UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of	)	
	)	
DUKE POWER COMPANY, ET AL.	)	Docket Nos. 50-413
	)	50-414
(Catawba Nuclear Station, Units 1 and 2)	)	
	)	

NRC STAFF RESPONSE BRIEF IN OPPOSITION TO THE APPEAL OF PALMETTO ALLIANCE AND CAROLINA ENVIRONMENTAL STUDY GROUP FROM PARTIAL INITIAL DECISIONS AUTHORIZING FULL-POWER OPERATION OF CATAWBA NUCLEAR STATION

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February 25, 1985

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I. INTRODUCTION

Palmetto Alliance and Carolina Environmental Study Group (CESG), Intervenors in this proceeding, filed timely notices of appeal from each of the three partial initial decisions issued by the two Atomic Safety and Licensing Boards (Licensing Boards) empaneled to hear the safety, environmental, and emergency planning contentions raised in this case. On July 20, 1984, the Atomic Safety and Licensing Appeal Board (Appeal Board) granted Intervenors' motion to defer filing of appeal briefs until after issuance of the final partial initial decision. That final decision having been served on the parties November 28, 1984, Intervenors timely served their joint brief in support of their appeals on January 9, 1985. This responsive brief is filed pursuant to the provisions of 10 C.F.R. § 2.762.

II. STATEMENT OF THE CASE

By orders dated March 5, July 8, and December 1, 1982, February 25, and August 8, 1983, and February 23, April 13, June 22, August 22, and September 4, 1984, the original Licensing Board established to hear this case admitted, and/or rejected, the Intervenor contentions which are the subject of this appeal. 1/ Following discovery and disposition of certain issues through summary disposition and sanctions for failure to comply with discovery orders, hearings on the merits of a broad quality assurance contention, as well as three more narrowly drawn safety and environmental issues, were conducted in October, 1983 through January, 1984, and reconvened in October, 1984. Ten emergency planning contentions were heard in May - June 1984. By Partial Initial Decision of June 22, 1984, 2/ the Licensing Board resolved all non-emergency planning issues in favor of Applicants, 3/ with the exception of one narrow quality assurance issue, and an emergency diesel generator contention admitted therein. By a Supplemental Partial Initial Decision on Emergency Planning, dated September 18, 1984, 4/ all emergency planning contentions were also resolved favorably to Applicants. Finally, on November 27, 1984, a

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1/ Inasmuch as each of these orders is separately reviewed, infra, citations are omitted here.

2/ Duke Power Company et al. (Catawba Nuclear Station, Units 1 and 2), LBP-84-24, 19 NRC 1418 (1984).

3/ The adverse meteorology contention was found to have merit, but to result in harmless error, and not to preclude authorizing licensing. Id., at 1585.

4/ Catawba, LBP-84-37, 20 NRC 933 (1984).

Partial Initial Decision Resolving Foreman Override Concerns and Authorizing Issuance of Operating Licenses, 5/ was issued, resolving the remaining quality assurance issue in favor of Applicants. On January 17, 1985, the Director of the Office of Nuclear Reactor Regulation issued a full-power operating license for Catawba Unit 1. As set forth herein, Intervenors have appealed (1) Licensing Board findings that Intervenors' quality assurance concerns do not prevent making the requisite safety findings, (2) certain Board rulings limiting discovery and cross-examination made in the course of trying the quality assurance contention, (3) the Licensing Board finding that Applicants' siren system satisfied alert and notification requirements, and (4) Board rulings that certain contentions were barred from litigation based upon (a) application of the late-filing criteria, (b) existing regulations or ongoing rulemaking, (c) lack of specificity, or (d) being outside the scope of the proceeding.

III. STATEMENT OF ISSUES ON APPEAL

Through their appeals of the three initial decisions and various Licensing Board rulings and actions in this proceeding, Intervenors have raised the following issues:

A. Whether the Licensing Board correctly determined that quality assurance deficiencies and pressure to approve faulty workmanship did not constitute a pervasive breakdown in quality assurance which would prevent finding of reasonable assurance that Catawba Station can be operated without endangering the health and safety of the public.

5/ Catawba, LBP-84-52, 20 NRC 1484 (1984).

B. Whether the Licensing Board gave Palmetto Alliance a fair opportunity to prove its case that there was a pervasive breakdown in quality assurance at Catawba.

C. Whether a FEMA evaluation of Applicants' siren system based on NUREG-0654 and FEMA-43 criteria was required where the Board determined there to be reasonable assurance that all pertinent acceptance criteria would be met.

D. Whether balancing of the late-filing factors to exclude late-filed contentions on emergency diesel generators and control room design deficiencies denied Intervenors hearing rights under Section 189a of the Atomic Energy Act, or was an abuse of discretion.

E. Whether the Licensing Board's dismissal of Intervenors' hydrogen control contentions was authorized by law and a sound exercise of discretion.

F. Whether the Licensing Board correctly found Palmetto Alliance's financial qualifications contention barred by Commission rule and policy.

G. Whether the Licensing Board's rejection of Intervenors' contentions seeking further evaluation of the environmental impacts of severe accidents caused by failure of hydrogen control measures and of transportation of Oconee and McGuire spent fuel to Catawba, and seeking consideration of need for power and energy alternatives was consistent

with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations, and the applicable NRC Statement of Policy and case law.

IV. ARGUMENT

A. The Licensing Board Correctly Determined that Quality Assurance Deficiencies and Pressure to Approve Faulty Workmanship Did Not Represent a Pervasive Breakdown in Quality Assurance Which Would Prevent Finding Reasonable Assurance that Catawba Station Can Be Operated Without Endangering the Health and Safety of the Public.

1. Background

a. Evidence Presented at Hearing

Palmetto Alliance's quality assurance contention, Palmetto Contention 6, was recast by the Licensing Board, and admitted after the Board's second prehearing conference. Palmetto Contention 6 read:

> Because of systematic deficiencies in plant construction and company pressure to approve faulty workmanship, no reasonable assurance exists that the plant can operate without endangering the health and safety of the public.

LBP-82-107A, 16 NRC 1791, 1795. The Licensing Board noted that the thrust of the contention was "primarily toward alleged company attitudes and practices" involving "corner cutting." Id.

Contention 6 was initially based on allegations made by two former Catawba workers, William R. McAfee and Nolan R. Hoopingarner, II. However, the Licensing Board's resolution of those allegations is not raised on appeal. See, LBP-84-24, supra, 19 NRC at 1444-1445, 1532-1548. The principal evidence relied upon by Palmetto Alliance to support its quality assurance claims came to Palmetto's attention through the discovery process, and related to allegations by Catawba welding inspectors of significant quality assurance violations. See, Memorandum and Order, June 13, 1983, slip op., at 5-6.

The so-called "Welder Inspector Concerns" were first expressed to Duke management in the Fall of 1981, in the course of internal appeals by a number of welding inspectors of a company decision to reduce their pay classification. LBP-84-24, supra, 19 NRC at 1449-1450. An initial Duke task force determined that the safety issues raised by the welding inspectors warranted further investigation. Id., at 1446. The inspectors were asked to submit their concerns in writing; twenty-three inspectors expressed concerns. Id. A Technical Task Force investigated all inspector concerns relating to specific plant hardware or procedures, and a Nontechnical Task Force reviewed administrative and personnel matters raised by the inspectors. Id., at 1446, 1452-1454. The investigation, evaluations, and corrective actions of the Technical Task Force were detailed in a two-volume report, which addressed each of 130 inspector concerns to determine whether a construction or quality assurance procedure was violated or an actual or potential technical inadequacy existed. Id., at 1453, 1461. The Nontechnical Task Force examined "non-technical" issues gleaned from the inspector technical concerns, as well as from several follow-up interviews. Id., at 1454-1456.

During the Fall 1983 hearings, the authors of the respective task force reports, Duke's top management in charge of these matters, and an outside consultant presented written testimony and were extensively cross-examined. See, Tr. at 1888, et seq. In addition, 15 inspectors and inspector supervisors were called as witnesses. LBP-84-24, supra, 19 NRC at 1427. Nine of these witnesses were responsible for 90% of the 130 technical concerns. Id., at 1461. First-line supervisor Gary E. "Beau" Ross submitted 64 of these, and one of his inspectors, John R. Bryant, submitted 30. Id. Nine hearing days were allocated to inspector/inspector

supervisor witnesses. Id., at 1427. Persons identified by the inspectors as the sources of their concerns -- particularly Catawba site QA Manager, Larry R. Davison, and second-line welding supervisors Charles Baldwin and Arthur Allum -- as well as the principal originators of concerns were extensively cross-examined by counsel for Palmetto Alliance concerning the major construction deficiency issues raised: (1) supervisors directing welding inspectors to "sign off" or not to initiate a Non-Conforming Item (NCI) Report on conditions the inspectors believed rejectable; (2) supervisors' "verbal voiding" of NCI documentation; (3) resolution of NCIs by permitting the hardware to be "used as is"; (4) acceptance of material not bearing proper identification; and (5) supervision's handling of welds determined by inspectors to be faulty. See, id., at 1461-1492. Similarly, substantial testimony was adduced from both management and welding inspector witnesses with respect to concerns raised about harassment of welding inspectors by construction craftsmen (and some other welding inspectors) as well as retaliation for raising concerns or for going to the NRC. See, id., at 1505-1532.

The Board also held in camera proceedings in order to hear testimony from four former Catawba workers who came forward, at the invitation of the Board, to present information in confidence on Contention 6 concerning quality assurance.

In its September 30, 1983 final prehearing conference order, the Board indicated the availability of in camera procedures for prospective quality assurance witnesses who genuinely feared that their jobs would be in jeopardy if they publicly testified. See, Tr. at 2459-2460. Based on information presented by Palmetto Alliance that such persons existed, the Board invoked these procedures. Id., at 2461-2469;

2603-2605. These witnesses initially presented their concerns on the record in closed evening sessions from November 8-10, 1983. A number of concerns were struck following motions by Applicants and Staff, and further in camera hearings were conducted on December 15 and 16, 1983, and January 30 and 31, 1984, for the purpose of allowing Applicants and Staff witnesses to present direct testimony addressing the concerns so raised and cross-examination of these witnesses by Intervenors. See, I. C. Tr. 12/15/83-12/16/83; 1/30/84-1/31/84. The principal concerns addressed during these hearings involved laminations in containment plate, accuracy of radiographs, use of defective weld rod material, honeycombed concrete, the safety of certain piping in the containment spray system, harassment of an inspector, and "foreman override" -- involving foreman pressure on welders to work contrary to procedures or to the welder's ideas of correct welding. LBP-84-24, supra, 19 NRC at 1445-1446, 1548-1574.

During the January 30-31, 1984 in camera sessions, the NRC Staff introduced summaries of 25 interviews conducted by the Staff to follow-up several of the in camera concerns, including the foreman override issue. Staff Ex. 27. With one exception, none of the welders interviewed by the Staff indicated any foreman pressure to use defective materials to fabricate welds or to do any welds outside procedures. Id.; LBP-84-24, supra, 19 NRC at 1565. However, one welder, designated in the interview summaries as "Welder B" did make such an allegation. Id. Following the close of the Fall-Winter 1983 hearings, the Board determined to leave the record open to receive a promised Staff inspection report on the Welder B allegations. Id.

On all other matters within the scope of Contention 6 the record was closed, and on June 22, 1984, the Board issued a Partial Initial Decision resolving all quality assurance issues favorably to the Applicants. Id., at 1418 et seq. In its June 22, 1984 decision, the Board reiterated its decision to leave the record open for receipt of expected follow-up reports from the Staff and Applicants. Id., at 1565.

Following receipt of subsequent Staff inspection reports corroborating portions of Welder B's allegations with respect to foreman override practices, a Duke report summarizing an investigation conducted at the Staff's request into these matters, and comments from the parties on how to proceed in light of these reports, the Board determined that further discovery and hearings on the foreman override concerns were warranted. LBP-84-52, supra, 20 NRC at 1486. Following discovery, hearings were held October 9-12, 1984, in which all parties presented witnesses on the issue held over by the Licensing Board--whether the evidence of foreman override reflected a pervasive breakdown in the Duke quality assurance program so as to preclude the necessary finding of reasonable assurance with respect to Contention 6. Id., at 1486-1489.

A final Partial Initial Decision Resolving Foreman Override Concerns and Authorizing Issuance of Operating Licenses followed, November 27, 1984 (LBP-84-52, 20 NRC 1484).

b. Licensing Board Rulings

In resolving the quality assurance issues, the Licensing Board relied heavily on the guidance given in the Appeal Board's Callaway decision for determining in what circumstances quality assurance deficiencies preclude making the regulatory findings necessary to authorize

issuance of an operating license. See, Union Electric Co. (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343 (1983).

The Licensing Board recognized that the conduct described by Contention 6 might not only violate Applicants' QA program, but might also violate one or more provisions of Appendix B to 10 CFR Part 50, which contains the quality assurance requirements Applicants' program is designed to implement. The Callaway decision, the Licensing Board observed, states that proof of such violations -- whether deliberate or negligent -- does not necessarily preclude making the findings necessary for licensing. LBP-84-24, supra, 19 NRC at 1432. What is required,

> ... is simply a finding of reasonable assurance that, as built, the facility can and will be operated without endangering the public health and safety ... 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.

Callaway, ALAB-740, supra, 18 NRC at 346. Thus, in both its June 22 and November 27, 1984 partial initial decisions, the Licensing Board examined the record on the quality assurance contention "to determine whether it reflected a 'pervasive failure' or 'breakdown' of the quality assurance program at Catawba, such that the requisite reasonable assurance finding cannot be made." LBP-84-24, supra, 19 NRC at 1434, 1583-84. See also, LBP-84-52, supra, 20 NRC at 1488, 1507. Although, as expected, the Board did find some violations, it concluded there was no pervasive failure

or breakdown which would stand in the way of making the requisite safety findings. Id.

Applying the Callaway guidance, the Licensing Board proceeded to evaluate the evidence and make findings on the safety significance of the technical issues raised by the inspectors. Specifically, the Board sought to determine whether inspector concerns that they were directed to "sign-off", rather than document suspect work, accept "use as is" NCI resolutions, or otherwise accept materials or conditions they believed to be rejectable, showed Duke to be condoning substandard workmanship. Id., at 1461-79. A similar case-by-case examination was made of concerns involving "verbal voiding" 6/ of NCIs to determine whether second and third-level welding inspector supervision sought to discourage either detection or documentation of substandard workmanship. Id., at 1479-92. Finally, the Licensing Board evaluated those concerns which did involve construction deficiencies to determine whether Duke took appropriate and timely measures to correct such deficiencies. Id., at 1492-98.

While the Board found that approximately 17 incidents involved violation of one or more Appendix B criteria, id., 1498-1504, the Board was satisfied that Duke did not deliberately condone substandard workmanship or attempt to circumvent the QA program. 7/ Id., at 1504. Moreover,

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6/ "Verbal voiding" may be defined as turning back a partially completed NCI form with an oral explanation, rather than a written one, and not placing the Q-1A form in the QA vault. Id., at 1481.

7/ Based on the detailed review of the inspector concerns, the Board found only one incident to reflect condoning of substandard workmanship. That incident involved Construction Department Technical Support personnel overruling a QC inspector's decision, a violation of both the relevant ANSI standard and Appendix B. Id., at 1467.

matters to an NRC inspector (presumably without first bringing these concerns to Mr. Davison). In a separate incident, Warren H. Owen, then Duke Vice President for Construction, made a statement during a meeting with the inspectors which appeared to qualify employees' right to go to the NRC. Id., at 1509-1510. After hearing various versions of both incidents, including listening to a tape of the meeting between Mr. Owen and the inspectors, the Board found no attempt to punish inspectors for going directly to the NRC. Id., at 1511. The Board noted that inspectors continued to contact the NRC freely. Id.

The Board considered two incidents where an inspector was told to "ease off" or "slack up" on inspections. However, in only one of the two was the instruction interpreted as a threat. After hearing both the inspector and the supervisor in question, the Board determined there to have been a misunderstanding arising from the supervisor's inept attempt to encourage the inspector to resolve minor questions himself, and no instructions to let violations pass. Id., at 1511-1513. 9/

The Board did find that Duke management had used first-line welding supervisor Ross' performance evaluation as a means of retaliating for Mr. Ross' role in his crew's "strict adherence to QA procedures and expression of safety concerns." Id., at 1513-1519. The Board found that

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9/ The Board noted that management concern about "over-inspecting" was a symptom of the general problem that inspectors and supervisors had differing views about the inspector function, the former seeing their role as enforcers of the letter of the written procedure, the latter seeing the inspector as not allowing reasonable tolerances, where an appropriate resolution was available through informal or ad hoc procedures. The Board noted that procedural changes have since alleviated the previous confusion, and that, in any event, the inspectors continued to reject "work that did not measure up." Id. at 1512-1513. See also, id., at 1447.

the Board review of concerns relating to directions to "sign off" or not write an NCI, "use as is" resolutions, and material identification showed either that no Duke procedure was violated, or that, while a procedure may have been violated, later testing or technical evaluations (performed in response to the concerns) confirmed the acceptability of the work. Id., at 1465, 1469, 1474, 1504. Similarly, the Board rejected Intervenors' thesis that verbal voiding was used intentionally to reduce the volume of documented procedural violations. Rather, the Board found that these incidents were an understandable, if sometimes inept, attempt to confine NCIs to situations warranting detailed engineering evaluation. Id., at 1504. See also, id., at 1488, 1491. It found that the relative number of verbally voided NCIs was so low (on the order of 1% of all NCIs initiated) that such actions "could not have served to conceal faulty workmanship or significantly diminish the number of nonconformances that were documented." Id. The Board rejected Palmetto Alliance's proposed finding that the record was inadequate to show how extensive voiding of NCIs was beyond the welding area. For example, it noted that QA Manager Davison's testimony encompassed all construction disciplines. Id., at 1484.

Finally, the Board found no evidence that the identified quality assurance deficiencies had a significant impact on plant safety. It found no evidence that improper materials were installed; it found the inspectors and first-time supervisors to be "very conscientious about doing a good job, [8/] notwithstanding any perceived lack of management support on

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8/ The Board also found, based on the welding inspector concerns, "no unusual or pervasive effort [by construction personnel] to cut corners in order to meet cost and time schedules." LBP-84-24, supra, 19 NRC at 1504-05.

their technical concerns, and that all were satisfied the plant was built safely. It found very few situations where Duke did not promptly correct confirmed deficiencies; and it noted that the extensive NRC resident inspection activity at Catawba did not indicate there to be any significant technical discrepancies which were not already corrected or being corrected. LBP-84-24, supra, 19 NRC at 1505. Pursuant to the Appeal Board's guidance in Callaway, the Licensing Board concluded that the extensive evidence on the technical concerns did not show "a pervasive failure or significant breakdown in Duke's QA program or pressure from construction personnel which resulted in significant deficiencies in the Catawba plant." Id.

The Licensing Board also considered four allegations of retaliation growing out of the welding inspectors' expression of concerns. A first concern was whether Mr. Davison, while in the corporate QA department in Charlotte, had threatened to retaliate against any inspectors as a result of their pressing their pay and quality assurance concerns in the 1981-1982 period. The Board found no evidence, apart from his involvement with the Ross evaluation, discussed below, that Mr. Davison retaliated against the inspectors for expressing their concerns. Id., at 1506-1508. The Board found that, in fact, Mr. Davison had played a constructive role in processing and resolving their concerns, and the subject encounters had no impact on the identification and documentation of procedure violations. Id.

The Licensing Board also considered allegations that inspectors had been warned against taking their concerns to the NRC before bringing them to management. Mr. Davison had met with the inspectors "in pairs" following his learning that inspectors had raised concerns about several

matters to an NRC inspector (presumably without first bringing these concerns to Mr. Davison). In a separate incident, Warren H. Owen, then Duke Vice President for Construction, made a statement during a meeting with the inspectors which appeared to qualify employees' right to go to the NRC. Id., at 1509-1510. After hearing various versions of both incidents, including listening to a tape of the meeting between Mr. Owen and the inspectors, the Board found no attempt to punish inspectors for going directly to the NRC. Id., at 1511. The Board noted that inspectors continued to contact the NRC freely. Id.

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management had allowed undue weight to be given in Mr. Ross' performance evaluation to Mr. Poss' disagreements with supervision over these matters. Id. The Board also pointed to special pressures and lack of openness in management's treatment of Mr. Poss, stemming from his role in the inspector concerns. Id. However, the Board looked carefully at the impact of Mr. Ross' treatment, and found that, while it could have impacted on the functioning of the inspection function, there was no evidence that either Mr. Ross or his crew changed their inspection practices as a result. It found that they continued to perform their duties conscientiously, and consequently "there was no 'breakdown' or even relaxation of the QA program." Id., at 1519-1520. Finally, the Board found no evidence of other such discriminatory evaluations, or any direct evidence that Mr. Ross' evaluation adversely affected the overall QA program.

The Licensing Board also considered the scope and impact on the QA program of harassment of welding inspectors by craft or craft foremen, as well as one allegation of harassment of an inspector by other inspectors. Id., at 1520-1532. The Board focused its concern on three incidents -- (1) the "Jackson-McKenzie incident" where powerhouse mechanic forman Edward J. McKenzie threatened to hit, and ridiculed, inspector Larry S. Jackson when the latter attempted to follow-up his non-conforming 10/ of an improperly marked grinding disk, id., at 1522-1525; (2) the "Deaton rifle incident" in which a disgruntled ironworker, passing QC inspector Deaton's car on the highway, pointed a rifle at Deaton, id., at 1525-1526;

10/ Use of the Non-Conforming Item Report (NCI) was one of several means available to inspectors for documenting failure to follow construction or quality assurance procedures. Id., at 1448-49.

and (3) the "Harris-Mullinex incident," in which foreman Mullinex was said to have threatened to hit a QC inspector (Harris) after Harris threatened to non-conform an improperly preheated tack weld. Id., at 1527-1528. Further, the Board noted one incident, in which several inspectors berated inspector Boyce Cauthen for rejecting their work during "walk-down" inspection -- intended principally for the purpose of detecting construction damage, rather than reinspection of accepted welds -- and threatened to have Mr. Cauthen removed from "walk-down" inspections because he was "over-inspecting." Id., at 1526.

Considering these incidents, as well as several other less serious ones, the Board found that "[i]n most cases, the Applicants acted in a reasoned manner to discourage repetitions," though the Board thought that the corrective actions could have been more severe, and better publicized so as to convey stronger support for the inspectors. Id., at 1532. Further, based on the length of experience of the inspectors who stated concerns, the Board doubted that any significant harassment incident involving welding inspectors was not considered. It found that, even assuming that similar types of incidents occurred in other craft/inspection areas, the evidence indicated that harassment was not a widespread phenomenon at Catawba. Id., at 1532. The Board noted that the incidents described did not deter the inspectors from performing their duties, nor restrict the freedom of the QA program, nor were any faulty items left uncorrected. Id., at 1530, 1531. Thus, the Board considered the impact of harassment on the quality assurance program and found it to be negligible.

On the in camera record, the Board considered the specific admitted concerns of the four in camera witnesses, [11/] and determined either that they were unfounded or that the evidence showed that the quality assurance program functioned in an appropriate manner to identify, evaluate, and/or correct the subject conditions. Id., at 1549-1574.

The Board considered former Catawba welder Sam Nunn's "foreman override" allegations--that foreman pressured welders to work in violation of procedures--and determined that they were not corroborated by the welders whom he asserted were victims of such practices. Id., at 1566. Based on the record developed in the Fall-Winter 1983 hearings, the Board resolved the "foreman override" issue raised by Mr. Nunn in Applicants' favor, finding no evidence, apart from the specific concerns raised by Welder B, [12/] that "foreman override" was a widespread concern at Catawba. Id. With respect to the matters raised by Welder B, the Board determined to treat these separately, and upon receipt of further investigation reports from the Staff and Applicants which corroborated, at least in part, Welder B's allegations, determined that further hearings were required. LBP-84-52, supra, 20 NRC at 1485-86.

In contrast to the Licensing Board's June 22, 1984 PID, which focused on whether QC welding inspectors, under pressure from inspector-supervision, adequately detected and documented deficiencies

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11/ Harry Langley, a former welding inspector, testified publicly, but his concerns were, for convenience, treated under the in camera phase of the proceeding. Howard Samuel Nunn, Jr., a former Catawba welder, elected to forego in camera treatment of his testimony during the last days of the hearings, in January, 1984.

12/ See, Section IV.A.2.c., infra, at 27-29.

they found in their inspections, the November 27, 1984 "foreman override" PID focused principally on whether craftsmen, particularly welders, were directed by their foremen to violate construction procedures, which violations may have eluded detection by the inspection function.

In the latter decision, the evidence before the Licensing Board consisted of reports by the NRC Staff identifying areas of possible foreman override (Staff Exs. 27, 31), a Duke Power Company investigative report on foreman override both in welding and other crafts (App. Ex. 116), the Staff's monitoring and evaluation of the Duke investigation (see, Staff Ex. 33; P.A. Ex. 146), the affidavits of more than 200 Duke employees obtained in Duke's investigation (App. Ex. 118), testimony by six present or former employees called by Palmetto Alliance, and testimony by the Duke and NRC Region II employees responsible for the reports in question. In addition to this direct evidence on the scope and significance of foreman override, the Board heard expert witnesses presented by Palmetto Alliance and Applicants on whether the Board would be justified in relying on the information gathered by Duke's investigation in reaching conclusions concerning whether foreman override was a pervasive problem at Catawba. 13/

The Board examined all the direct evidence of foreman override, and found about a dozen specific incidents classifiable as foreman override.

13/ See, testimony of Dr. Raymond Michalowski, P.A. Ex. 147, Tr. 13927 et seq.; and testimony of Dr. John E. Hunter, App. Ex. 120, Tr. 14278, et seq. The Board also heard NRC Staff witnesses and received several Staff reports concerning Staff investigation of the same matters, and monitoring of Duke's investigation, which supported the accuracy of the Duke conclusions. See, LBP-84-52, supra, 20 NRC at 1488-89, 1493; P.A. Ex. 146.

LBP-84-52, 20 NRC at 1495. The Board gave special consideration to the evidence relating to violation of interpass temperature -- that is, welding without allowing appropriate cooling of the metal between weld passes -- and found that while some violations of this sort did occur as a result of foreman pressure, they were isolated. Id., at 1496, 1506. Further, the Board found the evidence linking violation of interpass temperature to weld sensitization -- a condition leading to the possibility of intergranular stress corrosion cracking (IGSCC) -- to be inconclusive. Id., at 1505. In any event, the Board found that such weld sensitization as had been established was not a safety problem due to water chemistry controls. Id., at 1505-06. The Board also found none of the dozen or so foreman override incidents to have compromised plant safety. Id., at 1507. Further, upon consideration of the methodological challenges to the Duke study, the Board concluded that valid inferences about the safety of the plant could be drawn. Id., at 1493. In this connection, the Board rejected Palmetto Alliance's argument that fear of reprisal prevented workers from expressing all their safety concerns, finding the workers willing to candidly respond to questioning both at the hearing and in the Duke interview process. Id., at 1493, 1506-07. Based on the direct evidence concerning foreman override as well as inferences fairly drawn from the investigations and testimony in evidence, the Board found that foreman override at the Catawba plant was not so pervasive as to indicate a breakdown of the quality assurance program. Id., at 1507.

2. Analysis of Appellants' Claims of Error

Appellants' claims of error on the merits of the quality assurance contention, though far from clear, appear to be as follows: (a) the

Board should have found that the evidence concerning identification and documentation of construction deficiencies showed there to be "serious doubt" that conditions adverse to quality have been identified and corrected; [14/] (b) the Licensing Board should have found that evidence of harassment and retaliation raised sufficient doubt as to whether construction defects have gone undetected so as to preclude the necessary safety findings; [15/] (c) the Board should have found that numerous instances of foreman override raised uncertainty about the safety of the Catawba plant, precluding the required safety findings; [16/] (d) methodological flaws in the Duke investigation of foreman override precluded drawing inferences about the pervasiveness of foreman override, as the Licensing Board did; [17/] and (e) Duke's suppression of evidence of sensitized welds resulting from interpass temperature violations compelled further inquiry into the existence and correction of these welds, and precluded the necessary safety findings. [18/]

a. Inadequate Detection and Documentation of Construction Deficiencies

Although evidence concerning identification, documentation and correction of construction deficiencies took up the bulk of the Licensing Board's June 22, 1984 PID (see, LBP-84-24, supra, 19 NRC at 1460-1505),

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14/ Brief of Appellants Palmetto Alliance and Carolina Environmental Study Group, January 9, 1985, at 22-24, hereinafter cited as "P.A. Brief".

15/ P.A. Brief, at 9-10.

16/ Id., at 31.

17/ Id., at 32.

18/ Id., at 34.

and was heavily relied upon by the Board in reaching its conclusion that the Duke quality assurance program was working well, id., at 1434, 1505, Palmetto devoted only four pages of its brief to this subject, and confines its assertions of error to (1) a vague statement that the "Board's reaction to the 'black book' and 'verbal voiding' reflects a disturbing casualness for strict adherence to the Commission's clear quality assurance requirements," and (2) an immaterial argument over whether Duke should have been given credit by the Staff for the welding inspectors' finding of violations. 19/ P.A. Brief, at 24, 25.

While it is true that NRC Inspector George Maxwell testified that he was concerned during an October 1980 inspection to hear from inspectors that they were noting deficiencies in their personal notebooks rather than documenting them on the appropriate Duke QA forms, Staff Ex. 6, at 6, the subject inspectors apparently denied they had black books, id., and there was little further evidence on this subject. Palmetto, in fact, cites nothing in the record, from the thousands of pages of inspector testimony, to substantiate a claim that the Board ignored any evidence concerning failure of inspectors to document deficiencies.

With respect to "verbal voiding," while the Board treated this subject in great detail, as summarized above, Palmetto is content with a citation to "June 22, 1984, PID, pp. 96-115," without any elucidation of any errors the Board is asserted to have made in identifying cases of verbal voiding or evaluating their safety significance. P.A. Brief, at

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19/ As noted above, the Licensing Board made its own evaluation whether violations of Appendix B had occurred, and did not rely on the NRC Staff's application of its enforcement policy. See, LBP-84-24, 19 NRC at 1498-1504.

24. The Board's review of the evidence, which included a case-by-case review of the relevant technical concerns, identified several actual instances of verbal voiding, but concluded that verbal voiding was too infrequent to have had a significant impact on the quality assurance program. LBP-84-24, supra, 19 NRC at 1484, 1504. Appellants present no basis for overturning this finding.

b. Pressure on Inspectors By Harassment and Retaliation

It is apparent, however, that Palmetto does not rely principally on the claim that the Board failed to properly weigh the evidence of specific quality assurance deficiencies, since Palmetto hardly mentions this evidence. Rather, Palmetto relies on a thesis drawn by analogy from the Appeal Board's decision in Commonwealth Edison Company (Byron Nuclear Power Station, Units 1 and 2), ALAB-770, 19 NRC 1163, 1175 (1984), in which Palmetto asserts that lack of independence of the quality assurance program from cost and schedule pressures at Catawba is comparable to the absence of adequate certification procedures for quality assurance personnel found at Byron. P.A. Brief, at 8-9. Since the Appeal Board in Byron found that even where no "'widespread breakdown' in quality assurance procedures" or "actual uncorrected construction defects of potential safety significance" was shown, the absence of adequate inspector certifications raised sufficient doubt "as to whether construction defects of potential safety significance had gone undetected," Palmetto argues that it is enough in the Catawba case to demonstrate that Duke Power Company allowed harassment and retaliation against its quality assurance inspectors in the welding area, and pressure on craftsmen to sacrifice quality requirements, in order to cast legitimate doubt on the overall integrity

of the plant and preclude the requisite safety findings. 20/ P.A. Brief, at 9-10; cf. Callaway, ALAB-740, supra, 18 NRC at 346.

However, Palmetto has not only misapplied the Appeal Board's conclusion in Byron, but, by ignoring the voluminous evidence which the Licensing Board examined to determine the safety signficance of the allegations of harassment and retaliation, has virtually defaulted in its briefing of this issue. See, 10 C.F.R. §§ 2.762(d)(1), 2.762(g). With respect to the relevance of Byron, it should be noted that although the Appeal Board initially found there to be "uncertainty as to whether construction defects of potential safety significance had gone undetected" because of inadequate inspector certification procedures, such uncertainty was due to the fact that, at the time of the review of the licensing board initial decision, the implications of the certification inadequacies had not yet been examined. Byron, ALAB-770, supra, 19 NRC at 1175. However,

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20/ Palmetto repeatedly refers to Duke's failure to provide the quality assurance function with the "required authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations." E.g., P.A. Brief, at 9, 16, 17. See, App. B to Part 50, Criterion I. This purported failure, Palmetto argues, led to harassment and retaliation, and the consequent doubts about the integrity of the plant. However, as the Board noted, the structure and organization of the Catawba QA Department was not itself an issue within Contention 6. LBP-84-24, supra, 19 NRC, at 1458. The Board noted that the structure of the QA organization was litigated and approved during the construction permit phase. Id., citing, Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), LBP-75-34, 1 NRC 626, 646-50 (1975). In any event, the Board determined that the organizational relationship between the Construction and QA departments did not have a very great effect on inspector performance. LBP-84-24, supra, 19 NRC at 1460. Finally, in response to Palmetto's assertions in this regard, the Board made specific findings that the inspectors' concerns did not demonstrate a lack of independence due to cost and schedule pressures on the part of the quality control function. See, e.g., id., at 1466, 1476, 1500 ("we find no violation of Criterion I among the concerns of the welding inspectors").

the "full exploration of the significance" of the Applicant-initiated review of quality assurance activities called for by the Appeal Board in Byron, which took place in that case only upon remand, 21/ has already been accomplished by the Catawba Licensing Board in its two initial decisions relating to quality assurance. Palmetto does not point to cases of retaliation and harassment of inspectors or craftsmen which the Licensing Board should have identified but failed to find. 22/ Thus the issue is whether the Board fully considered the evidence and drew the appropriate conclusions as to its safety significance.

As discussed above, the Board carefully examined the cases in which harassment and retaliation was alleged to have occurred -- both in the welding inspector and "Welder B" phases of the hearings. The Board found "the number of significant harassment incidents in this record is relatively small," that "it seems reasonable to conclude that virtually all of the significant harassment incidents involving welding inspectors were in the record, and that "correspondingly small numbers of harassment incidents" could be assumed in other craft/inspection areas, and still conclude that it "was not a widespread phenomenon at Catawba."

21/ Id., at 1178. See also, Byron, ALAB-793, supra, December 20, 1984, slip op. at 9, et seq.

22/ Palmetto does, however, erroneously, characterize the signficance the Licensing Board attached to the incidents of harassment which were presented. Palmetto states that the Board "acknowledges numerous cases of "alleged harassment of welding inspectors to the detriment of the effectiveness of the QA program." The quoted statement is not a Licensing Board finding that harassment was to the detriment of the QA program. Rather, the statement was merely the Board's characterization of the issue "which arose in this case." P.A. Brief, at 12, 17, citing, LBP-84-24, supra, 19 NRC, at 1520.

LBP-84-24, supra, at 1531-32. (Emphasis added.) Further, where it found harassment, neither the contemporaneous or future work of the inspectors was affected, "nor was the freedom of the QA program restricted." Id., at 1531. (Emphasis added.)

Similarly, the Board examined evidence concerning alleged retaliation by Duke management personnel against inspectors for expressing safety concerns and for bringing concerns to the NRC and found that "[e]xcept for the Ross case the Board finds no substantial evidence that Larry R. Davison [who had been responsible for the QC inspection program at Catawba from 1974 to 1981] actually did retaliate against welding inspectors for expressing their concerns." Id., at 1507-8. The Board also determined that the record revealed "no attempt to punish inspectors for going directly to NRC," as Palmetto attempted to show. Id., at 1511.

In addition, the Board found that the retaliatory performance evaluations of Mr. Ross were the only such evidence presented to the Board, and that the evaluations did not affect Mr. Ross' work, or compromise the inspection process. Id., at 1519-20. The Board did not treat the discriminatory evaluation in a vacuum, but related it to the inspector concerns, as being part of "an unsuccessful attempt on the part of some mid-level supervisory personnel to bring about an informal relaxation of inspection procedures." Id. However, the Board examined whether these efforts "undermined the QA program at Catawba by diminishing the efforts of inspectors" and found that both Mr. Ross and his inspectors "continued to perform those duties conscientiously", and therefore no breakdown or even relaxation of the QA program occurred.

Id. There was no evidence that the overall QA program was adversely affected. 23/ Id.

Finally, in the foreman override decision, as will be discussed in more detail below, not only did the Board find no pattern of foreman override, or safety significance in the few isolated instances of foreman override that were identified, but explicitly rejected the Palmetto thesis that the foreman override evidence substantiated its earlier claim that that harassment had a "chilling effect" on the expression of concerns at Catawba, and as a result " the true extent and seriousness of foreman override practices [at Catawba] ... remain yet unknown." LBP-84-52, supra, 20 NRC at 1506-07.

In sum, Palmetto has failed to substantiate its claim that harassment and retaliation found by the Licensing Board warrant withholding a finding that the plant can be operated safely. The Board carefully examined each such incident, and determined that retaliation and harassment was not frequent at Catawba, and that such retaliation and harass-

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23/ Intervenors claim that the Licensing Board should have attributed a violation of 10 C.F.R. § 50.7 to Duke management as a result of the Ross performance evaluation. P.A. Brief, at 20. The Licensing Board did find that the spirit of 10 C.F.R. § 50.7, if not the letter, had been violated, based on factual findings that Duke had discriminated against Ross. LBP-84-24, supra, 19 NRC at 1518, n.27. Since it is the safety implication of these findings which the Board was required to evaluate, it does not appear that the legal correctness of the Board's interpretation of 10 C.F.R. § 50.7 is a relevant consideration in reviewing the correctness of the Board's findings.

The Staff does not necessarily agree with the Board's determination that contact with the NRC is required to find a violation of 10 C.F.R. 50.7. The Staff currently has a 10 C.F.R. § 2.206 petition pending before it concerning enforcement of 10 C.F.R. § 50.7 against Duke Power Company on this matter, where this issue will need to be resolved.

ment as occurred did not significantly affect the work of inspectors or craftsmen, or compromise the integrity of the quality assurance program. Palmetto has presented no basis for disturbing the Licensing Board's resolution of these concerns.

c. Evidence of Pervasiveness of Foreman Override

Palmetto argues that the evidence from Duke's own investigation shows that the practice of foreman pressure to violate procedures "extended far beyond" Welder B's foreman, Arlon Moore, and implicated 23 supervisors. P.A. Brief, at 31. But while Palmetto notes that the Board considered whether the evidence supported Palmetto's assertion, and rejected it for lack of proof, Palmetto makes absolutely no showing that any of the instances of foreman override, or any of the additional foreman included in its tabulations of "foreman override," were improperly evaluated by the Board. Id. The Licensing Board considered the affidavits referenced in Palmetto's proposed findings which implicated foremen other than the eight discussed in the Staff's proposed findings, and concluded that "none . . . describes events clearly involving foreman override" (although it found five to be debatable). LBP-84-52, supra, 20 NRC at 1501-02. Palmetto has provided no basis for the Appeal Board to overturn the Board's conclusion that only eight foreman (among hundreds at the site) were involved in foreman override incidents, and that five

of the eight were involved in only a single incident, with no indication of patterns of improper conduct. Id. 24/

In addition, Palmetto implies that the lengthy descriptions by Welder B of two encounters with foreman Arlon Moore are indicative of numerous unexplored incidents involving this foreman which have gone undetected for at least four years. P.A. Brief, at 30, 31. However, Palmetto does not mention that the Duke investigation included interviews with 65 of the 110 welders who had worked with Mr. Moore, as well as 69 other randomly selected welders during the relevant time periods, which, as noted above, turned up only the handful of incidents found by the Board. LBP-84-57, supra, 20 NRC at 1490, 1495-1502. In sum, Palmetto has provided no specific support for its claim that the evidence of foreman override went beyond that found by the Board.

24/ Palmetto asks the Appeal Board to consider selected pages of its proposed findings in support of its argument as to the extent of foreman override. P.A. Brief, at 32. This is clearly inappropriate. See, Kansas Gas & Electric Co., et al. (Wolf Creek Generating Station, Unit No. 1), ALAB-424, 6 NRC 122, 127 (1977). Such incorporation would have the effect of permitting Palmetto to exceed the 70-page limitation on its brief, contrary to 10 CFR § 2.762(e). See, Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2 and 3), ALAB-430, 6 NRC 457, 458 (1977) (appendix to brief stricken upon motion where it contained legal argument, in an attempt to exceed set page limitations). However, even if Palmetto's proposed findings are considered, they are of little use, since, as Palmetto notes, its tabulations did not distinguish between actual incidents and general concerns, or between those with safety significance and those without such significance. See, Table 1, Attachment to Palmetto Alliance, Carolina Environmental Study Group Proposed Findings of Fact and Conclusions of Law on Issue of Foreman Override, Tr. 14,386-14,435. Palmetto provides no basis for overturning the Board's more detailed review of the subject supervisor actions under the criteria the Board established for foreman override.

d. Methodological Flaws in the Duke Investigation of Foreman Override

Palmetto rather cursorily summarizes its earlier claim that there were "serious methodological flaws undermining the validity and reliability of Duke's study" of foreman override problems. P.A. Brief, at 32. 25/ Curiously, Palmetto makes not a single reference to the Licensing Board's treatment of the expert testimony on this subject, or the other evidence relied upon by the Board to conclude that inferences could be properly drawn from the Duke study of foreman override. Palmetto argues that interviews with two percent of the powerhouse mechanics and electricians and four percent of the steel workers "provide no basis for generalizing to the population of persons" engaged in safety-related work. Id. The Board, however, recognized that "a larger sample size would have been desirable," but upon consideration of all the circumstances and the testimony of Dr. Hunter, Duke's expert witness on the study's methodology, found the sample acceptable. LBP-84-52, supra, 20 NRC, at 1492. More specifically, the Board noted that the investigative approach of following each lead was necessary, and that if such a sampling technique tended to bias the sample population, such bias was in the direction of overstating, rather than understating, the number of violations. Id. The Board also considered whether all the employees' safety concerns were likely to have been raised in interviews with their employer where criticism of their supervisors might have been involved. Id., at 1492-1493. However, based on its observation of witnesses, and on their testimony concerning their responsiveness during the Duke investigation,

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25/ See, note 24, supra.

the Board concluded that the workers were candid in expressing their concerns. Id. Based on the extensive testimony and documentary evidence in the record, the Board determined that "the Duke investigative methodology was valid and an appropriate base for making generalizations and conclusion." Id., at 1493. Palmetto provides no basis for questioning this finding.

e. Sensitized Welds in Safety Systems

In order to show that the Board erred in finding that, despite sensitization of certain safety-related welds at Catawba, IGSCC would not occur, Palmetto relies on NRC Regulatory Guide 1.44, which states that avoidance of "severe sensitization [of stainless steel] is needed to diminish the numerous occurrences of stress corrosion cracking in sensitized stainless steel components in nuclear plants." P.A. Brief, at 33. Palmetto also asserts, without support or record reference, that violation of interpass temperature controls is a clear regulatory violation. Id. 26/ Finally, Palmetto claims that Duke's attempt to obscure the results of its field-testing of welds, which showed that a significant percentage may be presumed to be sensitized, requires identification and correction of all such sensitization. Id., at 34.

While concluding that Applicants could have presented their test findings more forthrightly, the Licensing Board rejected Palmetto's line of reasoning. LBP-84-52, supra, 20 NRC at 1505-06. Rather, it presumed that sensitization existed in the primary cooling system welds in ques-

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26/ See, note 24, supra. The Board noted the regulatory guide's hortatory status. LBP-84-52, supra, 20 NRC, at 1503, n.14.

tion, and focused on whether this presented a safety problem, concluding it did not. Id. The uncontroverted evidence was that for IGSCC to occur, sufficient concentrations of corrosive materials were required in the water chemistry to provide an "aggressive environment," and that such concentrations are prevented from occurring in the Catawba primary cooling system. Id. Moreover, notwithstanding the general statement in Reg. Guide 1.44, the testimony of the Staff's expert witness, Carl J. Czajkowski of Brookhaven National Laboratories was that there has never been a failure in the heat affected zone of austenitic stainless steel in a PWR primary cooling system (the location of the welds in question). Id., Tr. 13890-91. As a result, the Board found that, notwithstanding sensitization and interpass temperature violations, IGSCC is not expected to occur at Catawba and the welds would be safe in service. LBP-84-52, supra, 20 NRC at 1505-06. Tr. 13871, 13909, 13924. Nothing Palmetto raises draws this conclusion into question.

In sum, Palmetto has shown no error warranting reversal or remand of the Licensing Board's conclusion that the evidence on quality assurance deficiencies did not prevent making the requisite safety findings.

B. The Licensing Board Gave Palmetto Alliance Fair Opportunity to Prove That There Was a Pervasive Breakdown in Quality Assurance at Catawba

1. Background

Discovery on Palmetto Alliance's Contention [illegible]ed with its conditional admission on March 5, 1982. LBP-82-16, 15 NRC 566, 577 (1982). However, discovery was suspended from May 25, 1982 until December 1, 1982, during which time the Board's conditional admission of contentions was challenged and reversed, and the Board reconsidered its earlier decisions. See, Catawba, ALAB-687, 16 NRC 460 (1982); LBP-82-107A, supra,

16 NRC at 1795. At the conclusion of five and one-half months of further discovery, Palmetto sought on May 25, 1983 to extend the time for discovery based on voluminous materials on the welding inspector concerns which it received toward the end of discovery. On June 13, 1983, the Board granted further discovery, limited to depositions of Duke employees on the issue of quality assurance in the welding area. June 13, 1983 Memorandum and Order, at 2. During the extension granted, from June 20, to July 15, 1983, Palmetto conducted 26 depositions. Shortly before the commencement of hearings, during a September 9, 1983 conference call, Palmetto again sought to reopen discovery, based on a "Construction Project Evaluation" report, a self-initiated evaluation performed by a team from Tennessee Valley Authority and Duke Power Company. Tr. 1297-1325. While related to quality assurance, the discovery request extended beyond the scope of the issues encompassed by Contention 6, which had been narrowed through the summary disposition process. See, June 13, 1983 and August 26, 1983 orders. The Licensing Board held a full day evidentiary hearing on December 7, 1983 on whether there was good cause for reopening discovery, and, based on the testimony of eleven authors of the report and argument by the parties, found that inasmuch as the great weight of the testimony was favorable to the Catawba QA program, good cause for expanding the area of inquiry on quality assurance deficiencies was lacking. In Camera Transcript ("I.C.Tr.") 949-50.

Palmetto also sought further discovery in the in camera phase of the hearings on the eve of the second round of in camera evidentiary sessions. Tr. 11342-45; I.C. Tr. 534, et seq. However, the Board determined that the request, coming more than one month after both the commencement of the first round of in camera testimony and the parties'

agreement to avoid formal discovery, was untimely. Tr. 11218. The Board also determined that further formal discovery was not required for meaningful exploration of the in camera witnesses' concerns inasmuch as the concerns were specific, and Palmetto was given the opportunity to cross-examine Duke and Staff personnel who investigated the existence and safety significance of the concerns. LBP-84-24, supra, 19 NRC at 1432.

During the period following the close of the Fall-Winter 1983 hearings, the Staff and Applicants served a number of reports and documents detailing the progress of the respective investigations into the Welder B - foreman override concerns. Upon motion by Palmetto, the Board on September 21, 1984 reopened discovery and ordered hearings on these concerns. During the period until the October 9, 1984 hearing, Palmetto obtained discovery, including the taking of more than 15 depositions, and access to numerous Staff and Applicants documents. At the outset of the hearings, Palmetto sought additional documents relating to employee interview statements, drafts of Duke's technical reports, documents supporting report conclusions, performance evaluations of certain foremen, and several types of production-related reports. Tr. 13091-13104. Palmetto also sought more time to interview employees with concerns or to take evidentiary depositions. Tr. 13077-85. The Board granted further discovery on the first three requests, while denying the remainder. Tr. 13304-06; 13314-17.

During the course of each phase of the quality assurance litigation, the issue of time limitations for examination of witnesses -- relating both to allocation of cross-examination time and the number of witnesses to be heard -- also arose. As recounted in the June 22, 1984 PID, after several days of hearings, "it became apparent that some system of time

limits would be necessary." LBP-84-24, supra, 19 NRC at 1426. The Staff and Applicants supported imposition of time limits on all questioning, while Palmetto opposed such limits as arbitrary and capricious. Id. The Board thereafter imposed broad time limits for panels and for individual witnesses, allowing counsel flexibility to use time allotted to one panel or witness for another panel or witness. Id., at 1427. The Board also allowed a total of nine hearing days to hear inspector and first-line supervisor witnesses. Id. In the Fall 1984 hearings, the Board allotted 4 days for hearing the matter, including lengthy evening sessions each day. See, LBP-84-52, supra, 20 NRC at 1486-87.

2. Analysis of Palmetto Claims of Error

Palmetto's claims of error fall into two categories - discovery and hearing time limitations. Palmetto argues that the Board improperly restricted Palmetto's access to evidence needed to prove its claim of a "pervasive" breakdown in quality assurance at Catawba by the Board's rulings of June 13, 1983 (limiting reopened discovery to depositions in the welding area only); December 16, 1983 (denying reopening of discovery to probe criticisms of Catawba QA in the "Construction Project Evaluation"); December 13, 1983 (denying formal discovery on in camera concerns); and October 9-10 1984 (denying further opportunity to gather more information from Duke employees who had given affidavits). P.A. Brief, at 39-43. With respect to opportunity to adduce evidence, Palmetto argues that it was arbitrarily limited in the number of witnesses it could present, as well as in the time for cross-examination of Applicants' witnesses. It argues that the authority cited by the Board for such limitations, MCI Communications Corporation v. American Telephone & Telegraph Company,

85 FRD 28 (N.D. Ill., 1979), aff'd, 708 F.2d 1081, 1170-1173 (7th Cir. 1983), is inapplicable because that case did not require a showing of pervasiveness (where the number of violations is an important consideration), and there was no showing that exclusion of witnesses was based merely on numbers, as Palmetto claims the Board's rulings were. P.A. Brief, at 45.

The Appeal Board has noted that "to establish reversible error arising from curtailment of discovery procedures, a party must demonstrate that the action made it impossible to obtain crucial evidence...", Northern Indiana Public Service Company (Bailly Generating Station, Nuclear 1), ALAB-303, 2 NRC 858, at 869, the denial of which might have prejudiced its case. Cf. Houston Lighting & Power Company, et al. (South Texas Project, Units 1 and 2), ALAB-799, February 6, 1985, slip op. at 22. This Palmetto has not done. With regard to the June 13, 1983 ruling, Palmetto identifies no deposition or other type of evidence on welding inspection which it was improperly denied, nor does it point to any showing which could have supported inquiry beyond the welding inspection area. With regard to the December 16, 1984 ruling, Palmetto refers to critical findings on a number of plant systems, P.A. Brief, at 40, but fails to put forward anything in the lengthy "Construction Project Evaluation" report which showed evidence of Duke "corner cutting" or is suggestive of a "systematic breakdown in QA at Catawba." See, I.C. Tr. 950; Tr. 5979. Similarly, Palmetto fails to identify the "crucial" evidence denied to it by the Board's December 13, 1983 in camera discovery ruling. As noted by the Board , the scope of the in camera hearing was limited to specific witness concerns, of which Palmetto was fully aware, and on which Palmetto had adequate opportunity to cross-

examine Duke and Staff witnesses who had investigated those concerns. LBP-84-24, supra, 19 NRC at 1432. Finally, Palmetto points to no "crucial evidence" of foreman override which it was denied, and makes no showing of prejudice resulting from the Board's October 9, 1984 decision not to extend discovery to permit Palmetto to gather additional evidence. In these circumstances, there is no basis to reverse the challenged discovery rulings.

Although Palmetto challenges the Board's "arbitrary limitation" on the number of Intervenor witnesses and time allotted to cross-examine Applicants' witnesses, the Board correctly notes in its June 21, 1984 PID that Palmetto challenged the Board's authority to set any time limits on cross-examination. Id., at 1428. The cases Palmetto cites do not stand for the proposition that a court has no such authority. The Board noted that it based its rulings on the number of witnesses to be heard and time to be allotted on the Commission Rules of Practice, including the authority to prevent repetitious or cumulative testimony (10 C.F.R. § 2.757(c)) and to regulate the course of the hearing (10 C.F.R. § 2.718(c)), as well as the Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452 (1981), which directs Boards to "set and adhere to reasonable schedules." Id. Nothing in the cases cited by Palmetto suggests that all time limits are arbitrary, or that a licensing board cannot regulate proceedings before it in a reasonable manner.

Nor does Palmetto show that time and witness restrictions were imposed without reference to the factors of relevance, cumulativeness, and possible prejudice to Palmetto. Without such a showing, there is no basis for finding abuse of the Board's discretion. See, MCI v. AT&T, supra, 708 F.2d, at 1171-72. Palmetto itself notes that the Board heard

15 welding inspectors and first-line supervisors. P.A. Brief, at 44. As the Board notes, it heard testimony from nine of the 15 inspectors who submitted technical concerns to Duke, and these nine were responsible for 90% of the technical concerns. LBP-84-24, supra, 19 NRC, at 1461. It also notes that the parties stipulated as to the nine "important" witnesses (from a list of 35 names) of whom six were considered more "important" than the other three. Id., at 1427. The Board allocated nine days for these witnesses and a total of 31 hearing days to the welding inspector concerns, most of it devoted to Palmetto cross-examination. Neither the number of witnesses nor the time allotted was arbitrary. Moreover, it is not sufficient for Palmetto to establish that the Board may have excluded relevant testimony. To warrant overturning the Board rulings, Palmetto was required to show prejudice -- that curtailment of cross-examination "had a substantial effect on the outcome of the proceeding." South Texas, ALAB-799, supra, slip op. at 22. Palmetto has made no showing of prejudice. 27/

In sum, Palmetto has failed to demonstrate that any of the discovery, cross-examination, or witness limitations of which it complains prejudiced

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27/ Palmetto cites only one specific case in which it claims to have been arbitrarily cut off, that being in the cross-examination of Welding Inspector J.R. Bryant. P.A. Brief, at 44. Three and one-half hours were provided from Palmetto cross-examination of this witness. Moreover, a review of the cross-examination shows that Palmetto was questioning Mr. Bryant on those concerns on which he was not satisfied with the Duke Technical Task Force resolutions. See, Tr. 6090-6136. While Palmetto did not complete the remaining three concerns about which Mr. Bryant had expressed dissatisfaction -- D-24, D-25, and D-27 -- cross-examination by the Staff elicited the bases for his dissatisfaction in these areas. See, Tr. 6138 et seq. Thus, it does not appear in any event that Palmetto was prejudiced by the termination of its cross-examination.

its case or otherwise caused it to be denied a fair hearing. The Licensing Board's rulings should be affirmed.

C. FEMA Evaluation of Applicants' Siren System Based on NUREG-0654 and FEMA-43 Criteria Was Not Required Where the Board Determined There To Be Reasonable Assurance That All Pertinent Acceptance Criteria Would Be Met

1. Background

The original Licensing Board, in a series of rulings, admitted ten emergency planning contentions. See, Tr. 1085-1102; unpublished orders dated August 17, 1983, September 29, 1983, and December 30, 1983. On February 27, 1984, pursuant to a motion by Applicants, a separate Licensing Board was established to hear the emergency planning issues. See, LBP-84-37, supra, 20 NRC at 933, 937. Hearings on these contentions were conducted over a 16-day period in May and June, 1984. Id. Among the contentions litigated was Emergency Planning Contention (EPC) 9, which stated, in pertinent part:

> The emergency plans for Catawba do not adequately provide for the early notification and clear instruction to State and local response organizations and the public that are required by 10 C.F.R. 50.47(b)(5) in that:
>
> (a) If the sirens do sound, not all citizens who would be affected and therefore require notification would be able to hear a warning siren. Such a situation could arise as a result of hearing impairments, weather conditions, distance from sirens, etc.
>
> * * *

Id., at 970-971.

Applicants presented a panel of witnesses on EPC-9, including an acoustical consultant, a Duke emergency planning manager, and representatives from State and County jurisdictions involved. FEMA witnesses also addressed this contention, as did an official of a local amusement park, offered by Intervenors in rebuttal on a portion of EPC-9 not sub-

ject to this appeal. Id. The aspect of this contention subject to appeal was the adequacy of siren coverage of the plume exposure pathway emergency planning zone (EPZ), particularly whether the sirens could be heard under a variety of conditions. Although FEMA had not evaluated the Catawba siren system at the time of the hearing, the Board heard evidence from Applicants' witnesses concerning whether acoustical criteria established in NUREG-0654, Appendix 3, and FEMA-43, "Standard Guide for Evaluations of Alert and Notification Systems for Nuclear Power Plants," September 1983, had been met. LBP-84-37, supra, 20 NRC, at 971. The Licensing Board determined, based on this testimony, that the NUREG-0654 and FEMA-43 criteria that the siren system provide 60/70 dBC acoustic alert coverage, or sound levels 10 dBC in excess of average outdoor daytime ambient sound levels, had substantially been met, and would be fully satisfied with ten additional sirens, which Applicants had committed to install by September 1, 1984. Id., at 971-972. Although Intervenors raised concerns that adverse weather conditions and indoor noise would affect a person's ability to hear the sirens, the Board found that Applicants' use of average summer daytime conditions in its acoustic design analysis was in accordance with NUREG-0654 and FEMA-43, and that the NUREG and FEMA criteria in question were design objectives for the sirens, rather than a means for assuring 100% notification, which could be acceptably accomplished through various supplemental means. Id., at 973. The Board found these methods, including route alerting, tone alerting, the EBS network, word of mouth and special plans to identify and notify hearing-impaired individuals, together with the siren coverage, to provide reasonable assurance that the plume EPZ population would be notified of an emergency at Catawba. Id., at 974.

2. Analysis of Arguments on Appeal

Intervenors claim, first, that the Board was required to await a FEMA field survey of the acoustical coverage of the Catawba siren system before making a finding on the acceptability of the system. Second, they claim that a statistical survey of the plume EPZ populace to determine whether the sirens have been heard and their meaning understood must be performed prior to licensing. P.A. Brief, at 46, 47, 49. As a corollary, they claim that without empirical measurement of the audibility and public awareness of the siren signal's meaning, there is no basis for establishing the design requirements for supplemental notification methods.

Intervenors' claims raise these related legal questions: first, whether the actual FEMA field testing of the sirens and a follow-up statistical survey under NUREG-0654 and FEMA-43 is a prerequisite for licensing, and therefore a matter which may not be left for post-hearing resolution, and second, whether failure to wait for the FEMA testing and survey was in derogation of Intervenors' hearing rights.

In this case, the Board relied on the design coverage of the siren system as verified by limited field-testing performed by Applicants, together with plans described by Applicants and officials from local jurisdictions as to the supplemental notification methods to be used. The prompt notification requirement in 10 C.F.R. § 50.47(b)(5) requires the "means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone." The pertinent NUREG-0654 criterion provides for establishing the administrative and physical means and time required for notification, in accordance

with Appendix 3. (Criterion II.E.6, p. 45). 28/ Appendix 3 provides minimum acceptable design objectives for the plume EPZ (described in the prior section), and states:

> Assurance of continued notification capability may be verified on a statistical basis. Every year, or in conjunction with an exercise of the facility, FEMA, in cooperation with the utility operator, and/or the State and local governments will take a statistical sample of the residents of all areas within about ten miles to assess the public's ability to hear the alerting signal and their awareness of the meaning of the prompt notification message . . ."

NUREG-0654, at 3-3, 3-4. It also provides that "[w]herever proposed as part of a system, subject to later testing by statistical sampling, the design concept and expected performance must be documented as part of plans . . ." (NUREG-0654, at 3-7, 3-8).

Neither the standards and criteria cited above, nor the testimony proffered on these matters suggest that field testing and the related statistical survey is a requirement for initial licensing. As was made clear by FEMA witness John C. Heard, Jr., no such surveys had as yet been performed at any operating reactor in FEMA's Scutheast region. Emergency Planning (EP) Tr., 1571. However, it is FEMA practice to give preliminary approval to alert and notification systems, subject to their passing these field tests as part of the formal 44 C.F.R. Part 350 FEMA review process. EP Tr. 1572-73. Thus, the FEMA interim findings submitted to the NRC found that the notification standard (10 C.F.R. § 50.47(b)(5)) "is adequately addressed in the plans and was demonstrated by the States and counties during the exercise." Staff Ex. EP-3; see also Staff Ex. EP-3A.

28/ The Licensing Board took official notice of NUREG-0654 and FEMA-43. See, LBP-84-37, supra, 20 NRC at 939, n. 2, 971.

Rather than serving as a criterion for initial approval of the alert and notification system, field testing and the related statistical surveys are intended to provide, at a later date, "assurance of continued notification capability" "every year or in conjunction with an exercise . . . ." NUREG-0654, App. 3, at 3-3, 3-4, and 3-7. The Licensing Board in this case, based on evidence received from Applicants, determined there to be reasonable assurance that the siren system met, or would shortly meet the NUREG-0654/FEMA-43 acoustical criteria. LBP-84-37, supra, 20 NRC at 972. In so doing, the Board relied on the Fermi [29/] and Waterford [30/] Appeal Board rulings that the regulations do not require "that all aspects of the plans be complete before a final licensing decision is reached," and that boards need not inquire into the details of implementing procedures. LBP-84-37, 20 NRC at 939.

The recent decision in Union of Concerned Scientists v. Nuclear Regulatory Commission, 735 F.2d 1437 (D.C. Cir. 1984), cited by Intervenors, is inapposite. That decision addressed whether a Commission amendment to 10 C.F.R. § 50.47(a)(2) had the effect of denying the opportunity for a hearing on the results of emergency planning exercises where the Commission considered these results to be material to a full-power licensing decision. Id., 735 F.2d, at 1442-1443. Here, the NRC's regulatory guidance document as well as NRC and FEMA administrative practice is clear that the actual field testing of the sirens by FEMA

29/ Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-730, 17 NRC 1057, 1066 (1983).

30/ Louisiana Power and Light Co. (Waterford Steam Electric Station, Unit 3, ALAB-732, 17 NRC 1076, 1103-04, 1106-07 (1983).

is not a material issue to be resolved prior to the issuance of a full-power license, 31/ but is a confirmatory matter which is followed up periodically during the life of the plant. The UCS decision did not hold that the NRC could not make predictive findings, id., at 1445, n.14. Rather, it held only that NRC could not treat exercise findings as material for issuance of a full-power license, but adopt a rule, the effect of which was to prohibit litigation of exercise findings. Further, Intervenors had a full opportunity to litigate whether the evidence of siren coverage supported a reasonable assurance finding as to the adequacy of the prompt alert and notification system. The unavailability of FEMA test results did not deny Intervenors the opportunity to litigate compliance with 10 C.F.R. § 50.47(b)(5). As a result, the Board's reliance on the Fermi and Waterford cases was appropriate, and there is no basis for overturning the Board's finding that the coverage of the Catawba siren system was adequate without awaiting the results of FEMA's follow-up field testing.

D. The Licensing Board Reasonably Exercised its Discretion to Exclude Late-Filed Contentions on Emergency Diesel Generators and Control Room Design Deficiencies Based on a Balancing of the Late-Filing Factors.

1. Background

In its initial prehearing conference order, the Licensing Board ruled that it would not apply the Commission's late-filing criteria in 10 C.F.R. § 2.714(a)(1)(i)-(v) to new or revised contentions based on new information in licensing documents, such as the Staff's safety evaluation

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31/ As noted above, Applicants' contractor did conduct field tests to verify the accuracy of the siren coverage predicted by the contractor's computer model. These predictions concerning the adequacy of siren coverage were considered by the Licensing Board in making its predictive finding that the prompt notification coverage for the plume EPZ would be adequate. LBP-84-37, supra, 20 NRC at 972.

reports or the Applicants' emergency plans, which were not available so as to permit the timely filing of contentions on information first contained in such documents (provided any such contentions were filed within 30 days of receipt of such new information). LBP-82-16, supra, 15 NRC at 574-575. Upon interlocutory review requested by Applicants and the Staff, the Appeal Board agreed with the Licensing Board, ruling that

> as a matter of law a contention cannot be rejected as untimely if it (1) is wholly dependent upon the content of a particular document; (2) could not therefore be advanced with any degree of specificity (if at all) in advance of the public availability of that document; and (3) is tendered with the requisite degree of promptness once the document comes into existence and is accessible for public examination.

ALAB-687, supra, 16 NRC, at 469. The Appeal Board determined that where the above criteria were met, the good cause thereby provided could not be overridden by other late-filing factors. Id., at 470. The Commission reversed, holding that Section 189a of the Atomic Energy Act does not require giving such "controlling weight to the good cause factor in determining whether to admit a late-filed contention based solely on institutionally unavailable documents." CLI-83-19, 17 NRC 1041, 1045-1046 (1983). The Commission concluded that to require a reasonable showing under the well-established late-filing criteria in such cases does not deny any hearing rights and is a reasonable exercise of the Commission's authority under Section 189a. Id., at 1046-1047. However, the Commission adopted the Appeal Board's three-pronged test as the test for good cause in such cases.

The Licensing Board had occasion to apply the Commission's ruling on application of 10 C.F.R. § 2.714(a)(1) with respect to late-filed contentions on the reliability of the emergency diesel generators (EDGs) at Catawba, and on control room design deficiencies.

Relying on an October 21, 1983 Board Notification, Intervenors on December 5, 1983 orally moved the admission of a three-part contention on the reliability of the Transamerica Delaval, Inc. (TDI) EDGs at Catawba. See, Tr. 9620-26, 9659-75. The Board later heard argument on Intervenors' motion, and, after weighing the late-filing factors, admitted that part of the proffered contention addressing inadequate design of the EDG crankshafts, contingent upon Intervenors' securing expert witnesses and providing the substance of their testimony by April 2, 1984. Memorandum and Order, February 23, 1984; Tr. 12548. The Board's application of the third factor -- on intervenors' likely contribution to developing a sound record -- was based on Washington Public Power Supply System (WPPSS Nuclear Project No. 3), ALAB-747, 18 NRC 1167, 1177-78, 1180-81 (1983). However, the Board rejected the two more generic aspects of the proffered contention, based principally on heavy weight given to factor five -- the delay and broadening of the proceeding which would attend litigation of issues relating to TDI diesel generator operational history and the TDI QA program--as well as on the third factor, the lack of showing of ability to contribute to the record. Memorandum and Order, February 23, 1984, at 6. The Appeal Board dismissed the referral of the rejection of these generic aspects of the contention. ALAB-768, 19 NRC 988 (1984). On April 13, 1984, the Board dismissed the contingently admitted EDG crankshaft contention for Intervenors' failure to secure any expert witnesses. Order, April 13, 1984.

On February 27, 1984, however, the Board admitted, sua sponte, an EDG contention based on site-specific problems which Applicants had identified to the Board. Memorandum and Order, February 27, 1984. On June 8, 1984, the Commission, upon review, found the identified problems

did not constitute serious safety matters for purposes of 10 C.F.R. § 2.760a and dismissed the site-specific contention. However, upon motion by Intervenors, the Board, finding that all late-filing factors but the third weighed favorably toward admission, re-admitted an identical contention as an Intervenor contention, subject to Intervenors' securing an expert either to testify or to assist in cross-examination. LBP-84-24, supra, 19 NRC at 1586, n.50. Intervenors named an expert by letter of July 6, 1984. However, as described in the Board's Memorandum and Order of July 20, 1984, subsequent statements by Intervenors created uncertainty as to whether prospective Intervenors' witness, Dr. Robert Anderson, would in fact be available to provide meaningful assistance. As a result, the Board required Intervenors to establish minimally that Dr. Anderson either would review Applicants and Staff safety reports and be present at the hearing to cross-examine or assist Intervenors in cross-examination, or would assist in preparation of a detailed statement of technical positions reflecting review of the pertinent Catawba-related reports. Id. Intervenors instead submitted pre-filed testimony of the intervenors in the Shoreham proceeding. The Board rejected this submission, because of the differences between the issues raised at Shoreham and at Catawba the fact that the Shoreham testimony likely would not be useful in evaluating site-specific "fixes" for the problems which arose at Catawba. Memorandum and Order, September 4, 1984, at 3-4. The Board concluded that based on the limited interaction between Intervenors and any experts, the Board had no reason to expect Intervenors to make a contribution through cross-examination. Id., at 5. See also, Order, August 22, 1984.

Intervenors' original contentions (PA Contention 22 and CESG 16) on the adequacy of the Catawba control room design review were first conditionally admitted pending the availability of the pertinent FSAR sections containing Applicants' review of the control room design, but were subsequently rejected upon reconsideration, following the remand required by ALAB-687. See, LBP-82-16, supra, 15 NRC at 581, 583; LBP-82-107A, supra, 16 NRC at 1795-96. In rejecting these conditionally-admitted contentions, however, the Board directed Applicants to serve Intervenors with copies of their control room design review, so that, if desired, new contentions could be promptly filed based on that information. LBP-87-107A, supra, 16 NRC at 1795, n.2. Copies of Applicants' control room design review were served on the parties in early June, 1983. See, letter from A. V. Carr, Jr., to J. L. Kelley, et al., June 8, 1983.

Shortly before the close of the Fall-Winter 1983 hearings, on January 31, 1984, Palmetto raised the control room design issue, stating that "it is a pending matter," whereupon Applicants argued that Intervenors had not acted on the information on the control room design review provided in early June 1983. Tr. 12404-12407. On April 12, 1984, Intervenors served a "revised contention" focusing on Applicants' failure "to demonstrate the justification for delaying correction of identified human engineering deficiencies [HEDs] until the end of the first refueling outage, and . . . to provide adequate verification that the implemented corrective actions in fact resolved" identified HEDs. 32/ These deficiencies

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32/ "Palmetto Alliance and Carolina Environmental Study Group Motion to Readmit Contentions Regarding Severe Accidents, Control Room Design Deficiencies and Lack of Financial Qualifications," ("Intervenors' Motion") April 12, 1984, at 5.

were raised by the Staff in its Preliminary Draft Safety Evaluation Report (draft SER) for the Unit 1 detailed control room design review (DCRDR), transmitted to Applicants on March 9, 1984. In addressing the 10 C.F.R. § 2.714(a)(1) criteria, Intervenors argued that their revised contention was timely served within one month of the availability to them of the draft SER. However, the Licensing Board rejected Intervenors' contention for the reasons advanced by the Staff in its May 2, 1984 responsive pleading. 33/ LBP-84-24, supra, 19 NRC at 1425, n.3. These reasons were: (1) Inasmuch as the Staff draft SER was based on information contained in the Duke Power Company Response to Supplement 1 to NUREG-0737 for Catawba Nuclear Station, submitted June 1, 1983, and transmitted to Intervenors on that date, it was the Duke June 1, 1983 document, not the draft SER nine months later, which triggered Intervenors' obligation to file a contention; see, CLI-83-19, supra, 17 NRC at 1048; (2) The coincidence of Intervenors and Staff concerns in this instance minimized the weight to be given to factors two and four, which favored admission; (3) The mere showing of past performance on other litigated contentions constituted a weak showing of ability to contribute to developing a sound record; (4) Since the Staff expected to shortly resolve the outstanding draft SER issues, there were no scheduling factors mitigating the delay and broadening of the issues which would be caused by admission of the contention. Staff Response, at 7-11.

33/ "NRC Staff Response to Intervenors' Motion to Readmit Contentions on Hydrogen Generation Accidents, Control Room Design Deficiencies, and Lack of Financial Qualifications" ("Staff Response"), May 2, 1984.

2. Analysis of Arguments on Appeal

Initially, Intervenors argue that application of the five late-filing factors where contentions are filed promptly following the availability of new information is improper and in violation of their hearing rights under Section 189a of the Atomic Energy Act. P.A. Brief, at 52-56. However, as noted above, the Commission in CLI-83-19 has specifically rejected Intervenors' position, holding that application of the late-filing criteria is not contrary to Section 189a. CLI-83-19, supra, 17 NRC at 1046. Thus the Commission requires both a showing of good cause and a showing with respect to the other four late-filing factors. 34/ The Commission's holding in CLI-83-19 with regard to the reasonableness of applying all five late-filing factors is controlling in this proceeding.

a. Intervenors' Diesel Generator Contentions

The Appeal Board has noted that in reviewing a licensing board's evaluation of the five factors governing late intervention requests it will not overturn the lower board's determination unless that board has abused its discretion. The Detroit Edison Company, et al. (Enrico Fermi Atomic Power Plant, Unit 1), ALAB-707, 16 NRC 1760, 1763-64 (1982), and cases cited therein. Thus the question is whether the Board abused its discretion in finding that Intervenors' failure to demonstrate an ability

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34/ As the experience in this case aptly illustrates, there may be circumstances where, notwithstanding the existence of good cause due to institutionally unavailable documents, a balancing of the interests of Intervenors in an issue against the public interest in requiring those seeking to invoke the hearing process to meaningfully contribute to that process reasonably weighs against the commitment of resources to a hearing, or circumstances where, notwithstanding the unavailability of certain licensing documents, good cause is lacking.

to contribute to development of the record outweighed their showings on the other four factors.

Intervenors barely address the Licensing Board's application of the five-factor test, much less make a showing of abuse of discretion, with respect to the Board's rejection of the two generic aspects of its initial diesel generator contention and the Board's dismissal of the crankshaft design contention. Palmetto Brief, at 58-59. However, Intervenors do strenuously argue that the Licensing Board erred in interpreting 10 C.F.R. § 2.714(a)(1)(iii) to require them to obtain the services of an expert on diesel engines to directly or indirectly assist them in cross-examination, rather than allowing them to satisfy their burden by establishing their ability to make their case entirely through cross-examination, citing the concurring views of Judge Edles in WPPSS, ALAB-747, supra, 18 NRC at 1182-1183 ("we do not rule out the possibility that some future late intervenor may be able to prevail on factor three by reliance on cross-examination, either alone or in combination with an affirmative presentation").

However, while the Licensing Board interpreted ALAB-747 as placing an affirmative burden on Intervenors to show they could "make a significant contribution to the record on the highly technical diesel generator contention," see Order, August 22, 1984, it did, in fact, permit Intervenors to satisfy this burden through a demonstration that they could effectively cross-examine other party witnesses as the means of making their case. Thus, Intervenors' argument lacks foundation.

Moreover, the Licensing Board did not abuse its discretion in finding that Intervenors' failure to satisfy factor three outweighed favorable showings on the other four factors. In the WPPSS appeal, the

Appeal Board ruled, in effect, that in determining, under 10 C.F.R. § 2.714(a)(1), whether to accept a late-filed petition, an inadequate showing on petitioner's ability to contribute to the development of a sound record might outweigh favorable findings on the other factors. The Appeal Board noted that factor three "is important in the determination of all late petitions," but particularly so where "grant or denial of the petition will also decide whether there is to be any adjudicatory hearing." WPPSS, ALAB-747, supra, 18 NRC at 1180.

The instant case involves the same five-factor test, but pursuant to 10 C.F.R. § 2.714(b) and its direction to apply this test where contentions are filed after the time therein specified. Nevertheless, while the context is different, the considerations which led the Appeal Board to attach special weight to the "contribution to the record" factor in WPPSS are analogous. There, the Appeal Board noted that the special weight was triggered by the fact that the decision on the late petition would determine whether any hearing would be held in that proceeding. Here, the late-filed contention came after the closing of the record (with two exceptions), and a favorable determination would have led to hearings where none were then scheduled. 35/ In addition, the Licensing Board stated its determination that it did "not believe Intervenors can make a substantial contribution to these technical issues unless they are

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35/ Although the Licensing Board found the fifth factor (degree to which admission of the contenton would broaden the issues or delay the proceeding) not to weigh against admission of the contention, in the context of the proceeding as it existed at the time (no diesel generator contention to be litigated, hearings completed on all except limited issues), the fifth factor arguably could have been found to weigh against admission or, at best, to be neutral.

prepared to present expert testimony or at least have expert assistance in their cross-examination." LBP-84-24, supra, 19 NRC at 1586, n.50. Thus there were sound considerations which supported the Board's determination to condition admission on the above basis, and ultimately to dismiss the contention when the condition was not met. Under these circumstances, the Board's rulings were a reasonable application of the Commission requirement that all five-late filing factors be balanced when determining whether to admit late contentions. See, CLI-83-19, supra. These rulings should be affirmed.

b. Intervenors' Control Room Design Deficiencies Contention

Intervenors argue that the Board unfairly imposed on them the burden of showing a contribution to the record, where their contention "was timely filed." P.A. Brief, at 62. In this instance, however, the Board found Intervenors had also failed to show good cause for their lateness. LBP-84-24, supra, 19 NRC at 1425, n.3. As noted above, Palmetto waited ten months from the time Applicants' detailed control room design review was submitted to the Staff and parties before raising inadequacies in Applicants' submittal. As the Commission has stated, "the institutional unavailability of a licensing-related document does not establish good cause for filing a contention late if information was available early enough to provide the basis for the timely filing of that contention." CLI-83-19, supra, 17 NRC at 1048. Here, timely filing would have been promptly following the public availability of the documents (Applicants' review) containing the pertinent information. Id., at 1044, 1047, affirming in part, ALAB-687, supra, 16 NRC at 469.

Intervenors make no showing on appeal to refute the Licensing Board conclusion that the contention was inexcusably late. Similarly, they make no showing as to why the Licensing Board erred in finding they had not demonstrated an ability to make a significant contribution to the record. In short, no basis has been supplied to support a determination that the Licensing Board abused its discretion in its weighing of the five factors to dismiss the control room design contention. In these circumstances, the Licensing Board's ruling should be affirmed.

E. The Licensing Board's Dismissal of Intervenors' Hydrogen Control Contentions Was Authorized by Law and a Sound Exercise of Discretion

1. Background

Among their original contentions, Intervenors stated their concern that "hydrogen release consequences" should be "dealt with so as to make impossible damage to the public health and safety." Palmetto Contention 31 (CESG 2). 36/ They questioned whether "the igniter system" could "perform this function." Id. Similarly, Intervenors stated Applicants should be required to demonstrate either that an uncontrollable hydrogen-oxygen explosion will not take place, or that the plant could safely withstand such explosion. Palmetto Contention 9. Id. In its March 5, 1982 prehearing conference order, the Licensing Board rejected these contentions on the ground that "the issue is being addressed in the rulemaking process," relying on Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), ALAB-655, 14 NRC 799 (1981).

36/ See, P.A. and CESG supplements to their petitions to intervene, dated December 9, 1981.

LBP-82-16, supra, 15 NRC at 584. While noting that "hydrogen issues may be litigated in individual proceedings provided the challenger postulates a credible scenario for a loss-of-coolant accident producing hydrogen," the Board rejected the contentions in the absence of such scenarios. Id. 37/

Intervenors sought reconsideration of these rulings by submitting four "plainly credible, Catawba specific accident scenarios." 38/ The Board invited party comments on these scenarios, noting that the accidents postulated "presumably could occur at any pressurized water reactor." LBP-82-51, 16 NRC at 167, 170 (1982). Following receipt of comments, the Board rejected the four scenarios: one stud bolt failure scenario, which it dismissed based on grounds of res judicata and collateral estoppel, and the remaining hydrogen control scenarios, which it dismissed based again on the pendency of the hydrogen control rulemaking. LBP-82-107A, supra, 16 NRC at 1808-1810. Elaborating on its earlier reliance on Rancho Seco and the TMI Restart case, 39/ the Board said that inasmuch as the "rulemaking directly addresses

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37/ The Board also rejected as lacking specificity a more general severe accident contention, Palmetto 5, also noting the need to postulate a specific credible accident scenario. Id., at 583-4.

38/ "Palmetto Alliance and Carolina Environmental Study Group Responses and Objections to Order Following Prehearing Conference," dated March 31, 1982.

39/ Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-16, 11 NRC 674, 675 (1980).

intervenors' hydrogen concerns," 40/ and would be completed well before the facility was licensed to operate, there was no safety justification for litigating this generic issue in the Catawba case. Id., at 1809. While rejecting the contentions, the Board noted that Intervenors could submit their scenarios as timely comments in the rulemaking. Id., at 1810.

On April 12, 1984, Intervenors sought reconsideration of this ruling, based on the fact that the hydrogen control rule had not issued, as well as on recent research on hydrogen ignition accidents. Intervenors' Motion, dated April 12, 1984, at 3-4. However, based on the continuing expectation of final Commission action on the generic rule addressing the same concerns before the anticipated date of full-power operation at Catawba, the Board again rejected the contention. LBP-84-24, supra, 19 NRC at 1425, n. 3.

In fact, the Commission unanimously approved the final rule on December 10, 1984 subject to Commission review of modified wording of the implementation provision. The modified wording was approved on January 17, 1985, resulting in a final 4-1 vote in favor of the rule. See, 50 Fed. Reg. 3498 (January 25, 1985). As adopted for publication in the Federal Register, the final rule notice contains dissenting views of Commissioner Asselstine, and a responsive statement by Chairman Palladino, specifically addressing the propriety of resolving the issue which arose in the Catawba case through the rulemaking. Id.

40/ The Board noted, for example, that the "technical review being conducted in the rulemaking features both breadth and depth, including 'review of the deliberate ignition systems installed at Sequoyah and McGuire . . ., a spectrum of degraded core accident scenarios . . . and several hydrogen combination phenomena.' [46 Fed. Reg.] at 62282." Id., at 1809-10.

2. Analysis of Arguments on Appeal

Intervenors claim that although they complied with the Board's direction to submit "'plainly Catawba-specific accident scenarios' involving reactor containment failure through inadequate hydrogen control measures," the Board ruling denied them the right "to participate in the resolution of this serious safety issue" (citing Wisconsin Electric Power Company (Point Beach Nuclear Plant, Unit 2), CLI-73-4, 6 AEC 6, 7 (1973)), contrary to Section 189a of the Atomic Energy Act. P.A. Brief, at 64-65. The issue on appeal is thus whether the Licensing Board erred in determining that it was not required to allow case-specific litigation of Intervenors' accident scenarios as a basis for their claims that Applicants had not established reasonable assurance that Catawba Station can operate safely. 41/

It would appear to be well established that in circumstances where a hearing on the record is provided by statute, an administrative agency may, consistent with due process, resolve challenges to its regulations by offering interested parties the opportunity to participate in the generic resolution of such challenges in a common rulemaking proceeding. Union of Concerned Scientists v. Atomic Energy Commission, 499 F.2d 1069, 1081 (D.C. Cir. 1974), citing, Weinberger v. Hynson, Westcott & Dunning, Inc., 412 U.S. 609, 624-625 (1973). In Union of Concerned Scientists, a licensing board denied intervenor the opportunity to be heard on

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41/ In Intervenors' April 12, 1984 Motion, the relief sought was "readmission and an opportunity to litigate the plainly credible accident scenarios in order to establish our earlier claims that Applicants have not established reasonable assurance that the Catawba Station can operate safely."

certain issues before issuance of the contested license authority. The licensing board's determinations to limit intervenors' hearing rights to a pending rulemaking were upheld, where the contentions were found to be in the nature of challenges to the regulatory standard, rather than a challenge to the agency's enforcement of these standards. Id., at 1081, 1086-1091. The correctness of the Board determination here, therefore, turns on the characterization of the proffered contentions, and whether the rulemaking, in fact, provided an opportunity to have Intervenors' concerns addressed.

In the Union of Concerned Scientists case, the language of the contentions was not clear, and the Court sought guidance from the evidence sought to be relied on, in that case evidence relating to the validity of an analytical model the Commission specified could be used to demonstrate compliance with certain interim safety criteria. Id., at 1088-89. The Court upheld the licensing board's rejection of contentions, based on the board's determination that intervenor sought to challenge the validity of the analytical model, rather than utility compliance with the model. Id. In the Catawba case, the only bases offered for litigation of the contentions were three accident scenarios claimed to lead to hydrogen explosions and breach of containment. While characterized as Catawba site-specific, the Licensing Board noted they "could occur at any pressurized water reactor." LBP-82-51, supra, 16 NRC at 170. Similarly, the Board observed that the technical review performed as part of the rulemaking proceeding addressed deliberate ignition systems like that

installed at Catawba, 42/ a spectrum of degraded core accident scenarios and several hydrogen combination phenomena. LBP-82-107A, supra, 16 NRC at 1809-10. Like the accident scenarios under consideration in the rulemaking, the credibility of Intervenors' postulated accidents bore on the basis for the agency standard to be applied, rather than compliance with that standard. 43/ Intervenors have provided no basis at any stage of the proceeding to support a contention that Applicants would not be able to comply with the rule once adopted. The contentions were therefore within the ambit of the holdings in Union of Concerned Scientists, supra, and the Board's ruling that it was permissible to resolve Intervenors' claims generically was correct.

Thus, the Board relied on the proposition that, as a general rule, "licensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission." Rancho Seco ALAB-655, supra, 14 NRC at 816. Nevertheless, the Board recognized that the Commission in TMI Restart had provided a means for litigating hydrogen control contentions presuming a metal-water reaction in excess of the then-current requirements. See, LBP-82-107A, supra, 16 NRC at 1809, n.5. The Board interpreted the Commission action to permit it to exercise an informed discretion in the circumstances of the case. Id., at 1809. The Board found there was no demonstrated reason why the generic questions as to what sort of loss-of-coolant accidents leading to hydrogen generation

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42/ See, 50 Fed. Reg. 3498.

43/ It appears that though advised to do so, Intervenors did not seek to participate in the rulemaking.

and explosion must be accounted for by plant design and what sorts of countermeasures are required could not appropriately be determined by rulemaking. The Board also reasoned that since the rule would be promulgated prior to full-power operation, and thus prior to the development of the potential for such a safety problem, there was no safety justification for litigating these matters in this case. Id. While the Board's timing was somewhat off, the Commission approvals on December 10, 1984 and January 17, 1985, ultimately bore out the Board's position. 44/

In sum, in appropriate circumstances, present here, it is permissible for an administrative agency to resolve by rulemaking matters which might otherwise be properly considered in adjudicatory hearings. Commission practice and case law provides for just such determinations. Intervenors were afforded an opportunity (which apparently they did not use) to have their concerns addressed in the rulemaking; and the Board soundly exercised its discretion to reject the contentions where it reasoned, correctly, that no safety justification warranted separate case-specific litigation of the matter.

F. The Licensing Board Correctly Dismissed Palmetto Alliance's Financial Qualifications Contention

1. Background

Although Palmetto Alliance Contention 24, challenging the financial qualifications of small owners of Catawba, was initially conditionally admitted, LBP-82-16, supra, 15 NRC at 576, 581-82, it was dismissed after

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44/ Applicants were issued their full-power operating license on the afternoon of January 17, 1985.

adoption on March 31, 1982 of new rules barred litigation of financial qualifications of electric utility applicants. LBP-82-51, 10 NRC at 168. See 47 Fed. Reg. 13750. However, following the remand of the rule by New England Coalition on Nuclear Pollution v. NRC, 727 F.2d 1127 (D.C. Cir. 1984), Intervenors moved to have their contention readmitted, claiming that the Court of Appeals had invalidated the rule. Intervenors' Motion, April 12, 1984. On June 7, 1984, the Commission issued a Statement of Policy, which noted that a new financial qualifications rule, applicable only to operating license applications, and based on regulated utilities' ability to recover the costs of operation through the rulemaking process, had been proposed. Based on the expectation that the proposed rule would soon be finalized and the Commission view that the Court of Appeals had not vacated the March 31, 1982 rule, the Commission directed licensing boards, in the interim, to follow the March 31, 1982 rule barring litigation of financial qualifications contentions in pending operating license proceedings. 49 Fed. Reg. 24111. Based on that Statement of Policy, the Licensing Board again rejected the contention. LBP-84-24, supra, 19 NRC at 1425, n. 3. Finally, on September 6, 1984, the Commission adopted the proposed rule as a final rule, noting that adoption of the rule constituted "a generic resolution of financial qualification issues that may be pending in operating license proceedings involving electric utilities." 49 Fed. Reg. 35747.

2. Analysis of Arguments on Appeal

On appeal, Intervenors argue that the Commission's Statement of Policy treating the March 1982 rule as continuing to have viability pending finalization of the proposed revised rule was improper, and that the finalized new rule is also invalid.

Intervenors' claims must be rejected for two reasons: First, whatever the merits of the Commission's Statement of Policy, the Licensing Board was required to abide by it. Under the March 31, 1982 rule, Intervenors still had the option of seeking a waiver of the rule under 10 C.F.R. § 2.758 procedures. They did not do so. Thus, the Board did not err. Union Electric Company (Callaway Plant, Unit 1), unpublished Commission Order, July 6, 1984; Byron, supra, ALAB-793, slip op. at 39. Second, for similar reasons, Intervenors' challenge to the validity of the new rule is not amenable to resolution by either the Licensing Board or the Appeal Board. Id.; 10 C.F.R. § 2.758. In any event, even if at this late stage waiver of the rule were to be allowed, Intervenors have proffered no basis for challenging the application of the new rule. As a result, there is no basis for disturbing the Licensing Board's rejection of Intervenors' financial qualifications contention.

G. The Licensing Board Correctly Rejected Intervenors' Contentions Seeking Further Evaluation of the Environmental Impacts of Severe Accidents Caused by Failure of Hydrogen Control Measures and of Transportation of Oconee and McGuire Spent Fuel to Catawba, and Seeking Consideration of Need for Power and Energy Alternatives

1. Background

Intervenors raised 23 environmental contentions, 45/ four of which are the subject of this appeal. Intervenors' DES Contention 22 asserted, inter alia, that the Staff environmental evaluation for Catawba was inadequate because it did not specifically analyze "the significance of [the ice-condenser] feature for accident impacts." Id., at 14. DES Contention 19 raised several issues regarding spent fuel transshipment --

45/ PA and CESG supplement to petition, dated September 22, 1982.

the need for shipping fuel from other Duke reactors to Catawba for storage, the environmental costs and other impacts (including severe accidents) of such transshipment, alternatives to shipping spent fuel from other Duke reactors to Catawba, and the environmental costs of operating Catawba as a storage facility for such fuel. 46/ DES Contention 10 also raised concerns about the consequences of shipping Oconee and McGuire spent fuel to Catawba. Id., at 7. Finally, DES Contentions 6 and 8 raised the issue of need for power, while DES Contention 7 sought to inject fixed capital costs into the environmental cost/benefit analysis. LBP-82-107A, supra, 16 NRC at 1801.

Intervenors' DES-22 was rejected insofar as it sought a more detailed accident analysis of the ice condenser feature. Id., at 1798. The Board noted that a more meaningful accident analysis of ice condenser and hydrogen control than could be done in this proceeding was being accomplished in the hydrogen control rulemaking proceeding. In any event, the Board ruled that, with minor changes, the general discussion of the ice condenser feature contained in Appendix E of the DES would suffice. Id.

DES-6 and DES-8, the need for power contentions, were rejected pursuant to the Commission rule barring consideration of need for power in operating license proceedings. 10 C.F.R. § 51.53(c). Id., at 1801. DES-7 was rejected as raising matters (fixed capital costs) beyond the scope of the proceeding. Id. Finally, the Board dismissed DES-10 and

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46/ Id., at 11. This last element, which was admitted and resolved through summary disposition, is not raised on appeal.

those parts of DES-19 relating to spent fuel transshipment as follows. It determined that several of the matters raised -- "the need to ship their spent fuel [from Oconee and McGuire] for storage elsewhere, the adequacy of the criteria for cask integrity in severe accidents, and alternatives that other Duke plants might use to avoid spent fuel shipments to Catawba" -- were previously rejected when offered as Palmetto Contention 15. They were again rejected as being outside the scope of the Catawba operating license proceeding. LBP-83-88, 17 NRC 291, 293 (1983). With respect to the environmental impacts of transshipment, the Board found that the environmental impacts of shipping spent fuel from Oconee and McGuire for storage at a fuel reprocessing plant, or for disposal by another authorized means, had been adequately considered in connection with environmental reviews of those facilities and that, inasmuch as Applicants had committed to not exceed Table S-4 values, Intervenors' contentions constituted impermissible attacks on Commission regulations. Id., at 294. The Board noted that if Intervenors believed they could identify with reasonable specificity environmental impacts not adequately accounted for by Table S-4, they could seek waiver of the rule under 10 C.F.R. § 2.758. However, the Board noted that even assuming there were impacts not accounted for by earlier environmental reviews, Intervenors had failed to identify those impacts with reasonable specificity, and therefore the contentions were rejected on this alternative basis as well. Id., at 294-95.

2. Analysis of Arguments on Appeal

Intervenors claim that rejection of the foregoing contentions prevented the "fullest possible consideration of the environment," P.A. Brief, at 67, relying on Calvert Cliffs Coordinating Committee v. AEC, 449 F.2d 1109 (D.C.Cir. 1971). Specifically, they argue an environmental analysis of low probability, but extreme consequence accidents caused by failure of Catawba's hydrogen control measures was required by NEPA and 40 C.F.R. § 1502.22. P.A. Brief at 68-69. Intervenors also argue that the Licensing Board erred in holding that Table S-4 (10 C.F.R. § 51.20(g)) adequately accounted for the environmental impacts of shipment of Oconee and McGuire spent fuel to Catawba because, under its terms, that provision applies only to transport of such fuel to a reprocessing plant. Intervenors further argue that consideration of the need for such transshipment and less harmful alternatives was required by NEPA. Id. Finally, Intervenors dispute application of the Commission's need for power rule so as to exclude consideration of the need for Catawba's capacity, or the construction costs of providing electricity. Id., at 71.

Intervenors' assertion (regarding the severe accident analysis) that a "case-by-case analysis" was not performed in keeping with 40 C.F.R. § 1502.22 is not well-taken, and there is no basis for their claim of error. Pursuant to the Commission's Statement of Interim Policy, 45 Fed. Reg. 40101, June 13, 1980, the Final Environmental Impact Statement related to the operation of Catawba, NUREG-0921, January, 1983, describes

the manner in which the Staff performed its probabilistic assessment of severe accidents. 47/ Id., at 5-36 - 5-37, Appendix E, at E-1.

The FES clearly states that the analysis of severe accidents is based on probability risk assessments (PRA) for Surry, as revised using "rebaselining," and giving consideration to the information gleaned from the PRA for Sequoyah, which has an ice-condenser containment like that of Catawba. See, FES, NUREG-0921 at 5-36 - 5-37, 5-46 - 5-47, Appendix E, E-1. The FES states at E-1:

> As noted in Section 5.9.4.5(2), the probability of accident sequences from the Surry plant were used to give a perspective of the societal risk at Catawba because, although the probabilities of particular accident sequences may be substantially different and even improved for Catawba, the overall effect of all sequences taken together is likely to be within the uncertainties. (Emphasis added.)

Although Intervenors cite the CEQ regulations, they do not explain in what manner the reasoned reliance on the PRAs performed, and applied to Catawba's plant design, is not fully in compliance with both CEQ regulations and with the Commission's Statement of Policy. The agency made clear the gaps and uncertainties in the information available, 48/

47/ Environmental impact statements, such as that for the Catawba OL, are to "include considerations of the site-specific environmental impacts attributable to accident sequences that lead to releases of radiation and/or radioactive materials, including sequences that can result in inadequate cooling of reactor fuel and melting of the reactor core." 45 Fed. Reg. 40101. The Commission therefore required "a reasoned consideration of the environmental risks," giving approximately equal attention to "the probabilities of occurrence of releases and to the probability of occurrence of environmental consequences of those releases." Id. However, "[d]etailed quantitative considerations that form the basis of probabilistic estimates of releases need not be incorporated," but may be referenced. Id.

48/ In response to Intervenors' contention, further explanation justifying use of the Surry analysis was added to the FES, at 9-14.

yet there is no showing that a Catawba-specific PRA was essential to a reasoned choice among alternatives. The adaptation of data from other sites, together with Catawba site-specific information in such areas as meteorology and population, was a reasonable method of evaluation. 49/ Neither NEPA, CEQ regulations, nor NRC regulations and policy require a site-specific PRA be performed.

Moreover, since any differences in response between the ice condenser and large dry containments were considered and determined "to be within the uncertainties," failure mechanisms specific to ice condenser containments have been considered. There can be little doubt that the agency took the requisite "hard look" at the environmental consequences, in conformance with NEPA, (see, Public Service Company of Oklahoma, et al. (Black Fox Station, Units 1 and 2), ALAB-573, 10 NRC 775, 779 (1979)), and that the Board's determination that the FES was adequate in this respect was not erroneous.

With respect to Intervenors' claims that the Board should have required a full environmental impact statement relating to shipment of Oconee and McGuire spent fuel to Catawba as well as evaluations of need and alternatives, the Licensing Board correctly applied the regulations

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49/ Further corroboration of the reasonableness of the Staff's use of the rebaselined Surry probabilistic risk assessment is contained in the record on Emergency Planning Contention 11, relating to whether the risk of accidents at Catawba was sufficiently different from Surry, the PRA for which underpins the 10-mile plume EPZ rule, so as to support expansion of the EPZ beyond "about" 10 miles. The Licensing Board accepted Applicants' expert witness testimony that use of Surry was appropriate, since when the release frequencies calculated for Sequoyah were adjusted assuming the presence of the McGuire hydrogen mitigation system, the results were virtually identical, even taking into account possible failure of this system. LBP-84-37, supra, 20 NRC at 981.

and the case law to the facts of this case. Intervenors do not, in fact, challenge the ability of the Commission to deal with environmental impacts of transportation of spent fuel by rule. Their only complaint is that, because the transshipment was to Catawba, rather than to a reprocessing plant, the rule does not apply. The Board, in rejecting Palmetto Contention 14, found no reason why Table S-4, which covers "Environmental Impact of Transportation of Fuel and Waste To and From One Light-Water Cooled Nuclear Power Reactor," should not apply to shipments to Catawba, as well to a reprocessing plant. LBP-82-16, supra, 15 NRC at 579; LBP-83-8B, supra, 17 NRC at 292. This ruling was clearly correct. Although 10 C.F.R. § 51.20(g)(1) assumed the shipment was "from the reactor to a fuel reprocessing plant," the very next paragraph, § 51.20(g)(2), gave the criteria for applicability, which made no mention of the destination of the fuel. 50/ Moreover, WASH-1238, 51/ on which the rule is based, the Statement of Consideration for the rule, 52/ as well as Table S-4 itself, make no mention of "in plant" radiological aspects of transportation. Impacts from transshipment are examined based on distances and methods of transport, not destination. Moreover, the unavailability of reprocessing

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50/ Since the Licensing Board decision, Part 51 has been revised, and Table S-4 and related provisions on applicability are contained in 10 C.F.R. § 51.52. The rule is substantively unchanged; however, the revised provision drops reference to the destination of the spent fuel, further reinforcing the argument that the original provision did not treat destination as bearing on the environmental impacts of transportation. See 49 Fed. Reg. 9352, 9389-9390.

51/ "Environmental Survey of Transportation of Radioactive Materials to and from Nuclear Power Plants," WASH-1238, December 1972, at 3, 38, 43-44, 53.

52/ 40 Fed. Reg. 1005.

plants has not affected the Commission's reliance on Table S-4 to evaluate the environmental impacts of fuel transshipment in environment impact statements. 53/ Thus, the Board correctly found that Intervenors' contention seeking a separate EIS constituted a challenge to a Commission rule. Further, as noted above, if Intervenors wished to show environmental impacts not covered by the rule, they had the mechanisms provided by 10 C.F.R. § 2.758 available to them. LBP-83-8B, supra, at 294. Intervenors did not pursue such remedy. Moreover, the Board noted that since no basis for claiming additional environmental impacts had been specified, even assuming the contentions were not barred by rule, they were rejected as lacking requisite specificity. Id., at 295. Intervenors do not address these grounds, and, as a result, the Board's ruling should be affirmed. 54/

53/ See "NRC Staff Position on Applicability of Table S-4 to Transshipment of Spent Fuel from Oconee and McGuire to Catawba," December 13, 1982, at 5.

54/ Despite Intervenors' claim that they were promised an environmental impact statement on such transshipment, P.A. Brief, at 70, they offer no basis, other than the claimed inapplicability of Table S-4, for requiring preparation of an environmental impact statement. Thus, no basis for disturbing the Board's finding that the environmental impacts of Oconee and McGuire spent fuel shipments were adequately considered in connection with licensing those facilities has been given. See, LBP-83-8B, supra, 17 NRC at 294, citing Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 46 n.4 (1978). The Appeal Board recently noted in language applicable to the facts here: "If, after an initial environmental assessment, the agency determines that no significant impact will result from the proposed action, without additional analysis it may publish a statement indicating that such is the case. This is what occurred in this instance." Virginia Electric and Power Company (North Anna Power Station, Units 1 and 2), ALAB-790, 20 NRC 1450, 1452, n. 5 (1984).

15 NRC at 584 (noting construction costs are considered in construction permit proceedings, and are usually irrelevant at the OL stage). Intervenors provide no basis for disturbing this ruling.

In sum, Intervenors have made no showing that the Board erroneously applied NEPA, CEQ rules, and NRC regulations, policy, and case law to the evaluation of environmental impacts of operating Catawba.

V. CONCLUSION

Based on the foregoing, the Partial Initial Decisions of June 22, September 18, and November 27, 1984 should be affirmed, and Intervenors' appeal dismissed.

Respectfully submitted,

George E. Johnson
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 25th day of February, 1985.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of	)	
	)	
DUKE POWER COMPANY, ET AL.	)	Docket Nos. 50-413
	)	50-414
(Catawba Nuclear Station, Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE BRIEF IN OPPOSITION TO THE APPEAL OF PALMETTO ALLIANCE AND CAROLINA ENVIRONMENTAL STUDY GROUP FROM PARTIAL INITIAL DECISIONS AUTHORIZING FULL-POWER OPERATION OF CATAWBA NUCLEAR STATION" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, by deposit in the Nuclear Regulatory Commission's internal mail system, this 25th day of February, 1985:

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