entirely within the CPS Unit 1 exclusion area on property owned by the Applicants and is not visible to persons located outside the exclusion area. The excavation is approximately 40 feet deep, 350 feet wide, and 1350 feet long at the top, and approximately 280 feet wide and 900 feet long at the bottom. One side of the excavation abuts the radwaste, control and diesel buildings for Unit 1. Portions of the north and south sides of the excavation are covered by a revetment composed of a grout intrusion blanket. The remaining portions of the north and south sides, and the east side of the excavation, are sloped and are stabilized by herbaceous vegetation. (See Affidavit of Germain Laroche (Laroche Affidavit) dated June 6, 1985, and attached to the Staff Response, at 2-3.)

The Board was concerned that a person might be injured by accidentally falling into the excavation. The photographs sent to us by the Staff,

however, clearly show that the slope of the excavation's sides is everywhere less than 45° and hence not steep enough to constitute a significant hazard. There is a road running along the east rim of the excavation, and presumably a vehicle accidentally going over the rim could turn over and perhaps roll on the slope, but Applicants have committed to construct a 3-foot-high berm on the three exposed sides of the excavation; this structure should prevent such a vehicular accident. On the basis of the foregoing, we conclude that the excavation, if left unfilled, will present no significant hazard to the health and safety of the public or of plant personnel.

We turn now to environmental considerations. The elevation of the bottom of the excavation is 695 feet above MSL. A drain at the bottom empties into the cooling pond, which has an elevation of 690 feet above MSL. A flap gate in the drain prevents backflow into the excavation from the cooling pond. Applicants plan to include provisions relating to effluent discharges from the excavation drain in their NPDES permit renewal before the end of 1985. (Laroche Affidavit, at 3.)

As we have mentioned, Applicants have committed to construct a 3-foot-high berm on the three exposed sides of the excavation to prevent flood waters from entering the excavation. At the time of the filing of the Staff Response, Staff did not yet know whether IPC was going to construct the berm of earth or of concrete. Staff indicated that if the berm is to be constructed in whole or in part of earth, Staff will require Applicants to stabilize the berm with vegetation in order to prevent soil erosion. (*Ibid.*)

Because of the cancellation of Unit 2, the Unit 2 excavation will be considered part of the Unit 1 site. As a licensing condition of Unit 1, the Applicants will be required to submit an Environmental Protection Plan (EPP) which, upon approval, will be appended as Appendix B to the Unit 1 operating license. The EPP will require the licensee to provide the Staff with a detailed analysis of data and proposed course of action to alleviate the problem should harmful effects or evidence of trends towards irreversible damage to the environment be observed. Additionally, the EPP will require the licensee to prepare an environmental evaluation before engaging in any additional construction or operational activities which may have measurable environmental effects that are not confined to onsite areas previously disturbed during site preparation and plant construction. If the evaluation indicates that the activity involves an unreviewed environmental question, prior approval of the activity must be obtained from the Director of NRR. If the activity involves a change in the EPP, the activity and change in the EPP will require an appropriate license amendment. (*Id.* at 4.)

The Unit 2 site is presently stabilized and presents no significant environmental impacts. The construction of the berm around the excavation will provide a satisfactory means of ensuring continued environmental acceptability and also will provide protection against a vehicular accident at the excavation. Staff sees no immediate need to fill the excavation and believes that the ultimate disposition of the excavation can be deferred for future consideration. Should the excavation later require further redress, such action can be required pursuant to the EPP for Unit 1. (*Id.* at 4-5.)

CONCLUSIONS

Considering the Applicants' commitment to construct a berm around the excavation and Staff's requirements with respect to the berm, we conclude that the Unit 2 excavation will present no significant safety risks. Further, we conclude that the measures already taken to stabilize the excavation plus the additional measures committed to by Applicants and those to be required by the Staff are adequate to ensure the continued environmental acceptability of the site.

ORDER

Upon consideration of the foregoing and the entire record in this matter, pursuant to 10 C.F.R. § 2.107(a) it is, this 11th day of July 1985,
ORDERED:

1. That IPC's Motion to Terminate Proceeding for an operating license of Clinton Power Station Unit 2 is granted, subject to the conditions that:

- (a) The Unit 2 excavation shall be considered a part of the Unit 1 site and subject to licensing conditions imposed by the NRC Staff;
- (b) The Staff shall require licensee to conform to the monitoring and reporting procedures described in ¶ 8 of the Affidavit of Germain Laroch dated June 6, 1985.

2. That the Director of Nuclear Reactor Regulation is authorized to rescind Construction Permit CPPR-138 issued for Clinton Power Station Unit 2.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Hugh K. Clark, Chairman (by OHP)
ADMINISTRATIVE JUDGE

George A. Ferguson
ADMINISTRATIVE JUDGE

Oscar H. Paris
ADMINISTRATIVE JUDGE

Bethesda, Maryland

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Herbert Grossman, Chairman
Richard F. Cole
Ernest F. Hill

In the Matter of

Docket No. 50-223-SP
(ASLEP No. 85-509-02-SP)

UNIVERSITY OF LOWELL
(Training and Research Reactor)

July 19, 1985

MEMORANDUM AND ORDER

(Cancelling Prehearing Conference and Terminating Proceeding)

Memorandum

On February 14, 1984, the University of Lowell (Licensee) timely filed an application for renewal of its Facility Operating License No. R-125 for an additional 30 years. The license is for the operation of a training and research reactor located on the campus of the university in Lowell, Massachusetts.

On March 29, 1985, the NRC published a notice in the *Federal Register* offering an opportunity to the Licensee and any other person whose interest might be affected by the renewal of the license to file a written petition for leave to intervene by April 29, 1985. 50 Fed. Reg. 12,668.

By petition for leave to intervene, dated April 29, 1985, filed with the NRC, John F. Doherty sought to intervene in this proceeding. No other petitions for leave to intervene have been received.

On May 6, 1985, this Atomic Safety and Licensing Board was established to rule on petitions for leave to intervene and to preside over the proceeding in the event that a hearing is ordered. 50 Fed. Reg. 19,827 (May 10, 1985).

We issued an Order on June 20, 1985, subsequently published in the *Federal Register*, setting a prehearing conference for August 1-2, 1985, to consider Mr. Doherty's petition. The public was invited to attend. 50 Fed. Reg. 26,423 (June 26, 1985).

Subsequently, by letter dated July 11, 1985, Mr. Doherty withdrew his petition for leave to intervene. His withdrawal leaves no petition before this Board and no issues to be heard. Consequently, there is no need or occasion for the previously scheduled prehearing conference or for subsequent evidentiary hearings.

Order

For all of the foregoing reasons, and based upon a consideration of the entire record in this matter, it is, this 19th day of July 1985,

ORDERED:

1. That the prehearing conference scheduled for August 1-2, 1985, is cancelled; and
2. That this proceeding, begun with establishment of this Board on May 6, 1985, is *terminated*.

Board members, Administrative Judges Richard F. Cole and Ernest F. Hill, join in this Order.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Herbert Grossman, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland
July 19, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Peter B. Bloch, Chairman
Mr. Gustave A. Linenberger, Jr.
Dr. Jerry Harbour

In the Matter of

Docket No. 50-293-OLA
(ASLBP No. 85-510-01-LA)

BOSTON EDISON COMPANY
(Pilgrim Nuclear Power Station)

July 19, 1985

In this Memorandum and Order, the Licensing Board dismisses a petition to intervene for failure to show good cause, untimeliness and lack of standing.

PETITION TO INTERVENE: TIMELINESS

A petition to intervene in a license amendment case that is late by 9 days and does not show good cause for late filing will be dismissed for untimeliness.

INTERVENORS: STANDING

Although residence 43 miles from a nuclear power plant may be adequate to establish standing with respect to applications for the construction or operation of a nuclear power plant, this same distance is not adequate, without a further showing, to establish standing in a case involving a change in allowable K-effective for a fuel pool.

MEMORANDUM AND ORDER (Petition to Intervene)

Memorandum

On June 21, 1985, Mr. John F. Doherty ("Petitioner") filed a "Request for Hearing and Petition for Leave to Intervene" ("Petition"). However, the Petition was filed 8 days after the last date for filing provided for in the notice that was published in the *Federal Register*.¹ Petitioner should have been aware of the need for timely filings because that need was explained in the *Federal Register* notice.²

The procedural regulations require that we dismiss the petition because Mr. Doherty has not shown good cause for his late filing.³ So we shall dismiss the petition.

Additionally, we note with approval the discussion of standing contained in "Licensee's Answer to John F. Doherty's Request for a Hearing and Petition for Leave to Intervene," July 12, 1985.⁴ Petitioner has not stated a valid ground for intervention.

There is clear precedent that status as a ratepayer of the utility that owns a nuclear plant does not confer standing to intervene.⁵ There is no precedent supporting standing based on the consumption of fish or cranberries (or other edibles), and such a claim is too sweeping as a basis for standing because it could be made by a vast army of consumers that might buy these products anywhere around the world.⁶

Furthermore, the fish-and-cranberry ground for standing shares a deficiency we also find in the claim for standing based on residence 43 miles from Pilgrim. Boston Edison Company is not applying for a construction permit or an operating license for the Pilgrim Nuclear Power Station. If it were doing so, residence 43 miles from the plant might provide grounds for standing because there are scenarios under which effects

¹ 50 Fed. Reg. 20,971 (May 21, 1985). The 30-day notice period is binding pursuant to 10 C.F.R. § 2.714.

² 50 Fed. Reg. at 20,970.

³ Nontimely filings may be entertained only upon a balancing of factors set forth in 10 C.F.R. § 2.714(a)(1).

⁴ The NRC Staff Response to John F. Doherty's Petition for Leave to Intervene, July 19, 1985, did not address Applicants' argument concerning the relationship between the specific amendment being requested and the distance required for standing. See Staff Response at 11-13.

⁵ E.g., *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 614 (1976).

⁶ Standing requires a showing of injury from the challenged action and that the injury is within the zone of interests protected by the statutes governing the proceeding. See, e.g., *id.* at 614-15.

might be felt at that distance from the plant.⁷ However, Pilgrim already is licensed to operate. The license includes permission to operate the fuel pool. Under abnormal conditions, Boston Edison Company is already permitted to operate its fuel pool with a criticality constant (K_{eff} , i.e., effective reactivity) of 0.95. Hence, the only increased risk of which Petitioner complains is that the maximum permissible K_{eff} of the pool would be changed from 0.90 to 0.95 under normal operating conditions.⁸

This case concerns a request for a license amendment and it is not controlled by the same standing considerations that govern standing when an operating license is sought. Whatever the risk to the surrounding community from a reactor *and* its associated fuel pool, the risk from the fuel pool alone is less and the distance of residence from the pool for which standing would be appropriate would, accordingly, be less. Consequently, we do not consider residence 43 miles from this plant to be adequate for standing. We need not decide how close residence might be before standing would be established.

In making this ruling, we note that we know of no scenario under which radiation attributable to the fuel pool would affect a residence 43 miles distant from the fuel pool; and petitioner has not informed us of any such scenario. Even were there a risk of an accident that would disperse the contents of the fuel pool to such a great distance, we know of no way that permitting an increase of K_{eff} during normal operations of the plant (to an upper limit already approved for abnormal operation) would increase the risk to Petitioner from such an incident. Nor has Petitioner suggested any such scenario to us in support of his questionable claim to have standing.

Consequently, we conclude that the Petition must be denied both for lateness and for lack of standing.

Order

For all the foregoing reasons and based on consideration of the entire record in this matter, it is, this 19th day of July 1985,

ORDERED:

⁷ See *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1421 n.4 (1977) (standing based on the distance of a residence could be granted for a residence 50 miles from a plant) and *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-81-24, 14 NRC 175, 179 (1981) (the strength of a claim for standing based on the location of a residence diminishes with the distance of the residence from the plant).

⁸ Petition at 2.

That the Request for Hearing and Petition for Leave to Intervene, filed by John F. Doherty on June 21, 1985, is dismissed.

Pursuant to 10 C.F.R. § 2.760 of the Commission's Rules of Practice, this decision will constitute the final decision of the Commission thirty (30) days from the date of its issuance, unless an appeal is taken in accordance with 10 C.F.R. § 2.762 or the Commission directs otherwise. *See also* 10 C.F.R. §§ 2.785 and 2.786.

THE ATOMIC SAFETY AND
LICENSING BOARD

Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE

Mr. Gustave A. Linenberger, Jr.
ADMINISTRATIVE JUDGE

Dr. Jerry Harbour
ADMINISTRATIVE JUDGE

Bethesda, Maryland

Cite as 22 NRC 101 (1985)

LBP-85-25

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Helen F. Hoyt, Chairperson
Dr. Richard F. Cole
Dr. Jerry Harbour

In the Matter of

Docket Nos. 50-352-OL
50-353-OL
(ASLBP No. 81-465-07-OL)

PHILADELPHIA ELECTRIC COMPANY
(Limerick Generating Station,
Units 1 and 2)

July 22, 1985

In this Partial Initial Decision, the Board finds in favor of the Applicant with respect to issues concerning offsite emergency planning for the State Correctional Institution at Graterford, and authorizes the issuance of a full-power operating license.

EMERGENCY PLANNING: EVACUATION TIME ESTIMATES

Evacuation time estimates (ETE) need not include an analysis of worst-case scenarios. Such an analysis is not contemplated by either the NRC regulations or NUREG-0654. ETEs are intended to be representative and reasonable so that any protective action decision based on them will reflect realistic conditions.

EMERGENCY PLANNING: EVACUATION TIME ESTIMATES

Neither NRC regulations nor NUREG-0654 establishes a standard for effectuating evacuations within a given time. An evacuation time estimate does not attempt to predict exact conditions during an evacuation. Rather, it attempts to indicate the sensitivity of the analysis to a number of commonly occurring events.

FOURTH PARTIAL INITIAL DECISION (On Offsite Emergency Planning Contentions Relating to Graterford)

I. INTRODUCTION

This is the Fourth Partial Initial Decision ("PID") issued by this Atomic Safety and Licensing Board ("Licensing Board" or "Board") in this proceeding. The First PID and Second PID decided all issues admitted for litigation before this Licensing Board, except offsite emergency planning contentions, and resolved them in favor of Applicant, Philadelphia Electric Company ("Applicant").¹ The Third PID disposed of those remaining issues in favor of Applicant except for a contention admitted on behalf of the inmates of the State Correctional Institution at Graterford ("Graterford" or "SCIG").² The Fourth PID now disposes of the two Graterford issues in favor of Applicant.

In an Order dated June 12, 1985, the Licensing Board ruled on the admissibility of the proposed contentions proffered by the Graterford inmates. One contention with two bases was admitted on behalf of the Graterford inmates.³ Following discovery, 2 days of evidentiary hearings

¹ The First PID was issued on March 8, 1983, and resolved the litigated issues in favor of Applicant, subject to certain conditions. LBP-83-11, 17 NRC 413 (1983), *aff'd in part, remanded in part*, ALAB-785, 20 NRC 848 (1984). The remanded issues relating to the appeal from the First PID were resolved in favor of Applicant without the need for an evidentiary hearing. Memorandum and Order on Delaware's Remanded and Revised Environmental Contentions V-14 and V-16 (November 8, 1984), *aff'd*, ALAB-804, 21 NRC 587 (1985). The Second PID was issued on August 29, 1984, LBP-84-31, 20 NRC 446 (1984), *appeal pending*. It decided all issues in controversy which were prerequisite for authorization of the low-power operating licenses requested by Applicant pursuant to 10 C.F.R. § 50.57(c). The Third PID decided all offsite emergency planning contentions in Applicant's favor, subject to two conditions which have now been met, as verified by the Federal Emergency Management Agency ("FEMA"). LBP-85-14, 21 NRC 1219 (1984).

² See ALAB-806, 21 NRC 1183 (1985).

³ Order Admitting Certain Revised Contentions of the Graterford Inmates and Denying Others (June 12, 1985) (unpublished).

on the contentions were held on July 15, 1985, and July 16, 1985, in Philadelphia, Pennsylvania.

Prior to the hearing, the Board and parties participated in a conference call regarding the hearing schedule and procedures to be followed. The parties identified their witnesses and agreed to make arrangements for their depositions. The parties further agreed that proposed findings would be made by way of oral argument, supplemented concurrently by written findings if the parties so desired. Memorandum and Order — Graterford Contentions and Hearing Schedule, slip op. at 3 (June 18, 1985). As agreed, the Board heard oral argument at 1:00 p.m. on July 17, 1985.

At the evidentiary hearing, the Board heard the testimony of seven witnesses and received into evidence the deposition transcript of Robert L. Morris. Except for Mr. Morris, all the witnesses appeared and were subject to cross-examination. Intervenor offered the deposition of Mr. Morris even though he was not present at the hearing. At the end of Mr. Morris' deposition on July 3, 1985, Intervenor proposed, for the first time, that the witness' deposition testimony be received into evidence in lieu of live testimony. Deposition of Robert L. Morris, ff. Tr. 21,013, at 73-74. The other parties did not agree to this procedure because there had been no proper notice given or legal basis stated for the proposal. After a discussion at the hearing on the admissibility of the Morris deposition, the parties agreed not to object to the admissibility of this testimony, even though the witness was not present for cross-examination, to avoid any potential claim of error (Tr. 21,009-13).

II. FINDINGS OF FACT

CONTENTION OF THE INMATES AT THE STATE CORRECTIONAL INSTITUTION AT GRATERFORD

There is no reasonable assurance that the Radiological Emergency Response Plan for the State Correctional Institute [sic] at Graterford will protect the inmates at said institution in the event of a nuclear emergency at the Limerick Generating Station.

A. Basis C-Training

There is no reasonable assurance the emergency response training will be offered to civilian personnel who will be involved in the emergency response plans, such as civilian bus and ambulance drivers.

The inmates contend that emergency response training be offered to civilian personnel who will be assisting the Bureau of Corrections, the state police, and the National Guard in the appropriate response to an accident at Limerick Generating Station. Pursuant to further discussions, held during the closed conference in Harrisburg, the Commonwealth of Pennsylvania has attempted to address the inmates' concern by the offering of said emergency response training to civilian bus drivers.

The method by which the Commonwealth has suggested to achieve this purpose is a letter to all bus providers which is attached to the Commonwealth's "Answer of the Commonwealth of Pennsylvania to Proposed Contentions of the Graterford Inmates with Regard to the Evacuation Plan" dated April 4, 1985 as Exhibit B. This letter, addressed to the employers of the bus drivers, offers a two hour course explaining the proper use of dosimetry by the Pennsylvania Emergency Management Agency ["PEMA"]. The inmates find this letter inadequate in several respects. Initially, there is no guarantee that the employees will ever receive any notice of the opportunity to avail themselves of this training program. Furthermore, the training envisioned by the inmates was a broader, more comprehensive program, such as the training offered to the school bus drivers. See the Third Partial Initial Decision on Offsite Emergency Planning by the Licensing Board, Section 333, page 155, which reads, "[t]he training program for bus drivers offers a general orientation and overview of radiation principles, emergency management principles, susceptibility of children to radiation and additional background information." The inmates contend that the two hour course offered by PEMA is not as comprehensive as the one offered to the bus drivers of school children and is therefore inadequate in this respect.

Training

1. Planning Standard O of NUREG-0654/FEMA-REP-1, Rev. 1 and 10 C.F.R. § 50.47(b)(15) call for radiological emergency response training to be "provided to those who may be called on to assist in an emergency." Furthermore, Criterion O.1 provides that "each organization shall assure the training of appropriate individuals." Asher/Kinard, ff. Tr. 20,995, at 1.

2. PEMA will be responsible for conducting the training of the civilian bus companies and ambulance companies (Taylor, ff. Tr. 20,856, at 3; Asher/Kinard, ff. Tr. 20,995, at 1).

Offer of Training

3. Donald Taylor, Director of Training and Education for PEMA, testified that "civilian personnel" within the meaning of this contention are those non-State employees identified in the Radiological Emergency Response Plan ("plan") for Graterford who would have a role in the emergency response in the event of a radiological emergency at Limerick. This includes drivers employed by civilian bus and ambulance companies which have agreed to furnish vehicles upon request to assist in an evacuation of Graterford. Taylor, ff. Tr. 20,856, at 2.

4. Reasonable efforts are being made to offer training to civilian personnel who would be involved in an evacuation of Graterford. For example, on April 4, 1985, Mr. Taylor wrote each of the six bus companies that would transport prisoners from Graterford in an evacuation and offered dosimetry and decontamination training at no expense for

drivers who would be involved. To date, no responses from those six companies have been received. Mr. Taylor has made plans to visit each of the bus companies personally to urge them to take advantage of this training (Taylor, ff. Tr. 20,856, at 3-4; Taylor, Tr. 20,863, 20,877). Ambulance providers will be offered training in the same manner as bus companies, i.e., by letter and personal visit (Taylor, ff. Tr. 20,856, at 4). Personal visits to the bus and ambulance companies will occur in late July or early August 1985 (Taylor, Tr. 20,879-80).

5. Any Training sessions that are conducted for bus and ambulance drivers will be scheduled in a place and at a time convenient to the drivers themselves (Taylor, ff. Tr. 20,856, at 4; Asher/Kinard, ff. Tr. 20,995, at 2).

6. The initial training and/or refresher training will be made available annually to the drivers of each bus and ambulance company having a responsibility for an evacuation of Graterford (Taylor, ff. Tr. 20,856, at 5).

Nature of Training

7. The training to be offered to the civilian bus drivers and ambulance drivers who would assist in evacuating the SCIG would include a general orientation and overview of radiation principles, emergency management principles, and additional background information, as well as instruction on the use of dosimeters and survey meters (Taylor, Tr. 20,860-61; Taylor, ff. Tr. 20,856, Plan of Instruction Number Seven at 1-4).

8. Bus and ambulance drivers will be provided self-reading dosimetry and thermoluminescent dosimeters, which would be read afterwards. Data will be recorded. Taylor, Tr. 20,872-73.

9. The training program offered by Pennsylvania Emergency Management Agency ("PEMA") is essentially identical to that offered by Energy Consultants ("EC") to other bus drivers who would participate in an evacuation of the plume exposure pathway emergency planning zone for Limerick ("EPZ"), which this Board previously found to be acceptable (Taylor, ff. Tr. 20,856, at 6; Taylor, Tr. 20,860-86; see Third PID, LBP-85-14, 21 NRC at 1318). Training on decontamination monitoring procedures is also included, however, on the remote possibility that bus and ambulance drivers might become involved in some manner with decontamination monitoring (Taylor, ff. Tr. 20,856, at 2).

10. The training program for school bus drivers provided by EC through the auspices of the Applicant was approved by Mr. Taylor, the

Director of Training and Education for PEMA, prior to its implementation in the various counties in the Limerick EPZ (Taylor, ff. Tr. 20,856, at 5-6). Further, PEMA certifies the EC instructors as qualified to give such instruction (*id.*; Taylor, Tr. 20,861). Consequently, the Board believes Mr. Taylor is in a position to compare the EC course to that being offered by PEMA in this instance (*id.*).

11. The plan of instruction for these bus and ambulance drivers covers a full spectrum of topics, including government response to disasters, levels of radiation during an incident at a fixed nuclear facility, proper use of dosimetry, and decontamination monitoring procedures (Taylor, ff. Tr. 20,856, at 6; and Plan of Instruction Number Seven, ff. Tr. 20,856). The only significant difference between this course and the EC program is that the latter provides for a "public relations" lesson, which explains how a nuclear generating plant operates and the safety of such a facility (Taylor, ff. Tr. 20,856, at 6).

12. It is the judgment of Federal Emergency Management Agency ("FEMA") that emergency response training should be tailored to the individual's expected duty in responding to an emergency (Kinard, Tr. 21,000).

13. The bus and ambulance driver's role is limited to driving the bus or ambulance during an evacuation of the SCIG (Kinard, Tr. 21,005; Taylor, Tr. 20,869).

14. Training in inmate custody and control is unnecessary. Drivers will only be required to drive their buses or ambulances. The Department of Corrections will provide the staff necessary to ensure control of the inmates. Taylor Tr. 20,860, 20,868-69; Asher, Tr. 20,999.

15. Any additional concerns raised by the drivers during training, such as security precautions for the protection of the drivers, will be addressed by PEMA during the training sessions (Taylor, ff. Tr. 20,856, at 6; Asher/Kinard, ff. Tr. 20,995, at 2; Asher/Kinard, Tr. 20,999-21,000).

16. Graterford inmates have also raised a concern about whether there is a "guarantee" that training will be offered to bus and ambulance drivers, since no financial inducement has been offered for participation in the training (Case, ff. Tr. 20,930, at 5).

17. In his testimony, Major John D. Case's main concern within the scope of this contention was whether bus drivers would have an incentive to attend the training session (Case, Tr. 20,938-39). He did not address in any way the adequacy of the training to be offered bus and ambulance drivers by PEMA.

18. Notwithstanding his belief that incentives should be offered to civilian bus drivers, Major Case expressed no basis for believing that

civilian bus drivers would not accept training (Case, ff. Tr. 20,930, at 5; Case, Tr. 20,939).

19. At the outset, the Board observes that our mandate does not include a standard that calls for a "guarantee" in the emergency planning area. Rather, the standard to be applied for emergency matters under the Commission's regulations is whether there is "reasonable assurance." See 10 C.F.R. § 50.47.

20. There is nothing in the emergency planning guidance (NUREG-0654/FEMA REP-1, Rev. 1) that requires the provision of financial incentives to anyone receiving training (Asher, Tr. 21,001). PEMA's Director of Training and Education does not believe that the bus and ambulance drivers will not accept training because of the lack of financial incentives (Taylor, Tr. 20,869).

21. Based upon training given to offsite emergency response personnel and volunteers for other nuclear power plant sites in Pennsylvania and information supplied by PEMA concerning Graterford and Limerick, FEMA concluded there is reasonable assurance that emergency response training will be offered to civilian personnel expected to be involved in the implementation of the Department of Correction's emergency plan for Limerick (Asher/Kinard, ff. Tr. 20,995, at 2).

22. Even if such training were not received by bus and ambulance drivers assisting in the evacuation of Graterford in the event of an emergency at Limerick, those drivers would not be expected to do more than what they would do in carrying out their routine work assignments, i.e., drive a bus or ambulance (Taylor, Tr. 20,866; see Third PID, LBP-85-14, 21 NRC at 1320). Thus, their ability to function during an emergency would not be impaired by not having received training (Taylor, Tr. 20,874). The FEMA witnesses agreed that drivers could perform their function without training (Asher, Tr. 20,998).

23. PEMA has determined that the training offered to the bus drivers and that will be offered to the ambulance drivers will adequately prepare the drivers to respond to the Graterford facility during a radiological emergency at the Limerick Generating Station (Taylor, ff. Tr. 20,856, at 6).

24. Based on (1) the fact that the offered training has been provided at other sites in Pennsylvania; (2) the information provided by PEMA to FEMA concerning how training will be offered to the drivers supporting the evacuation of the SCIG; and (3) the assurances of PEMA and Mr. Taylor that personal contact will be made with the bus and ambulance companies, FEMA has concluded that there is reasonable assurance that emergency response training will be offered to civilian bus and ambulance drivers supporting the SCIG radiological emergency response

plan (Asher/Kinard, ff. Tr. 20,995, at 2; Kinard, Tr. 20,997-98; Asher, Tr. 21,003-04).

25. Additionally, the Board finds that, based on this record, the PEMA's letter of April 4, 1985, to the bus providers and Mr. Taylor's commitment to personally visit each of the bus and ambulance companies assisting in the evacuation of the SCIG provides reasonable assurance that the drivers will receive notice of the emergency response training to be provided by PEMA.

26. The Board has reasonable assurance that training will be offered and accepted by bus and ambulance providers. The Board also finds that based on this record there is reasonable assurance that the training to be provided by PEMA is as comprehensive as the training offered to the school bus drivers. The Board is further satisfied that the limited responsibility which drivers would be called upon to perform in an actual emergency involves no more than the driving assignments they perform on a daily basis. Accordingly, even if drivers for Graterford inmate evacuation have not received training, overall bus and ambulance provider response and the ability to implement an evacuation at Graterford would not be impaired. Moreover, drivers could be quickly instructed in the use of dosimetry at the time of an actual emergency before carrying out their assignments. Taylor, Tr. 20,873.

B. Basis E-Estimate of Time of Evacuation

There is no reasonable assurance that the estimated time of evacuation of six-to-ten hours can be achieved.

Appendix 4 of NUREG-0654 provides details regarding evacuation time estimates within the plume exposure pathway. ILC *Special Facility Populations* states, "An estimate for this special population group shall usually be done on an institution by institution basis. The means of transportation are also highly individualized and shall be described." Section IV.B. of Appendix 4 entitled *Methodology* states, "[t]he method for computing total evacuation time shall be specified. Two approaches are acceptable. The simplest approach is to assume that events are sequential. That is to say, for example, that no one begins to move until all persons are warned and prepared to leave before anyone starts moving. The time is estimated by simply adding the maximum time for each component. This approach tends to overestimate the evacuation time. The second approach, which is more complex and will be discussed further, is to combine the distribution functions for the various evacuation time components. This second approach may result in reduced time estimates due to a more realistic assumption." The inmates contend that the failure to specifically address this estimated time of evacuation in the plan and the mere mention in a footnote of the Applicant's request for an exemption fails to meet the criteria as suggested by Appendix 4. The inmates are concerned that the six-to-ten hours estimate does not include a breakdown of the various sequential events as prescribed in NUREG-0654, Appendix 4 4.IV.B. necessary to accomplish the task. The inmates contend that such a breakdown is necessary.

27. Appendix 4, NUREG-0654/FEMA-REP-1, Rev. 1 (November 1980) is the Commission's guidance which governs the preparation of evacuation time estimates for special facilities (Urbanik, Tr. 20,974-75). Section II.C of Appendix 4, NUREG-0654, provides under special facility population that "[a]n estimate for this special population group shall usually be done on an institution-by-institution basis" (NUREG-0654 at 4-3).

28. Dr. Thomas Urbanik one of the principal authors of Appendix 4, NUREG-0654, explained that Appendix 4, NUREG-0654, did not intend evacuation time estimates for special facilities to include analysis of worst-case scenarios (Urbanik, Tr. 20,976, 20,979-80). Rather Appendix 4, NUREG-0654, intended such estimates for special facilities to provide some data points from which decisionmakers can make decisions (*id.*). Further, the intent of Appendix 4, NUREG-0654, is for evacuation time estimates to present representative evacuation times for fair and adverse weather conditions which can be used by decisionmakers (Urbanik, Tr. 20,976-77, 20,979-80).

29. The primary purpose of evacuation time estimates is to serve as a tool in the protective action decisionmaking process by providing a framework within which decisionmakers can incorporate input on evacuation characteristics and traffic flows at the time of an actual emergency. As such, pursuant to NUREG-0654, time estimates are intended to be representative and reasonable so that any protective action decision based on those estimates would reflect realistic conditions. An overly conservative estimate could result in an inappropriate decision. Urbanik, Tr. 20,979-80. As explained by Dr. Urbanik, it was the intention of planners to rely upon the judgment of authorities responsible for particular special facilities in estimating evacuation times because of their specialized knowledge and expertise in operating those facilities (Urbanik, Tr. 20,975, 20,981).

30. Neither NRC regulations nor NUREG-0654 establishes a standard for effectuating evacuations within a given time. An evacuation time estimate study does not attempt to predict exact conditions during an evacuation. Rather, it attempts to indicate the sensitivity of the analysis to a number of commonly occurring events. *Id.*

Development of Evacuation Time Estimate

31. As part of its emergency planning effort for Graterford, the Department of Corrections undertook an evacuation time estimate analysis. In so doing, it worked with the Graterford staff and developed estimates based upon past experience as to how long it would take to secure

the prisoners, assemble them, load buses, and transport inmates from the institution. Zimmerman, ff. Tr. 20,763, at 3; Zimmerman, Tr. 20,771.

32. The Board finds that the issues of whether the estimated time of evacuation (ETE) of 6 to 10 hours developed by Commissioner Jeffes can be achieved and whether there is an adequate basis for that estimate's methodology are moot for several reasons. First, as we noted earlier (see Board Finding 30), neither the Commission's requirements nor guidance established a standard for effectuating evacuations within a given time. Second, the Bureau of Corrections for the Commonwealth subsequently undertook an independent analysis of the components and time needed to complete an evacuation of the SCIG. Zimmerman, ff. Tr. 20,763, at 2. This analysis resulted in a revised ETE for Graterford of 8 to 10 hours which is within the range of and consistent with the 6- to 10-hour ETE developed by Commissioner Jeffes (Zimmerman, ff. Tr. 20,763, at 1-2, 8; Tr. 20,768-69). The methodology for the revised ETE of 8 to 10 hours has been litigated and the record shows, as demonstrated below, that the methodology was based on reasonable assumptions regarding the evacuation of the SCIG. Accordingly, the Board does not find that the revised ETE for Graterford of 8 to 10 hours requires any changes in the SCIG's emergency planning or preparedness.

33. To illustrate the methodology it used to determine the evacuation time for Graterford, the Department of Corrections developed a "flow chart" based upon previous experience with other emergencies and the day-to-day operation of the prison. This flow chart details the actions to be taken in evacuating the prison (e.g., calling off-duty personnel, assigning vehicle loading teams) and the times necessary to carry out these actions. On this basis, the Department of Corrections determined that it would take approximately 8 to 10 hours to evacuate the prisoners. Zimmerman, ff. Tr. 20,763, at 3; Zimmerman Flow Chart. The Board finds this estimate reasonable and in accordance with the guidance of NUREG-0654, Appendix 4 (Zimmerman Flow Chart).

34. There are certain times where the inmates at Graterford would already be locked down, such as at night, before lunch and before dinner (Zimmerman, ff. Tr. 20,763, at 3-4).

35. In the event an evacuation of the SCIG were necessary, the inmates would be notified via the public address system, which is heard throughout the institution, that they should pack their personal effects in a pillowcase, that they would be permitted to take only that which would fit on that person and in the pillowcase, and only those health and comfort items deemed necessary for their trip and for their relocation (*id.*). Further, the inmates will be informed through an inmate handbook

provided to every inmate about what to do to assist in their evacuation (*id.*). Thus, the Board finds that Major Case's concern about the lockdown time being extended because the inmates will lack information about the evacuation (Case, ff. Tr. 20,930, at 3; Case, Tr. 20,946-47) is without merit. Major Case acknowledges that the inmates would be likely to cooperate if they are provided information about the evacuation (Case, Tr. 20,942, 20,946-47). Moreover, based on Superintendent Zimmerman's past experience at the SCIG, the inmates cooperate with SCIG staff when the inmates recognize it is for their benefit during emergency situations. This has been the case in the past with fire drills at the SCIG. Zimmerman, ff. Tr. 20,763, at 3.

Vehicle Arrival Time

36. The estimate for the vehicle arrival time portion of the revised ETE is 2 to 4 hours (Zimmerman, ff. Tr. 20,763, at 4). This estimate is based on routes travelled regularly by SCIG buses and vans when moving from one facility to another (*id.*). If the radiological emergency developed gradually, the SCIG officials would already have the buses on site at Graterford. On the other hand, if the radiological emergency developed more rapidly, it might take between 1 and 3 hours for the bus companies to get their vehicles to the support facilities and then to travel to Graterford. *Id.* This is based on the drivers having the buses at the support institutions (*id.* at 5).

37. On the time of arrival of the off-duty personnel, the SCIG officials developed an estimate of 1 to 2 hours maximum for their arrival under average conditions and 2 to 3 hours maximum under adverse conditions (*id.*). This estimate is based on the SCIG's experience over the past several years involving emergency situations where they have had to call in off-duty personnel (*id.*). Some of the personnel would begin to arrive almost immediately, but to get the teams needed to load the vehicles it will take 1 to 2 hours (*id.*). All of the off-duty personnel would not be necessary to implement the SCIG evacuation plans, only the number of personnel indicated in the SCIG plans would be necessary to move the inmates from their cells to the staging area for loading (*id.*).

Prisoner Assembly and Vehicle Loading

38. The SCIG officials have assigned designated personnel to be vehicle loading teams, that is, they would be at the staging areas. They have designated five of those areas in various places in the institution to which inmates would be funneled and boarded on the buses. Loading

team personnel are required to see that the inmates get on the proper vehicle. *Id.*

39. In developing the revised ETE for the SCIG, the SCIG officials designated different classes of inmates depending on the amount of security required (Zimmerman, ff. Tr. 20,763, at 6-7). For the revised ETE, Class 4 and 5 inmates are those inmates requiring the least amount of security at the institution. In fact, many of these inmates live outside the walls of the institution and work outside the walls. Some of them go home on furloughs periodically. Class 3 inmates are those inmates designated as the general population. They are free to move about the inside of the institution depending on their work assignments, where they live, and in which program they are involved. All of the SCIG staff who would be involved in moving these inmates have been trained in the use of security equipment and use it on a regular basis. The SCIG officials have designated special teams that go on the blocks, the numbers are determined by the size of the block and the amount of security needed. These teams would effectively remove the inmate from his cell, apply the appropriate security device and see him on his way to the appropriate staging areas. The teams can move from cell to cell because officers will be running a line from the block that is being evacuated onto the staging area. The inmate will be directed to go and follow that line of officers so that the inmates in effect would be walking to the staging areas for boarding the buses in a smooth, uninterrupted flow. *Id.* The amount of time allocated for these Class 3, 4 and 5 inmates indicates that more than one inmate at a time in each of these classes will be getting security restraints and being loaded. There will be teams of officers doing this simultaneously on several blocks and moving right down the block on all of the ranges and tiers. Ranges and tiers are the different parts of the cellblock. *Id.* More time was allocated for loading Class 1 and 2 inmates because these inmates are those requiring the highest degree of security. These are inmates in restricted housing units or in disciplinary lockup or administrative custody. The reason more time is allowed to restrain and load them is because of additional security devices that may be used and the additional security required in moving them from their cells to the vehicles. However, there are several teams working, depending upon the location and the physical plant, and the time estimate is based on the fact that the officers are familiar with using the restraints and moving the inmates. *Id.* at 7.

40. Past experience in emergency situations shows that off-duty personnel will arrive within 1 to 2 hours after notification. Superintendent Zimmerman testified that he had experience in the development of plans for all types of emergencies at the State Correctional Institutions at

Huntington and Camp Hill, as well as the State Regional Correctional Facility at Mercer. Zimmerman, Tr. 20,766. Additionally, Graterford's (nonradiological) emergency plan, which is tested at least twice a year, requires a demonstration of the call-in system. These tests also establish that off-duty personnel will arrive within 1 to 2 hours (Zimmerman, ff. Tr. 20,763, at 5; Tr. 20,808, 20,839). Not all off-duty personnel are required to implement the evacuation plan (Zimmerman, ff. Tr. 20,763, at 5; Zimmerman, Tr. 20,809, 20,840). Superintendent Zimmerman testified that, as a practical matter, only a maximum number of 300 staff would be called to assist in an evacuation (Zimmerman, Tr. 20,840-42).

41. If one of the cellblocks refuses to lock down or in some other way tries to impede the evacuation of the institution, the effect on the evacuation would be minimal to none. This is because the SCIG officials handle emergency situations on an almost regular basis, and the fact that Graterford is a maximum security correctional facility. Moreover, a team of trained personnel, the Emergency Response Team, would be on hand and would be ready to respond to any type of situation like this. Areas inside the institution can be isolated, and once isolated, the required personnel can be moved into that area, and then do whatever is necessary to restore order. *Id.* at 7. The other inmates could still be evacuated (*id.*).

42. Intervenor tried to discredit the use of a 30-minute inmate lockdown time estimate by citing various past incidents in which lockdowns had taken longer. The evidence showed, however, that those longer timeframes for lockdowns had occurred primarily during power outages before the installation and use of an emergency lighting system in 1984. Zimmerman, Tr. 20,782, 20,843, 20,849). Since that time, partial power losses have occurred, but have never interfered with prison operations, including lockdowns, which have never taken more than 30 minutes (Zimmerman, Tr. 20,849-50).

43. On the basis of this information, Intervenor's witness, Major Case, agreed that a 30-minute lockdown time is realistic (Case, Tr. 20,946-47). He felt that if there was a good educational program at Graterford for both the officers and prisoners explaining what should be done in the event of an emergency at Limerick and why those actions were being taken, the prisoners would cooperate and there would be no problem in completing lockdown within 30 minutes, or for that matter, completing any other action that would have to be taken within the time-frame calculated by the Department (Case, Tr. 20,947). Major Case raised no concern regarding the adequacy of information that would be available to inmates if an emergency occurred (Case, Tr. 20,938, 20,942, 20,946).

44. At the hearing on July 16, 1985, Major Case stated that a one-page addendum to the prisoners' handbook would be adequate (Case, Tr. 20,938). The Board finds that Major Case's concerns have been adequately addressed by plans to issue an addendum to the inmate handbook, which is given to every prisoner, telling them what to expect in an evacuation (Zimmerman, ff. Tr. 20,763, at 4; Zimmerman, Tr. 20,833-34). Moreover, given the travel time it will take most buses to reach Graterford from their respective depots, which is greater than 1 hour, the time required to lock down and count inmates, a total of 1 hour, is not a critical path item (Lieberman, ff. Tr. 20,956, at 4).

45. The numbers of the times of evacuation for the vans, ambulances and buses were arrived at by evaluating the actions that would take place during the evacuation. Certain actions will take place at the same time. The SCIG officials can begin lockdown, request the vehicles and call in off-duty personnel at the same time. *Id.* at 7-8. As noted earlier, inmates will be restrained, loaded into vehicles and removed as the vehicles arrive on site. To arrive at the total of 8 to 10 hours, the SCIG officials reviewed the buses that would be coming at what time and how many inmates would be loaded at what times. *Id.* They then added a short period of time for travel out of the evacuation area. Inmates will be sent out of the evacuation area in a reasonably direct route that will not take them past Limerick. *Id.*

46. Contrary to Graterford inmates' assertions, any ongoing evacuation of the general populace from the EPZ would not delay the arrival of buses and ambulances at Graterford. The Graterford Superintendent testified that the development of the Graterford plan was coordinated with PEMA to ensure that routes were selected such that evacuating traffic of the general public would not interfere with vehicles travelling to Graterford. Zimmerman, Tr. 20,803-05, 20,815-16, 20,844-45.

47. Buses would be loaded as they arrive and sent out to the support institutions, and the buses are expected to come in at varying times since they are travelling different distances (Zimmerman, ff. Tr. 20,763, at 8). It is unlikely that the evacuation could take longer than the 8 to 10 hours since the estimate used figures based on experience, including experience with emergency situations (*id.*). Moreover, the inmates will have been provided information with respect to an evacuation in the inmate handbook and will be kept abreast of developments during an incident (*id.* at 4; Zimmerman, Tr. 20,833-34).

Evaluation of Evacuation Time Estimates

48. Based on a careful analysis of the assumptions and methodology underlying the revised ETE for the SCIG by FEMA's expert in traffic engineering and transportation planning (Lieberman, ff. Tr. 20,956, at 1-11), FEMA's expert concluded that the revised ETE for the SCIG is certainly reasonable and conservative (*id.* at 8). Furthermore, the Graterford inmates' witness, Major John D. Case, acknowledges that it is possible to achieve the tasks identified in the revised ETE for the SCIG within the 8- to 10-hour timeframe (Case, ff. Tr. 20,930, at 4; Case, Tr. 20,934-37).

49. Any projected increase in the number of inmates at Graterford would have no effect on the evacuation time estimate of 8 to 10 hours. Any increase in the number of inmates would be met by a concomitant increase in staff and support resources (Zimmerman, Tr. 20,831).

50. Finally, Mr. Robert Morris, a witness for the inmates, cited his concerns that the ETE should include a combination of worst case situations such as traffic accident analysis, wind condition analysis, differences in gap acceptance times in a panic situation and various combinations of weather conditions (*see generally* Morris Deposition, ff. Tr. 21,013, at 41-55). Mr. Morris stated that he was not familiar with NUREG-0654 or any other emergency planning regulations for nuclear power plants, and he did not think it necessary (*id.* at 38-39, 49). Dr. Urbanik has adequately explained why worst-case scenarios are not appropriate under Appendix 4, NUREG-0654, for consideration in developing an ETE for a special facility (Urbanik, Tr. 20,976-77, 20,896). Therefore, the Board finds Mr. Morris' testimony on this matter lacking any probative value.

51. The Board finds that the evacuation from the EPZ should proceed rapidly. Graterford is approximately 8.3 miles from Limerick at the closest point. It is thus reasonable to conclude that the travel distance from Graterford to the EPZ boundary is only a very short distance because "a reasonably direct route" out of the EPZ will be taken. Accordingly, actual travel time of loaded buses out of the EPZ will be very brief. Zimmerman ff. Tr. 20,763, at 8; Lieberman, ff. Tr. 20,956, at 5-6.

52. Based on this record, the Board finds there is nothing in the Commission's emergency planning requirements or guidance that requires the estimated time for evacuating a special facility, such as the SCIG, to be included in the radiological emergency response plan for that special facility (*see* 10 C.F.R. § 50.47; Appendix E, 10 C.F.R. Part 50; NUREG-0654/FEMA-REP-1, Rev. 1 (November 1980)).

53. The Board finds that the revised ETE for the SCIG has adequately identified the various sequential events necessary to accomplish an

evacuation of Graterford. Finally, the Board finds that based on this record the revised ETE of 8 to 10 hours is consistent with the Commission's guidance established in NUREG-0654, Appendix 4.

III. CONCLUSIONS OF LAW

In reaching this decision, the Board has considered all the evidence of the parties and the entire record of this proceeding on the admitted contention including all proposed findings of fact and conclusions of law presented by the parties and oral arguments of counsel. Based upon a review of that record and the foregoing Findings of Fact, which are supported by reliable, probative and substantial evidence, the Board, with respect to the issues in controversy before us, reaches the following conclusion pursuant to 10 C.F.R. § 2.760a:

The SCIG emergency response plan meets the requirements of 10 C.F.R. § 50.47, and Appendix E to 10 C.F.R. Part 50, as well as the criteria of NUREG-0654, and provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

IV. ORDER

In accordance with the Atomic Energy Act of 1954, as amended, and the Commission's regulations, and based on the findings and conclusions set forth in the Third Partial Initial Decision on Offsite Emergency Planning and in this Decision, the Director of Nuclear Reactor Regulation is authorized to issue a full-power operating license for the Limerick Generating Station, Units 1 and 2, consistent with the Board's decisions in this case and upon making requisite findings with respect to matters not embraced in the Third Partial Initial Decision on Offsite Emergency Planning or in this Decision.

Pursuant to 10 C.F.R. § 2.760(a) of the Commission's Rules of Practice, this Fourth Partial Initial Decision will constitute the final decision of the Commission forty-five (45) days from the date of issuance, unless an appeal is taken in accordance with 10 C.F.R. § 2.762 or the Commission directs otherwise. *See also* 10 C.F.R. §§ 2.764, 2.785 and 2.786.

Any party may take an appeal from this Decision by filing a Notice of Appeal within ten (10) days after service of this Decision. Each appellant must file a brief supporting its position on appeal within thirty (30) days

after filing its Notice of Appeal (forty (40) days if the Staff is the appellant). Within thirty (30) days after the period has expired for the filing and service of the briefs of all appellants (forty (40) days in the case of the Staff), a party who is not an appellant may file a brief in support of or in opposition to the appeal of any other party. A responding party shall file a single, responsive brief regardless of the number of appellant briefs filed. *See* 10 C.F.R. § 2.762(c).

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Helen F. Hoyt, Chairperson
ADMINISTRATIVE JUDGE

Richard F. Cole
ADMINISTRATIVE JUDGE

Jerry Harbour
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland,
this 22nd day of July 1985.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Dr. Robert M. Lazo, Chairman
Dr. Richard F. Cole
Dr. A. Dixon Callihan

In the Matter of

Docket Nos. STN 50-529-OL
STN 50-530-OL
(ASLBP No. 80-447-01-OL)

ARIZONA PUBLIC SERVICE
COMPANY, *et al.*
(Palo Verde Nuclear Generating
Station, Units 2 and 3)

July 22, 1985

ORDER DISMISSING PROCEEDING

On July 25, 1980, the U.S. Nuclear Regulatory Commission published in the *Federal Register* a notice of receipt of an application for facility operating licenses for Palo Verde Nuclear Generating Station, Units 1, 2, and 3 and notice of opportunity for hearing (45 Fed. Reg. 49,732). The July 25, 1980 notice is a clarification of an earlier notice published in the *Federal Register* on July 11, 1980 (45 Fed. Reg. 46,941-43). Such licenses would authorize Arizona Public Service Company, Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, El Paso Electric Company, Public Service Company of New Mexico, and the Southern California Public Power Authority ("Joint Applicants") to possess, use and operate Palo Verde Nuclear Generating Station, Units 1, 2 and 3, which are three pressurized water nuclear reactors (the "facilities") located on the Joint Applicants' site in

Maricopa County, Arizona, approximately 36 miles west of the City of Phoenix.

In response to that notice, Ms. Patricia Lee Hourihan (hereinafter "Intervenor"), submitted a timely Petition for Leave to Intervene and Request for Hearing. The petition was granted by this Atomic Safety and Licensing Board (hereinafter "Board") which ordered that a hearing be held. The Board approved the admission of five of the Intervenor's contentions and allowed the Intervenor the opportunity to file additional contentions respecting emergency planning at such time as the emergency plans were prepared. Two of the five admitted contentions were subsequently withdrawn by the Intervenor, and two of the remaining admitted contentions were disposed of by the Board's Memorandum and Order, March 17, 1982 (unpublished), granting the motions for summary disposition filed by the Joint Applicants and the Staff of the Nuclear Regulatory Commission (hereinafter "NRC Staff"). The Intervenor submitted no emergency planning contentions.

An evidentiary hearing was conducted in April, May and June 1982, by the Board on the remaining contention which placed in issue whether there is an assured supply of usable treated municipal effluent for all three Palo Verde units for the first 5 years of operation. At the onset of the hearing, the contention was expanded to include the questions of the effect on the supply of effluent of a lower quality than expected and the relationship of the supply of effluent to the safety of the operation of the Palo Verde units. The evidentiary hearing on the Intervenor's expanded contention was closed on June 25, 1982.

On October 14, 1982, the West Valley Agricultural Protection Council, Inc. (hereinafter "West Valley") filed an untimely petition for leave to intervene and request for hearing. Such petition placed in issue (1) the effect of foliar depositions of salt from the drift emitted from the Palo Verde cooling towers and other potential sources of drift from Palo Verde on the productivity of agricultural crops grown in the vicinity of Palo Verde, and (2) the need for the preparation and distribution of a supplementary environmental statement by the NRC Staff to address the foregoing issue.

On December 30, 1982, the Board issued its Memorandum and Order (see LBP-82-117B, 16 NRC 2024 (1982)) granting the untimely petition and reopening the evidentiary record for the purpose of considering the environmental issue raised by West Valley — viz., the asserted adverse impact that the salt deposition associated with the operation of the Palo Verde facilities will have upon the productivity of nearby agricultural lands cultivated by West Valley members. For reasons stated in that opinion, the Licensing Board confined the record reopening to Units 2

and 3 of the Palo Verde facilities. In a contemporaneously issued decision, the Licensing Board resolved in the Joint Applicants' favor all issues previously raised by the Intervenor (Hourihan) with respect to all three Palo Verde units. Accordingly, the Licensing Board authorized the issuance of an operating license for Unit 1 alone. LBP-82-117A, 16 NRC 1964 (1982).

The issue of the impact of salt depositions on the productivity of nearby lands required consideration of five subsidiary questions:

1. The amount of drift which could reasonably be expected to be emitted from the Palo Verde cooling towers;
2. Predictions respecting the depositions from the drift in the area surrounding Palo Verde;
3. The effect of salt drift depositions on agricultural crops grown in the vicinity of Palo Verde;
4. Potential sources of drift emanating from Palo Verde in addition to the cooling towers; and
5. A suitable monitoring program to establish baseline data, to detect drift depositions and their effects on agricultural activities in the vicinity of Palo Verde.

To address the first three subsidiary questions the Joint Applicants undertook (1) to measure actual drift emissions from one of the Palo Verde Units 1 cooling towers operated during the hot functional test of such unit, (2) to validate the predictive computer model used to estimate the distribution of drift depositions in the area surrounding Palo Verde when all three units are in operation, and (3) to engage the University of Arizona to assess the effects of salt drift depositions on agricultural crops grown in the vicinity of Palo Verde. Results of these efforts were published in reports which were distributed to the parties and the Board and incorporated as exhibits in the prefiled testimony submitted by the Joint Applicants.

On May 1, 1985, the Licensing Board issued a "Notice of Public Hearing on Application for Operating Licenses for Palo Verde Units 2 and 3," which was published in the *Federal Register* on May 8, 1985 (50 Fed. Reg. 19,500). The Licensing Board then appointed Administrative Judge James H. Carpenter to be a Technical Interrogator and informal assistant to the Board pursuant to 10 C.F.R. §§ 2.722(a)(1) and (b) in an order issued May 2, 1985 (unpublished).

Thereafter, on May 20, 1985, the Joint Applicants and West Valley entered into a Settlement Agreement, and West Valley filed a request for the withdrawal of its Petition to Intervene, its contentions and its request for a hearing and consented to the entry of an order dismissing

this proceeding. Concurrently, the Joint Applicants requested that the Board dismiss the proceeding with prejudice.

In a conference call initiated by the Licensing Board on June 3, 1985, in which the NRC Staff, Joint Applicants and West Valley participated, the Board discussed the effect which a settlement reached between Joint Applicants and West Valley of the latter's concerns regarding salt deposition would have upon this operating license proceeding. While noting that West Valley had requested the withdrawal of its Petition to Intervene and all the contentions it had raised, the Licensing Board determined that it could not dismiss the proceeding at that time, but must hold a prehearing conference and preliminary hearing at which time the Board could question both the Joint Applicants' and the NRC Staff's witnesses concerning certain matters related to salt deposition from cooling tower drift and the agricultural monitoring plan that did not appear to have been resolved. The Licensing Board also indicated that it would inquire into five other matters: (1) Unresolved Safety Issue A-45 (shutdown decay heat removal requirements), (2) a petition filed pursuant to 10 C.F.R. § 2.206 relating to microbiologically induced weld corrosion in the spray pond, (3) the necessity of preparing a supplement to the Final Environmental Statement, (4) the status of certain allegations, and (5) whether any agencies of the State of Arizona had comments regarding the Settlement Agreement.

The prehearing conference and preliminary hearing was convened on June 11, 1985. After receiving limited appearance statements from members of the public, the Licensing Board questioned West Valley concerning the terms of the Settlement Agreement. West Valley described the additional agricultural monitoring which Joint Applicants are required to perform under that agreement. This additional monitoring program will include (1) cotton square, bloom and boll counts, (2) insect population counts, (3) measurement of site-specific temperature and humidity conditions, (4) yield determinations, and (5) analyses of the results of the additional monitoring on an annual basis. Such monitoring is in addition to the environmental monitoring program which Joint Applicants are required to conduct under the terms of the operating license for Palo Verde Unit 1.

With respect to the issue of the effects of salt deposition from cooling tower drift on agricultural crops in the vicinity of the facilities, the Licensing Board questioned, as a panel, the five witnesses who appeared on behalf of Joint Applicants, Drs. M. Goldman, C. Curtis, D. McCune, and K. Foster and Mr. K. Wilber, and the two witnesses for the NRC Staff, Drs. E.D. Pentecost and R. Samworth. Mr. Wilber testified regarding his measurements of the drift rates from the facilities' cooling

towers. Dr. Goldman testified concerning (1) the validation of the FOG computer model used to predict drift deposition, (2) the prediction of drift deposition, (3) possible sources of drift other than the cooling towers, and (4) the salt drift monitoring program that forms part of the Environmental Protection Plan which is a requirement of the operating license for Palo Verde Unit 1. Drs. Curtis and McCune were questioned with respect to their critique of the assessment of salt drift effects performed by the University of Arizona and sponsored by Joint Applicants. Dr. Foster of the University of Arizona, who participated in that assessment, was questioned on that subject.

The Licensing Board questioned Dr. Samworth regarding drift rates from the cooling towers and Dr. Pentecost concerning (1) the anticipated effect of salt drift on agricultural productivity, (2) predictions of salt deposition, and (3) the salt drift monitoring program. The prefiled written testimony, which had been submitted by all of the witnesses with the exception of Dr. Foster, was received into evidence, together with accompanying exhibits.

The testimony of the expert witnesses and other documentary materials made available to this Licensing Board establish that there is little likelihood that the amount of drift emitted from the Palo Verde facilities will adversely affect crops grown in the vicinity of the facilities. Moreover, the agricultural monitoring program to which the Joint Applicants have committed will provide a basis for determining whether agricultural crops will be damaged by salts emitted from the facilities. If crop damage is detected, then Joint Applicants are required to report such damage and take appropriate action pursuant to the provisions of § 5.4.1 of the Palo Verde Nuclear Generating Station, Unit 1, Environmental Protection Plan, which provides that "[i]f harmful effects or evidence of trends toward irreversible damage to the environment are observed, the licensees shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem."

During the hearing held on June 12, 1985, the NRC Staff and Joint Applicants reported to the Licensing Board concerning the status of the five remaining matters which the Board had previously raised. None of those matters requires any further action by this Board.

With regard to Unresolved Safety Issue, USI A-45, counsel for the Joint Applicants reported that the matter had been considered by the Commission during the May 30, 1985 meeting concerning full-power authorization for Palo Verde Unit 1. The transcript of that meeting records the fact that the Commission, the NRC Staff and the ACRS have agreed that the issue of installation of PORVs for Combustion Engineering plants will be dealt with through the resolution of Unresolved Safety

Issue, USI A-45. The NRC Staff is still planning to have the issue ready for submittal to the Committee to Review Generic Requirements by the end of this year.

During the Commission meeting on May 30th, the NRC Staff also reported that it had reviewed the matter of weld corrosion in the spray ponds and was satisfied with the status of the corrective actions taken by the Joint Applicants. Mr. E. Licitra, Project Manager for the NRC Staff, provided the Board with a detailed oral description of microbiologically induced corrosion and Mr. E.E. Van Brunt, Joint Applicants' Executive Vice-President, described the corrective actions taken. Such actions are detailed in a letter Mr. Van Brunt sent to the Commission on May 24, 1985.

With respect to the question of whether a supplement to the final environmental statement should be prepared, counsel for the NRC Staff and the Joint Applicants stated their position that, based upon the evidence received in the proceeding, there were no significant new circumstances or information regarding the possible effects from the deposition of salt drift from the cooling towers on agricultural crops grown in the vicinity of Palo Verde which necessitated the preparation and distribution of a supplement to the final environmental impact statement. The Board concurs in that position.

Counsel for the NRC Staff reviewed the status of investigations of various allegations that had come to the Board's attention and reported that of the 167 Palo Verde investigations which had been conducted, only 14 remain open. The Commission was apprised of these investigations during the May 30, 1985 meeting. Based upon assurances by NRC Staff members that the fourteen remaining investigations would not adversely impact upon full-power operation of Unit 1, the Commission permitted Unit 1 to be licensed.

In response to the Board's question regarding comments on the Settlement Agreement by any agencies of the State of Arizona, counsel for the NRC Staff reported that there were two agencies which would have an interest in the matter of salt deposition. These are the State Land Commissioner's Office and the State Agricultural and Horticultural Commission. These agencies manage State trust and sovereign lands some of which are located within 5 miles of the Palo Verde facilities and are rented out for farming. Three hundred acres of such lands abut the eastern boundary of the plant. Both State agencies were contacted by Staff counsel who was told by each that they were satisfied with the settlement in this proceeding and had no adverse comments.

Based upon the Licensing Board's interrogation of the witnesses, the written testimony which was received into evidence, the Board's ques-

tioning of West Valley and the reports of Joint Applicants and the NRC Staff, the Licensing Board accepts West Valley's withdrawal of its petition to intervene and approves the Settlement Agreement reached with Joint Applicants. After careful consideration, the Board has concluded that the proceeding should be terminated and dismissed with prejudice.

Order

For the foregoing reasons and in consideration of the entire record in this matter, it is, this 22nd day of July 1985,

ORDERED:

The request to withdraw its Petition to Intervene filed by Intervenor, West Valley Agricultural Protection Council, Inc., in connection with the Settlement Agreement dated May 20, 1985, is GRANTED and the intervention petition is withdrawn. Inasmuch as there are no other intervention petitions or requests for hearing in accordance with the Commission's notice of opportunity for hearing, the matter is uncontested, and the adjudicatory proceeding is therefore DISMISSED with prejudice.

As stated in our Initial Decision authorizing the issuance of an operating license for Palo Verde Unit 1, all of the findings of fact and conclusions of law set forth in that decision apply with full force and effect to all three Palo Verde units, LBP-82-117A, 16 NRC 1964, 2022 (1982). Therefore, this Board hereby adopts and incorporates by reference in this Order all of the findings of fact and conclusions of law set forth in Initial Decision LBP-82-117A as if set forth herein in full.

It is further noted that because this operating license proceeding is now uncontested, the Director, Office of Nuclear Reactor Regulation, is authorized upon making requisite findings with respect to matters not embraced in this Order in accordance with the Commission's regulations, to issue to Joint Applicants operating licenses for terms of not more than forty (40) years, authorizing operation of the Palo Verde Nuclear Generating Station, Units 2 and 3. Such licenses may be in such

form and content as is consistent with the conclusions of the Board herein.

THE ATOMIC SAFETY AND
LICENSING BOARD

Robert M. Lazo, Chairman
ADMINISTRATIVE JUDGE

Richard F. Cole, Member
ADMINISTRATIVE JUDGE

A. Dixon Callihan, Member
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland,
this 22nd day of July 1985.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Lawrence Brenner, Chairman
Dr. A. Dixon Callihan
Dr. Richard F. Cole

In the Matter of

Docket Nos. 50-456
50-457

COMMONWEALTH EDISON COMPANY
(Braidwood Nuclear Power Station,
Units 1 and 2)

July 30, 1985

The Licensing Board rules on a three-part contention alleging that the use of the Illinois Central Railroad to transport explosive materials from a federal ammunition plant creates a hazardous condition due to the proximity of the railroad tracks to the nuclear facility. The Board rules the subpart of the contention alleging sabotage or a purposefully induced explosion is precluded from the proceeding under 10 C.F.R. § 50.13(a). The other subsections of the contention, addressing the risk (probability and consequences) of an accidental railroad explosion, were found to be admissible. The Board ruled that those subparts do not involve "use or deployment of weapons incident to U.S. defense activities," consideration of which would be precluded under 10 C.F.R. § 50.13(b).

**LICENSING REQUIREMENTS: 10 C.F.R. § 50.13; ATTACKS
BY AN ENEMY OF THE U.S.**

Part of the rationale behind § 50.13 was the AEC's recognition of the practical necessity to exempt applicants from protecting their facilities

against military or paramilitary attacks threatening the national security, even if the attack is directed against a nuclear plant, because the country's security is intended to be left entirely to the nation's defense establishment and security agencies. *Florida Power and Light Co. (Turkey Point Nuclear Generating Units 3 and 4)*, 4 AEC 9, 13 (1967), *aff'd*, *Seigel v. AEC*, 400 F.2d 778 (D.C. Cir. 1968).

NRC: EXECUTIVE BRANCH POLICY

The AEC determined that requiring an applicant to demonstrate that its facility is protected against an enemy attack would "stifle utterly the peaceful utilization of atomic energy in the United States." *Seigel v. AEC*, 400 F.2d 778, 783-84 (1968).

LICENSING REQUIREMENTS: 10 C.F.R. § 50.13(a); SABOTAGE

Two inquiries must be made when determining if a contention is barred under 10 C.F.R. § 50.13(a). The first is whether the postulated sabotage is "directed against the facility" and the second is whether the saboteurs qualify as an "enemy of the United States."

LICENSING REQUIREMENTS: 10 C.F.R. § 50.13(a); ATTACKS BY AN ENEMY OF THE U.S.

In determining whether an attack is "directed against the facility," the subjective intent of the attackers is not material. The Board is not required to engage in an inquiry into the mind of an attacker to determine whether the attack was intended to damage the nuclear facility or whether the damage was merely incidental to some other hostile goal. See *Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2)*, LBP-81-42, 14 NRC 842, 844 (1981).

LICENSING REQUIREMENTS: 10 C.F.R. § 50.13; ATTACKS BY AN ENEMY OF THE U.S.

The Appeal Board in the *Indian Point* case determined that an applicant is not required to take affirmative measures against an attack by an armed group which is not an enemy of the United States. *Consolidated Edison Co. of New York (Indian Point Station, Unit No. 2)*, ALAB-202, 7 AEC 825, 829-30 (1974).

**LICENSING REQUIREMENTS: 10 C.F.R. § 50.13(a);
ATTACKS BY AN ENEMY OF THE U.S.**

A Board may determine whether an attacking force is an "enemy of the United States" by applying the objective test set out in the *Perry* decision. That test questions whether a hostile act was committed and whether the damaging result was caused by the hostile act. If the answers to both questions are affirmative, the group or nation perpetrating the hostile act qualifies as an enemy of the United States. *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-81-42, 14 NRC 842, 844 (1981).

**PLANT DESIGN: APPLICANT'S RESPONSIBILITY FOR
PHYSICAL SECURITY**

When an enemy act is beyond the type of design basis security threat encompassed by 10 C.F.R. § 73.1(a), then an applicant is entitled to rely on the government's military or law enforcement agencies to handle such an attack.

**NRC REGULATIONS: ENEMY ATTACKS ON NUCLEAR
PLANTS; 10 C.F.R. §§ 73.1(a) AND 50.13**

Section 73.1(a) of 10 C.F.R. is to be read *in pari materia* with § 50.13, *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-82-119A, 16 NRC 2069, 2098 (1982), but Part 73 refers to sabotage accomplished with the use of small weapons carried out by small bands of saboteurs, while § 50.13 addresses military-style attacks, broader in nature and employing heavier weapons. Part 73 contemplates sabotage on the plant site, and the security measures mandated under Part 73 are not to be extended beyond the vicinity of the plant's boundaries. See 10 C.F.R. §§ 73.45 and 73.46.

**RULES OF PRACTICE: ADMISSIBILITY OF
CONTENTIONS; 10 C.F.R. § 50.13(b)**

To determine whether a contention is barred under § 50.13(b), the Board must decide whether the contention postulates a scenario causing damage to the reactor's integrity, which is the result of "use or deployment of weapons incident to U.S. defense activities."

**RULES OF PRACTICE: ADMISSIBILITY OF
CONTENTIONS; DEPLOYMENT OF U.S. WEAPONS;
10 C.F.R. § 50.13(b)**

When artillery shells or explosives are transported, their mere movement is not "deployment" within the context of § 50.13(b) because they are not being strategically arranged in locations appropriate for their use, unlike nuclear missiles in silos from which they can be launched, or conventional weapons being tactically placed in the field with a military unit. It stretches the rationale on which 10 C.F.R. § 50.13 is premised to accept mere movement of raw ingredients for the manufacture of ammunition, or the ammunition itself, to or from a local ammunition plant, as deployment of weapons.

**LICENSING REQUIREMENTS: EMP CAUSED BY
EXPLOSION OF NUCLEAR MISSILE OR OTHER WEAPONS**

An explosion of a nuclear missile or other weapon would either be an enemy act, or, if a U.S. nuclear device, would arise from the deployment of weapons by the U.S. See *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1500 (1982) and *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-81-42, 14 NRC 842, 845 (1981).

AIRCRAFT CRASH RISK

It is erroneous to view 10 C.F.R. § 50.13(b) as precluding the Board from considering anything related to the military that might impact a nuclear facility, on the theory that such military activity is necessarily "use or deployment of weapons incident to U.S. defense activities." *I.e.*, past agency practice has allowed Boards to consider the possible risks to a nuclear plant from crashes of military airplanes. *Consumers Power Co.* (Big Rock Point Plant), LBP-84-32, 20 NRC 601, 639-52 (1984).

**MEMORANDUM DETAILING RATIONALE IN
SUPPORT OF JUNE 21, 1985 ORDER ON
ADMISSIBILITY OF NEINER FARMS
CONTENTION 4 (RAILROAD EXPLOSION)**

BACKGROUND

On January 12, 1979, Bob Neiner Farms, Inc. submitted a petition to intervene in the Braidwood operating license proceeding. Among the contentions Neiner Farms wished to have litigated was one alleging that the use of the Illinois Central Railroad to transport explosive materials from the Joliet Army Ammunition Plant creates a hazardous condition due to the proximity of the railroad tracks to the Braidwood facility. This contention has been designated "Neiner Farms Contention 4." The admissibility of Neiner Contention 4 was addressed in the Licensing Board's Special Prehearing Conference Order ("SPCO"). LBP-85-11, 21 NRC 609, 617-24 (1985).

In earlier pleadings, both Applicant and Staff had urged the Board to bar the relitigation of Contention 4 under the legal theory of collateral estoppel.¹ The Applicant and Staff claimed that because issues associated with transporting explosive substances by rail were considered and ruled upon by the Licensing Board in the construction permit stage Braidwood site suitability determination, this Board is estopped from considering the issue in the operating license case. See LBP-75-1, 8 AEC 1197, 1226-27 (Findings 85-88) (1975); SPCO, 21 NRC at 619. For the reasons stated in the SPCO, the Board rejected the collateral estoppel argument and admitted the entire contention for litigation in the OL proceeding. SPCO, *supra*, 21 NRC at 617-24.

Applicant timely filed objections to the Board's SPCO. Applicant apparently reconsidered its earlier argument and eschewed challenging our determination that collateral estoppel would not be properly applied to Contention 4. Applicant's Objections to Board Order, at 2, dated April 29, 1985 ("Applicant's Objections"). In its Objections, Applicant instead propounded a different basis for excluding the contention and requested that the Board reconsider the contention's admission. Applicant's new argument rests on the claim that litigation of Contention 4 is barred be-

¹ Answer of Commonwealth Edison Company to the Contentions of Bob Neiner Farms, at 4-5 (August 22, 1979); Applicant's Supplemental Brief, September 17, 1979; Staff letter to Board, September 12, 1979.

cause it impermissibly challenges NRC regulation 10 C.F.R. § 50.13, which encompasses both U.S. defense activities and acts of sabotage.²

On April 30, 1985, the Board issued an unpublished Order directing the NRC Staff and Neiner Farms to respond to Applicant's new argument. We also directed the Staff and permitted Neiner Farms to address several Board questions. We find ourselves in basic agreement with the "NRC Staff Response to Applicant's Objections to Licensing Board's Special Prehearing Conference Order," dated May 20, 1985 ("Staff Response"). Neiner Farm's May 20, 1985 response was extremely brief and unhelpful. It did not discuss or challenge Applicant's argument that subsection (c) of the contention, relating to sabotage, is barred by § 50.13(a). It did challenge, with little discussion, Applicant's argument that the entire contention is barred by 10 C.F.R. § 50.13(b), by asserting, in agreement with the Staff and our holding below, that the railroad transportation of munitions from the ammunition plant is not a deployment of weapons.

Applicant's objections to the admission of Contention 4 were ruled on in the Board's unpublished June 21, 1985 Order Reconsidering Admission of Neiner Farms Contention 4. In summary fashion, the Board ruled that, as asserted by Applicant and the NRC Staff, Contention 4(c) is barred by § 50.13(a) (relating to sabotage). However, we rejected Applicant's other objection that the entire contention is barred by § 50.13(b) (relating to U.S. defense activities). On this point, we agreed with the NRC Staff and Neiner Farms. Accordingly, the Board ruled that subparts (a) and (b) of the contention are appropriate for litigation in this operating license proceeding. This memorandum serves to supplement the Board's June 21, 1985 Order, explaining more fully why the Board ruled as it did on reconsideration of Neiner Farms Contention 4.

² See 10 C.F.R. § 2.758a; *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 2), ALAB-456, 7 NRC 63, 65 (1978); *Commonwealth Edison Co.* (Byron Nuclear Power Station, Units 1 and 2), LBP-80-30, 12 NRC 683, 692-93 (1980).

Applicant acknowledges that its new arguments based on 10 C.F.R. § 50.13 should have been raised at an earlier stage in the proceedings. Applicant's Objections, at 7. We agree. It should have been raised in this operating license proceeding six years ago, in its August 22, 1979 answer to contentions. Indeed, it arguably should have been raised over ten years ago, before a similar issue was considered by the Licensing Board in the uncontested site suitability hearing phase of the construction permit proceeding. However, we also agree with Applicant, at least in the circumstances of the regulation in question, that Applicant's objections to the subject matter jurisdiction of the Board should not be deemed to have been waived. Cf. Fed. R. Civ. P. 12(h). Applicant's Objections, at 8. There is no suggestion by anyone, nor do we perceive any possible basis for one, that Applicant for some strategic reason would have knowingly deferred making its subject matter jurisdiction objection. Any inconvenience to the other parties and the Board has been insubstantial (given the result we reach on the new objections), and is far outweighed by the goal of correctly defining, in advance of trial, the Board's jurisdiction over the issues advanced by Neiner Farms Contention 4. Indeed, prior to the filing of Applicant's new objections, the Board had been considering whether to ask the parties to address the admissibility of subpart (c) of Contention 4 in light of § 50.13(a).

RATIONALE FOR RULING

As accepted by the Board in the SPCO, Neiner Farms Contention 4 stated:³

Intervenors contend that the proximity of the Illinois Central Railroad to the plant site and the use of the rail system to transport explosive materials from the Joliet, Illinois arsenal and other plants or depositories creates an unacceptably hazardous condition not considered by the Atomic Safety and Licensing Board, which issued the partial initial decision on environmental and site suitability matters for the Braidwood Station (LBP-75-1, 8 AEC 1197 (January, 1975)). At the construction permit stage the analysis of the probability of an explosion was inadequate in that:

- a) the six-month period during 1974 for which the traffic from the Joliet arsenal was analyzed is not representative of other traffic periods in the past and may not be representative of the traffic to be expected in the future.
- b) the analysis of the traffic was based on peacetime traffic only.
- c) only the probability of accidental or inadvertent explosions were assessed and the probability of sabotage or purposefully caused explosions were not explored.

Applicant argues, as we have already noted, that litigation of Neiner Farms Contention 4 would be an impermissible challenge to § 50.13. That regulation provides:

An applicant for a license to construct and operate a production or utilization facility, or for an amendment to such license, is not required to provide for design features or other measures for the specific purpose of protection against the effects of (a) attacks and destructive acts, including sabotage, directed against the facility by an enemy of the United States, whether a foreign government or other person, or (b) use or deployment of weapons incident to U.S. defense activities.

³ Pursuant to the Board's encouragement, the contention has now been reworded by agreement of the parties to better reflect the actual controversy. July 11, 1985 filing by NRC Staff, Tr. 155. The Board approves the rewording, which states:

4. Intervenors contend that the proximity of the Illinois Central Railroad line to the Braidwood Station site and the use of that rail line to transport munitions from the Joliet Army Ammunition Plant, including the potential transport of RDX and HMX explosives which may be manufactured at that facility in the future, create an unacceptably hazardous condition. The condition is hazardous in the following respects:

- a. The probability of an accident involving an explosion of munitions on the rail line is not so low as to preclude its consideration as a design basis accident; and
- b. The design of the Braidwood Station is such that the facility could not withstand the occurrence of an explosion of munitions on the rail line without endangering the public health and safety.

We begin our evaluation of Applicant's argument by reviewing the rationale behind § 50.13. We find that this provides the primary basis for our rulings on the contention.

Section 50.13 was adopted by the NRC's predecessor agency, the Atomic Energy Commission ("AEC"), in 1967 because there was an obvious, practical need to exempt applicants from being forced to protect against certain types of military or paramilitary attacks which the Commission recognized were beyond the sphere of an applicant's responsibility. This included situations in which the national security was threatened, even if the attack directed its force against a nuclear power facility. When the Commission developed the policy of excluding hostile attacks from litigation, it did so based on its determination that the country's national security is intended to be left entirely to the nation's defense establishment and security agencies. *Florida Power and Light Co. (Turkey Point Nuclear Generating Units 3 and 4)*, 4 AEC 9, 13 (1967), *aff'd*, *Seigel v. AEC*, 400 F.2d 778 (D.C. Cir. 1968).

Prior to the adoption of § 50.13, the Atomic Energy Commission had articulated the reasoning in support of the regulation in the Turkey Point facility construction permit case, which arose in the late 1960's. *Turkey Point*, *supra*.⁴ In the *Turkey Point* proceeding, the Commission addressed whether the Licensing Board was required to adjudicate intentional efforts to damage a facility when those efforts are carried out by an enemy of the United States, the same question this Board faces vis-a-vis Contention 4(c). *Id.* At the time the Commission issued its decision in *Turkey Point*, what is now § 50.13 was only a proposed rule. (See 32 Fed. Reg. 2821 (Feb. 11, 1967).) The Commission noted that the background information provided with the publication of the proposed rule "confirmed the Commission's past practice of not requiring applicants for facility licenses to provide for special design features or other measures for protection against the effects of attacks and destructive acts directed against the facility by an enemy of the United States." *Turkey Point*, *supra*, 4 AEC at 11.

We quote the Commission's language in the August 4, 1967 *Turkey Point* Memorandum and Order, which sets forth the rationale for excluding enemy sabotage from licensing considerations:

We believe that our practice of excluding [protection against enemy attacks or destructive acts] from licensing consideration is founded on compelling factors. It would appear manifest, as an initial proposition, that the protection of the United

⁴ See also the Statement of Consideration, issued with the final rule. 32 Fed. Reg. 13,445 (Sept. 26, 1967).

States against hostile enemy acts is a responsibility of the nation's defense establishment and of the various agencies of our Government having internal security functions. The power reactors which the Commission licenses are, of course, equipped with numerous features intended to assure the safety of plant employees and the public, as indicated by our earlier summary description of the proposed Turkey Point facility. These safeguards, while designed to protect against accidents and their consequences, do not have as their specific purpose protection against the effects of enemy attacks and destructive acts — although the massive containment and the procedures and systems for rapid shutdown of the facility could also serve a useful purpose in the latter regard. One factor underlying our practice in this connection has been a recognition that reactor design features to protect against the full range of the modern arsenal of weapons are simply not practicable and that the defense and internal security capabilities of this country constitute, of necessity, the basic "safeguards" as respects possible hostile acts by an enemy of the United States.

The circumstances which compel our recognition are not, of course, unique as regards a nuclear facility; they apply also to other structures which play vital roles within our complex industrial economy. The risk of enemy attack or sabotage against such structures, like the risk of all other hostile acts which might be directed against this country, is a risk that is shared by the nation as a whole. This principle, we believe, is rooted in our political history and we find no Congressional indication that nuclear facilities are to be treated differently in the subject regard.

4 AEC at 13.

The United States Court of Appeals for the District of Columbia reviewed the Commission's Memorandum & Order in the *Turkey Point* case. The Court of Appeals affirmed the Commission and basically aligned itself with the Commission's legal reasoning. *Seigel v. AEC*, 400 F.2d 778 (1968). The Court summarized the basis on which the Commission made its decision as:

(1) the impracticability, particularly in the case of civilian industry, of anticipating accurately the nature of enemy attack and of designing defenses against it, (2) the settled tradition of looking to the military to deal with this problem and the consequent sharing of its burdens by all citizens, and (3) the unavailability, through security classification and otherwise, of relevant information and the undesirability of ventilating what is available in public proceedings.

400 F.2d at 782.

The Court of Appeals understood and endorsed the Commission's determination that requiring an applicant to demonstrate that its nuclear facility is protected against various forms of enemy attack would "stifle utterly the peaceful utilization of atomic energy in the United States." *Seigel*, 400 F.2d at 783-84. The Court's conclusion clearly upholds § 50.13:

In short, Congress certainly can be taken to have expected that an applicant for a license should bear the burden of proving the security of his proposed facility as

against his own treachery, negligence, or incapacity. It did not expect him to demonstrate how his plant would be invulnerable to whatever destructive forces a foreign enemy might be able to direct against it in 1984.

400 F.2d at 784.

Contention 4(c) Is Barred by § 50.13(a)

We turn now to the two inquiries necessitated under § 50.13(a). The first is whether the sabotage postulated by Contention 4(c) is "directed against the facility." Applicant argues that the postulated attack or sabotage against the Illinois railroad train transporting explosives from the ammunition plant would be "directed against" the Braidwood facility within the meaning of the regulation. We agree. The very premise of Neiner Contention 4(c) is that the attack or sabotage of the train will take place at a location in proximity to the Braidwood plant, consistent with the further apparent premise that it is the intent of the attackers (or saboteurs) to damage the nuclear power station. Any such attack would be a more localized attack and, therefore, one even more clearly directed against the nuclear facility than other postulated "indirect" attacks barred from consideration in other cases. In any event, the subjective intent of such attackers is not material.

In *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-81-42, 14 NRC 842, 844-45 (1981), intervenors argued that their postulation of an act of detonating a nuclear explosion during an attack on a neighboring country which allegedly could damage the Perry nuclear plant, was not an attack "directed against" the facility. The *Perry* Board found, and we agree given the rationale of § 50.13 described above, that a Board is not required to engage in the absurdity of the subjective test of inquiring into the mind of an attacker (or saboteur) to decide whether the act was intended to damage the nuclear facility or whether such damage was merely incidental to some other hostile goal of the attacker. *Id.* at 844. Rather, as stated by another Licensing Board, the very nature of the act of detonating a nuclear device which could damage a nuclear power plant constitutes, *a priori*, a destructive act directed against the facility. *Washington Public Power Supply System* (WPPSS Nuclear Project No. 1), LBP-83-66, 18 NRC 780, 783 (1983).

Therefore, while the postulated attack or sabotage may be perpetrated on the train or its tracks, such activity satisfies the requirement that the sabotage be "directed against the facility." This would be so whether or not the subjective intent of the perpetrators is to damage the nuclear facility.

The second inquiry is whether, in the words of § 50.13(a), the saboteurs qualify as "an enemy of the United States, whether a foreign government or other person." We find it implausible to categorize any group of individuals who attempt to damage a trainload of munitions traveling from a federal arsenal as other than an enemy of the United States. Moreover, as Applicant discusses in its Objections, at 5-6, the Appeal Board has addressed an intervenor's exception to a Licensing Board's finding that an applicant need not protect against an armed band of saboteurs intent upon, and capable of, damaging the plant. *Consolidated Edison Co. of New York* (Indian Point Station, Unit No. 2), ALAB-202, 7 AEC 825 (1974). The Appeal Board in *Indian Point* characterized the intervenor's exception as raising the issue of whether an applicant must take affirmative measures against an attack by an armed group which is not an enemy of the United States. *Id.* at 829-30. In denying the intervenor's exception, the Appeal Board focused on whether it would be reasonable to require an Applicant to provide such protection. The *Indian Point* decision is unequivocal that it would not be a reasonable requirement.

This situation presents problems which, from an applicant's standpoint, differ little in kind or degree from the problems presented if the armed band is in fact an enemy of the United States.¹⁹ From a practical standpoint, if there is an attack by a substantial force, those who have to decide whether to seek assistance, and whether to provide responsive capabilities, will probably not first ponder over the question of whether or not the force is an enemy of the United States.

¹⁹ See and compare *Seigel v. AEC*, 400 F.2d 778, 782 (D.C. Cir. 1968).

Id. at 830.

The logic of the Appeal Board's reasoning is supported with its interpretation of the rationale behind § 50.13. The Appeal Board notes that the regulation does not require "an applicant to protect against the effects of enemy attacks and destructive acts" and that the same rationale "would also apply to an armed band of trained saboteurs." 7 AEC at 830. The Appeal Board concluded:

As in the case of defending against the threat of an attack by an enemy of the United States, it seems that an applicant should be entitled to rely on settled and traditional governmental assistance in handling an attack by an armed band of trained saboteurs. Without such reliance, each facility could indeed become an armed camp.

Id.

The more recent *Perry* decision also provides legal reasoning from which we may conclude that the saboteur band postulated by Neiner

Contention 4(c) would be an enemy of the United States. *Perry, supra*, 14 NRC 842. The portion of the decision explaining the rejection of a subjective test to determine if a nuclear weapon-induced electromagnetic pulse is "directed against the facility" (consideration of which would be precluded under § 50.13(a)), also explains how the Board determines whether the attacking force is an "enemy of the United States."

[I]f a nation fires a nuclear device which causes electromagnetic pulses over the United States, that nation is responsible for the result. By that hostile act, the nation becomes an enemy of the United States and is responsible for direct or indirect consequences resulting from its use of a nuclear weapon.

Perry, supra, 14 NRC at 844. We concur that where an act is hostile, and could damage a nuclear plant and thereby cause harm to the public health and safety resulting from radiation releases, then the perpetrator of that act is an enemy of the United States for purposes of application of § 50.13(a). Where, as here, such enemy act is beyond the type of design basis security threat encompassed by 10 C.F.R. § 73.1(a), then an applicant is entitled to rely on the government's military or law enforcement agencies to handle such an attack.

The discussion of our rejection of Contention 4(c) would not be complete without some mention of the physical protection of nuclear power plants mandated under the NRC regulations. The *Seigel* Court, as quoted *supra* pp. 134-35, had alluded to the security responsibilities to be shouldered by an applicant. Those provisions in the regulations requiring an applicant to provide physical security measures as a prerequisite to obtaining an operating license are contained in 10 C.F.R. Part 73. It has been previously stated by a licensing board that § 50.13 is to be read *in pari materia* with the regulations of Part 73. *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-82-119A, 16 NRC 2069, 2098 (1982). The distinctions between these two parts of the regulations serve to shore up our conclusion that neither Contention 4(c) may not be litigated in this proceeding.

The regulations encompassed by Part 73 require a nuclear facility to be secure against specific design basis threats. Such threats contemplate well-trained individuals (likely assisted by a knowledgeable insider), who carry hand-held weapons and/or other hand-carried equipment for destroying the reactor's integrity. 10 C.F.R. § 73.1(a)(1). Part 73 refers to sabotage accomplished with the use of small weapons by small bands of saboteurs. In contrast, when read in the light of its own rationale (discussed above) and § 73.1, § 50.13 addresses military-style attacks which are broader in nature and carried out with heavier weapons. *Shearon Harris, supra*, 16 NRC at 2098.

The threat postulated in Contention 4(c) is an explosion of the railroad train and its cargo, even if it is argued that this explosion may stem from a chain reaction begun by a small band of attackers with hand-held equipment. Thus, the method and nature of sabotage contemplated by Contention 4(c) would be beyond the scope of the design basis threat contemplated under § 73.1(a)(1). We agree with the NRC Staff (Response, at 10) that a railroad carload of munitions clearly was not intended for litigation under a regulation related to "hand-held weapons."

Furthermore, the sabotage envisioned by Part 73 is perpetrated at the plant site or against nuclear fuel being shipped to or from the site. § 73.1(b). Thus, Applicant is required to take certain precautions to ensure the plant's security. In the scenario postulated by Contention 4(c), sabotage is committed outside the plant's security boundary along the railroad's route from the Joliet arsenal. For that reason alone, Contention 4(c) could not be litigated under 10 C.F.R. Part 73 because the security measures required by Part 73 do not extend beyond the vicinity of the plant's boundaries. See 10 C.F.R. §§ 73.45 and 73.46. (As noted, under Part 73, other measures must be taken to protect shipments of nuclear material to or from the plant. This subject is unrelated to the contention.)

Contention 4 Is Not Barred by § 50.13(b)

In our June 21, 1985 Memorandum and Order, the Board ruled that neither Contention 4(a) and 4(b) is admissible for litigation in this proceeding. We disagree with Applicant that the accidents postulated by Neiner Farms in subparts (a) and (b) of the contention would be the result of use or deployment of weapons incident to U.S. defense activities, consideration of which is barred by § 50.13(b). Rather, we are in essential agreement with the NRC Staff. The Staff has provided the Board with a well-reasoned explanation of those areas in which Applicant's arguments falter. NRC Staff Response, at 3-6.

We first examine the language of § 50.13(b) to determine whether the shipment of explosive materials and munitions from (or even to) the Joliet Army Ammunition Plant would be encompassed within the regulation's intended meaning of "deployment of weapons." Proceeding initially with the simplest of linguistic tools, we found that the definition of deployment contained in Webster's Third New International Dictionary (unabridged) is as follows:

de-ploy . . . *vt* **1a:** to extend (a military or naval unit) in width or in both width and depth [he deployed his squad on both sides of the road] **b:** to place or arrange (armed forces) in battle disposition or formation or in locations appropriate

for their future employment [deploy forces to check aggressions] 2: to extend or place as if deploying troops [deploying the editors . . . in various phases of political reporting — *Newsweek*] [harried roadmasters deploying equipment and work gangs along the grade in military fashion — R.L. Neuberger] deploy *vi*: to move in or as if in deployment [the squad deployed and made a dash for the hill — Hanama Tasaki] [the staff deployed to their phones — *Time*].

The meaning of § 50.13(b) reasonably understood from the word “deploy” is that associated with the definitions set in a military context. The munitions (explosives or propellants for artillery shells) involved in this case, although they may be considered military munitions, are not being strategically arranged in locations appropriate for their use, unlike nuclear missiles being placed in silos from which they can be launched, or conventional weapons being tactically placed in the field with a military unit during war (or during a standby alert, or even engaged in a training exercise). Rather, the munitions in question are merely being transported from (or to) the Joliet ammunition plant, perhaps to storage locations, or to ammunition factories, or to military bases, such that in the event of a national security crisis or military exercise the munitions would *then* be deployed to a destination specified by the military for use in our national defense. Moreover, it stretches the rationale on which § 50.13 is premised, as discussed above, to label as “deployment of weapons” mere movement of raw ingredients for the manufacture of ammunition, or the ammunition itself, to or from a local ammunition plant.

The remaining subject of the contention (as set forth in the reworded Contention 4(a) and (b), note 3, *supra*), is the alleged public hazard from damage to the Braidwood plant by an accidental explosion close to the nuclear plant of a railroad train cargo of munitions being shipped from the nearby Joliet Army Ammunition Plant. Litigation of this issue should not intrude on national defense responsibilities and concerns of the country in general, which are the province of the military defense and security establishment. No strategic actions involving the use or deployment of weapons are affected by an analysis of the risk (consequences and probability) of the alleged railroad explosion. To be sure, if we find on the merits in favor of Neiner Farms, possible remedies by the Applicant may be limited by the U.S. Army’s prerogative, over which we exercise no jurisdiction, to operate the Joliet ammunition plant any way it desires to do so, including use of railroad shipments near the Braidwood plant. However, possible limitations on Applicant’s remedies, if any are necessary after our decision on the merits, do not affect the NRC’s subject matter jurisdiction to determine the merits of modified Neiner Farms Contention 4(a) and (b).

The Staff made the additional point that the cases cited by Applicant do not support Applicant's position that Neiner Contention 4(a) and (b) is not litigable. We agree that the cases are not factually close enough to the Braidwood circumstances to buttress Applicant's position. The cases Applicant relied upon were *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1500 (1982) and *Perry, supra*, 14 NRC at 844-45. In those cases, the weapon in issue was a nuclear missile (or other nuclear weapon) explosion postulated to cause an electromagnetic pulse (EMP) over a large area. See also *WPPSS, supra*, 18 NRC at 783. The EMP was postulated to disable the nuclear plant protection systems by electrical interference. Both Boards determined that explosion of a nuclear missile or other weapon would be either an enemy act, or, if a U.S. nuclear device, would arise from the deployment of weapons by the U.S. *Perry, supra*, 14 NRC at 845; *Limerick, supra*, 15 NRC at 1500. U.S. nuclear missiles (in silos or in the air), or other nuclear weapons in the air, are *deployed* weapons incident to U.S. defense activities. Stated another way, we find the widespread defense activity of the deployment of U.S. nuclear missiles in silos or in the air to be factually distinct from the localized nature of the transportation of weapons or explosives to or from the Joliet ammunition plant by railroad, particularly given the rationale behind § 50.13.⁵

We also note that if we accept Applicant's arguments, a Licensing Board would not be permitted to consider anything related to the military that might impact on a nuclear facility. That is, the Applicant would have the Board employ such an extremely broad reading of § 50.13(b) that almost *anything* military could be argued to be a use or deployment of weapons as an incidence of U.S. defense. For example, under the Applicant's reasoning, a Licensing Board would be forbidden from considering the air traffic of military planes taking off and landing at a military airfield located near a nuclear plant. This would conflict with what we understand to be long-standing AEC and NRC practice of considering the possible risks to a nuclear plant of crashes of military airplanes. *E.g., Consumers Power Co.* (Big Rock Point Plant), LBP-84-32, 20 NRC 601, 639-52 (1984) (a case with which Applicant's counsel before us is familiar). Similarly, we see no reason to bar our consideration of the shipment of ammunition or raw explosive materials for the sole reason that they may, at some later point, be deployed or used in national defense activities.

⁵ Given our view, we do not have to consider whether the contents of the shipments from the ammunition plant would constitute "weapons."

CONCLUSION

The above sets forth the Board's reasons for our rulings in the unpublished Order of June 21, 1985, that:

1. Neiner Farms Contention 4(c) is barred from litigation by 10 C.F.R. § 50.13(a); and
2. Neiner Farms Contention 4(a) and (b) (as now reworded) is not barred by 10 C.F.R. § 50.13(b), and is admitted as an issue in controversy in this proceeding.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Lawrence Brenner, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland
July 30, 1985

Directors'
Decisions
Under
10 CFR 2.206

DIRECTORS' DECISIONS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Harold R. Denton, Director

In the Matter of

Docket No. 50-295
(10 C.F.R. § 2.206)

COMMONWEALTH EDISON COMPANY
(Zion Station, Unit 1)
AND ALL LIGHT-WATER REACTORS

July 3, 1985

The Director of Nuclear Reactor Regulation denies a petition filed by Zinovy V. Reytblatt seeking an immediate postponement of all containment leak rate tests performed for light-water reactors based on alleged errors in containment leak rate measurement methodology. Petitioner also alleged errors in computer software used to determine containment leak rates. The Director concluded that the current leak rate methodology was adequate to determine containment leak rates. Furthermore, the NRC Staff has reviewed data sets from tests using the allegedly incorrect software and has found that the data have been correctly processed. In addition, NRC inspectors, as a matter of course, independently verify containment leak rate results.

**TECHNICAL ISSUE DISCUSSED: CONTAINMENT LEAK
RATE TESTING**

The equation used to calculate containment air mass will produce adequate results if testing is done under stable conditions and test data are properly evaluated. Further, the likelihood that weighting coefficients are manipulated to produce an acceptable test result is small as NRC inspectors regularly observe the tests conducted by licensees and document the results in Inspection Reports.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

INTRODUCTION

On March 5, 1985, Zinovy V. Reytblatt (Petitioner) submitted a letter pursuant to 10 C.F.R. § 2.206 to the Director of the Office of Nuclear Reactor Regulation seeking an immediate postponement of all containment leak rate tests performed for light-water reactors pursuant to the Commission's regulations in this area, specifically, 10 C.F.R. Part 50, Appendix J. The primary concern raised by the Petitioner was the alleged use of incorrect weighting coefficients in the air mass equation used for determining actual containment leak rates. Specifically, Petitioner alleges that incorrect weighting coefficients were utilized in determining the containment leak rate for the Zion Station, Unit 1.

On March 8, 1985, Petitioner submitted a second letter to the Director of the Office of Nuclear Reactor Regulation alleging that certain computer software developed by Volumetrics, Inc., and utilized at a number of nuclear facilities, including the Zion Unit 1, to determine containment leak rates, does not function correctly and consequently may lead to incorrect determinations of containment leak rates. Petitioner requested that actions be taken to ban the use of the software in question until it has been "debugged" and revalidated.

On April 22, 1985, I acknowledged receipt of both the March 6 and March 8, 1985 letters from the Petitioner and informed the Petitioner that both letters would be considered together as a Petition pursuant to 10 C.F.R. § 2.206 and that appropriate action would be taken on the issues raised in the Petition within a reasonable time. I also have considered a subsequent letter from the Petitioner dated April 30, 1985, in reaching my decision. My decision in this matter follows.

DISCUSSION

The Petitioner has been involved in the technical issues associated with containment leak rate testing methodologies for a number of years. Petitioner's activities have been focused upon (1) criticizing the current methods used to assure adequate containment leak rates and (2) suggesting what Petitioner would consider to be improved methods to perform containment leak rate tests. The NRC Staff has also been active in reviewing the adequacy of the Commission's regulations regarding containment leak rate testing. Leak rate testing of light-water reactor containments is a substantial undertaking. While the Commission's present

requirements for leak rate testing continue to provide reasonable assurance that the public health and safety is adequately protected, these requirements are now over 11 years old and a substantial base of experience exists to apply in seeking improvements to the regulations. In fact, one modification to 10 C.F.R. Part 50, Appendix J, in the area of Type B tests was made. See 45 Fed. Reg. 2330 (1980) and 45 Fed. Reg. 62,789 (1980). The NRC Staff has under way the review of leak rate testing requirements with a view to see whether other modifications to these requirements are appropriate. Petitioner is well aware of these activities and has participated in them over the years, including participation in the activities of Working Group ANS-56.8 of the Standards Committee of the American Nuclear Society, the entity carrying out a detailed review and examination of methodologies appropriate for adequate containment leak rate testing. The Petitioner has also presented his concerns with respect to containment leak rate testing directly to the NRC Staff on many occasions in the past in both written and oral form. Indeed, I have issued twice before Director's Decisions pursuant to 10 C.F.R. § 2.206 dealing with Petitioner's concerns in this area.¹ Consequently, both the nuclear industry and the NRC Staff have long had the benefit of Petitioner's views with respect to containment leak rate testing.²

The current Petition raises essentially three issues. First, the Petition alleges that the equation used to calculate containment air mass at any given time is wrong. This issue has been raised by the Petitioner in the past and, in fact, was the subject of an earlier Director's Decision issued by this office.³ As noted in my earlier decision, the equation used in the standard of the American Nuclear Society (ANS) and the American National Standards Institute (ANSI)⁴ for calculation of containment air mass is not "wrong" as alleged by the Petitioner. The manner in which the mean containment temperature is calculated for use in the equation, however, is important. In this regard, ANSI-ANS 56.8-1981 does not prescribe how to calculate the mean containment temperature. Either a mass-weighted mean temperature or a volume-weighted mean temperature would be acceptable if the leak rate testing is properly conducted to assure stable conditions and the test data are properly evaluated. In essence, the equation is correct, but inadequately defines the temperature

¹ *Commonwealth Edison Co.* (LaSalle County Station, Units 1 and 2), DD-84-6, 19 NRC 891 (1984); *Commonwealth Edison Co.* (Zion Station, Unit 1), DD-85-2, 21 NRC 270 (1985).

² It should be noted that the Commission has placed leak rate testing for water-cooled power reactors on its Regulatory Agenda. See 50 Fed. Reg. 18,154 *et seq.* (Apr. 29, 1985).

³ See DD-84-6, *supra*, 19 NRC at 894.

⁴ ANSI/ANS 56.8-1981, "Containment System Leakage Testing Requirements."

term by allowing the assumption of a uniform density throughout the containment. The density may not, however, be uniform because the temperature may not be uniform. Hence it is important to assure that the test is conducted under stable conditions. Within the range of temperature variations experienced at tests conducted at nuclear facilities, the difference in leak rates using the assumption of uniform density has no safety significance. Consequently, while this is an area where improvement may be made, such an improvement would be more correct technically but would produce no meaningful change in the conduct of containment leak rate tests.

The second issue raised by the Petitioner concerns the use of the so-called weighting coefficients in determining containment leak rates and the allegation that such weighting coefficients may be manipulated to reach an acceptable result. This issue is also the subject of my earlier decision.⁵ As noted in my earlier Decision, a properly conducted leak rate test would not contain the types of deficiencies alleged by the Petitioner such as the use of unjustified weighting coefficients. Such manipulation of data would be a violation of the Commission's regulations and would subject licensees to NRC enforcement action. In addition, to ensure compliance with the Commission's requirements regarding leak rate testing, NRC inspectors regularly observe the tests conducted by licensees and document the results of their observations in Inspection Reports.

The third issue raised by the Petitioner concerns alleged inadequacies in certain software used to conduct containment leak rate testing. The Petitioner alleges that the Volumetrics computer program for processing leak rate test data does not perform addition and/or division correctly which consequently may lead to underestimating leak rates to the degree that such leak rates would appear to be within normal limits. The Petitioner suggests that such may be the case with respect to Zion Unit 1 leak rate testing, and suggests that other facilities may be employing the same defective software. Petitioner further alleges that the Volumetrics computer program has a "fraudulent" option which permits doubling of the weighting coefficients and that this "fraudulent" option has been used during the November 1983 Zion test and possibly also in the July 1984 Zion test.

The Volumetrics computer program (software) was used in conducting the November/December 1984 containment integrated leak rate test (CILRT) at the Detroit Edison Company's Fermi Unit 2 plant. NRC inspectors, as a matter of course, independently verify CILRT results. In the case of the Fermi Unit 2 test, the NRC inspectors found that the

⁵ DD-84-6, *supra*, 19 NRC at 894-95.

Volumetrics computer program produced acceptable results. There was no evidence of any manipulation of subvolume weighting coefficients to bias the data. Specific data sets from this test have also been checked for alleged inadequacies in the Volumetrics software, and it has been determined that the Volumetrics computer program correctly processes the data. Consequently, the Staff has not found it necessary to review the Volumetric software itself. Also, contrary to statements made by the Petitioner, the Volumetrics software has never been used for the integrated leak rate testing of the Zion containments. Again, the Staff has independently verified that the computer program used in the Zion tests produced correct results.

While the Petition raises three general concerns, Petitioner makes a number of allegations which are specific to the Zion Unit 1 facility. Particularly, the Petitioner contends that the July 1984 containment leak rate test for Zion Unit 1 was performed in violation of regulatory requirements. The Petitioner argues that the July 1984 containment leak rate test at Zion Unit 1 may have used the Volumetrics software permitting doubling of weighting coefficients and incorrect addition and/or subtraction. Further, the Petitioner argues that meaningless "verification" tests were performed during the Zion Unit 1 test on July 29, 1984. The Petitioner alleges that a verification test failed and that, following the failure, the reasons for the failure were not analyzed. Instead, an "unlawfully short test" with the same incorrect weight coefficients used earlier was performed and "successfully" verified. Petitioner questions this approach as no repair was done between tests and containment conditions for both tests were identical. The Petitioner further argues that, based on his analysis of certain data sets for the Zion Unit 1 test of July 1984, and upon his use of supposedly more realistic weight coefficients, he has concluded that the Zion Unit 1 containment leak rates are in excess of regulatory limits.

As stated above, the Volumetrics software was not used in the Zion tests. Nevertheless, the Petitioner presented a data set of nine temperature readings for a particular subvolume to show that the Volumetrics computer program does not correctly calculate the average containment temperature. The Petitioner, however, mistakenly included the readings of two channels of temperature sensors (numbers 4 and 14) that had been declared "out-of-service" through the course of the test. In fact, the computer program in use (not the Volumetrics program) was averaging, correctly, the readings of the seven "in-service" channels.

With regard to the Petitioner's allegations concerning the validity of the verification test for the July 1984 Zion CILRT test, the Petitioner alleges that no attempt was made to analyze the cause of the inability to

initially meet the test acceptance criterion. In fact, after conducting the verification tests, the Licensee did speculate on the cause and proceeded to take corrective action. It was thought that the verification test equipment may have been leaking during the CILRT (which would not have occurred during the subsequent verification test with the equipment in use) since the imposed leak rate was almost identical to the measured (composite) leak rate. The Licensee made adjustments to the verification test equipment and proceeded to conduct a second CILRT. The test was discontinued after 10 hours since the results were substantially the same as those obtained during the first CILRT. A second verification test was then conducted using a larger imposed leak rate (1.1 L_i versus 0.82 L_i), which is permissible. This resulted in a composite leak rate greater than 0.1 weight percent per day (wt %/day). Since the accuracy of measuring leak rates much less than 0.1 wt %/day is considered poor, conducting a verification test having a composite leak rate greater than 0.1 wt %/day improves the accuracy of the test. The NRC's Inspection Report⁶ reviewed the circumstances of the verification test related above. The report concludes that the test did confirm the acceptability of the CILRT.

CONCLUSION

Petitioner sought immediate suspension of all containment leak rate testing and immediate initiation of actions to ban the use of Volumetrics software until it is debugged and revalidated. For the reasons stated in this Decision, the Petitioner's request for relief is denied. As provided by 10 C.F.R. § 2.206(c), a copy of this Decision will be filed with the Secretary for the Commission's review.

Harold R. Denton, Director
Office of Nuclear Reactor
Regulation

Dated at Bethesda, Maryland,
this 3rd day of July 1985.

⁶ Letter to C. Reed, Vice President, Commonwealth Edison Company, from J. Keppler, Regional Administrator, Region III, U.S. Nuclear Regulatory Commission, dated September 7, 1984, transmitting Inspection Report No. 50-295/84-11; 50-304/84-11.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Harold R. Denton, Director

In the Matter of

Docket Nos. 50-352
50-353
(10 C.F.R. § 2.206)

PHILADELPHIA ELECTRIC COMPANY
(Limerick Generating Station,
Units 1 and 2)

July 29, 1985

The Director of the Office of Nuclear Reactor Regulation denies the Petition of Robert L. Anthony and Friends of the Earth (Petitioners) seeking the Directors' immediate initiation of show cause proceedings to revoke the operating license for the Limerick Generating Station Unit 1 of the Philadelphia Electric Company (Licensee). The Petitioners argued that certain exemptions granted to the Licensee were improperly granted and that Licensee Event Reports, Inspection Reports and certain correspondence demonstrate that licensed activities at the Limerick facility are being conducted in an unsafe fashion and warrant license revocation. Finally, Petitioners argue that the Independent Design Verification Program undertaken for the Limerick facility indicates that the design of the facility is inadequate. In his decision, the Director also considered the comments of Mr. Frank Romano submitted on March 11, 1985, and the comments of Mr. Marvin Lewis submitted on February 15, 1985, on issues related to the Limerick facility.

RULES OF PRACTICE: SHOW CAUSE PROCEEDINGS

Where no specific factual basis is provided by the Petitioners to support a claim that exemptions were improvidently granted, the Director

of the Office of Nuclear Reactor Regulation need take no further action under 10 C.F.R. § 2.206 with respect to Petitioners' claims.

RULES OF PRACTICE: SHOW CAUSE PROCEEDINGS

NRC inspection activities may discover violations of NRC requirements both in the construction and operation of facilities. Such violations are generally of minor significance. If truly major deficiencies on the part of a licensee are identified, the agency is authorized to issue orders, including stop-work orders, to assure appropriate remedial action.

RULES OF PRACTICE: SHOW CAUSE PROCEEDINGS

Isolated deficiencies in a licensee's program of construction or operation do not necessarily undermine the program to such an extent as to give rise to a significant safety concern. What is required is a careful assessment of the significance of the deficiencies, and the corrective action taken to preclude recurrence.

RULES OF PRACTICE: SHOW CAUSE PROCEEDINGS

A request pursuant to § 2.206 for institution of show cause proceedings shall set forth the facts that constitute the bases for the request. In the absence of the specific factual basis called for by the regulation, any inquiry must necessarily be limited.

RULES OF PRACTICE: SHOW CAUSE PROCEEDINGS

It is the NRC's policy to pursue all specific allegations with potential safety significance. However, vague and unspecified claims do not warrant further inquiry.

RULES OF PRACTICE: SHOW CAUSE PROCEEDINGS

The remedy afforded by § 2.206 should not be used as a means to reopen issues previously adjudicated. In the absence of any significant new information, neither a party to a Commission adjudicatory proceeding nor a nonparty may raise issues previously adjudicated for consideration under § 2.206.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

INTRODUCTION

On December 23, 1984, Robert L. Anthony on behalf of himself and Friends of the Earth (Petitioners) filed with the Director of the Office of Inspection and Enforcement a Petition seeking that the Director immediately institute show cause proceedings to revoke License No. NPF-27 (operating license) issued to the Philadelphia Electric Company (PECo or the Licensee). The operating license was issued on October 26, 1984, authorizing fuel loading and other low-power activities at the Licensee's Limerick Generating Station, Unit 1 (Limerick facility). Although the Petition was directed to the Office of Inspection and Enforcement, the Office of Nuclear Reactor Regulation will respond to the Petition as it deals with matters related to a license issued by this Office. As a basis for their request, Petitioners argue that certain exemptions granted to the Licensee when License No. NPF-27 was issued were improperly granted and that the public health and safety was thereby endangered. The Petitioners further argue that Licensee Event Reports issued by the Licensee since the commencement of operation under the low-power license are further indication that activities under the license are being conducted in an unsafe fashion. Thirdly, the Petition makes reference to various Inspection Reports issued by the NRC and to correspondence between the Licensee and the NRC as identifying additional deficiencies warranting revocation of the license. Finally, the Petitioners argue that the Independent Design Verification Program (IDVP) undertaken for the Limerick facility indicates that the design of the Limerick facility is inadequate and that license revocation is called for.

On February 13, 1985, I acknowledged receipt of the Petition and informed the Petitioners that the Petition would be treated under 10 C.F.R. 2.206 of the Commission's regulations and that a formal decision with respect to it would be issued within a reasonable time. I further informed the Petitioners that, for the reasons set out in my letter, I saw no need to take any immediate actions with respect to the concerns raised by the Petition. I specifically noted in my letter that all of the matters raised by the Petition were ones of which the NRC Staff was well aware.

Mr. Anthony has provided the Nuclear Regulatory Commission with additional views subsequent to the filing of the Petition dated December 23, 1984. On February 25, 1985, Mr. Anthony provided additional comments with respect to the alleged unsafe operation of the Limerick facility and again urged that the Commission issue an order to the Licensee

to show cause why License No. NFP-27 should not be revoked. On April 5, 1985, Mr. Anthony reiterated his request with respect to the institution of show cause proceedings. On May 9, 1985, Mr. Anthony submitted additional comments mainly alleging violation by the Licensee of certain environmental conditions of License No. NPF-27.¹ I have taken Mr. Anthony's additional views into account in reaching my final decision with respect to the Petition.

On February 15, 1985, I received the comments of Mr. Marvin L. Lewis supporting the Petition of Mr. Anthony, *et al.* I acknowledged Mr. Lewis' letter on March 26, 1985, and informed him that his comments would be considered in reaching my final decision with respect to the Petition.

On March 11, 1985, I received the comments of Mr. Frank R. Romano who joined with Mr. Anthony, *et al.*, in calling for the institution of show cause proceedings. I acknowledged Mr. Romano's letter on May 23, 1985, and informed him that his comments would also be considered in reaching my final decision with respect to the Petition.

The Licensee has also submitted its comments with respect to Petition of Mr. Anthony, *et al.* These comments were submitted on February 6, and April 12, 1985, and I have considered them in reaching my decision. My decision in this matter follows.

DISCUSSION

Petitioners seek the institution of show cause proceedings pursuant to 10 C.F.R. § 2.202 to revoke License No. NPF-27. The issuance of a show cause order is appropriate only where substantial health or safety issues have been raised.² This is the standard which I have applied to the concerns discussed in this Decision to determine whether an enforcement proceeding pursuant to § 2.202 is warranted.

Petitioners' submittals raise essentially three general issues. First, the Petitioners question certain exemptions which have been issued for the Limerick facility. Secondly, Petitioners make reference to numerous pieces of correspondence between the NRC Staff and the Licensee, to a number of Licensee Event Reports (LERs) which have been submitted

¹ To the extent the May 9, 1985 filing by Petitioner Anthony raises concerns with respect to the use of cooling water for the Limerick facility, these concerns are very similar to concerns addressed in a Director's Decision Under 10 C.F.R. § 2.206 issued on May 17, 1985, and I consider that Decision responsive to these issues. See DD-85-8, 21 NRC 1561 (1985).

² Consolidated Edison Co. of New York (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 176 (1975); Washington Public Power Supply System (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 89, 923 (1984).

by the Licensee to the NRC since License No. NPF-27 has been issued, and to a variety of NRC Inspection Report findings, apparently to support the proposition that the Limerick facility contains faulty design features and has experienced a poor level of performance by facility personnel since the facility commenced operation. Consequently, it is suggested that continued operation poses an undue risk to public health and safety. Finally, the Petitioners point to the IDVP performed for the Licensee by Torrey Pines Technology (Torrey Pines) as further support for the Petitioners' argument that the design of the Limerick facility is faulty or that the design features of the facility cannot be confirmed to operate as intended.

Prior to discussing each one of these areas, it is important to note that much of the content of Petitioners' submittals consists of references to correspondence, Inspection Reports, and LERs. On the basis of such references, Petitioners argue that the facility design is inadequate and that the facility is poorly operated. While I intend to discuss each of these issues generally, I do not intend to respond specifically to each item which has been referenced.

I view the references as supportive of the more general concerns raised by the Petitioners. I see no benefit and no need to address each reference on its merits. What is important is whether or not the items referred to by Petitioners taken together raise a substantial safety concern warranting institution of enforcement proceedings. This approach is particularly appropriate as the NRC has been well aware of the matters referred to by Petitioners. It is important to recognize that the Petition provides no new information but only restates information or references documentation of which the NRC was already aware. In this context, then, it is appropriate to respond to the principal concerns of the Petition rather than responding with a detailed discussion of each of the referenced items.³

A. Exemptions from Specific Regulations

The Petition argues that certain exemptions granted to the Licensee when License No. NPF-27 was issued were improvidently granted and that the public health and safety are thereby endangered. Specific exemptions identified are concerned with control room habitability, the standby gas treatment system, compliance with 10 C.F.R. Part 50, Appendix J, and the adequacy of isolation valves for certain systems. Petitioners' concerns with regard to certain exemptions issued for the Limerick facility

³ Cf. DD-84-7, *supra*, 19 NRC at 904-05.

may be categorized as simply disagreement with conclusions reached by the NRC Staff and the Licensee regarding the appropriateness of the exemption at issue. No specific factual basis is provided by the Petitioners to support the claim that the exemptions were improvidently granted. In the absence of such specific factual basis, I need take no further action with respect to Petitioners' claims. Section 2.206(a) requires that Petitioners "set forth the facts that constitute the basis for the request." Absent such a showing, I need take no action on the Petition.⁴ Although I decline to take action on the exemption concerns of the Petitioners in the absence of any factual basis, I have discussed the relevant portions of the Staff's evaluations to make clear that the Petitioners' concerns are unwarranted.

Remote Shutdown System Redundancy

On October 25, 1984, Licensee requested an exemption from certain requirements of General Design Criterion (GDC) 19 regarding the remote shutdown capability for the Limerick facility.

As discussed in § 7.4.0 of the Limerick Safety Evaluation Report (SER), NUREG-0991, issued in August 1983, the Limerick facility is provided with a remote shutdown system outside of the control room from which the reactor can be shut down in a safe and orderly fashion. The design basis for the remote shutdown system is to effect a safe shutdown under the following conditions: (1) Inaccessibility of the main control room with the plant operating at or less than design power conditions, (2) loss of offsite power and (3) loss of turbine control, feedwater control and steam bypass.

The SER noted that the design submitted by the Licensee did not include redundancy in the controls and indication provided for the remote shutdown system. The Licensee had committed to modify the design to achieve such redundancy prior to initial plant startup but subsequently requested an exemption from full compliance with GDC 19 for plant operation through the first fuel cycle. SER Supplement No. 3 provided the NRC Staff's evaluation supporting an exemption from the specific requirements of GDC 19 for the period of operation up to 5% of rated power. The Staff's evaluation was based on the fact that there would be minimal decay heat removal requirements prior to exceeding 5% power and that the likelihood of simultaneously losing the main control room safe shutdown capabilities and the existing single remote shutdown train

⁴ *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), DD-82-13, 16 NRC 2115, 2121 (1982) and cases there cited. See also CL1-75-8, *supra*, which instructs at 2 NRC 175 that the Director in considering a request pursuant to § 2.206 must make an inquiry appropriate to the facts asserted.

was highly unlikely for the short period of time following initial criticality and prior to exceeding 5% power. On this basis, the Staff found that an exemption from full compliance with GDC 19 was justified for initial startup and operation up to 5% power.

Since the issuance of SER Supplement No. 3, the Staff has received additional information describing how redundancy will be achieved for operation beyond 5% power and is currently preparing a safety evaluation on this subject. The Staff will require that this issue be suitably resolved prior to authorizing operation beyond the 5% power level.

Refueling Area Connection to the Standby Gas Treatment System

On September 21, 1984, the Licensee requested an exemption from GDC 61 regarding the connection of the Standby Gas Treatment System (SGTS) to the refueling area. The Licensee requested an exemption to delay the connection of the SGTS until prior to the first movement of irradiated fuel into the refueling area.

The Staff evaluated this issue in SER Supplements No. 2 and 3. As noted therein, the Licensee has committed to completely isolate the refueling area from the Unit 1 secondary containment zone during the time the exemption is permitted. Furthermore, there will be no irradiated fuel permitted in the refueling area until the SGTS is operable. Thus, there will be no radioactivity in the refueling area to be released during the first fuel cycle and consequently no need to have the SGTS operational. The commitments made by the Licensee to ensure that this will be the case have been incorporated as a condition to the operating license. These actions preclude the introduction of radioactivity into the refueling area and virtually eliminate the risk of discharging radioactive gas to the atmosphere in case of an accident.

Containment Leakage Rate Testing Program

On September 24, 1984, the Licensee requested an exemption with regard to certain specific elements of the Limerick Containment Leakage Rate Testing Program which did not meet the explicit requirements of Appendix J to 10 C.F.R. Part 50. These exemptions requested: (1) seal testing instead of a containment airlock test whenever maintenance had not been performed on the airlock, (2) testing of the main steam isolation valve (MSIV) leakage at a pressure less than the containment pressure for design basis accidents (P_d) and exclusion of the measured leakage from the combined local leak rate test results, (3) no local leak rate testing of traversing in-core probe shear valves and (4) a one-time

exemption from the requirement to perform local leak rate testing on seven Residual Heat Removal System (RHRS) relief valves.

As stated in § 6.2.6.4 of Supplement No. 3 to the SER, the Licensee's requested exemption regarding the airlock testing was found acceptable by the NRC Staff. Appendix J, ¶ III.D.2(b)(ii) requires that "[a]ir locks opened during periods when containment integrity is not required by the plant's Technical Specifications shall be tested at the end of such periods at not less than P_s ."

In lieu of this requirement, the Licensee requested that the overall airlock leakage test at P_s be conducted only when maintenance has been performed on the airlock that could affect the airlock sealing capability. The Licensee stated that a full pressure test at P_s will require installing strongbacks on the inner door which is a cumbersome process requiring at least 12 hours. The Licensee further stated that the airlock leaktightness is assured if no maintenance which could affect the ability of the airlock to seal has been performed, by compliance with the 6-month periodic test requirements of ¶ III.D.2(b)(i) and the 3-day test requirements of ¶ III.D.2(b)(iii) of Appendix J.

Accordingly, the Staff concluded that the Licensee may substitute the seal leakage test for the full pressure test of ¶ III.D.2(b)(ii) when no maintenance has been performed on an airlock. Whenever maintenance has been performed on an airlock, the requirements of ¶ III.D.2(b)(ii) must still be met by the Licensee as reflected in the Plant's Technical Specifications.

As stated in § 6.2.6 of the SER and Supplement No. 3 to the SER, the Licensee requested an exemption regarding testing the main steam isolation valves (MSIV) at a pressure less than the containment peak pressure and excluding the measured leakage from the combined local leak rate test results.

Each main steam line is provided with two MSIVs that are positioned to provide better sealing in the direction of post-accident containment atmosphere leakage. In the event of a LOCA, the main steam leakage control system will maintain a negative pressure between the MSIVs. The effluent will be discharged into a volume where it will be processed by the Standby Gas Treatment System before being released to the environs. The design of the MSIVs is such that testing in the reverse direction tends to unseat the valve. Testing of the two valves simultaneously, between the valves, at design pressure, would lift the disc at the inboard valve. This would result in a meaningless test. The proposed test calls for a test pressure of 25 psig to avoid lifting the disc of the inboard valve. The total observed leakage through both valves (inboard and outboard) is then conservatively assigned to the penetration. The NRC

Staff concluded, based on the above rationale, that this test procedure is acceptable. Furthermore, the Staff concluded that excluding the leakage from the summation for the local leak rate tests is acceptable because the leakage has been accounted for separately in the radiological analysis of the site.

As stated in § 6.2.6 of the SER, the Licensee requested an exemption regarding the performance of local leak rate testing of traversing in-core probe (TIP) shear valves. The shear valve, by definition, if tested would be destroyed thus requiring replacement to permit the passage of the TIP during normal operations. Therefore the Staff found acceptable the replacement of the Appendix J leakage test requirement with selected bench tests and maintenance procedures that ensure that the valves will perform their function when called upon.

As stated in § 6.2.6 of the SER, the request for a one-time exemption from the requirement to perform local leak rate testing on seven Residual Heat Removal system valves was found acceptable. On the basis that these valves were exposed to the initial Integrated Leak Rate Test (ILRT) and that any leakage past these valves would have been included in the ILRT test results, the Staff believes that it is unlikely that degradation in the valves will occur during the period of the exemption in the first fuel cycle.

Containment Isolation

On September 21, 1984, the Licensee requested an exemption from GDC 56 regarding the containment isolation valves for the hydrogen recombiners and the Drywell Chilled Water and Reactor Enclosure Cooling Water systems.

The Licensee has provided a detailed technical basis for its conclusion that the probability of releases from the subject hydrogen recombiner lines penetrating containment is low. The NRC Staff addressed the issue in § 6.2.4 of the SER and SER Supplements No. 1 and 3. As discussed in SER Supplement No. 1, each of the two redundant hydrogen recombiner trains for post-accident hydrogen control has one automatic containment isolation valve in the line from the reaction chamber to the wet well. The second isolation barrier for each line penetrating containment is considered by the Licensee to be the closed piping system of the hydrogen recombiner trains. This represents a deviation from the explicit requirements of GDC 56 for penetrations of the primary containment that connect directly to the containment atmosphere. GDC 56 generally requires two isolation valves in each line penetrating reactor containment. The Licensee's evaluation that the system configuration, i.e., a closed

system outside containment, constitutes an acceptable isolation barrier was accepted by the NRC Staff as adequate for the first fuel cycle until the second isolation valve is installed.

The recombiner system was leak-tested in conjunction with the containment integrated leak rate test, so that the closed system rationale has been demonstrated and hence justified. Breach of the containment integrity would require a degradation of the recombiner system's components along with a failure of an existing isolation valve, which is judged by the Staff to be unlikely during the first cycle of operation.

As discussed in § 6.2.4 of the SER and SER Supplement No. 3, each of the lines associated with the Drywell Chilled Water (DCW) and the Reactor Enclosure Cooling Water (RECW) systems which penetrate primary containment have two isolation valves in them. The exemption request of the Licensee was with respect to the requirement that all containment isolation valves receive diverse containment automatic isolation signals. The Licensee requested that plant operation be permitted until the first refueling outage without having an automatic closure by diverse containment isolation signals for DCW outboard containment isolation valves and the RECW inboard and outboard containment isolation valves. The Licensee has committed to provide all of the containment isolation valves in these lines with diverse automatic isolation signals prior to startup after the first refueling outage. On the basis that (1) these lines do not open directly to the containment atmosphere or to the reactor coolant boundary, (2) these lines are designed to withstand a seismic event, and (3) the Licensee has committed to provide special interim operating instructions to isolate these lines should a LOCA occur, the Staff determined that operation of the plant during the first cycle without automatic isolation of these valves is acceptable.

B. Inadequate Design and Poor Plant Performance

The Petitioners appear to base their concerns with respect to plant performance principally upon the number and content of certain LERs which have been submitted by the Licensee regarding the Limerick facility, and the findings of a variety of NRC Inspection Reports, and the content of certain correspondence between the NRC Staff and the Licensee associated with the licensing of the Limerick facility.

The Petitioners have merely cited documents that have either been prepared by the NRC or submitted to the NRC. The Petitioners provide no new information or new analysis of the information in the documents and conclude, with no supporting evaluation, that the operating license should be revoked. In light of these conclusory arguments it might be

appropriate to rest upon the position that the Petitioners have provided no justification for the relief requested for each of the three categories of documents cited. I will, however, provide background and analysis to address the Petitioners' concerns that will: (1) explain how that documentation fits within the regulatory process; (2) summarize the Petitioners' apparent concerns; and (3) discuss and analyze the documentation in making an overall assessment as to the lack of significance in the cited documentation in the context of continued plant operation.

NRC Staff-Licensee Correspondence

In order to obtain a license from the NRC, a potential Licensee must submit an application for agency review. In the process of that review, the NRC Staff often finds the need for additional information from the Licensee to justify the adequacy of the Licensee's proposed design. There follows then a series of correspondence between the Licensee and the NRC Staff discussing and documenting a wide variety of design and operational issues related to the facility which is the subject of the licensing review. The correspondence may be extensive and extend over a lengthy period of time given the complexity of nuclear facilities. It is to this correspondence that the Petitioners point as a basis for alleged safety concerns at the Limerick facility. Indeed, just the opposite is true. With respect to the issues identified by the Staff, which are the subject of the correspondence referred to by Petitioners, the correspondence is evidence that the Staff is conducting a thorough and complete review of the issues of significance to assure that the facility will be properly designed and constructed.⁵

⁵ Petitioners' references to correspondence are generally unspecific. The Petitioners do, however, provide specificity with respect to one matter. The Petition states that several Licensee letters on tornado missiles and damage to the Ultimate Heat Sink "omit altogether the threat to safe shutdown from the design railway explosion which could simultaneously collapse the cooling towers and disable the water intake structure at the river." Petition of December 23, 1984, at 6. The Staff does not find it credible to require the assumption of a hazardous wind event, i.e., a tornado, severe enough to disable the Ultimate Heat Sink concurrent with a design basis transportation accident such as a railway boxcar explosion. The Petition provides no basis for such an assumption. Assuming a railroad boxcar explosion of sufficient severity to disable the nonsafety-related intake structure and the cooling towers, a highly unlikely event in itself, then the safety-related Ultimate Heat Sink spray pond remains to safely shut down the reactor. Most importantly, Petitioner FOE has already had a full opportunity to present this issue to the agency in the Limerick operating license proceeding. See Order (Concerning Proposed FOE Contentions on Hazards from Industrial Activities), issued by the Licensing Board sitting in the Limerick operating license proceeding on November 27, 1982 (unpublished), dismissing an FOE contention regarding propane railroad car explosions for want of an adequate basis. Having had an opportunity to present this issue in the operating licensee proceeding, Petitioner FOE may not now use the § 2.206 procedure to seek its reconsideration. See *General Public Utilities Nuclear Corp.* (Three Mile Island Nuclear Station, Units 1 and 2), (Oyster Creek Nuclear Generating Station), CLI-85-4, 21 NRC 561, 563-64 (1985).

Inspection Reports

The objectives of the NRC inspection program are to:

- (a) assess the safety status of the Licensee systems — both administrative and hardware;
- (b) verify Licensee compliance with NRC rules, regulations, orders and license conditions;
- (c) assure timely corrective actions are implemented to prevent recurrence of identified problems;
- (d) identify generic issues;
- (e) provide feedback to related NRC organizations such as program offices, hearing boards, and Staff offices on issues of concern.

The Regional Staff implements these objectives by performing inspections on nuclear power reactors while under construction and throughout the operational lifespan of the unit. Thus, as a reactor plant progresses through the phases of design, construction, preoperational readiness, startup, operation and decommissioning, the inspection program changes to meet the specific needs of each phase. An onsite Resident Inspector provides a continuous inspection-regulatory presence, as well as providing a direct contact between NRC management and the licensee. The inspection activity of the Resident Inspector is supplemented by professionals from the Regional Staff who perform specialized inspections in a wide variety of engineering and system disciplines, ranging from civil and structural to health physics and reactor core physics. The specialist inspectors provide a perspective that is different from, but complementary to, that of the Resident who by necessity is a generalist.

Regional inspection findings are documented in Inspection Reports. These inspection activities examine the licensee's performance in a wide variety of areas to assure that the licensee is conducting licensed activities safely. The activities undertaken are of an audit nature, spot checking licensee performance in order to form conclusions with respect to the licensee's overall performance.⁶

In addition to conducting its general inspection program through Resident and Regional personnel, a periodic Systematic Appraisal of Licensee Performance (SALP) is conducted by a review board of NRC Staff for the purpose of making an overall judgment as to the adequacy of the

⁶ The audit-type NRC inspection activities can be clearly understood with reference to a matter raised by the Petitioners dealing with certain surveillance tests required of the Licensee prior to initial criticality. Petitioners argue at page 5 of the February 25, 1985 submittal of the absence of any certification by the agency that all 120 surveillance tests required by License No. NPF-27 have been reviewed by the NRC. There is no requirement for any such certification nor does the NRC generally inspect 100% of the activities in a given area. In this instance, partial review of surveillance testing was conducted by the NRC and the testing conducted by the Licensee was found acceptable.

licensee's performance based upon a review of the inspections conducted over the assessment period, normally 1 year. A rating is given to the licensee in each of several functional areas (e.g., construction activities) based on the results of this SALP evaluation. It is important to stress that it is in the SALP report that the overall significance of inspection trends and findings is identified. For this reason, the latest SALP report, issued for the Limerick facility on April 26, 1985, will be extensively cited.

Inspections, in general, result in either acceptable findings, violations of NRC requirements, or unresolved issues. Violations are documented in a Notice of Violation issued to the licensee. Corrective action is required. See 10 C.F.R. § 2.201. The nature, extent and timing of corrective action is reviewed by the NRC to assure that it is adequate to resolve the problems found. Unresolved items are matters which do not necessarily rise to violations of NRC requirements but are of concern to NRC inspectors and warrant further review. After further review the inspector may determine the unresolved issue is acceptable, or may determine that it should be a violation.

It is important to note that while the Commission expects licensees to pay meticulous attention to detail and achieve a high standard of compliance with NRC requirements, errors may occur.⁷ NRC inspection activities discover violations of NRC requirements both in the construction and operation of facilities. Such violations are generally of minor significance. If major violations in construction or operational activities are identified, escalated enforcement action is considered by the agency including the issuance of civil penalties. If a truly major deficiency or deficiencies on the part of a licensee are identified through the inspection process, or otherwise, the agency is authorized to issue a variety of orders, including stop-work orders, to assure appropriate remedial action.

Isolated deficiencies in the licensee's program, however, do not necessarily undermine the program to such an extent as to give rise to a significant safety concern.⁸ What is required, when a violation is identi-

⁷ *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 346 (1983); *Washington Public Power Supply System* (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 899, 906 (1984). Although these cases refer to facility construction, the same principle applies to the facility operation. While licensees are expected to pay meticulous attention to detail and achieve a high standard of compliance with NRC requirements, see General Statement of Policy and Procedure for NRC Enforcement Actions, 10 C.F.R. Part 2, Appendix C, § 1, violations in the area of reactor operations at Severity Levels IV and V are not generally the subject of civil penalties. *Id.* § V.B.

⁸ See, e.g., *Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), DD-83-13, 18 NRC 721, 722 (1983) where escalated enforcement action including issuance of an order to show cause was considered inappropriate due to the limited safety significance of the violations involved at an

(Continued)

fied, is a careful assessment as to the significance of the violation, its cause, and the corrective action taken to preclude recurrence.

The Petitioners cite a number of Inspection Reports as identifying deficiencies in Limerick plant performance. See, for example, the letter of February 25, 1985, at 3. Petitioners also refer to the latest SALP report and a variety of other Inspection Reports as documenting numerous personnel errors by the Limerick Staff.⁹

The NRC inspection program at Limerick has been extensive. For the latest SALP period alone (December 1, 1983, through November 30, 1984) the NRC has expended nearly 9000 inspector-hours at Limerick, focusing in the areas of construction, preoperational and startup testing, operational readiness and plant operations. Based upon that inspection effort, I see no basis for the relief requested by Petitioners, as explained in more detail below.

Eleven inspections were conducted by Regional specialists in addition to continuing inspections by the Resident Inspectors in the area of construction during the latest SALP review period. These inspections included routine reviews of areas such as piping, electrical, instrumentation and controls, welding, preservice inspection and engineering/design for Unit 1, and storage maintenance for Unit 2. Special team inspections were conducted of the as-built configuration of the plant and of installation practices applied to the Power Generation Control Complex (PGCC). The NRC Nondestructive Examination (NDE) Van was used to independently evaluate the quality of welding and a special team inspection was conducted at the San Francisco office of the architect/engineer, Bechtel Power, to examine FSAR pipe break analyses and the use of certain computer codes. Further, a substantial amount of inspection

operating plant. See also *Petition for Emergency and Remedial Action*, CLI-78-6, 7 NRC 400, 405 (1978) where the Commission noted that not every regulatory violation mandated license suspension or facility shutdown.

⁹ The assertions made by the Petitioners with respect to Inspection Reports consist essentially of a restatement of Inspection Report findings. In one area, however, the Petition claims that an NRC Inspection Report was issued with willful deceptiveness. See Letter of December 23, 1984, at 5. Petitioners suggest that the incident of August 22, 1984, when a fuel bundle hit the spent fuel pool wall, constituted a violation of NRC requirements and consequently the finding in the Inspection Report, specifically Inspection Report No. 84-43, which concluded that no violations were identified, was willfully deceptive. In order to clarify the basis for the NRC finding, the following discussion is provided. During the course of the new fuel receipt and inspection process, NRC inspectors verified that adequate procedures had existed to perform each activity involved. Movement of new fuel into the spent fuel racks was an activity under the control of licensed operators who had been trained in this process. After the fuel bundle hit the pool wall, the Licensee was found to have implemented a conservative course of corrective actions. These actions included removal of the affected bundle from the pool, removal of the fuel bundle channel, and a reinspection of the bundle. Because the NRC determined that the Licensee's approach to this problem was adequate and that the event was isolated in nature, no violations of NRC requirements were identified.

effort was expended closing out open inspection items prior to issuance of the operating license.

The previous SALP assessment had found construction performance to be at a high level, concluding construction-related activities were well performed and managed, and that they exhibited good quality.

The Licensee maintained this good performance through the latest SALP assessment period. Significant amounts of NRC inspection effort bore out the conclusion that the quality of construction was maintained at a high level. The as-built team inspection performed a thorough review of the emergency service water system and the high pressure coolant injection system installation, including pipe supports and welding, electrical power and instrumentation associated with the two systems. The team compared the system configurations to the FSAR descriptions and performed independent measurements of piping and support details. Minor discrepancies were identified which were suitably addressed by Licensee management prior to licensing.

The NDE Van, along with an additional extensive structural welding inspection, independently verified the quality of ASME and AWS welding at Limerick. Included in these two inspections were independent checks of approximately 500 welds of various types and configurations. Further, these and additional inspections of welding and welder qualifications determined that both the Licensee and its constructor maintained good control over welding activities.

Fourteen inspections of preoperational testing activities and six inspections of startup testing activities were performed by Region-based inspectors during the latest SALP review period. In addition, the Resident Inspectors examined these areas on a daily basis. Based on an extensive review of tests and test results by the NRC, it appears that the test program has been adequately managed to assure satisfactory performance of those plant systems covered by it.

The Licensee's startup test program at Limerick used information obtained from other licensees with recent successful startup program experience. The Licensee utilized the program from Susquehanna Steam Electric Station as a basis to develop its own startup program.

The Licensee assigned General Electric (GE) as the lead organization to coordinate and implement the startup program with assistance from Bechtel. PECO personnel were responsible for the operation of the facility during the program in accordance with the operating license. Staffing levels of the Licensee and its contractors have been adequate.

Schedules developed correctly displayed the logic necessary to conduct all required startup tests. Procedures to support the startup test program have been reviewed by the NRC and were found to be comprehensive

and technically adequate with the exception of the procedure for the Loss of Offsite Power Test which is not yet issued.

The interface between the General Electric startup personnel and Licensee operations personnel was observed to be working well with good coordination. GE startup engineers have been assigned to operating shifts so that continuity between startup and operations personnel can be maintained.

QA/QC coverage of the startup program to date has been acceptable. QC was observed to provide surveillance coverage of the fuel load operation and control rod drive startup tests. Extensive QC coverage and QA audits for the remainder of the program are planned.

Region-based inspectors conducted ten inspections in the operational readiness area during the latest SALP review period. These included review of the Licensee's readiness for fuel receipt, storage, transfer and inspection; the operations Quality Assurance (QA) program; nonlicensed Staff training; maintenance and design control programs; and system acceptance by the station Staff. Additionally, a special team inspection was conducted to compare the facility's proposed technical specifications to as-built system conditions and to the implemented surveillance test procedures.

Approximately 1 month prior to receipt of the operating license, the station implemented the normal control room shift rotation. Since that time, the normal station operating and administrative procedures have been enforced for the control of plant activities. Thus, all system testing, maintenance and modifications are being controlled by these approved procedures. In general, these activities have been performed adequately.

Operator performance has been good; however, some weaknesses have been identified. Initial inspections indicated that shift turnover controls needed improvement to minimize noise levels and to limit the number of nonessential personnel in the control room. The Licensee has implemented acceptable corrective actions for these issues.

The control room operators displayed a professional attitude toward plant operations. Activities such as fuel loading have been performed well. However, shortly after license issuance, NRC noted that more operator vigilance and awareness toward control room annunciators were necessary. Improvements in this area were significant after Licensee management implemented corrective actions, but similar improvements for nonlicensed operators (e.g., radwaste operators) were also found to be necessary and have since been completed.

The Licensee's performance to date has not been error-free; however, as I have previously stated this is not the standard by which a license is issued. Based upon the Licensee's performance under its operating

license to date, the inspection of that performance, and the Licensee's response to identified problems and violations, the Licensee has demonstrated the ability to operate the facility safely and in conformance with NRC requirements.

It is important to note that the SALP process includes a review and analysis of Licensee violations occurring within the assessment period to evaluate overall significance and identify trends to be formally addressed by the Licensee. As depicted in Table 3 of the Limerick SALP report, dated April 26, 1985, the violations of license requirements total sixteen Severity Level IV, ten Severity Level V concerns and one deviation from license commitments. Appendix C of 10 C.F.R. Part 2, defines these categories of violations as minor and not cause for significant concern. The Licensee is required to formally address these concerns, and respond in writing to the NRC, detailing the corrective actions and results achieved, corrective actions to prevent recurrence, and provide the date when full compliance will be achieved.

Licensee Event Reports (LERs)

Commission regulations, specifically 10 C.F.R. § 50.73, require each licensee to make written reports of certain events to the NRC within certain prescribed timeframes. These are the LERs to which the Petitioners refer. LERs are submitted to both the NRC headquarters and the Regional offices for consideration. LERs are reviewed in headquarters for identification of any trend in events and the need to alert licensees to generic implications associated with such events. In the short term, LERs are reviewed by both Regional and Resident personnel to assess significance with respect to the particular facility.¹⁰

The Petitioners essentially argue that the Limerick facility has deficient equipment and procedures which, in interaction with poorly trained personnel and questionable supervision, have combined to produce an alarming series of LERs. Petitioners argue that the LERs give only "a hint of the true picture of equipment failures, construction deficiencies, procedural gaps, and maintenance and operator blunders by PECO at the Limerick plant." The Petitioners claim that the Licensee's own analysis of the various incidents that have occurred at the Limerick facility ascribes the causes to (1) personnel error, (2) design, manufacturing, construction and installation error, and (3) procedural defi-

¹⁰ See NUREG-1022, "Licensee Event Report System," September 1983, for a more complete discussion of the LER System. A Supplement to NUREG-1022 was also issued in February 1984.

ciencies and other causes. Based on this performance by the Limerick facility and its personnel, the Petition urges that the NRC immediately institute proceedings pursuant to 10 C.F.R. § 2.206 by issuance of an order to show cause why NRC License No. NFP-27 for the Limerick facility should not be revoked.

The apparent trend in operator and technician errors was formally transmitted to the Licensee as a Regional concern in a January 11, 1985 letter which forwarded an Inspection Report containing findings involving personnel errors and requested a response to this concern. Prior to the receipt of the Licensee's response, the Limerick SALP report for the period between December 1, 1983, and November 30, 1984, also noted the trend in personnel errors.

The Licensee's initial response to the Regional concern was provided by letter dated February 11, 1985, and a followup meeting was held with Licensee management regarding proposed corrective actions on February 22, 1985. A subsequent letter, dated April 2, 1985, provided a detailed discussion of the Licensee's corrective actions in this area.

The Licensee's corrective action program addressed three principal areas for improvement. The improvement areas were plant modifications to correct conditions which provided opportunity for personnel errors, actions to address personnel areas, and programmatic improvements. The improvement measures taken to address personnel errors included additional training, a stationwide Operator Excellence Program, and more direct management control of operations.

In addition to the above, Region I has conducted an independent review of reportable events at Limerick from the date of the Limerick fuel load license, October 26, 1984, through May 7, 1985.¹¹ The effort included telephone reports made under 10 C.F.R. § 50.72, and Licensee Event Reports (LERs) made under 10 C.F.R. § 50.73. Since 10 C.F.R. § 50.72 reports are based on preliminary information where the root cause of the event may not yet be clear, the Region I review primarily used the written LERs and, where additional details were needed, the Regional Inspection Reports concerning the events were used.

The Region I review reached the following conclusions. Of ninety-four LERs submitted on events through May 7, 1985, thirty-six were caused by direct personnel error. Additional licensee initiatives in this area include plant modifications which are in progress to prevent grounds and shorts during surveillance testing of various electronic instruments in restricted spaces, and to minimize spurious signals experienced during

¹¹ See Enclosures 1 and 2, R. Starostecki (NRC) Memorandum to H. Thompson (NRC), dated March 1, 1985, "Limerick Operating Experience," and updated LER Summary, "Limerick LERs."

venting and filling differential pressure instruments. Together these two problems contributed to eleven of the direct personnel error events. The corrective actions taken by the Licensee appear to have been effective as indicated by the recent decrease in the number of reportable events related to direct personnel error; only ten of the thirty-six LERs caused by direct personnel error occurred after February 1, 1985.

Equipment failures caused thirty-one of the ninety-four total events; seventeen of these events were due to the two separate repetitive problems for which plant modifications are being pursued. One of the problems involved ten control room ventilation isolations caused by the breaking of the sample tape for the control room chlorine analyzer. Another problem involved seven reactor water cleanup (RWCU) system isolations caused by a spurious high temperature signal generated while reading RWCU system temperatures.

In considering whether a personnel error trend exists, the volume of Limerick LERs was reviewed considering the changes in reporting requirements due to the 1984 revision to 10 C.F.R. § 50.73. Susquehanna 1, which was licensed to load fuel on July 17, 1982, was the most recent lead unit BWR to start up in Region I. During a comparable time period, about the first 2 months after receipt of an operating license, Susquehanna reported ten LERs which resulted from personnel error. Of Limerick's fourteen LERs caused by direct personnel error in 1984 only eight would have been reportable prior to January 1, 1984. As an example, the actuation of an Emergency Safety Feature (ESF) such as an inadvertent system isolation is now reportable, whereas prior to January 1, 1984, it was not. Of the forty-three LERs Limerick submitted in 1984, approximately twenty-five were ESF actuations. In total, these facts suggest that Limerick's reportable personnel errors and volume of LERs do not vary significantly from industry experience, when considering the changes in reporting requirements.

Further, Region I has considered the safety significance of the reported events and has determined that none of the events resulted in a serious degradation of safety barriers. In addition, the Staff believes that the Licensee has been conservative in reporting events and that no reportable events have occurred which were not reported.

Based upon the above, I conclude that the number and types of LERs from Limerick do not justify the relief requested but rather are consistent with a new plant startup and of a conservative threshold by the Licensee for reporting.

C. The Independent Design Verification Program

Petitioners make reference to the IDVP performed for the Limerick facility Unit 1 Core Spray System by Torrey Pines Technology. While acknowledging that the Torrey Pines report of November 1984 concludes that the system will probably function as planned, Petitioners note that there are two disturbing features which cast a cloud over the design work done by the General Electric Company (GE) and the planning and calculations for safety features performed by Bechtel Power Corp. The Petitioners' February 25, 1985 letter (at 5-6) stated that the GE design control program was missing ten items for the Core Spray System design needed to authenticate design adequacy. Petitioners question the after-the-fact justification for these ten items and argue that the Core Spray System is suspect. Far more reaching, however, in the view of the Petitioners, is the uncertainty raised concerning other GE design work for Limerick for the same period in which document unavailability was identified for the Core Spray System. Petitioners question the adequacy of the overall GE design control program in light of the incomplete nature of the documentation associated with the Core Spray System and argue that the license for the Limerick facility should be revoked until proper verification of this overall aspect of the GE design for equipment and systems has been completed.

As discussed in the Torrey Pines IDVP report and in Supplement No. 4 to the SER, Potential Finding Report No. 26 (PFR-026) identified that GE was unable to retrieve ten Engineering Review Memorandums (ERM) from its records. The ERM is required by GE procedures to document that technical design reviews have been performed on GE design documents. The requirement to have retrievability was only applicable to three of the subject ten ERMs (i.e., those that were generated during the period from June 12, 1972 to 1974). The seven remaining ERMs were applicable to documents issued prior to June 12, 1972, and hence the requirement for document retrievability was not applicable. To ensure that the technical design reviews had been adequately performed, the Licensee authorized GE to re-review the ten subject design documents. The results of this re-review produced no hardware changes to the original design and only resulted in a few minor editorial changes to the design documents. Based upon GE's re-review of all ten associated design documents, and the minor nature of the corrections, the Staff believes that the GE design and the design process are adequate and that this issue is reduced to an insignificant concern regarding the failure by GE to follow its in-house procedures. The Staff concludes that the corrective action taken by PECO is acceptable and the Staff has no further concerns in this area.

Petitioners further argue that the Torrey Pines study brought to light other serious flaws in the Limerick facility, specifically in the facility's safe shutdown capability following postulated breaks in the core spray line. Petitioners claim that the study found errors affecting the Automatic Depressurization System (ADS), specifically (a) taking credit for instruments which could also be lost as a consequence of a line break; (b) taking credit for instruments which were not identified on the instrument list and were not in the plant design; and (c) not assuming the worst-case single active failure with the line break. Petitioners argue that other errors apply to the Reactor Protection System (RPS) and the Primary Containment and Reactor Vessel Isolation Control System (PCR-VICS). Petitioners argue that the Torrey Pines study did not assess the impact of these errors beyond their effect on the Core Spray System and that because of the repetitive nature of the errors, other errors of a similar nature might be present in the Limerick facility design. Petitioners further argue that corrective action proposed by the Licensee, specifically safety evaluation calculations associated with jet impingement, does not address the concern identified. What is required, Petitioners argue, is a complete review of design and construction of all systems and components related to the plant's safe shutdown capability.

In this regard, the Staff notes that PFRs 023 and 024, both classified as findings, identified errors and inconsistencies in the analysis that was used to demonstrate safe shutdown capability following postulated breaks in core spray lines. Bechtel Power Corporation (BPC) agreed that there were specific areas in the analysis needing clarification or correction but did not agree that plant safe shutdown capability had not been demonstrated. Nevertheless, PECO proposed to take action to review and revise, as necessary, all safety evaluation calculations associated with jet impingement and to provide a description of the methodology of the analysis, including a discussion of how worst-case single failures are identified. At the meeting in Bethesda on January 10, 1985, PECO stated that the corrective action associated with this item had been completed and that no hardware changes were required but that minor changes in documentation had been incorporated. At the subsequent visit to BPC's offices on January 15, 1985, the Staff reviewed BPC's calculations. As a result of its review, the Staff concludes that the corrective action in this area is acceptable.

Comments of M.I. Lewis

As noted in the introduction to this Decision, I indicated to Mr. Lewis that I would consider his comments of February 15, 1985, in reaching

my decision with respect to the Petition. Mr. Lewis' comments are essentially argument regarding the propriety of the continued operation of the Limerick facility. Specific factual concerns are generally absent. In the absence of the specific factual basis called for by the regulations,¹² my inquiry must necessarily be limited. My responsibility is to conduct an inquiry appropriate to the facts asserted. And in the absence of a specific factual basis, my inquiry is a limited one.

Mr. Lewis alleges that the Limerick facility stands on concrete that is so porous that a man could sit in some of the voids. No further specificity is provided. In the absence of a more definite factual basis, I decline to pursue this matter further.

Mr. Lewis further alleges that a 13-inch jog is present in one of the Limerick cooling towers. Although somewhat specific, I decline to pursue this matter as the Limerick facility cooling towers are not safety-related structures and any deficiencies in them would therefore not affect public health and safety.

Mr. Lewis further alleges that labor unrest on the Limerick site has lead to allegations by subcontractors of alcohol consumption on site, poor welding, security violations and many other safety-related deficiencies. Violations and "open item" evaluations have followed some, but not all, of the allegations. Again, these claims by Mr. Lewis are unspecific in nature and do not form the basis for any further factual inquiry. To the extent that Mr. Lewis suggests that violations have been identified in these areas by the NRC and "open items" have been noted, this would indicate that the NRC inspection program has pursued specific allegations received in these areas to determine their significance to regulatory requirements. It is the NRC's policy to pursue all specific allegations with potential safety significance. However, the vague and unspecified claims made by Mr. Lewis in these areas do not warrant any further inquiry on my part.

Mr. Lewis' claims with respect to weld deficiencies are likewise vague and unspecified and thus unsuitable for further inquiry. I would note, however, that this concern of Mr. Lewis was the subject of inquiry by the Atomic Safety and Licensing Board reviewing the operating license for the Limerick facility.¹³ The Commission has most recently noted that the principle is now firmly established that the remedy afforded by

¹² See discussion at pp. 153-54, *supra*.

¹³ LBP-84-31, 20 NRC 446, 509 *et seq.* (1984).

§ 2.206 should not be used as a means to reopen issues previously adjudicated.¹⁴ On this basis, I decline to consider the issue further.

The remaining concerns raised by Mr. Lewis, i.e., NRC Staff bias and loyalty to the Licensee, NRC "nitpicking," and the claim that the operating history of the Limerick facility mimics that of the Three Mile Island, Unit 2 facility are fundamentally argumentative, devoid of any specific factual basis, and so do not warrant further inquiry.

Comments of F.R. Romano

As noted in the Introduction to this Decision, I informed Mr. Frank R. Romano that I would consider his comments dated March 11, 1985, in reaching my decision with respect to the Petition.

Mr. Romano's comments, in part, are generally supportive of the concerns raised by Petitioners, particularly with the respect to the issue of LERs. Mr. Romano provides no additional specific information in addition to that provided in the Petition on this issue. As noted in this decision at pp. 165-67, *supra*, the NRC's assessment of the LERs submitted by the Licensee with respect to the operation of the Limerick facility to date does not warrant the initiation of enforcement proceedings.

Mr. Romano raises essentially two other issues in his March 11, 1985 letter. Both of these issues have already received consideration by the Atomic Safety and Licensing Boards convened to consider the operating license application for the Limerick facility.

Mr. Romano discusses his concerns with respect to welding and notes that he had framed his concerns as proposed contentions to the Atomic Safety and Licensing Board sitting in the Limerick operating license proceeding. Mr. Romano has therefore had his opportunity to have the agency consider this matter.¹⁵

The other concern raised by Mr. Romano, namely the sheltering option with respect to emergency preparedness at the Limerick facility, has also been the subject of adjudication. The Atomic Safety and Licensing Board sitting in the operating license proceeding has considered

¹⁴ CLI-85-4, *supra* note 5. While the Commission recognized that this principle in the past has been applied to prevent parties to a proceeding from seeking reconsideration of issues previously decided, the Commission in its decision extended this principle to those not parties to a proceeding in the interest of finality to administrative decisionmaking. The principle thus becomes whether or not an issue offered for consideration under § 2.206 has been previously adjudicated in a Commission proceeding. If so, and in the absence of any significant new information, neither a party nor nonparty may raise this issue for consideration by an Office Director pursuant to § 2.206.

¹⁵ See notes 13 & 14, *supra*.

issues related to emergency planning and has rendered a decision with respect to them.¹⁶

With respect to both of these matters, i.e., welding and sheltering, Mr. Romano simply seeks to relitigate issues already decided by adjudicatory boards sitting in the Limerick operating license proceeding. As noted above, the Commission has expressly barred the use of § 2.206 procedures to relitigate issues previously adjudicated. In this instance, Mr. Romano was a party to the proceedings wherein these issues were considered. Because the Petitioners have had an opportunity to receive agency consideration of these questions, I decline to further pursue either of these issues.

CONCLUSION

For the reasons discussed above none of the issues identified by Petitioners in their filings or in the comments of Mr. Lewis and Mr. Romano warrant the initiation of enforcement proceedings. Accordingly, Petitioners' request for action pursuant to § 2.206 is denied. As provided in 10 C.F.R. § 2.206(c), a copy of this Decision will be filed with the Secretary for the Commission's review.

Harold R. Denton, Director
Office of Nuclear Reactor
Regulation

Dated at Bethesda, Maryland,
this 29th day of July 1985.

[The enclosures have been omitted from this publication but may be found in the NRC Public Document Room, 1717 H Street, NW, Washington, DC 20555.]

¹⁶ LBP-85-14, 21 NRC 1219 (1985). Sheltering issues are specifically addressed at 21 NRC 1303-05, 1344.

Denials of
Petitions for
Rulemaking

DENIALS OF PETITIONS FOR RULEMAKING

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

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

In the Matter of

Docket No. PRM-50-35

JOHN L. NANTZ

July 26, 1985

The Nuclear Regulatory Commission denies a petition for rulemaking submitted by John L. Nantz. The Petitioner requested that the Commission adopt regulations to establish a formal procedure for Commission review of decisions to close advisory committee meetings or portions of those meetings. The petition is being denied on the grounds that current procedures are adequate to assure that advisory committees' use of exemptions from the requirement for open meetings are adequately justified and because Commission review would be an inefficient and unwarranted use of the Commission's resources.

ADVISORY COMMITTEES: MEETING CLOSURES

The Commission concludes that current procedures for rulings on closure determinations for advisory committee meetings are adequate.

ATOMIC ENERGY ACT: DELEGATION OF AUTHORITY

In the absence of any statutory prohibition, the Commission concludes that its delegation of authority to rule on closure determinations for advisory committee meetings is a proper exercise of its authority pursuant to § 161n of the Atomic Energy Act of 1954, as amended.

NRC: COMMISSION POLICY

Establishment of a formal procedure for Commission review of advisory committee closures would diverge from a strong policy of the Commission to extricate itself from nonessential procedural matters to conserve its resources for paramount responsibilities.

DENIAL OF PETITION FOR RULEMAKING

On October 26, 1984, the Commission published notice of receipt of a petition for rulemaking from John L. Nantz in which he requested that the Commission amend its regulations to establish a formal procedure to allow interested persons to petition the Commission for review of decisions to close advisory committee meetings or portions of those meetings (49 Fed. Reg. 43,070). That notice fully explicated the Petitioner's view on why a change was desirable and set forth the rule change that the Petitioner had proposed.

In brief, the Petitioner maintains that current Commission rules do not establish authority for ruling on appeals of closure determinations for meetings of advisory committees made, pursuant to the Commission's delegation and with the advice of the General Counsel,¹ by the Assistant Secretary as the Advisory Committee Management Officer.

The Commission sought public comment on the petition during a 2-month period.

The Commission received four comment letters on this proposal. Three commenters supported the petition in light of broad principles favoring open meetings and public participation; however, none of the three addressed specifically the appeal process proposed by the Petitioner or any problems related specifically to any unwarranted closing of advisory committee meetings.

The remaining commenter, Yankee Atomic Electric Co., asserted that under current practice there are adequate procedures to assure that advisory committees' use of exemptions from the requirement for open meetings are adequately justified. In particular, this commenter referred

¹ The petition also suggests that such a delegation may be improper, reasoning that because § 8(b) of the Federal Advisory Committee Act (FACA) permits delegation of certain specific functions to the Advisory Committee Management Officer (ACMO), it is implied that other functions may not be delegated; but the requirement of that section that the head of an agency "designate," not "delegate," an ACMO to perform certain functions does not speak to, let alone answer, the question whether the function of deciding meeting closings may be delegated by the agency head to another. In the absence of any prohibition, the Commission concludes that its delegation is a proper exercise of its authority pursuant to § 161n of the Atomic Energy Act of 1954, as amended.

to the Federal Advisory Committee Act's requirement that any determination to close an advisory committee meeting "shall be in writing and shall contain the reasons for such determination. [5 U.S.C., Appendix I, § 10(d)]." The commenter properly deduced that the written basis for closing must be sufficient for a reviewing court to determine whether the meeting was properly closed. See, e.g., *Nader v. Dunlop*, 370 F. Supp. 177 (D.D.C. 1973). In sum, the commenter concluded that "it is not apparent that the Petitioner's recommended procedures are a necessary or preferred substitute for proper enforcement of current provisions in the Act."

The Commission agrees with Yankee Atomic Electric Co. that the current procedures are adequate for the reasons stated. Moreover, the practice whereby the Advisory Committee Management Officer reconsiders his own decisions on appeal parallels the procedure for appeal of closure of Commission meetings where it is the Commission itself that reconsiders its earlier decision. In addition, the Commission notes that the procedure Mr. Nantz supports would be impractical and would diverge from a strong policy of the Commission to extricate itself from nonessential procedural matters in order to conserve its resources for health and safety matters and matters of common defense and security which are its paramount responsibilities.

The Petitioner argued that because the Commission makes the ultimate decision with respect to its own meeting closure, it should be the final level of review for advisory committee closures as well. This ignores the practical distinction that for its own meetings the Commission is already thoroughly cognizant of what is expected to be discussed and the analysis underlying closure. In order to rule on advisory committee closures, the Commission would have to be thoroughly briefed on the specific purpose of the particular meeting in question, what discussion was anticipated, and what analysis supported the closure decision. In the Commission's view, the expenditure of its resources on this undertaking would be unwarranted. Absent any contrary statutory provision, the Commission believes that any necessary review would more reasonably be undertaken by its delegate, the Assistant Secretary, with the advice of the General Counsel. The Commission notes that the Assistant Secretary in his capacity as Advisory Committee Management Officer, would be informed already of the anticipated meeting content and could more

efficiently and more expeditiously conduct any review or reconsideration. Accordingly, the Commission determines that rulemaking is neither necessary nor desirable at this time and denies the petition.

For the Nuclear Regulatory
Commission

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.,
this 26th day of July 1985.