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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
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In the Matter of)
DUKE POWER COMPANY, et al.)
(Catawba Nuclear Station,)
Units 1 and 2))

Docket Nos. 50-413
50-414

APPLICANTS' REPLY TO PROPOSED
FINDINGS OF FACT AND CONCLUSIONS OF
LAW OF INTERVENORS AND THE NRC STAFF

J. Michael McGarry, III
Mark S. Calvert
Anne W. Cottingham
BISHOP, LIBERMAN, COOK,
PURCELL & REYNOLDS
1200 Seventeenth Street, N.W.
Washington, D.C. 20036

Albert V. Carr, Jr.
Ronald L. Gibson
DUKE POWER COMPANY
P.O. Box 33189
Charlotte, North Carolina 28242

Attorneys for Duke Power
Company, et al.

March 15, 1984

8403160029 840315
PDR ADOCK 05000413
PDR

DS03

INDEX

	<u>Page</u>
I. General	1
A. Intervenors Fail to Confront the Evidence	3
B. Intervenors Fail to Cite the Record	6
C. Intervenors Rely Upon Matters Not in Evidence	6
D. Intervenors Reference Matters Struck From the Proceeding	7
II. Specific	11
A. SALP Report	11
B. NRC Staff Inspection Report No. 50-413, 414/81-02	17
C. QA Independence	19
D. Lack of Support	40
E. Procedure Q-1 and Verbal Voiding	49
F. QA Supervision Permitting Craft to Weaken QA Program	56
G. Pervasive Problems in the Resolution of Non-conformances	61
H. The McAfee and Hoopingarner Concerns	62
(1.) Protection of Cables	64
(2.) Rebar and Piping	68
(3.) Quenching of Welds and Welding on Unsafe Scaffolds	69
(4.) Pouring Concrete in the Rain and QA Waiver of Requirements on Concrete Pour	73

	<u>Page</u>
(5.) Rain in the Control Room	75
(6.) Flooding of the Diesel Generator Room	77
(7.) Order Not to Talk to the NRC, Harassment and Wrongful Termination of Employment	83
I. Pay Reclassification	93
J. Access to NRC	94
K. Task Force Results Foreordained	97
L. Non-technical Task Force	101
M. Harassment	105
1. Deaton	105
2. Harris-Mullinax	107
3. Bryant	111
4. Rockholt	113
5. Cauthen	115
6. Godfrey	117
7. Burr-Ledford	121
8. Jackson-McKenzie	124
9. Reep-Jones	127
N. Harassment Policy	130
O. G.E. "Beau" Ross	134
P. Mr. Zwissler	142
Q. Technical Task Force Investigation	149
1. General Criticisms	150
2. Specific Concerns	153
R. Potential Technical Inadequacy	168
S. NRC Response to Technical Task Force	171

	<u>Page</u>
*T. Issues Raised By In Camera Witnesses	175
U. DES Contention 17 - Adverse Meteorology	205
V. Contention 18/44 - Embrittlement	209

* This section is being supplied separately to a limited number of recipients due to the confidential nature of the matters discussed.

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1/ The filing date was subsequently modified in the Board's ruling of February 17, 1984. (Tr. 12,536 et seq.).

general references may be disregarded. 10 C.F.R. §2.754(c). Failure to make timely filing of proposed findings as directed may be deemed a default and may result in the contention being treated as uncontested. [p. 2]

See also the Board's observations set forth in the February 16, 1984 Telephone Conference. (Tr. 12,531-32, Kelley).

An examination of Intervenor's proposed findings reflects that our specific instruction has been disregarded in multiple instances. Moreover, Intervenor's proposed findings suffer from other infirmities which will be discussed below.

First, Intervenor has failed to confront the evidence in the voluminous record of this proceeding. Only passing reference is made to the cases of Applicants and the NRC Staff. Instead, the record references Intervenor does cite are limited primarily to references to exhibits in evidence and snippets from direct testimony. We are particularly troubled by this approach in that it would have us ignore almost totally that portion of the record developed during the 45 days of hearing already held, which portion was devoted almost exclusively to Palmetto Alliance's cross-examination of Applicants' 68 witnesses and NRC Staff's 13 witnesses. Second, Intervenor's proposed findings are replete with statements which lack any citation to the record. Third, a number of Intervenor's proposed findings rely upon matters not in

evidence. Fourth, Intervenors' findings improperly reference matters which we have ruled out of this proceeding.

These defects in Intervenors' proposed findings render them particularly unhelpful to the Board. There is no analysis of the record in these proposed findings. Rather, they consist essentially of a narrative of Intervenors' case, without appropriate citations; and they ask this Board to make broad, sweeping findings which they fail adequately to address or properly to document. We cannot accede to Intervenors' request. Intervenors' proposed findings fall far short of the quality we expect from participants in NRC licensing proceedings and we find that we can place little, if any, reliance upon them.

We now discuss briefly, with examples,^{2/} each of the deficiencies outlined above:

A. Intervenors Fail to Confront
the Evidence

One example of this deficiency appears in the first topic addressed in Palmetto Alliance's Findings of Fact Section, viz., the SALP Report (PA PFF ¶¶4-15, pp. 40-46). The six pages of proposed findings on this matter refer to Applicants' evidence as follows:

The SALP Report was not a rash judgement,
although it has been portrayed as a fluke

^{2/} These examples are not intended to be exclusive, but merely illustrative. The body of this document will discuss the shortcomings in Palmetto Alliance's proposed findings in detail.

by Duke [no citation to the record].

* * *

Warren Owen, Duke's Senior Vice President for Engineering and Construction, attempted to minimize and belittle the SALP report (Owen prefiled testimony, pp. 18-20) . . . [PA PFF ¶15, p. 46].

Intervenors' proposed findings fail totally to analyze the record on this subject; moreover, they fail to explain how Applicants sought to "minimize and belittle" the SALP Report and fail to provide the basis for what they allege is Applicants' claim that the SALP Report was a "fluke." Such cursory treatment ignores not only the substance of the prefiled testimony filed by Applicants in this matter (Apps. Exh. 1, Owen, pp. 18-20; Apps. Exh. 2, Grier, pp. 34-35; Apps. Exh. 9, Wells, p. 12; Apps. Exh. 24, Dick, p. 6), but also the cross-examination conducted by Intervenors themselves on the subject (see, e.g., Tr. 2509-12, 2530-37, Owen 10/13/83).

Another example of this failure to consider the evidence in the record is found in the second topic addressed by Intervenors in the Findings of Fact Section, viz., NRC inspection actions in February, 1981, (PA PFF ¶¶16-20, pp. 46-49). In the first place, Palmetto Alliance fails to identify the Inspection Report it is discussing and neglects to demonstrate that it is in evidence. Moreover, the three pages of proposed findings are devoid of any reference to the other parties' view of

this report, despite the clear indication in the record that as a result of the NRC's 1981 activity, Applicants conducted an engineering review of approximately 11,000 NCI's which the NRC found to be a satisfactory response to its concerns and that the NRC thereafter closed out the matter. (Tr. 9814-16, Bryant, Van Doorn 12/6/83).

A third example is of this deficiency appears in the Intervenor's proposed findings on the allegation that Mr. Hoopingarner was ordered not to talk to the NRC, was harassed, and had his employment improperly terminated. Palmetto Alliance filed 10 pages of findings on this issue (PA PFF ¶¶236-245, pp. 141-150) in which they ask us to find that Applicants violated 10 CFR §50.7 of the Commission's rules and then, as a consequence, to impose upon the Applicants the sanction of denying their operating license application. (PA PFF ¶¶142-143, pp. 142-143. Yet having asked us to make these findings, Palmetto Alliance does not cite one single transcript reference in its 10 pages of proposed findings to support its position, relying instead almost exclusively on documents which it introduced into the record. By so doing, Palmetto Alliance fails to account for the testimony of witnesses in the transcript which explains or puts into perspective the documents on which Intervenor relies.

B. Intervenors Fail to
Cite the Record

Second, Intervenors' proposed findings are replete with statements which lack any citation whatsoever to the record. To be more clear, these statements are not in the nature of conclusions drawn after an analysis of the record evidence, but rather purport to represent matters in the record itself. See, for example, paragraphs 16-19, 23, 26-30, 43, 50, 53, 59, 69, 71, 145-154, 162-165, 186, 192-193, 216-217, 223, 226-227, 232-233, 240, 243, 247, 255, 257-258, 280, 360, 362, 367, 375, 384, 405, 416, 434, 438-439, 452, 458, 460, 491, 517, 519-521.

C. Intervenors Rely Upon Matters
Not in Evidence

Intervenors' proposed findings of fact rely in part upon matters not in evidence, such as information relating to other nuclear power plants, offers of proof, and matters which have not been officially noticed. With respect to information relating to other nuclear power plants, Intervenors refer to other plants that received a rating similar to Catawba in the 1981 SALP Report (PA PFF ¶¶11-12, pp. 43-45). While the 1981 SALP Report is in evidence, its relevance to this record is limited to Catawba. The facts set forth in the 1981 SALP Report regarding the other nuclear plants has been ruled by the Board to be "too far afield." (Tr. 2507, Kelley 10/11/83). This Board's reasoning applies with equal force to the

various references made by Intervenor to Congressional Committee actions and to Commission and Board actions in other NRC cases and other matters (see, PA PFF, pp. 3-15). The record as developed in 45 days of hearing is simply silent on these points. This Board will not, and cannot, rely upon such information in deciding the issues in this case.

With regard to offers of proof, Intervenor's Proposed Findings rely upon pre-filed testimony of various witnesses of Applicants who were not called to the stand (see, e.g., PA PFF, ¶39, pp. 58-62). This Board cannot base its decision upon such non-evidence. See 10 CFR 2.743(e) which refers to offers of proof as "excluded evidence."

With regard to official notice, Intervenor's proposed findings (PA PFF ¶533, p. 262) assume that we take such notice of a February 13, 1984 significant deficiency report. We have not been formally requested to do so. Further, absent such a request, and absent a showing of why a significant deficiency report is a type of document we would normally "notice," we will not do so.

D. Intervenor Reference Matters
Struck From the Proceeding

Lastly, with regard to matters that have been struck, Intervenor's proposed findings improperly reference matters we have excluded from this proceeding. See, for

example, the references in PA PFF ¶16-17(p. 47), ¶69 (p. 77), and ¶556 (pp. 275-76) to training, which was excluded on several occasions by this Board (August 26, 1983 Memorandum and Order, p. 9; IC Tr. 403, 11/28/83); the reference in PA PFF ¶236 (p. 141) to Mr. Hoopingarner's ability to approach the Occupational Health and Safety Administration, which we ruled out of the case months ago when Palmetto Alliance sought to raise it in Mr. Hoopingarner's direct testimony (Tr. 7932, 11/18/83); the reference in PA PFF ¶¶552 (p. 274) to in camera Witness 1's ability to talk to supervision which was excluded by this Board (IC Tr. 481-486, 12/18/83); and the reference in PA PFF ¶¶595 and 597 (pp. 290-291) and ¶615 (p. 296) to in camera Witness 3's allegations concerning circumstances of his termination and his ability to raise concerns directly with the NRC which were struck by this Board (IC Tr. 522-24, 12/13/83).

As noted above, the examples given of these defects are by no means exclusive. However, we find the defects cited above to be in direct contravention of our December 30 Order.

The Board further observes that Intervenors have failed to file proposed findings on Palmetto Alliance's Contention 16, which involves the storage of Oconee/McGuire spent fuel at Catawba. Therefore, under our December 30 Order Intervenors can be viewed as having defaulted on this contention. (10 CFR 2.754(b); Detroit

Edison Co., et al. (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-709, 17 NRC 17, 21 (1983). As such, it is no longer necessary for us to decide the issue, particularly since we, the Board, have no independent interest in the matter. However, if we were to issue findings, they would essentially follow those submitted by Applicants and Staff.

In addition to the above general comments concerning Intervenor's proposed findings, the Board wishes to comment on the role of Appendix B (10 CFR Part 50) in this proceeding. We find that while Palmetto Alliance's proposed findings contain numerous references to Appendix B, but at no point do they present a cogent analysis of what Intervenor's believe should be the ultimate outcome of the matter in relation to Appendix B. It is not clear to us, for example, whether Intervenor's maintain that if we find one of the criteria of Appendix B to have been violated, we should deny the license. Therefore we find it necessary to place this matter in perspective.

Appendix B sets forth quality assurance criteria. As such, it serves as the regulatory standard to which a quality assurance program must be implemented.

Intervenor's allege that Applicants have failed to comply with Appendix B. In resolving this issue we are guided by

the Appeal Board's recent decision in Union Electric Company (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343 (1983). Therein the Appeal Board stated:

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

Obviously, this inquiry necessitates careful consideration of whether all ascertained construction errors have been cured. Even if this is established to be the case, however, there may remain a question whether there has been a breakdown in quality assurance procedures of sufficient dimensions to raise legitimate doubt as to the overall integrity of the facility and its safety-related structures and components. A demonstration of a pervasive failure to carry out the quality assurance program might well stand in the way of the requisite safety finding. [Id., at 346].

See also Pacific Gas & Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-756, 18 NRC ____ (December 19, 1983, slip op. at pp. 6-7).

By virtue of the sheer size and complexity of the plant, it is inevitable that errors will occur in the course of construction. Although a program of construction quality assurance is specifically designed to catch construction errors, it is unreasonable to expect the program

to uncover all errors. In short, perfection in plant construction and the facility construction quality assurance program is not a precondition for a license under either the Atomic Energy Act or the Commission's regulations. What is required instead is reasonable assurance that the plant, as built, can and will be operated without endangering the public health and safety. 42 U.S.C. 2133(d), 2232(a); 10 CFR §50.57(a)(3)(i); Power Reactor Development Co. v. International Union, 367 U.S. 396, 407 (1961); Maine Yankee Atomic Power Co. (Maine Yankee Atomic Power Station), ALAB-161, 6 AEC 1003, 1004 (1973), aff'd sub nom. Citizens for Safe Power v. NRC, 524 F.2d 1291 (D.C. Cir. 1975).

In sum, our decision seeks to determine if there has been a systematic breakdown in Applicants' QA program as evidenced by repeated violations of Appendix B criteria. Isolated infractions will not cause us to deny the license.

II. Specific

Applicants' comment on the specific proposed findings of Intervenor and Staff are set forth below.

A. SALP Report

[PA PFF ¶¶4-15 (pp. 40-46)]

Palmetto would have the Board find that the 1981 NRC Systematic Assessment of License Performance (SALP) Report's low rating of Catawba is indicative of an overall failure by Applicants to demonstrate that the plant has been built in compliance with 10 CFR Part 50, Appendix B (PA PFF ¶13, p. 46). Palmetto's basis for its proposed

finding is that the Catawba plant received a "below average" rating from the NRC in the areas they reviewed, which included QA.

The Board notes at the outset that no NRC witnesses were examined by Palmetto Alliance regarding this NRC assessment. The record contains the testimony of Applicants' witnesses, both prefiled, direct, and on cross-examination. However, Palmetto Alliance's proposed findings ignore this evidence.

The 1981 SALP Report, published in August of 1981, was the outgrowth of a task from the "NRC Action Plan Developed as a result of the TMI-2 Accident" (NUREG-0660)(PA Exh. 4, p. ii). The SALP Review Group states in the Forward to the SALP Report that

the intent of the appraisal and rating process is not to 'label' licensees, developing a sense of complacency for those rated above average or a sense of condemnation for those rated below average. The intent is for the findings of the Review Group be used for attaining a high level of performance by all licensees. [Id.].

The SALP evaluation process "involves collection of data over an appraisal period of at least one year, followed by an evaluation interval." (PA Exh. 4, i). The rating scheme contemplates above average, average, and below average. (Id.).

In those instances where a licensee has been rated "below average" the SALP Review Group was careful to point out that such a rating

does not mean that a facility was unsafe or that its operation or construction should be stopped. [Id.].

A "below average" rating does

mean that the facility was not meeting the full measure of these high expectations [expected performance level for nuclear facilities is high] and that, relative to the population of nuclear facilities, the facility's performance was judged to be less desirable than most other facilities. [Id.].

The SALP Review Group stated that the "overriding goal of SALP is improved performance of the industry as a whole and greater assurance to the public that nuclear power reactors are built and operated safely" (Id.). The SALP Review Group's goal is to rate on a yearly basis the performance of each operating facility and each facility under construction (PA Exh. 4, p. 5).

The SALP Review Group stated that it

found it difficult to rate power reactor facilities under construction. The reason for this is that these facilities were at varying stages of activity and completion.

The licensing and inspection activities varied with the level of licensee activity. In a number of instances very little information was available. [PA Exh. 4, p. 7].

An interesting point made by the SALP Review Group is that they found no facility under construction that could be rated above average. (Id.).

The Applicants acknowledged the below average rating in the 1981 SALP Report but disputed the Report's findings regarding Catawba. (Apps. Exh. 1, Owen, p. 18-20; Apps.

Exh. 2, Grier, p. 34-35; Apps. Exh. 9, Wells, p. 12; Apps. Exh. 24, Dick, p. 6). Applicants explained that the period of activity covered by the SALP Report was a period of heavy construction activity at Catawba and this accounted for the higher number of violations recorded. (Apps. Exh. 1, Owen, p. 19). Mr. Grier stated that the methodology used by the NRC in producing the SALP Report was to consider an "unweighted numeration of deficiencies." That is, the methodology gave little credit for the volume of work being done. Mr. Grier further pointed out that each deficiency presented to Applicants by the NRC had been investigated and corrective action performed. The NRC followed up on inspection and was satisfied with the action in every case. (Apps. Exh. 2, Grier, p. 34; Apps. Exh. 9, Wells, p. 12; Tr. 2530-2537, Owen 10/13/83). However, as Mr. Owen further stated, the 1981 SALP Report findings for Catawba did not take into account corrective action taken by Applicants. (Apps. Exh. 1, Owen, p. 19).

Palmetto cross-examined Applicants' witnesses extensively on the 1981 SALP Report and their overall conclusions that no systematic or programmatic deficiencies were evidenced by the SALP Report. This cross-examination also revealed the fact that Applicants in subsequent SALP reports received higher ratings (Tr. 2509-12, Owen 10/11/83). Applicants' witnesses had also

stated in their prefiled testimony that subsequent SALP Reports had given the Catawba QA program very high ratings. (Apps. Exh. 1, Owen, p.19). In 1983, SALP gave Applicants' QA program at Catawba the highest rating (Apps. Exh. 2, Grier, p. 35).

The Board was particularly interested in Mr. Owen's prefiled statement and testimony that the SALP evaluation process failed to properly weigh the heavy construction activity at Catawba for the period evaluated by SALP which resulted in SALP's finding that Catawba was below average. Mr. Owen explained to the Board that a

weakness in the SALP evaluation is that any rating system that uses numbers of violation should somehow relate to the level of activity, because plant activity with respect to those things that are covered by NRC regulations start out slow, peak high and then slow down again near the end (Tr. 2535, Owen 10/11/83).

He further stated that "if you're just going to count numbers then you need to take how many and divide it by some measure of how much work was going on." (Tr. 2536, Owen 10/11/83). The assumption made by Mr. Owen is that the other plants under construction which were evaluated by SALP were at varying levels of activity.

Mr. Dick was cross-examined on the subject by Palmetto and stated that the thing he remembers about the SALP Report is that Applicants program was adequate, even though Catawba was rated below average. Palmetto even acknowledged that

everybody is adequate, because if you weren't adequate, they [NRC] wouldn't let you keep building it. That is true of every unit in here. [NUREG-0834]. Because by definition, if they found that you weren't adequate, they would take your construction permit away or make another change in how you do business. (Tr. 5123, Guild 10/27/83).

The Board, having reviewed the applicable testimony and exhibits, concludes that Palmetto's characterization that Applicants' below average rating in the 1981 SALP Report is indicative of an overall failure to demonstrate that the Catawba plant has been built in compliance with 10 CFR Part 50, Appendix B is without merit.

The Board's conclusion is based upon the fact that the 1981 SALP Report clearly was not intended to determine whether licensees should lose their licenses or operating plants be shut down or construction stopped. Palmetto itself acknowledges this fact as well by stating that Catawba is adequate. In addition, the Board supports its conclusion by the fact that Applicants' uncontroverted testimony shows that all deficiencies identified by the NRC in the 1981 SALP Report were corrected; that Applicants have received good marks on QA at Catawba in subsequent SALP Reports; and that Applicants were concerned that Catawba had received a below average rating and did something about it. The Board finds that the 1981 SALP Report should not be used to judge Applicants' compliance with 10 CFR Part 50, Appendix B.

B. NRC Staff Inspection Report
No. 50-413, 414/81-02
[PA PFF ¶¶16-20 (pp. 46-49)]

Palmetto Alliance, relying upon an NRC Staff inspection report which it fails to identify, would have the Board find that Applicants have failed "to provide reasonable assurance that the Catawba plant has been built to any rational standard." (PA PFF 16-20, pp. 46-49). Palmetto's proposed finding is void of any record support whatsoever. However, the Board on its own initiative has determined the NRC Staff inspection report discussed by Palmetto Alliance may in fact be Attachment 25 (NRC Staff Inspection Report 50-413, 414/81-02) to NRC inspector Van Doorn's prefiled testimony (Staff Exh. 7; Tr. 9236-37, Johnson 12/2/83).

The record shows that NRC Staff inspection report 50-413, 414/81-2 dated April 10, 1981 was the result of a special inspection by the NRC at Catawba during the period January 26-February 6, 1981 (Staff Exh. 7, Attachment 25; Tr. 9356, Maxwell 12/2/83). NRC inspector Bryant testified that this special inspection was planned as far back as October of 1980 (Tr. 9498, Bryant 12/5/83). The reason for this special inspection was that the NRC wanted to "conduct some trial team inspections, construction team inspections at sites" (Tr. 9499, Bryant 12/5/83). The NRC

selected two sites in each Region to conduct these inspections. The Catawba site was one site selected in Region II (Id.). Catawba was selected not

because they were bad, because they were good, but the organization was one thing, who the architect-engineer was, who the nuclear steam supplier was, who the contractor was, various and sundry things, to try to get some sort of comparison around the country. [Id.].

The NRC inspection report which documents the inspection identified five violations of 10 CFR 50 Appendix B criteria by Applicants regarding the clarity and completeness of NCIs, the adequacy of resolutions of NCIs and the reportability of NCIs (Staff Exh. 7, Van Doorn, Attachment 25). Of the five violations of Appendix B one was a severity IV, three were severity V, and one was a severity VI. The NRC's severity level designations at the time of this Notice of Violation were from I to VI with severity levels I-III being violations which "would constitute an immediate threat to the health and safety of the public." (Tr. 9648, Bryant 12/5/83). Severity level IV-VI indicated less significant violations (Tr. 9650, Bryant 12/5/83). No civil penalties were attached to this Notice of Violation. (Staff Exh. 7).

As a result of the NRC's inspection, Applicants conducted an engineering review of approximately 11,000 NCIs which the NRC found to be a satisfactory response to its concerns and which subsequently resulted in its closing out the matter. (Tr. 9814-16, Bryant, Van Doorn 12/16/83).

The Board does not adopt Palmetto's argument that the NRC's inspection in January-February 1981 at Catawba demonstrates Applicants' continuing failure to provide reasonable assurance that the Catawba plant has been built to any rational standard. Quite the Contrary, the NRC inspection resulted in several violations of a minor nature. The Applicants' response to that inspection, which encompassed, among other things, an engineering review of approximately 11,000 NCIs was accepted by the NRC. Such is evidence that the NCIs were adequate to document deficiencies in construction and thus does not support the proposition the plant is not built to "any rational standard." The Board finds no merit to Palmetto's argument.

C. QA Independence [PA PFF ¶¶21-38 (pp. 50-58)]

Under the heading "Organizational Flaws in Duke QA" (PA PFF ¶¶21-38, pp. 50-58), Palmetto challenges the organizational structure of QA at Catawba. Palmetto would have the Board find as a fact that under this organizational structure, the QA Department now lacks, and

has lacked in the past, the requisite independence to discharge its role of assuring the quality of construction. (PA PFF ¶23, pp. 50-51). Generally, Palmetto proposes that the Board find that:

- (A) There is evidence of a failure to effectively initiate and support QA policies in the face of cost and schedule pressures (PA PFF ¶23, p. 51);
- (B) The AEC's questions about this organization prior to approval were an "early warning sign" of the organization flaws (PA PFF ¶¶24-28, p. 51-52);
- (C) The Company did not properly implement the QA plan approved by the AEC (PA PFF ¶28, p. 53);
- (D) Quality control inspectors remained in the Construction Department from 1974-1981, contrary to promises made to AEC (PA PFF ¶30, p. 53); and,
- (E) The evidence demonstrates that the Construction Department directed the work of quality control inspectors in all significant respects (PA PFF ¶30, p. 54).

This Board has previously ruled that inquiry into prior NRC approvals of Applicants' organizational structure was not germane to this proceeding; inquiry was permitted for foundation purposes. (Tr. 1927; Apps. PFF ¶32, n.47, p. 163). The Board remains of this view. However, inasmuch as an analysis of these proposed findings demonstrates that such are not substantiated by the evidence, and do not support the conclusion that Duke's organizational structure violates the Appendix B criteria, we have addressed them.

PA PFF ¶23 - Palmetto would have the Board express "considerable skepticism" regarding Applicants' assertions that the QA Department is independent because of the integrated organizational structure. (p. 51). This Palmetto finding, like many others, is not supported by any reference to the record. The conclusions Palmetto would have the Board draw from these statements are not supported by the record evidence.

To explain the "skepticism" with which it regards Applicants' assertions of an independent QA program, Palmetto first cites Mr. Owen's role as the corporate officer responsible for both the Construction Department (with its cost and schedule considerations), and the Quality Assurance Department (with its responsibility for quality). Second, Palmetto cites the alleged "evidence of [Warren] Owen's failure to effectively initiate and support quality assurance policies in the face of cost and schedule pressure" (PA PFF ¶23, pp. 50-51), and would have us find that this failure "heightens our doubts about the effectiveness of Duke's organization."

This finding accurately states that Mr. Owen is responsible for Construction and Quality Assurance. However, the record is absolutely clear that the Construction, Design and Quality Assurance Departments are all headed by separate independent managers who all report to Mr. Owen (Apps. Exh. 1, Owen pp. 3-4; Apps. Exh. 2,

Grier, pp. 5-6, 8-9; see Applicants' Proposed Findings, pp. 148-152 and citations therein.) In particular, the record is clear that Applicants' Corporate QA Manager has the requisite independence to implement the QA program. (Apps. Exh. 2, Grier, pp. 8-9).

Mr. Owen explained that the Appendix B Criteria required QA independence from the line (i.e., craft) organization that is responsible for the work that the QA employees review. (Tr. 2029, Owen 10/6/83). Palmetto appears to advocate some kind of complete organizational independence of the QA function. The structure that Palmetto appears to advocate would violate Criterion I, which provides in pertinent part:

The Applicant shall be responsible for the establishment and execution of the quality assurance program. The applicant may delegate to others, such as contractors, agents or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but shall retain responsibility therefore.

* * *

Such persons and organizations performing quality assurance functions shall report to a management level such that this required authority and organization freedom,^{3/} including sufficient independence from cost and schedule when opposed to safety considerations, are provided. Because of the many variables involved, . . . the organizational structure for

^{3/} Authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions.

executing the quality assurance program may take various forms. . . (emphasis supplied) (10 C.F.R. Part 50, App. B).

Even an independent contractor performing QA functions would report to a high level of Applicants' management, and management would be responsible for QA. Responsibility for construction and all other activities necessarily come together at some level of management. Under Palmetto's argument, even the independent contractor would lack independence because it would report to Applicants' management.

Criterion I recognizes that differing organizational structures may be employed to implement quality assurance functions. Palmetto has offered no evidence to show that Applicants' structure fails to satisfy this Criterion. This Board must base its findings on the record evidence and the logical inferences to be drawn from the evidence. Conclusory assertions of the nature advanced by Palmetto, without clear and accurate references to the evidence, are of little value to the Board.

PA PFF ¶¶24-29 - The AEC staff raised questions about the Applicants' organizational structure prior to approving the QA Program. Palmetto characterizes these questions as an acknowledgement by the AEC Staff of "significant early warning signs of the organizational flaws" in the QA Program. (p. 51). Based on the Board's review of the evidence, this characterization is simply

not correct. The document Palmetto interprets in these proposed findings is an excerpt from a Safety Evaluation Report (SER), which is the Staff's evaluation of Applicants' QA Program at the construction permit stage of the Catawba licensing proceedings. (Palmetto Exh. 1). The SER states that Applicants' "QA Program complies with the requirements of Appendix B to 10 CFR and is acceptable for the design and construction" of Catawba. (Palmetto Exh. 1, p. 5). This acceptance was subject to several concerns that had been resolved, but which remained to be appropriately documented by Applicants. Those concerns, as clearly set forth in the SER, were:

1. Clarification of the independence, responsibilities, authorities, and specific routine duties of the electrical, mechanical, welding/NDE, and civil inspectors.
2. Documentation of the position that the QA Managers receive their policy direction, instructions, and orders from the Corporate QA Manager.
3. Documentation of Duke Power Company's definition of the terms "administrative reporting" and "functional reporting."
4. Documentation of DPC's policy on evaluation of the performance of DPC's QA personnel, including the right to veto vested in the Corporate QA Manager.
5. Documentation of provisions for assuring adequacy of QA effort between the present time and completion of appointments to recently created QA positions.
6. Documentation of the fact that the Construction QA Manager, and other QA Managers, have not only the authority, but

also the responsibility, to refer unresolved problems to the Corporate QA Manager.

7. Documentation of provisions for requiring and verifying system completeness and acceptance during the end of the construction phase and during the operational test program up to the time of but not including initial fuel loading.

(Palmetto Exh. 1, pp. 5-6).

The SER clearly states with respect to the organization, "Pending acceptable documentation of the above areas by DPC in a forthcoming amendment, we conclude that DPC's organizational arrangements for QA, . . . comply with the requirements of Appendix B to 10 CFR 50, and are acceptable." (Palmetto Exh. 1, p. 3).

Palmetto finding 24 correctly states that the Staff questioned the acceptability of the organizational arrangement wherein the positions of Corporate QA Manager and Senior Vice President for Engineering and Construction were held by the same person, but fails to note that this matter was resolved to the Staff's satisfaction by the appointment of a separate QA Manager. (Palmetto Exh. 1, p. 2). Similarly, Palmetto finding 24 correctly points out that the Staff questioned the independence and authority of the departmental QA managers who reported administratively to the head of the line department, but functionally to the Corporate QA Manager. However, this

proposed finding fails to note that in the same document, the Staff accepted this arrangement based on amendments to the QA program which

1. Defined administrative reporting ('for timekeeping and payroll purposes, obtaining clerical help, and general services assistance');
2. Clarified that functional reporting denotes that the departmental QA Managers receive their technical and policy direction from the Corporate QA Manager; and
3. Clarified that the performance of the departmental QA Managers was to be evaluated by both the Corporate QA Manager and the line department head, and in the event of a dispute over the evaluation of the departmental QA Manager, the Corporate QA Manager has the right to veto. (Palmetto Exh. 1, pp. 2-3).

Palmetto's characterization of these staff concerns as "early warning signals of . . . organizational flaws" goes beyond advocacy of position and reaches the point of misrepresentation, particularly where, as here, the document relied on explains the Staff's concerns and the basis for its acceptance of the QA organizational structure. Proposed findings of this nature are of little assistance to the Board.

Palmetto finding 25 correctly states that the Staff was concerned over the lack of clear definition of the independence, responsibilities, authorities and specific duties of the electrical, mechanical, welding, and civil inspectors (the QA inspectors). However, Palmetto fails

to note in this finding that in the same paragraph wherein it expressed this concern, the Staff explains the basis for the resolution of this concern: the "inspectors perform objective acceptance inspections and are full time inspectors who are independent from the construction and production craftsmen and the production/construction foreman." (Palmetto Exh. 1, p. 3).

Palmetto finding 26 states that the Staff conditioned approval of the QA program on the satisfactory resolution of the questions and concerns the Staff identified. As can be seen from the language of the SER, this is not accurate. The Staff approved the QA program subject to receipt of documentation of the clarifications which resolved the Staff's questions and concerns.

Palmetto finding 26 adds that after "extensive discussion of this matter," the Company committed to appointing a full-time corporate QA Manager "independent of the Engineering and Construction Vice Presidency." (p. 52). This statement points up two additional inaccuracies in this proposed finding. First, it conveys the impression that the appointment of a full-time QA Manager was the basis for the Staff's acceptance of the Applicants' QA Program. The SER states:

As a result of extensive discussion of this matter, DPC has committed to appoint a full time Corporate QA Manager by no later than July 1974 and has otherwise clarified delineation of staffing and assignments that appear to

safeguard against dilution of QA effort during this interim period of reorganization. (Palmetto Exh. 1, p. 2).

The Staff sought a series of clarifications and delineation of staffings and assignments, one of which was the appointment of a full-time QA Manager. Second, Palmetto refers to the appointment of a QA Manager "independent of the Engineering and Construction Vice Presidency." (p. 52). This statement does not accurately reflect the considerations set forth in the SER. The Staff stated that it "questioned the acceptability of this organizational arrangement, wherein the same individual has multiple duties, to effectively implement the QA Program." (Palmetto Exh. 1, p. 2). Palmetto's emphasis on independence is misplaced. Based on our review of the SER, the Staff appeared to be concerned that the head of QA have sufficient time to implement the QA Program, unhindered by other responsibilities.

Palmetto finding 27 states that the Staff "insisted upon interim measures "to safeguard against dilution of the QA effort" pending this reorganization," and that the Staff further premised its approval of the QA Program on "satisfactory . . . clarification of the independence, responsibilities, authorities, and specific routine duties of the" QC inspectors. (p. 52). This proposed finding, like others, does not accurately reflect the Staff's views as expressed in the SER. Palmetto has taken the phrase

"to safeguard against dilution of the QA effort" out of its context in the SER. Palmetto's proposed finding would convey the impression of a failing QA Program struggling for Staff approval. In reality, the Staff sought various clarifications as a part of its approval of an ongoing QA program for a new project. (Palmetto Exh. 1, pp. 5-6).

Palmetto finding 28, like others pertaining to the SER, continues the erroneous impression that grave changes in Applicants' QA Program were required before Staff approval was obtained. The SER explains the Staff's concerns and how Applicants' actions satisfied those concerns. Yet Palmetto characterizes this process as the Staff's approval being "dependent" on further actions. The further actions were merely to document what the Staff and Applicants understood.

Palmetto also states that Applicants' QA program "only then existed as a written proposal," and that "actual implementation by Duke Power Company, however, did not follow this theoretical plan." (p. 53). This assertion is simply incorrect. At the time of the Catawba construction permit proceedings, Duke Power Company was nearing completion of the Oconee Nuclear Station and was actively constructing McGuire Nuclear Station (Apps. Exh. 9, Wells, p. 3, 5, 7; Tr. 1921, 1930, 1935, Owen, 10/5/83). The QA program was in place and functioning at

these facilities. While the QA effort was being reorganized, it was not a "theoretical plan." Palmetto cites no evidence to support these conclusory assertions.

Palmetto Finding 29 continues the misrepresentation of the SER when it states that "It is indeed unfortunate that the Commission Staff did not act more forcefully at the time its skepticism arose concerning the validity of Duke's "administrative" versus "functional" reporting scheme for quality assurance personnel." (p. 53). The SER did not express skepticism concerning the validity of the dual reporting role for QC inspectors. The Staff was "concerned over a lack of clear definition of the independence, responsibilities, authorities and specific duties" of QC inspectors. That Applicants provided the necessary definition and clarification in response to satisfy the Staff's concern is evidenced by the subsequent NRC approvals of Applicants' QA program (see Apps. PFF, p. 163, n.47).

PA PFF ¶¶30-31 - Palmetto proposed finding 30 states that "[i]n spite of Duke's contrary promises to the . . . Staff, the quality control inspection work force remained organizationally subordinate to the Construction Department for the first seven years of construction at Catawba, from 1974 until 1981." (p. 53). This finding further states that the Project Manager was charged with cost and scheduling responsibilities, as well as

supervising the quality control manager. These proposed findings, like others, distort the evidence. First, the proposed finding conveys the impression that Duke Power Company did not do something it committed to do. Under Applicants' QA Program, QC inspectors had a dual reporting relationship that was approved by the Staff subject to specific, agreed-to clarifying actions. (Palmetto Exh. 1, pp. 2-3). For "administrative" purposes, QC inspectors were, to use Palmetto's terms, "subordinate to the Construction Department." Functionally, the QC inspectors were subordinate to the QA Department, which provided technical and policy direction for the inspectors. This is the organizational structure the Staff approved. As the evidence demonstrates, this structure was in effect until February 1981 when the QC inspectors were transferred to the QA Department, reporting functionally and administratively to QA. Palmetto's statement, "[i]n spite of contrary promises," conveys an erroneous impression, and misrepresents the evidence.

The reference to the similar dual reporting relationship for the manager of QC inspectors does not demonstrate any failure by Applicants to comply with commitments to the Staff. This arrangement was clearly identified and approved by the Staff in the SER (Palmetto Exh. 1, p. 2-3).

Palmetto states in Finding 31 that "[i]t was not until 1981 that Duke reassigned the quality control inspectors" to report both administratively and functionally to the QA Department. Contrary to the erroneous impression Palmetto seeks to convey, there was no requirement before or after 1981 that QC inspectors report administratively to the QA Department. Palmetto's misrepresentation of the evidence is amply demonstrated by its statement that "Mr. Owen's testimony offered no explanation for the failure to assign QC inspectors to an independent quality assurance department for all those years." (pp. 54-55). To make this misrepresentation even more egregious, Palmetto quotes only a portion of Mr. Owen's response when asked why the QC inspectors were kept in the Construction Department. Mr. Owen's complete response was:

Why? Well, you could ask why we didn't move them. We just didn't. I don't recall any discussion about moving them or not moving them until we decided that we would like to give them more career opportunities within a given department, without having them to have to move from one department to another. So we enlarged the QA department, the numbers of people, more management opportunities, supervising opportunities for the growth of people. (Tr. 1945, Owen 10/5/83).

Palmetto offers only the first two sentences as Mr. Owen's response.

These Palmetto findings, like others, provide no reference to the evidence. Palmetto simply makes broad conclusory assertions without any basis in the record or NRC regulations. For example, in finding 31, Palmetto states:

Duke's Warren Owen explains that the QC inspectors were assigned to the Construction Department so '(They) could be scheduled to be available when they were needed for the construction work.' Owen, 1943. The evidence of actual interaction between inspectors and their management, however, demonstrates beyond doubt that the Construction Department directed their work in all significant respects. Although Duke's definition of 'functional' reporting attempts to imply that 'functional' reporting is the primary substantive work-directing relationship, this is a false view of the actual practices. It is only common sense to acknowledge that the organization which hires, fires, promotes, demotes, sets pay, schedules and supervises your work - to whom you 'administratively report' in Duke's parlance - calls the real tune. The fact that written QA procedures and policies may issue forth from the Quality Assurance Department does little to alter the fundamental command relationship of inspectors to the Construction Department. (p. 54).

Palmetto fails to cite any evidence of the Construction Department directing the work of QC inspectors "in all significant respects," asserting instead that it relies on "common sense," to support this statement. The record amply demonstrates that the QA Department established the procedures used by inspectors, trained the inspectors to carry out their inspection activities, and coordinated surveillance and audit activities to assure that the QA Program is implemented

effectively (Tr. 1938-39, Owen, 10/5/83; Tr. 2296, Grier 10/7/83; Apps. Exh. 2, Grier, pp. 9-10, 16, 23-31; Apps. Exh. 18, Morgan, pp. 1, 3-8; Apps. Exh. 19, Shropshire, pp. 1-2, 4-5; Apps. Exh. 14, Davison, pp. 18-19).

PA PFF ¶32 - Palmetto continues its misrepresentations when it states that the removal of W.S. Lee as Corporate QA Manager and the appointment of J.R. Wells to fill that position was "spurred on by order" of the Appeal Board. Palmetto quotes language from the Appeal Board decision in the McGuire licensing proceeding, conveying the erroneous impression that this was an issue in that proceeding. The language Palmetto quotes is from a footnote in the decision. The relevant text in the decision states:

The certified record includes evidence introduced by the regulatory staff which supports its position that the Applicants' quality assurance organization complies with the criteria in Appendix B.

A footnote^{4/} to this text discusses the Staff's

^{4/} The entire footnote provides as follows:

See testimony of Mr. Vassallo after Tr. 3507 at p. 4 and Tr. 3571, 3572, 3574, 3655 and 3656.

Mr. Vassallo also testified (Tr. 3608-3609) that the Staff approval of the applicant's current quality assurance organization was with the understanding that there is going to be a separate corporate quality assurance manager. The record reveals that the position initially is being filled by the applicant's Vice President for Engineering and Construction who is acting in a dual capacity. The regulatory staff has the duty and the responsibility to

(footnote continued)

understanding that a separate corporate QA manager would be appointed. The Appeal Board noted in this footnote that the QA Manager should be appointed within one year.

PA PFF ¶¶32-38 - These proposed findings address Palmetto's views of the QA personnel changes which occurred during the period the welding inspector concerns were being addressed. As is the case with its other proposed findings, Palmetto takes considerable liberties with the record in discussing J.R. Wells, Larry Davison, and Charles Baldwin. Palmetto's proposed finding 33 states:

The sequence of events and the regulatory involvement in Duke's appointment of Mr. Wells as the first "independent" corporate quality assurance manager, when considered in light of the evidence of his performance in that position, and the circumstances of his rather sudden departure, lead us to seriously question whether Duke Power has done anything more than go through the motions of establishing the independent quality assurance manager and the program he ostensibly managed. (p. 56).

(footnote continued from previous page)

assure that the applicant appoints a separate corporate quality assurance manager in a timely manner. Otherwise, the 'understanding' (Tr. 3609) which the staff had in that regard will not be very meaningful. For this reason, we believe that the Corporate Manager for QA position should be filled as quickly as possible, with the period of one year (which commenced in January 1973) being the outside limit for such action. [Duke Power Company (William B. McGuire Nuclear Station, Units 1 & 2), ALAB-143, 6 AEC 623, 625 n.11 (1973)].

Palmetto provides no record evidence to support this statement. It is clear from our previous discussion of the SER that the "regulatory involvement" in no way indicates inadequacies in Applicants' QA Program.

Palmetto also attacks Mr. Wells' performance as lackluster. The statement concerning "the evidence of [Mr. Wells] performance" refers to no record evidence, and we are aware of none, which would support the impression Palmetto seeks to convey. Similarly, Palmetto would have the Board draw negative inferences from Mr. Wells' assignment to the Institute for Nuclear Power Operators (INPO) in January 1982. Palmetto asserts that Mr. Wells went to INPO because of his performance, and that Mr. Owen "virtually concedes the point" while responding to Judge Foster's question whether Mr. Wells was assigned to INPO "to help clear up the problems in the QA Department" (Tr. 2976, Foster 10/10/83). Palmetto's editing of this quotation in its proposed finding alters the meaning of the quote. The complete exchange between Judge Foster and Mr. Owen was as follows:

- Q. We heard quite a bit about the circumstances that seemed to be developing rapidly at the time of Mr. Wells' assignment to INPO. I'd just like to ask you personally whether the move that you made at that time was to help clear up the problems in the QA department?
- A. (Witness Owen) Well, it's a hypothetical kind of situation because, as I pointed out, I had felt I had that obligation to INPO. I would say this, that when I was considering and talking with the other senior officers

in the company and the people that report to me concerning the replacement, I looked very carefully for someone that I thought had exceptional human relations skills in addition to the technical background --

Q. I'm not so much interestd in his going to INPO as I am relative to what was going on in the QA department at the time.

A. That wasn't my reason for doing it, but I think I would be less than honest if I didn't say that I thought George Grier had exceptional human relations skills and would help in that situation.

That is not to say that Mr. Wells doesn't have strong confidence. Like all of us, me included, sometimes I don't have all the skills I need for a particular job. But I did not make the move for that reason, and I don't know what would have transpired had I not made that move. (emphasis supplied).
(Tr. 2976-77, Owen, 10/13/83).

Palmetto's quotation of this exchange deleted the second question, which makes it clear that Judge Foster is referring to the QA Department, rather than INPO, and inaccurately quoted Mr. Owen's statement, "that wasn't my reason for doing it . . . "^{5/} Contrary to Palmetto's assertions, the record clearly reflects that Mr. Wells was not assigned to INPO because of the welding inspector concerns. Mr. Owen decribed in detail his efforts during this same period to establish the program at INPO to evaluate nuclear construction projects (Tr. 2823-32, Owen 10/12/83). Once established, the program required support from the participating utilities, including

^{5/} Palmetto's quotation states, "that was was reason for doing it. . . ." (p. 57).

loaned employees (Tr. 2825-26, Owen 10/12/83). The president of INPO requested that Mr. Owen commit in early January 1982 to lend a senior quality assurance employee to the INPO project. Mr. Owen made this commitment, and assigned Mr. Wells to INPO. Mr. Wells spent eighteen months at INPO establishing and implementing the criteria for evaluating construction projects.

Mr. Owen noted that in filling the position, he was concerned about the human relation aspects and thought that Mr. Grier would help the current situation in the QA Department. Palmetto seeks to turn these facts around to suggest that Mr. Wells lacked the skills to be Corporate QA Manager and was assigned to INPO because of the welding inspector concerns and his lack of human relations skills. The Board is unable to agree with this reasoning.

In its proposed finding 36, Palmetto remarks that Larry Davison remains a "noteworthy survivor of the fall-out by the welding inspector revolt." Under Palmetto's logic, where Mr. Wells' assignment to INPO "evidences Duke management's belated identification of a longstanding problem, Davison's continued assignment, apparently with the fullest endorsement of his supervisors, can only confirm that Davison's style of quality assurance management is not perceived by Duke Power as a problem at all." (p. 57). However, Applicants demonstrated that Mr. Wells was assigned to INPO for reasons totally unrelated

to the welding inspector concerns. The assignment to INPO evidenced Applicants' management's confidence in his abilities. As for Mr. Davison, he remains at Catawba with the full confidence of Applicants' management (Tr. 4329, Grier 10/21/83). Applicants' witnesses, including Mr. Davison, acknowledged that management was in part responsible for the communications problems at Catawba which gave rise to the welding inspector concerns, and the record is clear that Applicants took prompt and reasonable actions once this communications problem became evident. (Apps. Exh. 1, Owen, pp. 16-17; Apps. Exh. 2, Grier, pp. 54-55; Apps. Exh. 14, Davison, pp. 11,33-37).

Palmetto's proposed findings 37^{6/} and 38 contain an inaccurate description of the evidence as it relates to other personnel changes. For example, Palmetto's proposed finding 37 states that Mr. Davison "was quick to urge the sacrifice of his loyal associate, Charles Baldwin" when Mr. Davison recommended that Mr. Baldwin switch positions with Mr. Allum. It would require considerable imagination to interpret the facts to suggest that Mr. Davison's recommendation was to "sacrifice" Mr. Baldwin. The record is clear that there was a communications problem between Mr. Baldwin and some of the welding inspectors. Mr. Davison recommended that Mr. Baldwin switch positions with

^{6/} Palmetto mentions the welding inspector allegations of lack of support for the QA program. The lack of support findings are addressed in detail below.

Mr. Allum in hope of improving communications. (Apps. Exh. 14, Davison, p. 32). Palmetto would have us draw inferences from this circumstance which are not supported by the evidence.

The Board has considered Palmetto's reasoning in these proposed findings, as well as the relevant evidence, and concludes that the record does not support Palmetto's findings relating to personnel changes at Catawba.

D. Lack of Support [PA PFF ¶¶39-41 (pp. 58-63)]

Palmetto, relying upon the statements of various welding inspectors, suggests that QA supervision has failed to support the welding inspectors. (PA PFF ¶39, pp. 58-63). On the basis of such statements Palmetto asks this Board to find that these inspectors do not have sufficient authority or organizational freedom to do their job, and that accordingly the plant cannot be deemed safe (PA PFF ¶40, p. 63). As set forth below, the record simply does not support such a finding. All of the welding inspectors testified that they were able to perform their inspection tasks, and that on the basis thereof, they believed that the plant was safe.^{7/} We turn now to each of the welding inspectors.

^{7/} See Applicants' Proposed Findings, p. 23, and citations therein; p. 375, n.83, and citations therein; and p. 375, n.84 and citations therein.

John R. Bryant - Palmetto cites a portion of Mr. Bryant's prefiled testimony which makes the point that in his view "direct violations of QA procedures went uncorrected and inspectors felt they were unsupported by upper management in carrying out their duties." (p. 54, citing Apps. Exh. 30, Bryant, p. 6-7). Mr. Bryant testified that he did not believe that his concerns affected the safety at the plant, and his concerns did not reflect a belief that the project was not being constructed safely. In addition, Mr. Bryant indicates that he is not aware of any deficiencies in construction or in the QA Program which would cause him to question whether the plant is safely built (Apps. Exh. 30, Bryant, pp. 6-7).

The purpose of the QA Program is to assure that the plant is constructed in accordance with design. Mr. Bryant's testimony concerning the safety of construction and his unawareness of any significant construction deficiencies weigh heavily against the conclusions Palmetto would have us reach.^{8/}

^{8/} Mr. Bryant also states: "I have not had any meaningful questions or concerns about the safety of the construction of the plant due to knowing that there is a large scale of overdesign and by trusting that Duke has competent Design Engineers, who are responsible for designing a safe plant" (Apps. Exh. 30, Bryant, p. 6). We interpret this comment to refer to the conservatism employed by the company in its design and construction practices.

William Burr - Palmetto relies on an excerpt from Mr. Burr's prefiled testimony which states that inspectors were not getting support from QA management to enforce the QA Procedures (p. 60). Mr. Burr was asked in his prefiled testimony to explain what he was trying to communicate by his concerns. He responded:

I was trying to communicate the lack of support that the welding inspectors were continually experiencing. It was difficult to get management to listen to my views when interpretation of procedures was involved. (Apps. Exh. 29, Burr, p. 4).

Mr. Burr also testified that he continued to perform his duties as an inspector to the best of his abilities (Apps. Exh. 29, Burr, p. 4); that the QA Program was effective at Catawba (Apps. Exh. 29, Burr, p. 6); and that he is unaware of any deficiencies in construction or in QA which would cause him to question whether the plant is safely built (Apps. Exh. 29, Burr, p. 7; Tr. 5950, Burr 11/3/83).

Boyce Cauthen - Palmetto cites Mr. Cauthen's response when asked to state his understanding of the welding inspector concerns. Mr. Cauthen stated:

We, the welding inspectors, felt like we had lack of support from QA management, and some QA procedures were not being followed. (Apps. Exh. 32, Cauthen, p. 2).

During the hearing, Mr. Cauthen testified that based on the work he inspected in the plant, the plant is constructed safely (Tr. 6404, Cauthen 11/8/83; Tr. 6495-

96, Cauthen 11/9/83); that his reference to failure to follow procedures refers to his problems with Ed McKenzie's crew (Tr. 6507-08, 6533-35, Cauthen 11/8/83); that the QA program was working, but not the way the inspectors felt it should work (Apps. Exh. 32, Cauthen, p. 6); that when he refers to the QA program not working, he is referring to inspectors being overridden by QA supervision (Tr. 6541, Cauthen 11/9/83); that he knows of no instance when construction has overridden QA and required substandard work to be accepted (Tr. 6552, Cauthen 11/9/83); that he has never approved any faulty work (Tr. 6573, Cauthen 11/9/83); and that he is not aware of any work that would render the plant unsafe (Tr. 6575-76, Cauthen 11/9/83).

Charles Crisp - Palmetto cites portions of Mr. Crisp's prefiled testimony which states that management seemed to be influenced by the Construction Department in resolving QA craft disputes; that he was concerned that inspectors have the freedom to perform their jobs without influence from craft; and that management should support the inspectors (App. Exh. 57, Crisp, pp. 2-3). Mr. Crisp's prefiled testimony also states that he does not believe that the concerns reflect a breakdown in the QA program:

"I feel we have at present and have always had an excellent QA program here at Catawba. There were some areas which needed some improvement, like communications between inspectors and man-

agement, yet there was never a situation in which the program was not working, to my knowledge. [Apps. Exh. 57, Crisp, p. 5].

Mr. Crisp also testified that in his view Catawba "is built with more quality and safety than the codes require" (Apps. Exh. 57, Crisp, p. 5); that the QA program has been effective at Catawba; and that he is not aware of any deficiencies in construction or in the QA Program which would cause him to question whether Catawba is safely built (Apps. Exh. 57, Crisp, p. 6).

Vernon Godfrey - Palmetto cites a portion of Mr. Godfrey's concerns which states that in his opinion, Mr. Davison and Mr. Baldwin "[do] not mind changing things if they seem to hamper production or cause waves with the construction department," and that the inspectors have had a hard time trying to implement the procedures (p. 61). In his prefiled testimony, Mr. Godfrey was asked to explain what he was trying to communicate by his concerns. Mr. Godfrey responded:

The intent of some of the QA procedures was not being met. We were trained to follow the QA Procedures to the letter. There were times when we were told not to follow certain procedures, but we were not given an adequate explanation for not following the procedures. These deviations from procedure were not frequent, but the deviations were not explained to us. I did not feel comfortable signing-off on an item where there was a deviation from procedures that was not fully explained to me. This is what I was trying to communicate to management. (Apps. Exh. 56, Godfrey, p. 3).

Mr. Godfrey also testified that to his knowledge the welding inspector concerns would not affect the safe operation of the plant, that the QA program was working in terms of identifying deficiencies, and that he was not aware of any deficiencies in construction or in QA which would cause him to question whether Catawba was safely built (Apps. Exh. 56, Godfrey, p. 4-5).

Lindsay Harris - Palmetto relies on Mr. Harris' statement that his concerns were expressed "to try to get more support in making our jobs as welding inspectors more efficient, precise and thorough." (p. 61) (Apps. Exh. 67, Harris, p. 3). Mr. Harris' prefiled testimony dispells any questions about the nature of his concerns. He states that "[a] breakdown in the QA Program never existed at Catawba"; that the QA Program has been effective; that his concerns did not involve the quality of construction or the safety of the plant; and that he is not aware of any deficiencies in construction or in Quality Assurance which would cause him to question whether the plant is safely built (Apps. Exh. 67, Harris, p. 4).

Larry Jackson - Palmetto relies on Mr. Jackson's statement that "craft seemed to have so much pull over the QA Department," and that "QA supervisors and managers swayed toward craft in resolving NCI's and other problems" (Apps. Exh. 61, Jackson, p. 2). Despite his concern over a perceived lack of support from his supervision, Mr.

Jackson disagreed with the characterization that the inspectors expressed concerns affecting the quality and safety of construction at Catawba:

I disagree. I feel like this plant could not be built any safer. I think Duke Power goes far past its means to be safe. They take no short cuts. They want things to be done right. It's our job to make sure that these things are done according to Duke Power's Procedures, ASME Codes and others. I think Duke Power Company has high quality personnel and this company goes to upper means to make sure that work done on this job is done within the guidelines of all the safety codes. (Apps. Exh. 61, Jackson, p. 4).

Mr. Jackson also testified that his concerns did not reflect a breakdown in the QA program and did not reflect a belief that the plant was not being constructed safely; that the QA Program has been effective while he has been an inspector; and that he is not aware of any deficiencies in construction or in QA which would cause him to question whether the plant is built safely (Apps. Exh. 61, Jackson, pp. 4-5).

John Rockholt - When asked to explain what he was trying to communicate by his concerns, Mr. Rockholt stated:

I was trying to inform Duke management that they have a communications breakdown, as well as a definite and intentional deterioration of the QA program here at Catawba. Examples of this deterioration in the QA Program are lack of support for the program from QA management, reducing the incentive to attract and retain the top qualified people, and reducing required qualifications and pay. (Apps. Exh. 31, Rockholt, p. 4).

Palmetto relies on this statement to support its proposed findings on the alleged breakdown in the QA program. When it is viewed in the context of his entire testimony, however we conclude that Mr. Rockholt's statement does not support Palmetto's position. While Mr. Rockholt believes that there was a deterioration of the QA Program, we do not believe that the record evidence supports this position. In fact, Mr. Rockholt testified that the "QA Program was working in so far as being sure the plant was safe"; that his concerns were not concerns about the quality and safety of construction; that his concerns did not reflect a belief that the plant was not being constructed safely; and that he is not aware of any deficiencies in construction or in QA which would cause him to question whether the plant is safely built (Apps. Exh. 31, Rockholt, pp. 6-7).

Gary Ross - Palmetto relies on Mr. Ross' explanation of his understanding of the concerns:

These concerns were instances where the inspector would find a breach of the procedure and could not get support by QA management to enforce the procedure. Also, one concern was being verbally forced into signing off items which did not meet procedural requirements. There was some concern about QA being swayed by construction, and QA not standing up when inspectors were harassed (Apps. Exh. 34,, Ross, p. 2).

Mr. Ross's testimony, like that of the inspectors, lends little support to Palmetto's position. It is abundantly clear that there were many concerns involving disagreements over interpretation of procedures. (See Apps. PFF pp. 402-408). This does not necessarily indicate a breakdown in QA or the acceptance of substandard work. Mr. Ross testified that the QA program was functioning properly in the sense of assuring safety (Tr. 6971, Ross 11/11/83); that all of his technical concerns had been satisfactorily resolved^{9/} (Tr. 6977-78, Ross 11/11/83); and that the plant was safely built (Tr. 7003-04, Ross 11/11/83).

These excerpts from the prefiled testimony relied on by Palmetto do not lead us to believe that the concerns expressed by welding inspectors reflect a breakdown in QA.^{10/} The record evidence indicates that there were

^{9/} Mr. Ross testified that at one time he had an unresolved concern, but it had subsequently been resolved (Tr. 7049, Ross 11/11/83).

^{10/} Palmetto also relies on excerpts from prefiled testimony of welding inspectors which was admitted as an offer of proof. Since this testimony was excluded from the evidence as cumulative, we will not rely on evidence admitted as an offer of proof. However, we have examined the excerpts cited by Palmetto, along with the complete testimony of these inspectors and conclude that these excerpts, like the others, do not support a finding of a breakdown or any other inadequacy in Applicants' QA program. Further, these inspectors, like those who testified, proffered testimony that the plant is constructed safely. See Apps. Exh. 71, Bumgardner, pp. 4-5; Apps. Exh. 75, Farrell, p. 4; Apps. Exh. 78, Jones, pp. 4-5; Apps. Exh. 79, Karriker, pp. 4-5; Apps. Exh. 82, McCoy, pp. 3-5.

communications problems at the Catawba site which resulted in these concerns (see Apps. PFF, p. 19-27). However, we cannot find, as Palmetto proposes, that these concerns "reflect organizational and management flaws in Duke's quality assurance program at Catawba." (p. 63). We find from the evidence, including the welding inspectors' testimony, that they functioned with sufficient authority and freedom to do their job, to identify quality problems, and to assure themselves that these problems were resolved in a manner that provides reasonable assurance of the safe construction of the facility.

E. Procedure Q-1 and Verbal Voiding
[PA PFF ¶¶42-62, (p. 64-73)]

Palmetto would have the Board conclude that Applicants have failed to comply with the Appendix B requirements by verbally voiding NCIs and discouraging the documentation of deficiencies as NCIs. Having reviewed Palmetto's proposed findings and the evidence, we are unable to find a violation of Appendix B. The following, more detailed discussion of Palmetto's specific proposed findings amply demonstrates why we reach findings different from those suggested by Palmetto.

PA PFF ¶¶42-44 - Palmetto would have us find that the previously discussed "organizational flaws" in Applicants' QA Program are illustrated by the application of procedures to control nonconformances as required by

Criterion XV.^{11/} We have previously rejected Palmetto's arguments concerning the organization of Applicants' QA program, and nothing in these proposed findings persuades us to change that decision. The question remaining is whether Applicants' measures to control nonconformances comply with Criterion XV. Palmetto's proposed findings do not persuade us that the evidence shows a violation of Appendix B.

In its proposed finding 43, Palmetto states that "[t]he primary quality assurance procedure used by quality control inspectors at the Catawba facility in the performance of their inspection duties is procedure Q-1, "Control of Non-conforming Items." (p. 64). In this same finding, Palmetto also states that Q-1 is the primary measure and procedure established at Catawba to control nonconformances. These broad assertions demonstrate Palmetto's unfamiliarity with the evidence. First, Q-1 is not the primary procedure used by inspectors in performing

^{11/} Criterion XV provides:

XV. NONCONFORMING MATERIALS,
PARTS, OR COMPONENTS

Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

their duties. Applicants introduced the eight volumes of QA procedures into evidence. These procedures set forth the criteria that inspectors apply during the course of their inspection activities. (Apps. Exh. 6, QA Manuals; Apps. Exh. 2, Grier, pp. 9-10, 26-31).

Second, Q-1 is not the primary "measure" or "procedure" established to control materials, parts, or components which do not conform to requirements. A number of QA procedures are used to establish this control. These procedures contain the criteria applied during the inspection. If it appears that the criteria is not met, i.e., there are materials, parts, or components which do not conform to requirements, the same procedure used in the inspection may detail how to resolve the nonconformance. In addition to Q-1, there are other procedures in place to resolve the nonconformances. Procedure Q-1 is only one method of resolving a nonconformance, and is generally limited to significant discrepancies. The other methods are hold points, process control, and Procedure R-2. (see Apps. PFF, pp. 377-382; Apps. Exh. 2, Grier, pp. 18-20, 40-41; Apps. Exh. 14, Davison, pp. 22-26). Palmetto notes that over 17,000 NCI's have been initiated at Catawba to document NCIs. Palmetto fails to note that in addition, more than 17,000 efficiency reports under procedure R-2 have been written,

and thousands of variation notices and other process control forms have been issued. (Tr. 9777-79, Van Doorn 12/6/83).

PA PFF ¶¶45-49 - In this group of proposed findings Palmetto discusses revisions to the scope of Procedure Q-1. It is not entirely clear, but it appears Palmetto would have the Board find, apparently based on the revisions to Q-1, that Applicants have failed "to control nonconforming conditions, [failed] to specify through written procedures the means [by] which such control is to be accomplished, and to see that such control of nonconformances is accomplished in fact in accordance with such documented procedures." (PA PFF ¶¶48-49, p. 67). However, the record does not support such a finding.

The scope of Q-1, up to Revision 16, provided as follows:

This procedure shall apply to QA Condition non-conforming items whose control is not covered elsewhere in this manual or the Quality Assurance Manual for ASME Code work. (PA Exh. 59, Procedure Q-1, Rev. 16).

Revision 17 was modified to add the following language to the scope:

Discrepancies discovered during pre-planned inspections may be identified and resolved in accordance with the process procedure or procedure R-2. (PA Exh. 59, Procedure Q-1, Rev. 17).

Palmetto's proposed findings refer to this revision as a "deviation in the scope of procedure Q-1," (PA PFF ¶47, p. 67) and apparently rely on this revision as the basis for Intervenor's proposed finding that "[t]he above described contortions of Duke's QA procedure Q-1, on their face, fall short of [the] regulatory requirement." (PA PFF ¶49, p. 67). The finding that Palmetto would have us make based on this revision is that there was a failure to comply with the requirements for controlling nonconformances.

Based on our familiarity with the evidence, we cannot make such a finding. This revision to Q-1 was adopted in response to comments from the NRC to the effect that NCI's were being used to document insignificant matters that could be better resolved through simpler procedures (see Apps. PFF, pp. 408-412; NRC Staff Exh. 5, Bryant, p. 21; Tr. 9847, Bryant 12/6/83; Tr. 2581-82, Grier 10/11/83). We see no evidentiary basis for a finding that this revision somehow "falls short" of regulatory requirements.^{12/}

^{12/} Palmetto also urges us to find that Applicants discouraged documentation of deficiencies (PA PFF ¶62, p. 73). Palmetto's proposed findings would have us confuse Applicants' effort to reduce the number of NCIs by handling the deficiencies in accordance with other procedures, with some inappropriate effort to simply reduce the number of documented deficiencies. We find no evidence to support a finding that there was any effort to discourage documentation of deficiencies (see Apps. PFF, pp. 376-392).

PA PFF ¶¶50-61 - These proposed findings address the subject of verbally voiding NCI's. Palmetto would have the Board find that verbal voiding "reflects extremely serious examples of actions by Duke Catawba management to circumvent the Applicants' commitments to comply with the requirements of Appendix B" (PA PFF ¶53, p. 70). We previously concluded that we could not find that verbal voiding was an improper practice and detailed the evidence which supported our conclusion (see Apps. PFF, pp. 395-401). We see nothing in Palmetto's proposed findings to suggest a different conclusion.

We think that our previous discussion of verbal voiding amply covers the subject and little else need be said. However, our review of Palmetto's proposed findings reveals numerous misrepresentations concerning the evidence which must be addressed.^{13/} In proposed finding 51, Palmetto states that certain revisions to Q-1 after January 1981 "specify that the person discovering the nonconformance shall insure that the NCI becomes a permanent part of the Catawba Quality Assurance

^{13/} In its proposed findings 52-53, Palmetto would have us find that verbal voiding "really means circumventing the QA documentation requirements by discarding offending NCI's." (PA PFF 52, p. 69). We see no basis for concluding that this practice, to the limited extent it existed, amounted to a circumvention of documentation requirements (see Apps. PFF, p. 395-398). Similarly, we cannot find, as Palmetto proposes, that discarding an invalid NCI is a violation of Appendix B.

documentation by obtaining a sequential serial number from Document Control and recording this number on the Q-1 forms." (PA PFF ¶51, p. 68-69). Our review of Q-1 indicates that a person originating an NCI may obtain a serial number at the origination stage (see Apps. PFF, pp. 388-391).

Palmetto argues that the record is inadequate to reveal how extensive the practice of verbal voiding was (PA PFF ¶60). We conclude, based on what we believe is a full and complete record, that it was not a widespread practice. Our finding is based on the testimony of welding inspectors and members of QA supervision (see Apps. PFF, pp. 398-401).

In its proposed finding 61, Palmetto would have us find that verbal voiding violated the explicit provisions of Q-1. Palmetto cites the paragraph from Q-1 that provides the instructions for the project QA engineer review of the NCI (PA Exh. 59, Procedure Q-1, Rev. 15, ¶5.1.4). This paragraph provides directions for disposition of invalidated NCI's. This provision cited by Palmetto is not the provision applicable to the review conducted by Mr. Davison and Mr. Baldwin. Mr. Davison performed the Senior Engineer review, which later became the Technical Review, performed by Mr. Baldwin. (PA Exh. 59, Procedure Q-1, Rev. 15, ¶5.1.2, and Rev. 16,

¶5.1.1(m)-5.1.2)(see Apps. PFF, pp. 388-390, 395-398). In sum, we are not persuaded by Intervenor's proposed findings in this regard.

F. QA Supervision Permitting Craft to Weaken QA Program

[PA PFF ¶¶63-73 (pp. 74-78)]

Palmetto Alliance would have the Board find that Applicants undermined QA by permitting craft to weaken the QA program at Catawba (PA PFF ¶¶63-69, pp. 74-77).

Palmetto Alliance's proposed findings are totally unsupported by the record and are inconsistent with the direct testimony of several witnesses, including Mr. McKenzie and Mr. Cauthen, whose testimony is cited by Palmetto Alliance as support for its proposal. Further, Applicants (Apps. PFF ¶¶404-410, pp. 413-418) and the NRC Staff (NRC Staff PFF, ¶¶203-215, pp. 102-108) refute Palmetto's proposed findings.

Palmetto alleges that "through all manner of tricks and ruses, McKenzie's crew avoids enforcement of the quality assurance program" (PA PFF ¶65, p. 75). However, Palmetto's conclusion is directly contradicted by the very witness it uses to support its proposition. Mr. Cauthen was questioned by Counsel for South Carolina as to whether he knew of any instances where construction had overridden

QA and required substandard work to be done. Mr. Cauthen said that to the best of his knowledge he knew of no such instance (Tr. 6552, Cauthen 11/9/83).

Palmetto Alliance, after reciting some facts, concludes that "the effect of so much flagrant disregard for quality assurance procedures by craft supervision was to make a contest out of the quality control inspection program" (PA PFF ¶¶ 67, p. 76), and supports its position by quoting Mr. Cauthen's prefiled testimony where Mr. Cauthen discusses his conduct and the conduct of Mr. McKenzie's crew. However, Palmetto Alliance does not include Mr. Cauthen's explanation of that statement in response to Judge Foster's question of whether Mr. Cauthen and Mr. McKenzie had kind of a game going on. Mr. Cauthen responded to that question "No sir. I had a job to do. Random inspection or whatever" (Tr. 6553, Cauthen 11/9/83).

Moreover, by way of the McKenzie example, Palmetto Alliance would have the Board conclude that this conduct was more the rule than the exception. Yet Palmetto Alliance fails to include Mr. Cauthen's response to Judge Foster's question as to Mr. Cauthen's relationship with other crews Mr. Cauthen inspected. In response to that question Mr. Cauthen stated that he had "caught them [other crews] on a few things. If I had problems with them, I'd go to the foreman, and it wouldn't take him but

a minute and he would be down on that fitter. If I had problems, he would straighten it out" (Tr. 6554, Cauthen 11/9/83). So it is clear when the record is examined that, assuming Mr. Cauthen had a problem with Mr. McKenzie's crew, such was an isolated instance. Moreover, the record reflects that with regard to the cited incidents involving Mr. Cauthen and Mr. McKenzie's crew, an NCI was written (i.e., there was documentation) and the deficient work was corrected, both of which are indicia of an effective QA program (Tr. 6417-19, Cauthen 11/18/83).

Palmetto Alliance concludes that McKenzie's behavior constitutes a graphic illustration of craft's repeated harassment and intimidation of inspectors as they try to do their work. (PA FF 65). However, no record support is provided for its conclusion. Palmetto further implies that Applicants' QA management condoned McKenzie's action; however, Intervenor also fails to support this allegation or to refute testimony that shows the exact opposite. When asked about his relationship with Mr. Davison, Mr. McKenzie stated that in his experience Mr. Davison supported his inspectors totally (Tr. 8809, McKenzie 11/30/83). Palmetto also fails to mention a dialogue between Mr. McKenzie and Judge Purdom concerning an incident between Mr. McKenzie and Mr. Jackson. Mr. McKenzie stated to Judge Purdom that he was counseled by his management that any future confrontations with welding

inspectors would cause him to lose his job (Tr. 8796, McKenzie 11/30/83; Tr. 5309, Dick 11/1/83; see also Staff PFF ¶¶269-270).

The Board concludes that Palmetto's proposed finding on this issue is unsupportable given the testimony of both Mr. Cauthen and Mr. McKenzie.

Palmetto would have the Board find that in the context of the record before us, "QA management consistently leaned towards cost and scheduling considerations of the construction department to the detriment of enforcement of clear Quality Assurance criteria" (PA PFF 71, p. 77). Such an assertion is totally unsupported by the record. Palmetto Alliance fails to provide any record support for its position except for a quoted section from Mr. Bryant's prefiled testimony which, even taken out of context, does not support the proposition articulated.^{14/}

^{14/} palmetto Alliance also maintains that this proposition is supported by Mr. McAfee, who testified regarding an allegation that he was told not to write NCIs. However, Palmetto Alliance relies only on a part of Mr. McAfee's direct testimony to support this assertion (PA FF ¶73, p. 78). By so doing, Palmetto Alliance ignores the evidence of record on this allegation which was discussed thoroughly by Applicants (Apps. PFF ¶¶503-513, pp.462-469) and the NRC Staff (NRC Staff PFF ¶¶79-85, pp. 41-45). The record does not support Palmetto Alliance's assertion.

To demonstrate on the record that QA management was sensitive to cost and schedule considerations of the construction department in carrying out the QA program, Palmetto Alliance must show that welding was one craft that had the ability to tie up the construction schedule or otherwise frustrate the overall progress of construction. Palmetto offers absolutely no evidence to establish such a nexus. Further, the witnesses who testified on this issue are not cited by Palmetto and do not support Palmetto's finding. For instance, Mr. Barnes, Planning and Control Manager for Construction at Catawba, testified that pipe welding was not even on the scheduled critical path for construction of the plant. Further, Mr. Barnes testified that over the years welding has not been the item that has been holding things up. (Tr. 12,231-2, Barnes 1/30/84; Apps. PFF ¶408, p. 417).

Mr. Owen testified that Mr. Grier (Corporate QA Manager) is not responsible for the cost or the schedule of the Catawba project. Mr. Grier has been instructed by Mr. Owen that if he feels any pressures on the performance of the QA program, he is to advise Mr. Owen (Tr. 2243-44, Owen 10/8/83; Apps. PFF, ¶407, pp. 415-416). Moreover, Mr. Davison stated that no pressure from the Construction Department had influenced his determination as to whether

to approve or reject NCIs (Tr. 5014, Davison, 10/27/83). Similar statements were made by Mr. Allum and Mr. Baldwin (Tr. 5002, Allum, 10/27/83; Tr. 5001, Baldwin, 10/27/83).

Applicants' Proposed Findings of Fact describe the independent relationship between the QA Department and the Construction Department and Design Engineering. This relationship assures that the QA Department will not be subjected to pressure from other departments (Apps. PFF, ¶¶11-13, pp. 150-152).

The Board concludes that Palmetto's proposed finding on the issue of cost and schedule considerations of the construction department affecting the QA program is not supported by the record. Our review of the entire record, plus Applicants' (Apps. PFF, ¶¶404-410, pp. 413-418) and Staff's (NRC Staff's PFF, ¶¶204-206, pp. 103-104) Proposed Findings of Fact leads us to conclude that cost and schedule considerations of the construction department did not adversely affect the QA program at Catawba.

G. Pervasive Problems in the Resolution of Non-conformances [PA PFF ¶¶74-77 (p. 79)]

Palmetto Alliance would have the Board find that there are pervasive problems with resolution of NCIs, "even after identification and documentation through the NCI process" (PA PFF ¶¶74-77, p. 79). This proposed finding is totally unsupported by the record.

Applicants (Apps. PFF, ¶¶384-403, pp. 402-412) and the Staff (NRC Staff PFF, ¶¶184-199, pp. 94-100) discuss in detail resolutions of non-conformances based upon the whole record. Those discussions demonstrate that no such pervasive breakdown existed. Applicants, Palmetto Alliance, and the Staff all agree that Applicants' QA Supervision could have better communicated resolutions to NCIs to welding inspectors. (Apps. PFF ¶385, p. 402; Staff PFF ¶184, pp. 94-95). However, the key element is that this communications problem was not, as Palmetto would have it, indicative of a breakdown in QA or reflective that QA supervision directed welding inspectors to accept substandard work (Apps. PFF ¶¶355-357, pp. 382-386, ¶384, p. 402).

H. The McAfee and Hoopingarner Concerns
[PA PFF ¶¶78-143, (pp. 80-96;
¶¶236-245, (pp. 141-150))]

Palmetto Alliance characterizes Messrs. McAfee and Hoopingarner as their "original whistle blowers."

Palmetto Alliance would have us find that the testimony of these two former employees demonstrates Applicants' failure to comply with QA procedures and Appendix B to 10 CFR Part 50, claiming that their testimony comprises "eyewitness accounts" which "shed important light on the entire character of the Duke quality assurance program."

Palmetto Alliance criticizes the approach taken by Applicants as "isolat[ing] each of the allegations" and "explain[ing] away each instance." (PA PFF, ¶¶82-84, p. 81), and argues instead that we must somehow view the "cumulative effect" of the testimony of McAfee and Hoopingarner for evidence of "disturbing questions" it raises with respect to the ability of Catawba to operate safely. (Id. at ¶84). Palmetto Alliance then refers to Criteria V and XVII of Appendix B for quality assurance work, which require, among other things, that documented procedures be adopted for quality assurance work, notes that Applicants must comply with their QA plan, asserts that the concerns raised by McAfee and Hoopingarner are "clear evidence that the Applicant has failed to abide by its own procedures with respect to construction of the facility," and asks us to find that what McAfee and Hoopingarner "saw and have testified to in this proceeding is only a representative sample of the quality assurance breakdown at Catawba throughout construction." (Id., ¶¶88, 143, pp. 82, 96).

However, to determine whether and to what extent some pervasive problem does exist, it is necessary to examine each of these allegations individually, in the light of the whole of the record, to determine whether they are indicative of some broader problem. We are not aware of any other way to do this (certainly Palmetto Alliance has

not suggested another way), and to do otherwise would be to shirk our duty as a Board. The Applicants and NRC Staff have done so, both in their testimony and their proposed findings (Apps. PFF, ¶¶411-513, pp. 419-503; NRC Staffs PFF, ¶¶27-87, pp. 15-45) and so have we.

We find, following such examination, that the allegations raised by Messrs. McAfee and Hoopingarner are without merit. Any question they might raise respecting whether the plant is built in accordance with applicable standards, criteria, and procedures, and would thus operate safely, has been resolved in Applicants' favor.

(1.) McAfee and Hoopingarner Allegation
Concerning Protection of Cables
[PA PFF ¶¶ 89-97, (pp. 82-84)]

Applicants addressed this question at length in their Proposed Findings of Fact at ¶¶428-438, pp. 423-428; the NRC Staff addressed it at ¶¶42-47, pp. 23-26. The findings which Palmetto Alliance would have us adopt with respect to this allegation are at variance with the record; accordingly, we cannot adopt them.

Palmetto Alliance ignores the record in material respects. It asserts, for example, that "both McAfee and Hoopingarner personally observed many instances of improperly protected electrical cable" (PA PFF ¶89, p. 82). However, the record shows that, though Mr. McAfee did allege that on numerous occasions he was aware of cable not properly protected (PA Exh. 93, McAfee, pp. 28-

29), when questioned he was able to identify only one such example (McAfee deposition, pp. 88-90). Moreover, he testified that the situation was corrected to his satisfaction (Tr. 7882-84, McAfee 11/17/83). With respect to Mr. Hoopingarner the record is equally clear. Though his allegation appears broad on its face, the NRC Staff - who accompanied him on three different plant tours - testified that Mr. Hoopingarner pointed out power cords and welding cables and hoses as examples of improper storage of electrical cables. (NRC Staff Exh. 5, Bryant, p. 13). In short, not only did Mr. Hoopingarner not know the difference between safety-related and non-safety related cables (Tr. 8069-65, Hoopingarner 11/18/83), he pointed out items other than electrical cables. (Apps. PFF, ¶¶433, 435, pp. 426-428).

Palmetto Alliance points to other parts of McAfee and Hoopingarner's direct testimony to suggest that the conditions reported in that testimony were indeed pervasive. However, even if we were to ignore the foregoing, we do not credit this testimony. The record shows that when cable is being pulled there may be excess cable which appears to be improperly unprotected, but which in reality is not in violation of procedures. (Apps. PFF, ¶432, p. 925). Again, we note that in the course of three different site tours with two different NRC inspectors, Mr. Hoopingarner was able to point out

only one instance of a safety-related cable improperly stored (Id., ¶433, p. 426). We also note that numerous electrical inspections were performed by Region II from mid-1978 through August of 1980 and during this time only one safety-related cable was found to be improperly stored (Id.). In light of the entire record, we conclude that improper storage of safety-related cable was not pervasive.

Palmetto Alliance mentions testimony given by NRC Inspector Maxwell regarding a "housekeeping inspection" he conducted,^{15/} contending that the results of such inspection were "disturbing." (PA PFF, ¶94, p. 84). We have reviewed Mr. Maxwell's testimony on this point and have concluded that it is not "disturbing;" indeed, it is reassuring. Mr. Maxwell states he concluded that generally Applicants' housekeeping activities were being satisfactorily conducted. (Tr. 9592, Maxwell 12/5/83). He noted some "relatively minor things" which he characterized as bad habits, and stated that in his view the "housekeeping" inspections should have been expanded to go "the other step" to look at equipment to assure it is properly protected. (Tr. 9592-94, Maxwell 12/5/83). We do

^{15/} Palmetto Alliance claims that Inspector Maxwell's "housekeeping inspection" led to the non-compliance cited in its Exh. 107 (Report No. 50-413/80-19, 50-414/80-19). (PA Proposed Finding, ¶93, p. 83). This is incorrect. The Inspection Report in evidence as PA Exh. 107 was written by NRC Inspector Hunt following his tours of the site with Mr. Hoopingarner.

not believe the situation was serious. Moreover, we take comfort in the fact that the Applicants apparently accepted the NRC Inspector's suggestion to go "the other step."

Finally, Palmetto Alliance would have us find that Applicants have failed to carry their burden of proof on this allegation (PA PFF, ¶97, p. 84). Palmetto Alliance does mention the evidence put into the record by Applicants and Staff, which shows that even if improper storage of electrical cable were as widespread as alleged by Messrs. McAfee and Hoopingarner, it would not raise a question of safe operation at Catawba. (See Apps. PFF, ¶¶435-437, pp. 427-429; NRC Staff PFF, ¶46, pp. 24-25). However, though the existence of this evidence is acknowledged by Palmetto Alliance, Intervenor does not treat it in any substantive fashion. More specifically, Palmetto Alliance gives us no reason whatsoever not to credit the evidence of Applicants and Staff in this regard. Certainly neither McAfee nor Hoopingarner expressed any opinion on the matter.

In light of the entire record, we do not find that this allegation presents a question of the safe operation of Catawba.

(2.) Hoopingartner Allegations
Concerning Rebar and Piping
[PA PFF ¶¶98-101, (p. 85)]

This particular allegation is treated in a cursory fashion by Palmetto Alliance. (PA PFF, ¶¶98-101, p. 85). In fact, not only are Palmetto Alliance's proposed findings on this issue in direct contravention of the Board's December 30 order (for example, Palmetto Alliance does not cite to a single page of transcript in its proposed findings on this matter), but they border on default.

The sum and substance of Palmetto Alliance's proposed findings is simply to point out that a Notice of Violation for pipe on the ground in a storage area was issued as a result of Mr. Hoopingartner's site tour with Mr. Hunt, and that the same inspection report confirmed rebar was touching the ground in the storage area. Palmetto Alliance acknowledges that both Applicants and Staff have put evidence in the record which shows there is no safety significance to rebar touching the ground, but maintains that Applicants have not explained why the equipment was not properly stored. Though the NRC Staff testified that they have not found Applicants to be careless in handling materials, Palmetto Alliance would have us disregard that evidence and find a pervasive QA breakdown at Catawba. (Id.). This we cannot do.

The record is clear on this matter. Applicants addressed it in their proposed findings (Apps. PFF, ¶¶484-488, pp. 451-454), as did the NRC Staff (NRC Staff PFF, ¶¶58-61, pp. 31-33). Given that, we do not intend to dwell overlong on this issue. We would note, however, that Palmetto Alliance's assertion that there has been no explanation of the two minor incidents of improper storage of rebar and piping (of no safety significance) is incorrect. As Applicants pointed out in the record, there were large amounts of rebar (more than 50,000 tons) and pipe (more than 400,000 feet) handled on the site. In handling that quantity of material, sometimes some gets on the ground. Applicants would like for that not to happen, but it does. Applicants have programs to inspect for such situations, and have documented instances where it has occurred and been corrected. (Tr. 7445-46, Dressler; 7455-56, Davison 11/16/83). We would also note that the NRC Staff testified that they have not found Applicants to be careless in materials handling (NRC Staff Exh. 5, Bryant, pp. 29-30).

In light of the entire record, we do not find this allegation to raise a question of unsafe operation of Catawba.

(3.) Hoopingartner Allegations Concerning
Quenching of Welds and Welding
on Unsafe Scaffolds
[PA PFF ¶¶102-108 (pp. 86-87)]

(a) Alleged Quenching of Welds
[PA PFF ¶¶102-104 (p. 86)]

Mr. Hoopingarner's allegation that he observed a welder improperly quenching a weld on a stainless steel pipe is also given only a brief and superficial treatment by the Intervenor. (PA PFF ¶¶102-104, p. 86). We would also point out that this is an allegation on which Palmetto Alliance conducted no cross-examination of either Applicants' or Staff's witnesses. Yet Palmetto Alliance expects us to adopt its cursory findings on this issue and find "further evidence of the pervasive failure by Applicant to comply with its own procedures" (Id., ¶104). We reject this suggestion. Applicants (Apps. PFF ¶¶439-444, pp. 430-432) and the NRC Staff (NRC Staff PFF ¶¶62-64, pp. 33-34) discussed the evidence in the record.

Apparently lacking any substantive basis on which to criticize Applicants' presentation, Palmetto Alliance confines itself in its findings to faulting Applicants' evidence - on which Intervenor did not cross-examine - as a second-hand report, presumably in the hopes we will disregard it. Similarly, it denigrates the NRC Staff's evidence. Palmetto Alliance notes that Applicants' evidence shows that such quenching would not have adverse safety effects and indeed is permitted by procedures (Id., ¶¶103, 104), and gives us no reason not to accept that testimony.

We give no credence to Palmetto Alliance's argument that Applicants' and Staff's testimony is based on "second-hand" reports. After all, the testimony of Mr. Hoopingarner on this alleged incident is also a "second-hand" report, to use Palmetto Alliance's own definition. The un rebutted evidence of record shows that Mr. Hodge (the welder accused by Mr. Hoopingarner) was asked by both Applicants and the Staff if he had quenched a weld on stainless steel pipe with a wet rag and he said that he had not (Apps. Exh. 37, Dressler, et al., p. 8; NRC Staff Exh. 5, Bryant, pp. 21-22; see Apps. PFF ¶442, p. 431; NRC Staff PFF ¶63, pp. 33-34). We also note that the NRC Staff conducted an investigation which found no evidence of such a practice occurring at the site. (NRC Staff Exh. 5, Bryant, pp. 21-22).

Palmetto Alliance urges us to "credit Hoopingarner's account of this event and find therein further evidence of the pervasive failure by Applicant to comply with its own procedures" (PA PFF ¶104, p. 86). Palmetto Alliance gives us no reason why we should so find, and we decline its invitation. In light of the entire record we do not find that this allegation presents a question of safe operation of Catawba.

(b) Allegation Regarding Welding
on Unsafe Scaffold
[PA PFF ¶¶105-108 (pp. 86-87)]

Palmetto Alliance's proposed findings on this issue are in direct contravention of this Board's December 30 Order and are also cursory to the point of default. Intervenor fails to cite to a single page of transcript in its proposed findings on this matter.

The gist of Palmetto Alliance's proposed findings is that it disagrees with Applicants' approach to this matter, and that the "first hand" allegation of Hoopingarner that welders "told him that they were so concerned by the unsafe construction of scaffolding that they hastily and unsafely completed welds must be credited." Palmetto Alliance also asks us to ignore the voluminous evidence present in this record with respect to how the welding inspection program is carried out. (PA PFF ¶¶106-108, p. 87). We note that Applicants and the NRC Staff have in their proposed findings (Apps. PFF ¶¶445-449; NRC Staff PFF ¶65, pp. 34-35) addressed the evidence in the record and we accept the conclusions which they urge us to adopt.

However, we feel constrained to comment on one matter in Palmetto Alliance's findings. Intervenor states that it wants us to find Applicants' approach to this matter "disingenuous," and suggest that we should be "offended" by its being offered (PA PFF ¶107, p. 87). We decline to do

so. We note that Applicants were confronted with no more than a bare assertion by Mr. Hoopingarner that a welder told him that he got on a scaffold to "fill the gap" and get down "as fast as I can" (PA Exh. 93, Hoopingarner, p. 22). Applicants were unable to determine what Mr. Hoopingarner meant by "fill the gap" and Mr. Hoopingarner was unable to provide any information identifying specific welders or locations involved with his concerns (Apps. Exh. 37, Dressler, et al. (Davison), pp. 9-10). If Palmetto Alliance is displeased with the approach Applicants took it should have put on some substantive evidence or at a minimum put forth a more specific concern. In light of this, we find the Applicants' approach reasonable and Palmetto Alliance's remarks uncalled for. On examination of the entire record we do not find that this allegation presents a question of safe operation of Catawba.

(4.) McAfee Allegations Concerning Pouring
Concrete in the Rain and QA Waiver of
Requirements on Concrete Pour
[PA PFF ¶¶109-113 (pp. 88-89)]

(a) Pouring Concrete in the Rain
[PA PFF ¶¶109-111 (p. 88)]

Palmetto Alliance's findings on this issue are in direct contravention to our December 30 order and amount to a default. Not only does Intervenor fail to cite to a single page of transcript, but these findings do not even suggest to us a finding on the ultimate issue, which is

whether this incident might have an effect on the safe operation of Catawba. In light of the Applicants' (Apps. PFF ¶¶489-494, pp. 454-456) and NRC Staff's (NRC Staff's PFF ¶27-32, pp. 15-18) findings on this subject we see little need to comment further. However, we are constrained to take issue with Palmetto Alliance's assertion that the evidence of Mr. McAfee is that of the "only eyewitness to the event" (PA PFF ¶111, p. 82). The record shows that a QA surveillance was conducted on the pour that McAfee referred to (Tr. 7870, McAfee 11/17/83). The documents reflecting that surveillance are in evidence (Apps. Exh. 55). The persons conducting that QA surveillance were certainly eyewitnesses to the pour; moreover, they were there to document that procedures for carrying out the pour were adequate, and they did so.

In light of the entire record we find that this allegation does not raise an issue with respect to safe operation of the plant.

(b) QA Waiver of Requirements
on Concrete Pour
[PA PFF ¶¶112-113 (pp. 88-89)]

Palmetto Alliance's proposed findings on this issue are in contravention of our December 30 order and amount to a default (PA PFF ¶¶112-114, pp. 88-89). There are no citations to the transcript in this section of Intervenor's findings, which state only that McAfee

alleges the incident occurred, and acknowledge that the Applicants and NRC Staff reviewed all QA records for all concrete pours during a certain period of time.

Based on this, Palmetto Alliance not only asks us to determine that we cannot make a conclusive finding on this event, despite the extensive evidence in the record but also expects us to find Mr. McAfee's testimony as "one more indication of an instance in which Quality Assurance may have given way to construction pressure" (PA PFF ¶114, p. 89). This we decline to do. Applicants and the NRC Staff submitted proposed findings which address the evidence in the record (Apps. PFF, ¶¶495-502, pp. 457-462; NRC Staff's PFF, ¶¶33-36, pp. 19-20).

In light of the entire record we find that this allegation does not raise an issue with respect to safe operation of the plant.

(5.) McAfee and Hoopingarner Allegation
Concerning Rain in the Control Room
[PA PFF ¶¶116-123 (pp. 89-91)]

This allegation involves an incident which occurred in December of 1978. Palmetto Alliance's findings, which focus almost entirely on the cause of the incident, urge us to find a violation of Criterion XIII to Appendix B. They also urge us to find that "neither the Applicant nor the Staff has convinced us that the corrective actions

taken are sufficient to ensure the safe and reliable operation of the control boards over time." (PA PFF ¶¶116-123, pp. 89-91).

We address the second point first. We decline to make the finding urged by Palmetto Alliance, which ignores the extensive evidence in the record regarding the corrective actions taken. These actions are sufficient to ensure the safe and reliable operation of the control boards over time. We note that the Applicants (Apps. PFF ¶¶473-483, pp. 446-451) and the NRC Staff (NRC Staff PFF ¶¶37-41, pp. 21-23) have filed proposed findings which address these measures.

With respect to the first point, we have determined that for the reasons given by the NRC Staff (Staff Exh. 5, Bryant, p. 12, see NRC Staff PFF ¶39, p. 22), this isolated event was not a violation of Criterion XIII and was not the result of Applicants' negligence or poor construction practice. Moreover, we find the Applicants' and Staff's evidence in the record with respect to the cause of the event to be convincing and we have determined this was an isolated event which does not reflect poor or inadequate QA or construction practices.

In light of our examination of the entire record, we find that this allegation does not raise an issue with respect to safe operation of the plant.

(6.) Hoopingarner Allegation Concerning
Flooding of the Diesel Generator Room
[PA PFF ¶¶124-140 (pp. 92-96)]

In its proposed findings on this matter, Palmetto Alliance again fails to consider the evidence in the record.^{16/} However, both Applicants and the NRC Staff presented extensive findings focusing on the record (Apps. PFF ¶¶450-472, pp. 435-446; NRC Staff's PFF ¶¶48-57, pp. 26-31).

Palmetto Alliance's findings make two essential points. First, they ask us to make a finding that the diesel generator flooding incident demonstrates that Applicants were not in compliance with Criterion XIII. Second, they ask us to find there is no reasonable assurance that the diesels were adequately refurbished following the flooding incident. (PA PFF ¶¶132, 140, pp. 94, 96).

With respect to Criterion XIII, we decline to make the finding urged by Palmetto Alliance. They claim two points - first, that the Applicants offered no explanation for how the incident occurred, and second, that because

^{16/} Palmetto Alliance's finding contain one paragraph (¶128, p. 93) with no citation. Hence we will not consider it. Its finding on this issue also contains numerous incorrect citations, e.g., the transcript reference furnished in ¶137, p. 95 does not refer to the subject matter addressed.

Staff's witnesses did not have "direct knowledge" of the event their testimony should not be credited. (PA PFF ¶¶126, 127, pp. 92-93).

The Applicants' direct case (which was not challenged on cross-examination by Palmetto Alliance) did address the cause of the event (Apps. Exh. 37, Wylie Panel, p. 15) and thus the assertion by Palmetto Alliance is incorrect. Though Staff witness Bryant may not have had direct knowledge of the event in the sense that he personally performed the inspection, he directly supervised the inspection, discussed the matter directly with the inspector who did perform the inspection, and reviewed and approved the inspection report (Tr. 9809-13, Bryant 12/6/83). Therefore we accept the testimony of Mr. Bryant on this issue to the effect that the incident involved water running down ungraded land, into an open manhole and through conduits which were open because cable was being pulled (Tr. 9813, Bryant 12/6/83). Moreover, the NRC Staff also presented as a witness Mr. Hunt, who was the NRC Inspector who actually performed the inspection, prepared the NRC Staff Inspection Reports and monitored the situation for the NRC Staff (Tr. 11,816-19, Hunt 12/16/83). In light of the above we assign no importance to the fact Mr. Bryant was involved in a supervisory

capacity in the investigation of the diesel generator flooding event, rather than personally performing the inspection.

Palmetto Alliance also states that there was no covering over the diesel generator, so that ANSI N45.2.2 level c (Special) was not complied with (PA PFF ¶129, p. 93). However, such assertion - based on Mr. Hoopingarner's direct testimony - simply ignores the record. To begin, Applicants' Wylie panel testified (without challenge from Palmetto Alliance) that the diesel generators were subject to the storage requirements of ANSI N-45.2.2 level c (Special) which included coverings to prevent moisture from falling on equipment (Apps. Exh. 37, Wylie panel, p. 16; Apps. PFF ¶454, p. 437; NRC Staff's PFF ¶53, p. 29). Moreover, though Mr. Hoopingarner acknowledges that there was a cover for the equipment hatch for diesel generator room, which he alleges was left off, he further acknowledges that he was not at the site to see the hatch at the time of the flooding (Tr. 11,904, 11,907-08, Hoopingarner 12/16/83). Therefore, he has no knowledge of whether the hatch was on or off. Mr. Hunt testified he saw no evidence of rain coming through that opening (Tr. 11,841, Hunt 12/16/83).

The equipment, due to its size, had to be installed before the building and grading were completed, which could not be done while movement of heavy equipment,

underground construction and the like were still going on (NRC Staff Exh. 5, Bryant, p. 27). Given these unique circumstances, plus the unexpected occurrence of 7 inches of heavy rainfall in a 38-hour period (Apps. Exh. 37, Wylie Panel, p. 15), we do not find Applicants were derelict in their responsibilities. We find that this isolated instance did not constitute a violation of Criterion XIII, particularly in light of the fact Applicants found and corrected the situation themselves.

Palmetto Alliance urges us to find that neither Applicants nor Staff have provided any assurance that they understand the mechanism of the flooding sufficiently to ensure it will not happen again (PA PFF ¶133, p. 94). For us to make such a finding would require us to ignore the state of the record and we decline to do so. Such an event will not recur again because site grading has been completed, the permanent site drainage system has been installed, the manhole covers are now permanently on each manhole, sump pumps are now installed in manholes, and the conduits for electrical cables that served as the principal pathway for entry of the water have been sealed (Tr. 7557, Davison; Tr. 7470-71, Dressler; Tr. 9813-14, Van Doorn, Bryant 12/6/83).

We again note that Palmetto Alliance chose not to question Applicants' Wylie panel; consequently, that panel's testimony with respect to the extensive

refurbishment of the diesel generators is unrebutted. Palmetto Alliance did attempt to address in some fashion the testimony of Applicants' Wylie panel on that subject (PA PFF ¶134, p. 94); however, its finding is unintelligible and we will not consider it.

Palmetto Alliance mentions (PA PFF ¶¶135-136, p. 94) the new contention which we have accepted and suggests for that reason we should find that there is a question whether the diesels can perform their function. That new contention is wholly unrelated to the issue now before us - whether the flooding incident has adversely affected the ability of the diesel generators to function. We will not consider the new issue now, and we note again that Applicants' extensive evidence (sponsored by the seven members of the Wylie panel) in the record regarding the effects of the flooding is not rebutted by Palmetto Alliance.

Palmetto Alliance refers to the discovery of files which had been painted into the generators for diesel engines 1A and 2A, and asks us to find that the discovery of these files leads us to conclude that there has been a serious breakdown in quality control and quality assurance (PA PFF ¶¶137-139, p. 95). Palmetto Alliance urges us to conclude that the files should have been discovered earlier, in light of the fact the diesel generators have been refurbished and cleaned, (Id., ¶139, p. 95).

This subject arose at the hearing when counsel for Palmetto Alliance sought to cross-examine Applicants' witnesses on the subject of a Board notification. Applicants' counsel objected to any such cross-examination on the grounds that the subject was beyond the McAfee and Hoopingarner concerns. Counsel for Palmetto Alliance asserted that he wished to inquire as to whether Applicants should have found the files when the generators were disassembled for cleaning. (See Tr. 7254-57 11/15/83). We allowed questioning on this matter because we believed that if a cleanup and overhaul were done, the question of the files might be relevant to the thoroughness of such (Tr. 7295-96, 11/15/83). The record on this matter gives us no concern with respect to the files vis-a-vis the adequacy of the cleanup.

A file was found in generator 1B when during testing it came loose and caused some damage (Tr. 7297, Davison 11/15/83). A file painted with the same paint as was used on the inside of the generators was later found in the 2A generator when it was completely disassembled to remove the rotor from the generator. This file was actually painted into the internal parts of the generator and subsequent analysis of paint on both files as well as other physical evidence indicated that the files were in the generators when they came from the factory. (Tr. 7300, 7307-09, Davison, Dressler 11/15/83). Moreover, the

record indicates that, unlike the diesel engines, the generators were not disassembled during the cleaning process, they were simply washed (Tr. 7305, Dressler 11/15/83). Given that both files were painted with the same paint as was used in the inside of the generators, that the generators were not disassembled in the cleaning process, but that the file was not found in the 2A generator until it was completely disassembled, we do not find that the failure to discover the files during the washing of the generators (which resulted from the flooding) calls the adequacy of that cleanup into question.

We find that the diesel generator flooding was an isolated event which does not reflect poor or inadequate QA or construction practices. In light of the entire record we find that the diesel generator flooding incident does not raise a question with respect to safe operation of Catawba.

(7.) Hoopingartner Allegations Concerning
Order Not to Talk to the NRC,
Harassment, and Wrongful Termination
of Employment
[PA PFF ¶¶236-245 (pp. 141-150)]

Palmetto Alliance has filed 10 pages of findings on this issue in which they ask us to find that Applicants have violated 10 CFR §50.7 of the Commission's Regulations and, having made such a finding, to impose upon Applicants the sanction of denying the application for an operating

license for Catawba (PA PFF ¶¶142-143, pp. 142-143).

Incredibly, having asked us to make these findings, Palmetto Alliance in its proposed findings on this issue cites not one single transcript reference in its 10 pages of proposed findings in support of its position.^{17/}

Instead, Palmetto Alliance relies for support almost exclusively on certain exhibits which it introduced into evidence,^{18/} as well as snippets from the direct evidence of certain witnesses. However, in so doing Palmetto Alliance fails to take into account the testimony of witnesses in the transcript which explains or puts into proper perspective the documents which are cited. Such evidence is particularly compelling because it consists in large measure of the cross-examination of Applicants' and Staff's witnesses on the very documents on which Palmetto Alliance now seeks to rely. And of course it is the totality of the record - not just selective portions - which we consider.

^{17/} Palmetto Alliance does attempt to cite to the transcript at one point to support an assertion which it makes but was apparently unable to locate such support, for it is cited as "(Tr.?)." (PA PFF ¶243, p. 149). We do not credit this statement.

^{18/} Contrary to our explicit instructions (see 10/30/83) Board Order), Palmetto Alliance does not cite to specific parts of exhibits. Instead, in many instances it provides only a blanket citation to several exhibits to support an assertion. (See, e.g., PA PFF ¶236, p. 142).

In direct contrast to Palmetto Alliance's findings on the issue of the alleged harassment of Mr. Hoopingarner, Applicants presented extensive findings on the issues raised by the employment and termination which discussed all the evidence in the record (the majority of which was elicited on cross-examination of Applicants' witnesses by counsel for Palmetto Alliance)(Apps. PFF ¶¶517-580, pp. 470-503). The NRC Staff also discussed the matter thoroughly (NRC Staff's PFF ¶¶68-78, pp. 36-41). Because those discussions are extensive and complete we see no need to repeat them here. However, Palmetto Alliance's findings raise a few points which warrant some further discussion.^{19/}

First, Palmetto Alliance asks us to find, assuming we agree with their characterization of the treatment of Mr. Hoopingarner, that we have "great concern for the other victims of Duke's heavyhandedness of whom we may never know." (PA PFF ¶263, p. 142). We find that suggestion without merit and, in light of the paucity of Palmetto Alliance's findings on this issue, bordering on the impertinent. We reject it, noting that Palmetto Alliance

^{19/} We note that Palmetto Alliance would have us find (PA PFF 236, p. 141) that Applicants attempted to impede the ability of Mr. Hoopingarner to communicate with the Occupational Health and Safety Administration. We excluded that issue some months ago when Palmetto Alliance sought to raise it in Mr. Hoopingarner's direct testimony (at pp. 14-15) and will not consider it further (Tr. 7932, 11/18/83).

has ignored the evidence of record with respect to these issues relating to Mr. Hoopingarner and has pointed us to no other evidence in the record with respect to other employees "of whom we may never know" that would suggest that such a finding could be made.

Second, Palmetto Alliance asks us to make a finding against Applicants

that the record with respect to Mr. Hoopingarner establishes a violation of the employee protection provisions of our regulations, 10 CFR 50.7 [PA PFF ¶236, p. 142].

Assuming we make such a finding, Palmetto Alliance then urges us to

frame the appropriate remedy pursuant to subsection (c) [of 10 CFR 50.7] which provides such violation 'may be the grounds for (1) denial, revocation, or suspension of the license.' We consider the Hoopingarner discrimination as further independent grounds supporting our decision that Duke's application for the licenses sought should be denied. [PA PFF ¶237, pp. 143-144].

Palmetto Alliance is not entirely clear as to why, or on what grounds, this Board could make such a finding. Indeed, it is at least questionable whether we have the requisite authority. We note that the statute which forms the underpinning for 10 CFR 50.7 (Section 210 of the Energy Reorganization Act of 1974, as amended, Public Law 95-610 (92 STAT 2951), 42 USC §5851) requires that any employee who feels he has suffered wrongful discrimination under this statute must file a complaint, within 30 days

after such wrong has occurred, with the Department of Labor (42 USC §5851(b)). The Department of Labor will then conduct a proceeding to determine whether the claim of wrongful discrimination does or does not have merit (43 USC §5851(b)2(A),(B)). Such proceedings are conducted pursuant to regulations adopted by the Department of Labor and codified in 29 CFR Part 24.

As Mr. Hoopingarner's employment was terminated on September 4, 1980, it appears to us that the proper avenue for him to remedy that discrimination under Section 210 would have been to file a complaint with the Department of Labor in accordance with the provisions of 29 CFR Part 24. At that time the totality of Mr. Hoopingarner's complaints could have been considered by the agency given statutory jurisdiction over the matter. Apparently Mr. Hoopingarner never made such a filing.^{20/}

^{20/} We do note that Mr. Hoopingarner filed a complaint against Applicants alleging discrimination with the Department of Labor under a different statutory provision (PA Exh. 103). Following an investigation of the allegation, the Department of Labor concluded:

There is no question that you were involved in protected safety and health related activity during your employment at Duke Power Co. Your complaints to management, OSHA and the media were verified during our investigation. However, we were unable to verify that the company demonstrated any animus towards you for your safety activity or that your termination was as the result of engaging in safety and health activity.

Our investigation disclosed that you were terminated after twice failing to return to work after
(footnote continued)

We note at this juncture that we have doubts whether we could reach the result urged on us by Palmetto Alliance. As we read the statute and the regulations, we believe that it is at least problematical whether we can impose a sanction under 10 CFR 50.7(c) without first having a finding made by the Department of Labor that the discrimination outlined in 10 CFR 50.7(a) has actually occurred. It appears that the Commission is of the same view, for in adopting 10 CFR 50.7 it noted that

Section 210 identifies specific acts of employees as protected activities and prohibits employers from discriminating against employees who engage in those activities, provides the Department of Labor with new authority to investigate an alleged act of such discrimination, and provides a remedy to the discrimination by means of an administrative proceeding in the Department of Labor. [47 Fed. Reg. 30452, July 14, 1982].

and stated that

The Commission, to effectively fulfill its mandate, requires complete, factual, and current information concerning the regulated activities of its licensees. Employees are an important source of such information and should be encouraged to come forth with any items of potential significance to safety without fear of retribution from their employers. The purpose of the final rule is to ensure that employees are aware that employment discrimination for

(footnote continued from previous page)

being personally contacted by the company with instructions to do so. These infractions coupled with an earlier instance in which you failed to return to work after a dental appointment were apparently the reason for your termination. OSHA cannot provide protection for you in such circumstances. Your protected activity cannot render you immune to discharge for legitimate reasons. (emphasis added).[PA Exh. 105].

engaging in a protected activity, for example, contacting the Commission, is illegal and that a remedy exists through the Department of Labor. The organizations subject to the rule should understand that the Commission will not permit any interference with communications between the Commission's representatives and employees of such organization. In addition to redress being available to the individual employee, the Commission may, upon learning of an adverse finding against an employer by the Department of Labor, take enforcement action against the employer because the employer engaged in illegal discrimination. (emphasis added) [47 Fed. Reg. 30453, July 14, 1982].

Palmetto Alliance has not directed us to any authority which suggests that the Commission is mistaken in its approach to this matter. In the absence of that, which we see as a real question regarding our ability to proceed as Palmetto Alliance wishes on this matter, we decline to accept Intervenor's invitation.^{21/}

Palmetto Alliance appears to suggest that the absence of a finding on this matter by the Department of Labor stems from the fact that Mr. Hoopingarner, who was represented by counsel with regard to his claims of harassment and discrimination (PA Exh. 103), was unaware of the existence of the remedy for such alleged discrimination under Section 210:^{22/}

^{21/} Of course, the state of the record with regard to the Hoopingarner concerns plays a large role in this decision. We believe there is no merit to the claims and that in itself is reason enough not to proceed further.

^{22/} Mr. Hoopingarner's employment was terminated September 4, 1980; the Commission did not publish its final rule until July 14, 1982.

Sadly, Mr. Hoopingarner's claim of discriminatory discharge was never pursued under the then re-cently-enacted employee protection provisions applicable to nuclear industry workers. Mr. Hoopingarner pursued the OSHA discrimination complaint, Palmetto Alliance exhibit 103, pro-cessed by the U.S. Department of Labor; which apparently never informed him that he had re-medies under statutes applicable to nuclear workers. [PA PFF #243, p. 150].

That this is Palmetto Alliance's claim is further buttressed by statements made by Palmetto Alliance's counsel when he sought to introduce into evidence the very documents on which Palmetto Alliance now relies as support for its claim of discrimination:

MR. GUILD: [Exhibit] 103. We are prepared to demonstrate the authenticity of that document if it is contested as authentic. It was sent by Mr. Hoopingarner's lawyer.

There are a couple of points here. First it demonstrates that in contemporaneous with his termination -- in fact, during the time he was out of service, I think -- before he was actually told he was terminated, finally and irrevocably, Mr. Hoopingarner not only took the position that his treatment by Duke Power Company was retaliatory for filing complaints, but he got a lawyer and his lawyer filed a lawsuit -- a complaint against Duke Power Company pursuant to the Department of Labor statute.

The interesting thing here that I think will permeate not only Mr. Hoopingarner's relationship with the Applicants but that of a number of other witnesses, Mr. Ross in particular, is that even with able counsel, he filed his complaint under the wrong law. He filed his complaint solely under the OSHA protection, protecting employees from retaliatory treatment for exercising protective conduct under the occupational and health statute to the Department of Labor, where at the same time there was a parallel provision that I will represent to you Mr. Hoopingarner is prepared to demonstrate he had no knowledge of, hadn't been told of, had no understanding of his rights under, and that's

the Energy Reorganization Act amendments, the employee protection provisions, if you will, that are not included as an attachment to the company's defense testimony on Hoopingarner and McAfee concerns, if you will, the Board notice that was posted.

Mr. Hoopingarner has been whip-sawed between jurisdictions since day one on this job, and we believe that that treatment of him is consistent with the treatment of a number of other witnesses in this proceeding who do not have a clear knowledge of their rights to employee protection for NRC safety-related conduct, and we offer this document to demonstrate the truthfulness, the substantive truth, of Mr. Hoopingarner's retaliation claim for protected conduct within the context of this Board's jurisdiction, and that is nuclear safety-related complaints. (emphasis added)[Tr. 7963-64, Guild 11/18/83].

However, contrary to Mr. Guild's express representations to this Board, one of Palmetto Alliance's own exhibits taken from Mr. Hoopingarner's own files (see, e.g., Tr. 7743-44, 7773, Guild 11/17/83) shows conclusively that Mr. Hoopingarner had been informed by NRC Inspector Hunt of the provisions of Section 210, sometime during the summer of 1980. Moreover, on September 3, 1980 - the day before Mr. Hoopingarner's termination - Mr. O'Reilly of the NRC's Region II also informed Mr. Hoopingarner of the existence of Section 210 and mailed to him a copy of both the statute and the applicable DOL regulations:

With regard to your reference to 10 CFR Part 19, please be advised that the requirements contained therein apply only to "radiological working conditions." In that the concerns which you have brought to our attention do not involve radiological working conditions or radioactive

materials, 10 CFR Part 19 does not apply to this situation. However, Public Law 95-601 (92 STAT 2951 [Section 210]) amended the Energy Reorganization Act of 1974 to provide additional employee protection as a matter of Federal law and a copy of that statute is enclosed for your information. Please note that as you were informed by Mr. Hunt, the statute specifically assigns responsibility for investigating complaints of this type and effecting relief, if appropriate, to the U.S. Department of Labor (DOL) and requires that such complaints be made in writing to that agency. I have also enclosed a copy of 29 CFR Part 24 which establishes the procedures to be followed in filing complaints such as yours. I note that your July 31 letter indicates that Mr. Hunt provided you with the address of the appropriate DOL office as he had been instructed to do. (emphasis added)[PA Exh. 107].

We assume that when counsel for Palmetto Alliance made the above-quoted representation to the Licensing Board regarding Mr. Hoopingarner's lack of knowledge about Section 210 he was unaware of the contents of Palmetto Alliance Exh. 109 (which, among other proposed exhibits, he was then seeking to have admitted into evidence). In any event, we find that Mr. Hoopingarner had both actual and constructive notice of the existence of Section 210 and the Department of Labor's regulations implementing such statute.^{23/} Therefore, we see no reason to consider the matter further.

^{23/} We also note that Mr. Ross had actual notice of the existence of 10 CFR §50.7, as Mr. Guild learned (Tr. 6776-78, Ross 11/10/83).

In our review of the entire record, we find that Mr. Hoopingarner's allegations concerning an order not to talk to the NRC, harassment, and wrongful termination of employment are without merit, and have no adverse implications for the safe operation of Catawba.

I. Pay Reclassification
[PA PFF ¶¶144-145 (pp. 97-100)]

PA PFF 144-152 - Palmetto makes proposed findings on the pay reclassification of welding inspectors as a part of the background to what Palmetto terms the "The Welding Inspector Revolt."^{24/} Palmetto would have us find that the pay reclassification of welding inspectors "undermines the authority, independence, freedom and qualifications of the welding inspectors," (PA PFF ¶152, p. 100) and was "responsive to . . . impermissibly considered scheduling and cost pressures" (PA PFF ¶153, p. 100). We are unpersuaded by Palmetto's proposed finding to alter any of the detailed findings we have made with respect to the pay reclassification (see Apps. PFF, p. 170-182). Palmetto's proposed findings do not address the evidence relating to the reclassification. Their proposed findings would simply have the Board infer some improper motives from the reclassification, without any evidence to support such

^{24/} Palmetto refers to the welding inspector concerns as reflecting "pervasive failures to implement the Quality Assurance program" (PA PFF ¶144, p. 97). We address Palmetto's proposed findings with respect to the concerns elsewhere in this decision.

inferences. Palmetto refers us to no evidence to support its proposed findings that cost and schedule considerations were involved in the reclassification, or that Applicants' explanations for the reclassification are pretextual.^{25/} These proposed findings must be rejected.

J. Access To NRC
[PA PFF ¶¶159-160 (pp. 102-103);
¶¶232-235 (pp. 136-140)]

Palmetto Alliance maintains that we should find a policy on the part of Duke management to retaliate against employees who approach the NRC, and also that as a result we should find a violation of 10 CFR 50.7,^{26/} and therefore deny the application for a license. (PAA PFF ¶¶159-160, 232-235, pp. 102-103, 136-140). Palmetto Alliance fails, however, to address the evidence in the

^{25/} Palmetto's proposed findings on the reclassification reflects an unfamiliarity with the evidence. Palmetto states that Mr. Davison was on the committee which "concluded either that the welding inspectors as a whole had been exercising too much judgment for the job or that henceforth inspectors with less capacity for judgment would be suitable for the welding inspector position." (PA PFF ¶149, p. 99). This proposed finding incorrectly describes Mr. Davison's role in the reclassification, and would have us draw inferences from the position evaluation that are not supported by the record evidence. The record is clear that Mr. Davison was not a member of the committee which evaluated the position analyses. Mr. Grier was on that committee. The basis for the reclassification of the welding inspector position, as detailed in Mr. Grier's testimony, do not suggest any improper motives. (Apps. Exh. 14, Davison, p. 3; Apps. Exh. 2, Grier, pp. 44-45); Apps. PFF, p. 172-175).

^{26/} Based on the discussion of 10 CFR 50.7 elsewhere in this decision, we decline to make such a finding.

record. This evidence was addressed by Applicants (Apps. PFF 309-337, pp. 358-370) and Staff (NRC Staff's PFF, ¶¶246-254, pp. 124-128). Palmetto would have the Board believe that the evidence in the record of Applicants' policy towards employee access to the NRC can best be characterized by the testimony of Mr. Burr (Apps. Exh. 3, Burr, p. 3) and the talk given by Mr. Owen in his January, 1982 meeting with the welding inspectors.

Palmetto would have the Board conclude that welding inspector Burr's testimony reflects the fact that Larry Davison reprimanded welding inspectors for having communicated with the NRC (PA PFF ¶¶159-160, 232, pp. 102-103, 136-137). Palmetto Alliance would also have the Board conclude that Mr. Owen in his January, 1982 meeting with the welding inspectors communicated Applicants' policy towards employee access to the NRC which included a "veiled threat of retaliatory response" for communication with the NRC^{27/} (PA PFF ¶233, pp. 137-139). These proposed findings are totally unsupported by the record.

Palmetto Alliance ignores the fact that Mr. Davison met with the welding inspectors not to reprimand them, but to be sure they were aware of the Company's recourse procedure, that they had a responsibility to follow this

^{27/} Palmetto Alliance would also have us find that Mr. Hoopingartner was ordered not to talk to the NRC (PA PFF, ¶232, p. 137). We have considered that matter at length, found it to be without merit (see pp. 83, supra) and will not discuss it further here.

procedure prior to going to the NRC, but that this responsibility in no way hindered their right to go to the NRC at any time (Apps. PFF ¶319, p. 362; NRC Staff's PFF, ¶251, pp. 126-127). The assertion with respect to the testimony of Mr. Burr ignores the testimony of other welding inspectors (Apps. PFF, ¶323, pp. 363-364) who testified concerning their impressions of their meetings with Larry Davison. Those other welding inspectors who could recall the meeting said they did not have the sense they were reprimanded (Apps. PFF, ¶323, pp. 363-364). Palmetto Alliance also ignores Mr. Davison's testimony (Apps. PFF, ¶¶318-319, pp. 361-362) and NRC inspector Maxwell's testimony (Apps. PFF 318). In addition, Palmetto fails to include Mr. Burr's response to the Board's question regarding his meeting with Mr. Davison, where Mr. Burr stated that he felt he could go to the NRC without going to his supervision first and in fact had done so without any adverse effect on his job (Tr. 5936-37, Burr 11/3/83; Apps. PFF 322).

In addition to the foregoing, Palmetto Alliance also distorts the record with respect to Mr. Owens' statements during his meeting with the welding inspectors by failing to balance those statements with the testimony of welding inspectors (Apps. PFF, ¶¶328-332, pp. 366-368) who heard those statements and did not think they would be disciplined for going to the NRC. Mr. Owen also testified

regarding the talk in response to the Board's extensive examination of Mr. Owen (Apps. PFF, ¶¶334-335, pp. 369-370).

The Board concludes that Palmetto has failed to provide support from the record for its proposed finding on this issue and that its truncated view of the Applicants' policy on access to the NRC fails to account for the testimony of many witnesses who present a different perspective on the Davison and Owen meetings.

K. Task Force Results Foreordained
[PA PFF ¶¶ 171-175 (pp. 107-110)]

Palmetto would have the Board find that "even before the Report was prepared by the first of several 'task forces' commissioned by Duke management to 'investigate' the Catawba welding inspector allegations, Duke management had established their conclusions and outlined their course of action" (PA PFF, ¶173, p. 109).

Palmetto's proposed finding is totally unsupported by the record and Palmetto offers no record support for its finding other than two exhibits (PA Exh. 12 & 13). Palmetto's sweeping unsupported characterization of these two exhibits falls flat when the record and Applicants' Proposed Findings of Fact are considered.

Task Force I was formed at the direction of Mr. Lee and Mr. Owen to determine whether any technical inadequacies existed at Catawba and to determine the scope

of the problem involving welding inspector concerns initially provided to Mr. Wells and Ms. Addis (Apps. PFF, ¶¶67-68, pp. 182-183).

In order to gather more information about the concerns provided to Mr. Wells and Ms. Addis, Task Force I interviewed them as well as other Duke management personnel, including Mr. Davison (Apps. PFF, ¶71, pp. 184-185; Tr. 3767, Davison 10/19/83).

Mr. Davison was interviewed by Task Force I. He and his immediate supervisor, Mr. J.R. Wells, discussed the matter to attempt to determine, based on their own understanding of the situation, ways people might have concerns and what to do about them. In other words, the plan was "to say what do we perceive the situation to be and what action or plan would we come up with to deal with that" (Tr. 3767, Davison 10/19/83). The action plan was documented in a memorandum from Mr. Davison to Mr. Wells (PA Exh. 13).

However, Palmetto concludes that Mr. Davison's memorandum to Wells prejudged the effort of Task Force I and influenced the recommendations of this task force as well as the Technical Task Force and the Non-technical Task Force.

During the hearing, in response to Palmetto's question regarding prejudgment of Task Force I, Mr. Davison stated that his memorandum was based upon his

perception of what had occurred and also on his interview with Task Force I (Tr. 3768, Davison 10/19/83). Mr. Davison further stated that he did not indicate to the task force what his judgment was. He did indicate to them the answers to the questions they asked him (Id.).

Palmetto questioned Mr. Davison about whether his memorandum to Mr. Wells might have had some effect on Task Force I conclusions and recommendations. Mr. Davison responded that he did not see any possibility of his memorandum affecting Task Force I because Task Force I was totally independent (Tr. 3768-69, Davison 10/19/83).

Mr. Wells' December 29, 1981 memorandum to Mr. Owen (PA Exh. 12) included a typed version of Mr. Davison's handwritten memorandum (PA Exh. 13). Mr. Wells stated that he considered Mr. Davison's memorandum, discussed it with Mr. Davison and adopted it and sent it to Mr. Owen (Tr. 2764, Wells 10/12/83). Mr. Wells could not specifically recall whether Mr. Owen requested such a memorandum but Mr. Wells believes that he may have (Tr. 2746-48, Wells 10/12/83). Mr. Wells recalls that the basis for Mr. Davison's memorandum (with Mr. Wells' input) may have been meetings Mr. Owen had with Task Force I in which Mr. Wells on one occasion participated (Tr. 2750, Wells 10/12/83). During these meetings Task Force I conveyed to Mr. Owen what their findings were going to be (Id.). As a result it was Mr. Well's recollection that

the memorandum Mr. Davison and Mr. Well's put together included some aspects of the meetings between Mr. Owen and Task Force I. Palmetto cross-examined Mr. Wells extensively but not on the issues of prejudgment and independence.

Palmetto's proposed finding that the task forces' conclusions were foreordained by the Davison memorandum implies a lack of independence by the various task forces. Applicants' Proposed Findings of Fact accurately reflect the record that Task Force I chaired by Mr. McMeekin was in no way influenced by management (Apps. PFF 74, p. 187); the Technical Task Force chaired by Mr. Cobb was fully independent of Duke management (Apps. PFF 91, pp. 200-201); and the Non-technical Task Force chaired by Mr. Alexander was independent of Duke management (Apps. PFF 148, pp. 261-262).

The Board concludes that Palmetto's unsupported finding on this point is erroneous and mischaracterizes the record. The Board finds on the basis of facts brought out on the record as well as the Applicants' Proposed Findings and the Staff's Proposed Findings (Staff PFF 121-123, pp. 63-64) that Applicant did not foreordain the results of any task force effort.

L. Non-technical Task Force
[PA PFF ¶¶181-188; pp. 112-116)]

Palmetto would have the Board find that Applicants' Non-technical Task Force effort was a "sham in both form and substance" (PA FF 182), that no serious effort was made to investigate any welding inspectors non-technical concerns, and that the Non-technical Task Force Report and Implementation Plan was "merely a vehicle to legitimize and affectuate [sic] the 'rigged' conclusions^{28/} documented by Larry Davison and approved by Duke Management before the Non-technical Task force was even commissioned" (PA PFF, ¶¶181-188, pp. 112-116). Palmetto's finding and conclusions are totally unsupported by the record. In fact, Palmetto fails almost totally to cite any part of the record on this issue to support its findings.

Palmetto Alliance contends that it should be apparent to us from a review of the record that the non-technical task force conducted no serious investigation of the programmatic allegations of the inspectors. It asserts that Applicants made no serious effort to determine the factual validity of any of the non-technical concerns, to assess the significance of the allegations, or to remedy

^{28/} As to the "rigged" conclusions, see the discussion of the issue of the "foreordained" Task Force Report discussed elsewhere in this decision.

the problems identified. (PA PFF, ¶185, p. 114). As support for these conclusions, Palmetto Alliance proposes the following:

186. Each inspector who testified was questioned as to knowledge of the investigative effort by the Non-technical Task Force or its Chairman, Alexander. Virtually none expressed any awareness of his effort. Notably, craft foremen Ed J. McKenzie who acknowledge his deserved reputation as a "bully" on the site and a number of specific quality assurance procedure violations committed by himself and his crew, could recall no contact with Mr. Alexander in any investigation of welding inspector Boyce Cauthen's serious allegations of harassment and QA violations by McKenzie and his crew. (Tr. _____). This evidence leads us to the inescapable conclusion that the Applicants have failed to demonstrate that the Non-technical Task Force "investigation" was anything more than sham. [PA PFF ¶186, p. 115].

We are at a loss to understand how Palmetto Alliance could expect us to adopt this proposal. Not only does Palmetto not cite to the record to support its assertions in the above paragraph, but also it totally ignores substantial evidence in the record. As shown in Applicants' Proposed Findings of Fact, of the eleven welding inspectors who testified and submitted concerns, four welding inspectors stated that they recall the Non-technical Task Force contacting them; four welding inspectors could not recall; and three welding inspectors had no non-technical concerns (Apps. PFF, ¶157, p. 267).

Further, we do not consider it important whether the Non-technical Task Force ever contacted McKenzie regarding harassment concerns involving him or his crew. To begin with, he and his crew were not under investigation. In any event, the Implementation Plan of the Non-technical Task Force recommendations directed that a QA Department harassment procedure to deal with any employee harassment problem be implemented.^{29/} (Apps. PFF, ¶137, pp. 256-257). As a result a harassment procedure for the QA Department was written and put in place. (Apps. PFF, ¶¶141, 150, pp. 259, 262-263). Palmetto's "inescapable conclusion that the Applicants have failed [by this evidence] to demonstrate that the Non-technical Task Force 'investigation' was anything more than [a] sham" grossly mischaracterizes the record (PA PFF, ¶186, p. 115).

Palmetto further states that to the extent the Non-technical Task Force did investigate the allegations of the welding inspectors it "diluted the inspectors' claims through mistatement and reclassification" (Id.). No record support is provided for this conclusion. Moreover, Palmetto by way of comparison of Mr. Alexander's matrix (PA Exh. 20) to Mr. Alexander's Non-technical Task Force Final Report attempts to show that two major areas of

^{29/} We note that prior to this time, QA inspectors had been covered by the Construction Department and Corporate harassment procedure. (Apps. Exh. 2, Grier, p. 37).

inspectors' concerns (management support and harassment) disappeared from the final report. (PA PFF, ¶186, p. 115). Palmetto fails to point out that Mr. Alexander developed his matrix as a working tool to assist himself in addressing the welding inspector non-technical concerns. (Apps. PFF, ¶127, pp. 252-253). The Final Report did not separately address each of the matrix categories because Mr. Alexander sought to establish general categories and "fine tune" these general categories so that the Non-technical Task Force could identify and address common issues in the non-technical concerns. (Apps. PFF, ¶¶133-134, pp. 254-255). A review of Mr. Alexander's Final Non-technical Task Force Report clearly indicates that the welding inspector concerns relating to management support and harassment are covered under the subgroups in the six categories (Apps. Exh. 7, Alexander, Attachment 3).

The Board cannot help but note that Palmetto fails to refer to any testimony from Mr. Neal Alexander, the Chairman of the Non-technical Task Force to support its position, yet Palmetto conducted extensive cross examination of this witness. This, coupled with the Board's examination of Mr. Alexander as well as the Applicants' Proposed Findings of Fact on the Non-technical Task Force (Apps. PFF, ¶¶123-194, pp. 250-282) and the Staff's Proposed Findings of Fact (Staff PFF, ¶¶125-129,

pp. 64-67) argues most favorably that the Non-technical Task Force effort as well as the implementation of its recommendations was satisfactory and adequate.

M. Harassment
[PA PFF ¶¶192-193 (p. 118)]

Palmetto Alliance contends the Board should find that Applicants' management condoned acts of intimidation or harassment of the Catawba welding inspectors thereby hindering these inspectors in the performance of their duties (PA PFF ¶¶192-193, p. 118). Palmetto Alliance points to a number of incidents which it argues support that position. We will deal briefly with each one.

1. DEATON INCIDENT
[PA PFF ¶¶194-196 (pp. 118-119)]

This incident occurred in 1977 while Deaton was a welding inspector at the Catawba plant. (PA PFF ¶¶194-196, pp. 118-119). A particular craftsman was not doing quality work in fitting containment plates, and Deaton was repeatedly having to show him how to get his work done (Tr. 5793, Deaton 11/3/83). Deaton refused to sign the craftsman's process control sheet, and the welder became angry because his work was being rejected (Tr. 5794, Deaton 11/3/83). On the way home from work one day, this craftsman pulled his car alongside the one Deaton was riding in, pointed a rifle at Deaton, exchanged angry words, and then sped away (Tr. 5794-95, Deaton 11/3/83).

The first thing the next day Deaton reported this incident to his supervisor (Tr. 5795-96, Deaton 11/3/83). The matter was immediately investigated by Project Manager Doug Beam who called Deaton to his office to discuss the incident (Tr. 5796, Deaton 11/3/83). As a result of Beam's investigation, the craftman was permitted to resign that day (Tr. 5349, Beam 11/1/83; Tr. 5623-24, Beam 11/2/83). The worker was not involuntarily terminated for cause because Beam believed he had insufficient evidence of an event which took place miles away from the job site to do so (Tr. 5347, Beam 11/1/83; Tr. 5623, Beam 11/2/83).

As best this Board can tell, PA contends that Applicants' response, characterized by Palmetto Alliance as "lack-a-dasical" and "a slight wrist slap," amounts to condonation of such rifle-pointing activity. Based upon the record evidence, we reach precisely the opposite conclusion. Upon learning of the incident, Applicants' management took immediate and effective action to have the craftsman permanently removed from the project. Nowhere in the evidence does it appear that similar activity reoccurred; NRC resident inspector Van Doorn testified that Applicant took appropriate corrective action in response to this incident (Tr. 9743, Van Doorn 12/5/83).

Moreover, Palmetto Alliance's contention that management's condonation of such activity hindered the inspectors' performance of their duties is simply not

borne out by the record evidence. Deaton himself testified that the rifle-pointing incident did not affect his subsequent job performance in any way, and that he did not feel intimidated by the incident (Tr. 5800, Deaton 11/3/83). We accept Deaton's statement and find it corroborated by the fact that his prepared testimony fails to include any mention of the incident (Apps. Exh. 28, Deaton, pp. 1-5 and Attachment 1). Also, the Board recalls testimony that Deaton has written over 1,000 NCIs during his inspection work at Catawba (Tr. 5823, Deaton 11/3/83). This is hardly an indication of an intimidated or dispirited inspector.

The Board concludes the record is devoid of evidence that this incident had any impact on Deaton's or any other welding inspector's job performance at the plant. Applicants' management handled the matter expeditiously and properly. The evidence of record regarding this entire incident lends no support to Palmetto's assertion that welding inspector harassment was tolerated with consequent job performance repercussions.

2. HARRIS-MULLINAX INCIDENT
[PA PFF ¶¶197-200 (pp. 119-121)]

Palmetto Alliance next points to an incident^{30/}

^{30/} Relying solely on the testimony of former welding inspector Harry Langley, PA contends there was also an earlier incident in February, 1978 during which Harris was harassed by Mullinax. We have examined Langley's testimony regarding this alleged incident
(footnote continued)

involving steelworker foreman Tom Mullinax and welding inspector Lindsay Harris as illustrative of inspector harassment tolerated by Applicants' management. (PA PFF ¶¶197-200, pp. 119-121). This incident took place in the fall of 1978 when Harris was inspecting Mullinax's crew's work as they fit-up the upper personnel air-lock to the containment shell/liner plate in reactor building 2. (IC Tr. 1034, Harris 12/16/83; Tr. 8967, Harris 12/1/83; Apps. Exh. 101, Mullinax, p. 2).

After repeatedly finding the preheat on a tack weld insufficient, Harris told Mullinax that the crew would have to cut the tack out, or he (Harris) would issue an NCI report (Tr. 8968, 8985, Harris 12/1/83). According to Harris, Mullinax's response was that if Harris did not leave his men alone, he would knock Harris' teeth out (Id.; IC Tr. 992, Harris 12/16/83). According to Mullinax, his crew told him Harris was harassing them in their work and calling them "liars." In response,

(footnote continued from previous page)

and find that it is thoroughly inconsistent with that of Harris and Mullinax, the principals involved. In short, neither Harris nor Mullinax recall any incident occurring at the time, place, or under the circumstances outlined by Langley. However, even if the Board were to accept Langley's account as accurate, the incident has no significance in light of Langley's testimony that the work in question was performed properly and passed visual and x-ray inspection and that the incident did not keep him from doing his inspection work correctly. (Tr. 6867, 6883-84, Langley 11/10/83).

Mullinax told Harris, "Lindsay, you're going to get your teeth knocked out." (IC Tr. 1052-53, 1067, Mullinax 12/16/83).

The two men then went "up the hill" to their respective supervisors to get the matter "straightened out." (Tr. 8968, 8980, Harris 12/1/83; Apps. Exh. 101, Mullinax, p. 2). The very next day Mullinax met with Job Superintendent Cecil Wall, Larry Davison, Charles Baldwin and S.O. Shelby, the steelworker foreman, whom Wall had called in from vacation (Apps. Exh. 99, Davison, p. 2; Apps. Exh. 101, Mullinax, p. 3; Tr. 5680, 5694, Dick 11/2/83). Wall severely reprimanded Mullinax and told him that this type of statement would not be tolerated; that he was responsible for his crew's actions; and that his position as supervisor and quite possibly his job were on the line if this type of incident reoccurred (Apps. Exh. 99, Davison, p. 3; IC Tr. 1042, 1045, Mullinax 12/16/83).

Mullinax later apologized to Harris and asked him to put the matter behind them (Tr. 5681, Dick 11/2/83). Mullinax instructed his crew that arguments with inspectors were to be avoided; that threats to or intimidation of inspectors would not be tolerated; and that all questions which could not be resolved without arguing should be brought to him (Apps. Exh. 99, Mullinax, p. 4).

According to Harris, after the incident he and Mullinax worked well together without problems on a day-to-day basis (Tr. 9059, Harris 12/1/83). Harris did not file a harassment charge against Mullinax, because his supervisor handled the problem in a satisfactory manner (Tr. 9049-51, Harris 12/1/83). Harris noted that he subsequently learned that Mullinax had nearly lost his job over the incident (Tr. 8969, Harris 12/1/83).

Harris testified that the air-lock joint was properly fit-up and inspected in accordance with procedures (Tr. 8969, 8987, 8996, 9056-8, Harris 12/1/83). Had the correct procedures not been followed, Harris testified he would have written an NCI report (Tr. 9058, Harris 12/1/83). According to Harris, "we went by procedures. We didn't let the welders get by with anything." (Tr. 9000, Harris 12/1/83). Harris made it clear that the incident did not affect him in doing his job (Tr. 9059, Harris 12/1/83).

Having reviewed all the testimony regarding this incident, the Board finds it uncontradicted that Duke's management immediately and thoroughly investigated this incident and disciplined Mullinax. The record is equally clear that Harris' subsequent job performance was absolutely unaffected by the incident. In light of the overwhelming weight of the evidence to the effect that Applicants' management took immediate action to restore a

proper working relationship between Harris and Mullinax's crew and that the incident had no negative effect on Harris' inspection work, we conclude there is no support to be found in this incident for Palmetto Alliance's position that harassment was condoned with resulting adverse impact on the inspection program.

3. BRYANT INCIDENT
[PA PFF ¶¶201-202 (pp. 121-122)]

Palmetto Alliance next points to three incidents involving John R. Bryant as representative of management's countenancing craft harassment and intimidation of welding inspectors (PA PFF ¶¶201-202, pp. 121-122). First, Palmetto Alliance cites the instance in which welder Howard Beard threatened to push Bryant off a scaffold for rejecting a weld (PA PFF, ¶201, p. 121). Bryant reported the incident to Larry Davison who responded that such incidents were bound to occur on the job, and when they did to handle them in a professional manner by avoiding making the conflict worse. (Tr. 6051-53, Bryant 11/4/83). The second incident occurred when powerhouse mechanic foreman Mike Braswell cursed Bryant for turning down a fit-up due to improper marking (Tr. 6054-55, Bryant 11/4/83). The third occurred when the general foreman for pipe fit-ups in the auxiliary building, Henry Ellenberg, told Bryant that if it were the last thing he did he was

going to get Bryant out of the auxiliary building^{31/} (Tr. 6055-57, Bryant 11/4/83). Both of these incidents were reported to Larry Davison.

Our review of the record causes us to conclude that none of these incidents, either alone or in the aggregate, support Palmetto Alliance's position. Bryant's understanding from his conversation with Davison about the Beard incident was not, as Palmetto Alliance would have us believe, that he was "to let rejectable work pass." (Tr. 6052, Bryant 11/4/83). Bryant later talked with Beard's foreman who counseled Beard regarding the incident. Beard apologized to Bryant and the two men subsequently worked together without any problems (Tr. 6177, Bryant 11/4/83).

Bryant's testimony is that none of these incidents had any effect whatsoever on his job performance (Tr. 6149, Bryant 11/4/83). Moreover, Bryant stated that he knew of no welding inspector at Catawba whose job performance had in any way been altered by the occurrence of similar incidents (Id.). Bryant stated that he personally felt that the plant was constructed safely (Id.). He testified ". . . I've always felt there's been effort to assure public safety; that they've always been a little more stringent in the procedures than what (sic)

^{31/} Bryant's entire crew was later moved out of the auxiliary building to another job assignment, but this had no connection with the Ellenberg incident since such transfer occurred at least a year later (Tr. 6157, Bryant 11/4/83).

they had to, . . ." (Tr. 6150, Bryant 11/4/83). He concluded by saying that he had never approved any faulty work at Catawba and had no reservations about whether the plant was constructed in strict compliance with applicable standards (Tr. 6151, 6177, Bryant 11/4/83). This evidence, which is illustrative of the thrust of Bryant's testimony, lends no support to Palmetto Alliance's position.

4. ROCKHOLT INCIDENT
[PA PFF ¶¶203-205 (pp. 123-125)]

Palmetto Alliance next relies on an incident involving John Rockholt to make out its claim of management tolerance of inspector harassment resulting in an ineffective inspection program (PA PFF ¶¶203-205, pp. 123-125). In response to a Board question as to whether a craft worker had ever threatened him, inspector Rockholt testified:

. . . I was at one time shouldered by a craftsman (Cathcart - a carpenter). He just bumped into me. But as far as someone actually telling me he was going to do me bodily harm, I haven't had anybody tell me that. (Tr. 6372, Rockholt 11/8/83).

He further added, "No, I didn't feel threatened (by the shouldering). To be quite honest with you, I couldn't feel where he was coming from." (Tr. 6388, Rockholt 11/18/83). Rockholt also made it clear that the incident had no effect on the way he did his job (Id.).

Palmetto Alliance also points to Rockholt's request for an audience with Duke's Executive Vice President Warren Owen as evidence of lack of site management's (principally Larry Davison's) support for the welding inspectors. The record discloses that Mr. Owen came to the site, addressed the welding inspectors and answered their questions (Tr. 6263, Rockholt 11/8/83). Rockholt testified that after this meeting lines of communication between inspectors and Davison became much improved (Tr. 6240-41, 6343, Rockholt 11/8/83).

From Rockholt's testimony it is apparent he believed that a "less than ideal" working relationship between the welding inspectors and Applicants' management existed at one time at the plant. But his testimony is also replete with another far more dominant theme, illustrated by the following:

. . . we (welding inspectors) have not let it (adverse conditions) affect our job. (Tr. 6229, Rockholt 11/8/83);

(problems regarding the QA program) definitely did not affect the safety of the plant. (Tr. 6272, Rockholt 11/18/83);

It (low morale) does not and did not affect my job from the standpoint of not doing my job . . .
. . . I don't think it has affected anybody's inspection as far as the -- whether they carefully did their job or not. I feel that their job was done and it is continuing to be done now . . . (Tr. 6314-15, Rockholt 11/8/83);
and

. . . it (harassment or intimidation)(has) not affected (my) commitment to go ahead and do a good job as (I) had been hired to do . . . (Tr. 6353, Rockholt 11/8/83).

The Board cannot disregard the abundance of testimony by Rockholt which, when viewed in its entirety, undermines Palmetto Alliance's assertion that tolerance of harassment had a detrimental impact on the inspection program. We have no doubt that whatever problems Rockholt experienced at the plant, he did his job well and accepted no faulty or substandard workmanship. In short, the evidence in the record regarding inspector Rockholt allows us to reach no other conclusion. Palmetto Alliance's reliance on Rockholt's testimony as support for its assertion is simply misplaced.

5. CAUTHEN INCIDENT

[PA PFF ¶¶206-208 (pp. 125-126)]

Palmetto Alliance next contends that incidents involving inspector Boyce Cauthen support its position (PA PFF ¶¶206-208, pp. 125-126). Palmetto Alliance points to several occurrences during the period when Cauthen was on the M-4I job making "walk-down" final visual inspections of piping systems for surface conditions caused by construction damage such as arc strikes, saw cuts, gouges, etc. Occasionally Cauthen spotted a defect in a previously accepted weld while doing this job. (Tr. 6511, 6545, 6554-55, Cauthen 11/9/83). In one such instance where Cauthen discussed a weld that had "a little more

reinforcement" than was allowed by L-80 Construction Procedure, Slim Driscoll, an inspector on another crew, "chewed him out" and cursed him (Tr. 6517-18, Cauthen 11/9/83; Apps. Exh. 32, Cauthen, p. 3). About a week later Cauthen was removed from the M-4I job (Tr. 6521, Cauthen 11/9/83). However, he made it clear that the incident with Driscoll had no effect on his job as an inspector (Tr. 6548, Cauthen 11/9/83).

Cauthen had also "caught flak" from other members of Stanley Ledford's inspection crew because during his M-4I work he was nonconforming welds the crew had inspected and passed (Tr. 6511, Cauthen 11/9/83). Cauthen, therefore, arranged it so that when he found errors he would pass the word to the original inspector and his foreman would re-examine the weld and issue the NCI. According to Cauthen, this arrangement worked because every one of these welds was rewelded (Tr. 6575, Cauthen 11/9/83).

Palmetto also relies upon an incident where Cauthen caught craft foreman Ed McKenzie's lead man in a mistake which was then corrected. The next day McKenzie called Cauthen a "liar" (Tr. 6430, Cauthen 11/9/83). Cauthen made it clear that this incident had no detrimental effect on his job performance. In fact, quite to the contrary, Cauthen testified, "Every time I went by one of his (McKenzie's) fitters, I stopped and checked on them." (Tr. 6447, Cauthen 11/8/83; Tr. 6553, Cauthen 11/9/83).

In reviewing Cauthen's testimony the Board again notes a recurrent theme. Despite his feelings about various harassment incidents, Cauthen continued to perform his inspection job effectively. Of Cauthen's many statements to that effect, the Board selects the following examples:

I always go a little further (in inspecting) than what (sic) I am supposed to. (Tr. 6524, Cauthen 11/9/83);

A. The word was passed down to me that I was looking (inspecting) a little too hard.

Q. Did you stop looking so hard?

A. No, sir. (Tr. 6451, Cauthen 11/9/83); and

Well, I checked the whole Number 1 reactor, every pipe in there that we had to check, and with the group of men that I had working with me, I am satisfied that all of them (sic) pipes are safe. (Tr. 6542, Cauthen 11/9/83).

It is clear to this Board that whatever harassment Cauthen experienced had no effect on his job performance. We can find no evidence in the record that Cauthen accepted bad welds or was encouraged to overlook such welds. We conclude that Cauthen's testimony, viewed as a whole, militates against rather than supports Palmetto Alliance's position that harassment incidents had a negative impact on the welding inspection program.

6. GODFREY INCIDENT

[PA PFF ¶¶209-213 (pp. 126-127)]

Palmetto Alliance next relies upon certain excerpts from the testimony of inspector Vernon Godfrey to support its claim (PA PFF ¶¶209-213, pp. 126-127). Two of these

excerpts involve the McKenzie-Jackson incident discussed infra and the Beard-Bryant incident addressed supra. We will not deal with these incidents here except to note that, as discussed in some detail in those sections, neither constitutes authority for Palmetto Alliance's position. The other two excerpts Palmetto Alliance brings forward relate first to an incident where a craftsman cursed Godfrey and second to a period of time when Godfrey felt restrained from expressing his concerns to the NRC. We will briefly address these.

According to Godfrey, a craftsman, Lewis Lowery, called him a SOB for rejecting some of his work (Apps. Exh. 56, Godfrey, p. 5). Godfrey's supervisor, Charles Baldwin, told him "to put it aside." (Id.). At the hearing, when questioned closely about this incident, Godfrey responded as follows:

- A. It doesn't bother me so much if somebody throws words at me or something like that . . . About the only thing that I had problems was, like maybe one incident with Louis Lowry (sic).
- Q. Well, as far as any specific incident or general attitude that was conveyed to you about harassment or whatever, did it affect your performance on the job? Did it cause you not to follow procedures?
- A. No.
- Q. Do you know of any other welding inspectors who it might have adversely affected their job performance because of such threats?

A. NO. If anything it made us a little stricter. (Tr. 8207-08, Godfrey 11/28/83)(emphasis added).

Testimony such as Godfrey's, that he and the other welding inspectors', faced with occasional adversity as they went about their jobs, did not "let-up" in their inspection program, but rather became "a little stricter," provides this Board with reasonable assurance that Catawba is safely built.

Palmetto Alliance next relies upon Godfrey's statement that at a pay reclassification and recourse meeting Jim Wells or Larry Davison said it would not be to our (the welding inspectors') advantage to take concerns to the NRC (Apps. Exh. 56, Godfrey, pp. 2-3). Godfrey recalled that this meeting took place in early January, 1982 (Tr. 8279, Godfrey 11/28/83). Later that same month, on January 27, Warren Owen addressed the welding inspectors and answered their questions (Tr. 8274, Godfrey 11/28/83). Godfrey testified he came away from that meeting feeling free to go to the NRC without any concern about retaliation (Tr. 8278, Godfrey 11/28/83). He also said that he had always felt free to do so prior to the pay reclassification and recourse meeting (Tr. 8327, Godfrey 11/28/83). Godfrey further recalled that during that same month all the welding inspectors received a typewritten memo stating that they had unrestrained access

to the NRC without any fear of retaliation and providing the NRC's toll-free telephone number (Tr. 8283-85, Godfrey 11/28/83).

On this record the Board is left with little alternative but to find that Godfrey's concern about lack of access to the NRC was at the most short-lived. When Godfrey's further testimony, ". . . I never had a reason to go to the NRC . . ." is recalled, we can only conclude that his concern was de minimus. Having given it a close and fair reading, we find no support for Palmetto Alliance's argument in Godfrey's testimony.

Further, Godfrey's testimony about the quality of construction at the Catawba plant is noteworthy. He stated that he had been at the plant "since about day one, more or less" and "had seen about as much welding as any single individual out there" (Tr. 8316, Godfrey 11/28/83). Describing the construction of the plant, he stated, ". . . I don't think they (Applicants) sacrificed anything for safety." (Tr. 8310, Godfrey 11/28/83). Describing his job change from construction to the Catawba plant's operating department, he testified, ". . . I wouldn't be going back there now if I didn't think it was safe. . ." (Tr. 8316, Godfrey 11/28/83). Given such testimony, the Board concludes that Palmetto Alliance must search elsewhere than Godfrey's testimony for support for its position.

7. BURR - LEDFORD INCIDENT
[PA PFF ¶¶62, 214 (pp. 73, 127-129)]

Intervenor Palmetto Alliance would have the Board find that Applicant Duke undercut QA inspection not only by condoning harassment but also by having welding inspector supervisors instruct inspectors to be less rigorous in their inspection work in order to appease craft personnel. As its principal illustration in support of this assertion, PA points to the "coffee cup-ease off the craft" conversation between supervisor Stanley Ledford and inspector William Burr. (PA PFF ¶¶62, 214, pp. 73, 127-129). We have carefully examined all the record evidence regarding this incident and have concluded, for the following reasons, that this incident does not support Palmetto's assertion.

First, regarding this particular conversation, we have before us the testimony of the two participants therein.^{32/} This testimony, considered in the aggregate, shows that while Ledford tried to communicate one message, in an admittedly oblique fashion, Burr understood an entirely different message. Burr interpreted the conversation to mean that he had gone too far on his inspections in looking for problems and that he might be

^{32/} This issue (improper pressure by supervisors) was not pursued by the task forces because Burr did not submit it as one of his concerns (Tr. 3572-73, Cobb 10/18/83). Burr did not submit it because he believed he had to be able to document such concerns (Apps. Exh. 29, Burr, p. 3).

jeopardizing his possibilities for advancement by doing so. (Tr. 5953, Burr 11/3/83; Apps. Exh. 29, Burr, p. 3). Ledford, on the other hand, testified that he was trying to encourage Burr to become more self-reliant and to make his own decisions in a reasonable amount of time without causing undue delay, rather than urging Burr to "ease off" (Tr. 9093, Ledford 12/1/83). Ledford's comments about Burr's future were intended to suggest that Ledford thought Burr had promotion potential (Tr. 9095-96, Ledford 12/1/83). Certainly, Ledford would not have considered promoting a person to a more responsible position if he did not have confidence in and respect for the job the candidate was presently doing. We can only conclude from this evidence that there simply was poor communication between Ledford and Burr on this occasion.

Secondly, there is no evidence in the record to support PA's argument that the purported "ease-off" message originated at a level higher than the position occupied by Ledford. Burr testified that no source for the advice was stated by Ledford (Tr. 5938, Burr 11/3/83). Ledford testified that the message he gave Burr came only from himself and not from anyone above him (Tr. 9110, Ledford 12/1/83). This affirmative evidence from the two men involved and the absence of any evidence in the record to support a contrary finding leads us to reject PA's position that the message came from "higher up."

Finally, despite Burr's interpretation of the "coffee cup" conversation, his testimony was that the conversation only made him more determined to do his job as he saw fit (Tr. 5930-31, Burr 11/3/83). Burr neither "eased off" on the craft nor accepted any work that did not conform to Duke's QA standards and procedures (Apps. Exh. 29, Burr, p. 4). As he testified, ". . . we (the inspectors) were determined to see the (QA) program work" (Apps. Exh. 29, Burr, p. 6). Burr further testified that the QA program had been effective while he had worked as an inspector at Catawba, and that he knew of no deficiencies in construction or the QA program which would cause him to question whether Catawba were safely built (Apps. Exh. 29, Burr, pp. 6-7).

The Board concludes that the evidence regarding the Burr-Ledford incident, viewed in its entirety, simply does not add up to Applicant pressure to let procedure violations go undocumented or uncorrected. We characterize the incident as an employee communications/personnel matter without any safety significance. Our studied conclusion after careful review is that Palmetto's attempt to show improper supervisory pressure by pointing to this incident is without support in the record.

8. JACKSON-McKENZIE INCIDENT
[PA PFF ¶¶215-224 (pp. 129-133)]

Palmetto Alliance next points to an incident between inspector Larry Jackson and craft foreman Ed McKenzie in November, 1981 as "a primary example of lack of (management) support for inspectors in enforcing the quality assurance program." (PA FF ¶¶215-224, pp. 129-133). At issue was whether one of McKenzie's crew members had been grinding on a stainless steel pipe with a disk not marked with red paint as prescribed by Construction Procedure 170 so as to prevent the same disk from being used on carbon, and then stainless, steel pipe (Tr. 8823-25, Jackson 11/30/83; Tr. 8750-57, McKenzie 11/30/83). Jackson took the disk from the pipefitter, left the work area and met McKenzie (Tr. 8834-35, Jackson 11/30/83).

At McKenzie's request, Jackson handed him the disk, whereupon McKenzie looked at it and put it in his own shirt pocket (Tr. 8835-37, Jackson 11/30/83). By Jackson's account, he tried to take the disk out of McKenzie's pocket, whereupon McKenzie balled up his fist and told Jackson that if he touched him again, he would knock his eyes out (Id.). By McKenzie's account, Jackson pushed him repeatedly in the chest and demanded return of the disk (Tr. 8768, 8811, McKenzie 11/30/83). The two men then went to Jackson's supervisor who immediately reviewed the incident and concluded that the disk was not marked

properly. McKenzie agreed to this determination, apologized to Jackson and the two men shook hands (Tr. 8872, McKenzie 11/30/83).

Jackson then initiated an NCI report regarding the section of pipe on which McKenzie's crew member had been grinding (Tr. 8845, Jackson 11/30/83). The next day, however, Jackson placed the NCI tag on the wrong pipe section and McKenzie cursed him (Tr. 8850, Jackson 11/30/83). Jackson then filed a harassment charge against McKenzie for verbally abusing him (Tr. 8853, 8855, Jackson 11/30/83).

The final outcome of this incident was that the NCI report concerning the section of pipe was allowed to stand; but, the piping system of which this section was a part was later deleted and removed from the building for reasons totally unrelated to this incident (Tr. 8780-81, McKenzie 11/30/83). After resolution of the NCI report, Jackson's harassment charge was thoroughly reviewed with the investigation being directed by Duke's Vice President, Construction, Bob Dick (Tr. 5201, 5291, 5303, Dick 11/30/83). The conclusions reached by the investigators were that Jackson's actions had contributed to escalation of the confrontation and that, while no harassment occurred, steps should be taken by both Construction and QA to prevent a recurrence (Tr. 5304, 5329, Dick 11/1/83).

McKenzie was then counseled about the incident and about Duke's harassment policy (Tr. 8795, 8787, McKenzie 11/30/83). He testified that this counseling made a big impression on him and that he felt fortunate he did not lose his job because of the incident. He further stated he was informed that if a similar incident occurred again involving him that he would lose his job. (Tr. 8796, McKenzie 11/30/83). In addition, a verbal reprimand was given to McKenzie's entire crew (Tr. 5329-30, Dick 11/1/83).

Jackson was also counseled that he had behaved in an unprofessional manner in reaching for the disk and provoking McKenzie (Tr. 8869-70, 8913, Jackson 11/30/83). Jackson testified that the manner in which his harassment charge was handled would not discourage other welding inspectors from filing harassment charges if the situation called for it (Tr. 8876, Jackson 11/30/83).

Having reviewed all the evidence regarding this incident, including the seven citations to the record offered by Palmetto Alliance, this Board finds that this incident was thoroughly and promptly investigated by Duke and that appropriate corrective action was taken regarding the persons involved. The record, as we view it, contains no evidence of lack of inspector support from management in the resolution of this incident. Nor does the record contain any evidence that Jackson's inspection efforts

were thwarted in either this incident or any subsequent one. Palmetto Alliance apparently concedes this point since it has offered not a single citation to support its position that after the resolution of this incident became known, welding inspectors failed to implement effectively the inspection program. We cannot find in Palmetto Alliances's favor in the absence of any evidentiary support for its position.

9. REEP-JONES INCIDENT
[PA PFF ¶¶225-229 (pp. 133-135)]

The final incident advanced by Palmetto Alliance in support for its position involved welding inspector Max Reep who found welder G. R. Jones lying about 35 to 40 feet away from his welding rods in the in-core instrumentation pit in reactor building 2 (PA FF ¶¶225-229, pp. 133-135). Reep took Jones' rods and got another inspector to witness the situation in anticipation of preparing an NCI for failure of the welder to maintain control of his filler material as prescribed in Quality Assurance Procedure H-3 (Tr. 8640, 8666-67, Reep 11/30/83).

As Reep continued his assigned inspections, a fellow pipefitter aroused Jones and told him what had happened. Jones approached Reep, removed the rods from Reep's pocket, and put them in his own pouch which hung 6 to 7 feet away from where he sat down. (Tr. 8676-78, Reep

11/30/83). Reep took the rods from Jones' pouch again after performing his assigned inspections and turned to leave the pit. As he did so, Jones came up to him, retook the rods and exchanged words with Reep. (Tr. 8679, Reep 11/30/83). Reep reported the incident to his supervision and initiated an NCI regarding the uncontrolled filler material. He also filed a harassment charge against Jones. (Tr. 8680, 8684, Reep 11/30/83).

The final resolution of the NCI was that the rods were returned to the rod issue station and Jones received a Class A violation, a written disciplinary notice for violation of Procedure H-3 (Tr. 8682, 8704 Reep 11/30/83). Both the Construction and Quality Assurance Departments, through their Employee Relations sections, investigated Reep's harassment charge. The final conclusion, agreed upon by both departments, was that Jones' conduct toward inspector Reep did not constitute a violation of Duke's harassment policy. (Tr. 8693, 8709, Reep 11/30/83). One of the conclusions reached during the investigation was that, while Jones was undeniably at fault, Reep could have avoided the confrontation with Jones and had the opportunity to do so, i.e., Reep did not need to force the issue of possession of the rods since he already had a witness that the rods were not under Jones' control (Tr. 5268-69, Dick 11/1/83; PA Exh. 84, C.N. Alexander, pp. 68-84).

Jones received stern counseling from his supervisor about acting in a more professional manner and what the consequences of any further similar behavior would be (Tr. 8705, Reep 11/30/83; Tr. 5287-88, Dick 11/1/83). Also, Quality Assurance Employee Relations personnel met with Reep after the incident. Both Reep and Jones agreed with the final action taken by their respective departments. (Tr. 8708, Reep 11/30/83; Tr. 5287-88, Dick 11/1/83; Tr. 5591, Beam 11/2/83).

Having reviewed all the evidence regarding this final incident, the Board has found nothing to support a finding that Duke management's investigation and handling thereof permitted, invited or encouraged further similar activity. We do find, on the other hand, that Duke officials thoroughly investigated and took appropriate action regarding the incident. Inspector Reep testified without hesitation that Jones' conduct did not interfere with or keep him from performing his assigned inspection work (Tr. 8685, Reep 11/10/83). This incident lends no credence to Palmetto Alliance's argument that the inspection program was adversely affected by management's tolerance of harassment. In addition, we conclude that nothing about this incident shows a failure on QA management's part to take action to prevent harassment of inspectors.

In sum, Palmetto has cited a number of incidents involving nine separate inspectors as examples to support its argument that the QA program was ineffective due to lack of management support for the welding inspectors. We have examined each incident in far greater detail than the length of this order permits us to discuss. Suffice it to say that this Board has found very little, if any, evidence in the entire record to support Palmetto Alliance's position. We are constrained by the record and may not travel abroad through imaginary or uncharted waters. The record is unmistakably clear on this contention. We conclude that even if these incidents constituted harassment, which is not within this Board's province to decide, these incidents had absolutely no effect on the inspectors' job performance or on the Quality Assurance program at the plant. We cannot on the basis of this record conclude otherwise.

N. Harassment Policy
[PA PFF ¶¶230-231 (pp. 135-136)]

Palmetto would have the Board find that Applicants' Construction and QA Department harassment procedures do not protect welding inspectors from harassing conduct of "irate craftsmen and supervisors." The substance of Palmetto's position is that Applicants' harassment policy speaks to prevention of racial, sexual, religious, etc.

discrimination, but not harassment such as that allegedly experienced by welding inspectors in this case. (PA PFF ¶231, pp. 135-136).

In 1977 the Construction Department implemented Rules of Conduct which spelled out actions and activities which were not acceptable, including harassment. In September of 1980 the Construction Department implemented a harassment procedure (PA Exh. 73; Apps. Exh. 2, Grier p. 37; Apps. PFF, ¶152, p. 264). Applicants did not initially implement a corporate policy on harassment at this time because it was their practice to test procedures on good sized departments prior to making such procedures corporate procedures (Tr. 2974, Owen 10/13/83). As a result Applicants did not implement a corporate policy on harassment until February of 1981 (Apps. Exh. 2, Grier, p. 36; Apps. Exh. 27). The Board notes that the motivation for a harassment procedure came from Applicants' upper management, not concerns about welding inspectors (Tr. 2974, Owen 10/13/83).

The Corporate, as well as Construction Department, harassment procedures are virtually identical insofar as the main definition of harassment is concerned. That definition states:

Harassment is any annoying persistent act or actions that single out an employee, to that employee's objection or detriment, because of, but not limited to, race, sex, religion,

national origin, age, handicap, or innate personal characteristics (emphasis added) [Apps. Exh. 27; PA Exh. 73].

Importantly, the Corporate harassment policy states in pertinent part:

Harassment may include any of the following:

1. Verbal abuse or ridicule
2. Interference with an employee's work (Apps. Exh. 27).

The Construction harassment procedure contains identical additional forms of harassment but denotes them as various classes of violations. Verbal abuse and ridicule, and interference with an employee's work are considered Class A violations (PA Exh. 73).

A QA Department harassment procedure (PA Exh. 72) was implemented as a result of one of the Non-technical Task Force's recommendations in July of 1982 (Apps. Exh. 2, Grier, p. 37; Apps. PFF, ¶140, pp. 258-259). This procedure tracks closely both the Construction Department harassment procedure as well as the Corporate harassment procedure. The Board concludes that all three procedures are consistent with each other and all essentially provide the same definition of harassment.

Applicants' Proposed Findings of Fact (Apps. PFF, ¶¶152-153, pp. 264-265) discuss in detail the Construction Department's interpretation of their harassment procedure. Palmetto cross-examined Mr. Dick at great length regarding

the apparent failure of the Construction Department's harassment procedure to specifically include the type of harassment experienced by welding inspectors (Tr. 5272-5282, Dick 11/1/83). Mr. Dick responded numerous times that Applicants' policy clearly covered that type of harassment (Tr. 5275, Dick 11/1/83). The Board likewise was interested in determining Applicants' view of the scope of the Construction Department harassment procedure and Mr. Dick informed us that

we tried to cover that kind of harassment. If we failed to be specific in it, it was our failure in semantics, not intent [Tr. 5281, Dick 11/1/83].

Mr. Dick further stated in response to the Board's question that

it's been a long standing policy forever that I can remember that you don't harass fellow employees or employees of another department. And we would have aggressively addressed it in the absence of a policy, a written policy [Tr. 5282, Dick 11/1/83].

The Board attaches great weight to Mr. Dick's testimony. Further the Board views Mr. Owen's statements and Mr. Grier's statements about the implementation of a harassment procedure as demonstrative of a concerned management. Admittedly, the harassment procedures reviewed by the Board may have a certain degree of ambiguity to them; however, the Board recognizes that it is impractical to fashion a harassment procedure that explicitly states each and every form of harassment to be

covered. Further, the Board believes that the Applicants' definition of harassment is broad enough to encompass the type of harassment complained of in these hearings on the basis of (1) the conditional clause "but not limited to" in the harassment definition, and (2) the expansive definition of harassment in Applicants' Corporate procedure to include "verbal abuse or ridicule, [or] interference with an employees work". The Board also notes that Applicants have taken steps to direct the Catawba General Superintendent to reiterate Applicants' policy of harassment to his staff, through the first level supervision to employees

that construction builds in quality and QA verifies it; that construction employees by their action, show that we mean it. Intimidation, coercion or kidding will not be tolerated [PA Exh. 13, Attachment, Memo, Grogan to Dick; also see Tr. 3024-26, Owen, 10/13/83].

The Board finds that Applicants' policy on harassment as stated in its corporate and departmental procedures protect employees with regard to the type of conduct complained of by the welding inspectors.

O. G.E. "Beau" Ross
[PA PFF ¶¶216-259 (pp. 151-157)]

Palmetto would have the Board find that the Applicants discriminated against Mr. Ross by giving him a fair job evaluation. (PA PFF ¶¶246-259, pp. 151-157). Palmetto fails to request the Board find that such action against Mr. Ross had a detrimental effect on the QA

program at Catawba, but the Board assumes Palmetto would intuitively find that such action by Applicants undermined the QA program.

The Board notes at the onset that both Applicants and the Staff have devoted considerable attention in their respective Proposed Findings of Fact to Mr. Ross' evaluation (Apps. PFF ¶¶195-244, pp. 283-322; Staff PFF ¶¶228-245, pp. 115-123). The Board's reading of these Proposed Findings of Fact reveals that as to the issue of whether Applicants' handling of Mr. Ross' evaluation had a detrimental effect on the QA program at Catawba, both Applicants and Staff conclude it did not (Apps. PFF ¶244, p. 322; Staff PFF ¶245, p. 123). However, as to whether Mr. Ross was treated unfairly in his evaluation, the Staff concludes that he was (Staff PFF ¶243, p. 122).

Important to the Staff conclusion is its assertion that Mr. Allum did not properly use the last "accountability area" in the AS&A in evaluating Beau Ross. (Staff PFF ¶236, p. 120). In particular, the Staff notes that in this last category on the AS&A form -- which states that it is reserved for factors "outside of the Principal Accountabilities" -- Mr. Allum improperly listed problems previously listed in other, more specific "accountability areas, "such as Mr. Ross' interpretation

of the proper use of R-2A's and Q-1A's. In effect, this would appear to be "double-counting" or giving undue weight to this final category on the AS&A form.

The Staff's interpretation of Mr. Allum's use of this final category is incorrect (see Apps. PFF ¶¶197-228, pp. 283-305). Mr. Ross' Accountability Summary and Appraisal for Exempt Employees (PA Exh. 50) covered an evaluation period from roughly April of 1982 to April of 1983. The evaluation review was completed in February of 1983 (Tr. 3935, Davison 10/19/83). However, a new evaluation program (PPPW) took effect on or about 11/1/82 (Tr. 3936, Davison 10/19/83) and Mr. Ross was evaluated for the last four months under the new program. (Tr. 4561-62, Allum, Davison 10/25/83). In response to a question by Judge Kelley, Mr. Allum stated that for the first seven months of Mr. Ross' evaluation, prior to the implementation of the new evaluation program, Mr. Ross was given a rating of 1 (4561, Allum 10/25/83). The Board further questioned Mr. Allum and Mr. Davison on the evaluation of Mr. Ross and how his ratings were weighed because of the change in the evaluation program (Tr. 4561-63, Davison, Allum 10/15/83). The Board's understanding from Mr. Allum's and Mr. Davison's responses to the Board's questions is that Mr. Ross received an overall rating of 1 for the first seven months of his evaluation period. When the AS&A form was completed Mr. Ross' overall first seven months rating

of 1 (weighted as 3) was placed in the last accountability area on the AS&A form as a matter of convenience. Mr. Ross was then evaluated according to the other accountability areas only for the four months during which his evaluation period coincided with the new evaluation program. His evaluation during the last four month period showed that he had made significant improvements and when these improved ratings during the last four months were weighed with Mr. Ross' first seven month rating the overall rating came out to a rating of 2 (Tr. 4561-65, Allum, Davison 10/25/83). It is evident to the Board that the Staff's conclusion that Mr. Ross was twice rated for his first seven months' performance is not substantiated by a close reading of the record.

The staff also alleges that Mr. Ross was

"whip-sawed" by the early interim evaluation which rated him low for trying to answer a question he should have referred to supervision, and then in the AS&A, rating him low for not answering questions he could have answered himself. [¶238, p. 121].

Applicants' Proposed Findings of Fact discuss Mr. Ross' 1983 interim evaluation relating to Mr. Ross' failure to provide answers to employees questions when they (supervisors) know the answer. When they do not, they should go to the next level of supervision with the question to get the answer and then communicate it to the employee (Apps. PFF ¶205). Mr. Ross failed to follow this

procedure by first attempting to answer a question he could not, and then telling the individual to go to his (Mr. Ross') supervisor instead of Mr. Ross going to his supervisor with the question (Id.).

Applicants' Proposed Findings of Fact also discuss Mr. Ross' AS&A relating to Mr. Ross' failure to answer questions which he was capable of answering (Apps. PFF ¶217). In Mr. Allum's summarization of the problem he stated

Mr. Ross has a lot of technical - he is technically competent to make decisions. He is a very intelligent individual. He is able to answer the questions that come before him, but those that he doesn't feel will reflect what his people want to hear are referred to someone else.

. . .

If he thinks that the inspector will not see it the same way he does, I feel he sends that question on.

. . .

He doesn't answer it when he has the opportunity to do it, not that his decision or answer is any different than mine. [Tr. 4536-37, Allum 10/25/83].

The Board concludes that the two evaluations of Mr. Ross are not inconsistent with respect to Mr. Ross' duty to answer questions of subordinates.

With respect to Palmetto Alliance's position, Palmetto cites several actions by Applicants to support its finding. These actions include the Applicants'

mishandling of Mr. Ross' recourse action or appeal from his negative evaluation; the Applicants purported "witch hunt" to determine who leaked the rumor that Mr. Ross had received an unfair performance evaluation; and the Applicants' purported efforts to influence Mr. Ross' testimony in these hearings (PA PFF ¶¶246-259, pp. 151-159).

With respect to the purported attempt by Mr. Grier to influence Mr. Ross' testimony in these hearings, Palmetto cites to the memorandum prepared by Mr. Grier after his meeting with Mr. Ross as support. However, Palmetto utterly fails to cite its own cross-examination of Mr. Grier and Applicants' redirect examination of Mr. Ross regarding the meeting between Mr. Grier and Mr. Ross. The record shows the following:

Q. (Guild) How about the fact that Mr. Ross was likely to be a witness in this licensing proceeding with respect to his concerns about implementation of the quality assurance program?

A. (Grier) At this point in time, in April of 1983, I don't think I was thinking in terms of witnesses or who was going to be or who was not going to be witnesses [Tr. 3883, Grier 10/19/83].

* * *

Q. (McGarry) There was reference to a letter of George Grier it may have been a memorandum, which recounted Mr. Grier's meeting with you; do you recall that letter?

A. (Ross) Yes, sir.

Q. (McGarry) In that meeting, did Mr. Grier make any suggestion that if you were to testify favorably in this case you would be rewarded?

A. (Ross) No, sir. He did not.

Q. (McGarry) Can that meeting be viewed as an attempt to influence your testimony in any way whatsoever?

A. (Ross) No, sir. . .[Tr. 7049, Ross 11/11/83].

Mr. Ross confirms this point, as he stated that Mr. Grier made no attempt to influence his testimony whatsoever (Tr. 7049-50, Ross 11/11/83). Accordingly, this Board concludes that there is no basis whatsoever to find that Applicants attempted to influence Mr. Ross' testimony in these hearings.

Palmetto's next argument to support its conclusion that Mr. Ross was discriminated against is Palmetto's characterization that Applicants conducted a "witch hunt" to determine who leaked the rumor that Mr. Ross had received an unfair performance evaluation and was going into recourse over it. Palmetto answers its own question by stating that Mr. Ross himself "leaked" the rumor that he got an unfair evaluation (PA PFF #257, p. 156; Tr. 6789-91, Ross 11/10/83). From the Board's point of view there was no breach of confidentiality by Applicants and if Mr. Ross elected to make public his performance evaluation he was at liberty to do so. Applicants comment

to Mr. Ross by Mr. Willis and Mr. Allum suggests to the Board that Applicants were concerned about protecting Mr. Ross' confidentiality, not with keeping Mr. Ross from discussing his performance evaluation. (Tr. 4735-40, Davison 10/26/83). The Board finds no merit to Palmetto's argument.

Palmetto's remaining allegation is that Applicants prejudiced Mr. Ross' recourse of his negative evaluation by foreordaining the outcome since senior QA management was involved in the investigation and decision associated with the initial recourse (PA PFF ¶255, p. 156).

Applicants' Proposed Findings of Fact on this issue provide a concise description of Mr. Ross' recourse action (Apps. PFF ¶229-230, pp. 305-308, 310-311). These findings reveal that senior QA management was not prejudiced with respect to resolving Mr. Ross' recourse (Apps. PFF ¶230, pp. 306-307). The Board concludes that Mr. Ross' recourse action was not foreordained or otherwise manipulated by Applicants' senior QA management.

In sum, the Board concludes that Mr. Ross' evaluation was not indicative of a systematic deficiency in the QA program or served as an example of company pressure to approve faulty workmanship.

P. Mr. Zwissler
[PA PFF ¶¶271-272 (pp. 165-166)]

Palmetto would have the Board find that because Applicants restricted the review of Management Analysis Company (MAC) to the issues reviewed by the Technical Task Force, and because of what they believe are serious doubts as to the competence and qualification of MAC and Mr. Zwissler, no probative value should be given to his conclusions concerning quality assurance at Catawba or the adequacy of Applicants' response to the welding inspectors' concerns (PA PFF ¶¶ 268-272, pp. 163-166).

The Board's review of the record and Applicants' Proposed Findings of Fact (Apps. PFF ¶¶88-91, pp. 198-201) show that Mr. Zwissler of MAC was retained by Applicants as an independent consultant to oversee the Technical Task Force as described in Apps. PFF ¶¶88-89, pp. 198-199. (See Tr. 3187-89, Zwissler 10/14/83).

In carrying out his responsibilities, Mr. Zwissler had been told by Mr. Owen that his activities should be restricted to technical concerns, and thus performed no review of the Non-technical Task Force efforts (Tr. 3186-87, 3200, Zwissler 10/14/83). Palmetto argues that Mr. Zwissler's failure to review the Non-technical Task Force effort discredits his conclusions regarding the overall effectiveness of Applicants' QA program. The record shows otherwise.

After being retained by Applicants to oversee the Technical Task Force effort, Mr. Zwissler immediately undertook to become totally versed in the background leading up to the formation of the Technical Task Force. Included among a number of items Mr. Zwissler did were a review of the Gail Addis memo to Mr. Owen (Apps. Exh. 8, Addis, Attachment 7) which outlined the initial concerns of the welding inspectors; the Task Force I report (Apps. Exh. 10, McMeekin, Attachment 4); and the statements of concerns expressed by each welding inspector (Apps. Exh. 13, Zwissler, p. 5). These three documents clearly show that Mr. Zwissler understood the totality of the welding inspector concerns, as well as the conclusion of Task Force I, that

serious communication problems exist between the inspectors, their supervisors, and construction. These problems are evidenced by inspector's lack of understanding of NCI resolutions, inspector confusion as to what is expected of them . . . , and inconsistencies in communication channels between inspectors and QA. These problems are further complicated through technical complexity, organizational changes, position evaluations, and changing objectives of the NCI program [(Apps. Exh. 10, McMeekin, Attachment 4, p. 9-10)].

Mr. Zwissler's knowledge of these documents is further evidenced in his prefiled testimony wherein he stated that he agreed with this assessment by Task Force I (Apps. Exh. 13, Zwissler, p. 12). In cross-examination by Palmetto, Mr. Zwissler stated that his statement in his

prefiled testimony was based upon his review of the concerns expressed by the welding inspectors (Tr. 3193-94; Zwiessler 10/14/83; Apps. Exh. 13, Zwiessler, p. 12). Mr. Zwiessler went on to state that his view that serious communication problems existed was based on all of the written concerns in their original form

before they were cut up and pasted, or whatsoever, so, in fact, I had knowledge of precisely what the welding inspectors had written. As a result of that knowledge, I indicated that I felt there was a problem of communications" [Tr. 3194, Zwiessler 10/14/83]

Mr. Zwiessler went further in his prefiled testimony and stated that he believed that this problem could have potentially reduced the effectiveness of the QA program had steps not been taken to address the concerns (Apps. Exh. 13, Zwiessler, p. 12).

We do not accept Palmetto's argument that Mr. Zwiessler's failure to perform an overview of the Non-technical Task Force similar to that done on the Technical Task Force fatally flaws his endorsement of Applicants' QA program. The Board finds that Mr. Zwiessler did review the universe of concerns that ultimately were investigated by the Non-technical Task Force. Further the Board concludes that Mr. Zwiessler, in reviewing the universe of concerns characterized as "nontechnical" concluded that generally, communication problems were the underlying basis for them.

Having had the underlying basis for these concerns addressed, Mr. Zwissler concluded that no adverse effect on the QA program was evident.

The Board now addresses Palmetto's conclusion that Mr. Zwissler and MAC were not qualified and competent to perform a valid review of Applicants' QA program.

The Board notes that Applicants' Proposed Findings of Fact (PFF ¶88, p. 198-199) provides an accurate description of Mr. Zwissler's technical qualifications. The Board adds that Mr. Zwissler's technical qualifications were examined by the parties in the hearing and it was determined that Mr. Zwissler had extensive experience evaluating QA programs at nuclear power plants (Tr. 3222-3227, Zwissler 10/14/83). The Board finds that Mr. Zwissler, and derivatively MAC, were qualified to perform the review of Applicants' QA program. Having found that Mr. Zwissler and MAC were qualified to perform such a review, the Board now addresses their competency.

Palmetto's serious doubts about the competency of MAC and Mr. Zwissler appear to arise from Palmetto's perception that the work product by MAC and Mr. Zwissler in their review of the QA program at Consumers Power Company the Midland Plant was "rather shoddy" (PA PFF ¶273, pp. 165-166).

Palmetto Alliance attacks the competency of MAC and Mr. Zwissler on the grounds that on the same day that MAC characterized (in its report) the Midland Plant was as good as any other plant in the country with regard to their QA program, the NRC announced that Consumers Power Company, was being fined \$120,000 for quality assurance breakdowns at the site.

The Board was particularly interested in the fine imposed by the NRC against Consumers Power Company and the relationship that fine had to MAC's, INPO review of their QA program.

The record reflects that the Notice of Violations calling for the fine against Consumers Power Company was primarily concerned with the implementation of the QA program. Mr. Zwissler stated that to the best of his knowledge the NRC has not said anywhere that the QA program as documented was not an acceptable program (Tr. 3384, Zwissler 10/17/83). The INPO criteria to which MAC focused their attention in conducting the INPO review related essentially to project management; that is, MAC looked at the documented QA program as opposed to the implementation of the program (Tr. 3384, Zwissler 10/17/83; Tr. 3605, Zwissler 10/18/83).

Accordingly, MAC, during the INPO review focused on project management of QA and in so doing recommended that Consumers Power Company could improve their QA program by

dropping the In-Process Inspection Notice (IPIN) program and changing to a non-conformance report program. (Tr. 3600, Zwissler 10/18/83). The change to the NCR forms would result in a reduction in QA documentation and since the NCR forms were specifically identified and trended for cause, this would give an indication of any adverse situation which might affect quality (Tr. 3601-02, Zwissler 10/18/83). Futher, MAC based its recommendation for this change on the fact that there was a potential under the IPIN program for an inspector to find some discrepancies, allow the rework on an IPIN, reinspect and sign off the IPIN and treat that as a final sign off of the entire inspection procedure. This could in effect omit the balance of the inspection on that particular item (Tr. 3603, Zwissler 10/18/83).

In the meantime, the NRC audited the implementation of Consumers Power Company's QA program and disclosed the violation resulting in the \$120,000 fine which was suspected to have arisen from the use of IPINs. (Tr. 3604, Zwissler 10/18/83).

Mr. Zwissler explained that the INPO criteria MAC used to conduct the INPO evaluation were essentially related to project management; that is

[We] conduct a series of interviews with people throughout the organization in all the various disciplines, to reach an understanding of how well they understand their project management requirements, concepts, policies, procedures, et cetera.

Secondly, there were specific observations made of work in process to see if the people actually working were following those policies and procedures which define the project direction. There was not any inspection of completed hardware. There was no inspection element of hardware per se involved in the INPO procedure.

The NRC detected the discrepancy by actually inspecting the hardware, so that there is no provision within the INPO criteria that would pick up those kinds of discrepancies noted by the NRC as a result of physical inspection of hardware [Tr. 3605, Zwissler 10/18/83].^{33/}

The Board does not accept Palmetto's argument that Mr. Zwissler and MAC are not competent to perform a valid review of Applicants' actions with respect to the welding inspector concerns on the basis of the Midland example. What Palmetto Alliance fails to consider is that, on the face of Mr. Zwissler's testimony, he explains that what MAC looked at for Midland in its review and what the NRC looked at for Midland in its review were two different things. For Mr. Zwissler's review of the Catawba Task Force effort, it is clear that Mr. Zwissler looked at the same things both the NRC and the Task Force looked at. Therefore it does not seem to us that the Midland experience is applicable to this matter before us. The Board finds Mr. Zwissler and MAC competent in their ability to perform the review of the welding inspector concerns, and to determine whether those concerns indicate a breakdown of the QA program at Catawba.

The Board views the Applicants' retention of Mr. Zwissler for the purpose of overseeing the Technical Task Force effort as a prophylactic measure to assure itself that the Applicants' investigation was conducted with the degree of attention and responsibility necessary to assure its effectiveness. The adequacy of the Technical Task Force, or for that matter the Non-technical Task Force would not hinge on the presence or absence of a Zwissler-type review. The adequacy of Technical Task Force and the Non-technical Task Force are determined on their own merit. In reviewing Applicants' Proposed Findings of Fact (Apps. PFF ¶¶75-87, pp. 188-198, ¶¶123-144, pp. 250-260) and the NRC Staff's proposed finding (NRC Staff PFF ¶222, p. 112), as well as the remainder of the record, the Board concludes that Applicants' Technical and Non-technical Task Forces were adequate. Palmetto did not provide proposed findings of fact regarding the adequacy of Mr. Zwissler's report. The Board finds Mr. Zwissler's effort adequate.

Q. Technical Task Force Investigation
(PA PFF ¶¶260-530, pp. 158-259)

Palmetto challenges the adequacy of the Technical Task Force investigation in general and also takes issue with the resolution of some of the specific technical

concerns. We will first address Palmetto's general criticisms and then focus on those specific concerns which warrant further discussion.

(1.) Palmetto's General Criticisms

As we understand their position, Palmetto presents four general criticisms of the Technical Task Force effort. It will be seen, however, that these criticisms are based on misconceptions and in certain cases are flatly contradicted by the record.

First, Palmetto alleges that the Applicants failed to identify the "root cause" of the technical concerns and to take steps to assure that such problems do not recur (PA PFF ¶260, pp. 158-159). It is not clear what specific concerns, if any, they believe support this allegation. But in any case, this allegation wholly ignores the significant steps that were taken by the Applicants to alleviate the problems underlying the technical concerns. As explained in Applicants' Proposed Findings, the policy has now been implemented that an inspector may not be instructed to approve work which he believes is unacceptable (Apps. PFF, Vol. I, p. 47). Applicants have also reinforced the use of the Technical Recourse Program and have established the policy that an NCI may not be invalidated once it has been initiated (Id. at 47-48).

The inspectors agreed that these procedural changes have improved the QA program at Catawba (see, e.g., Apps. Exh. 30, Bryant, pp. 4-5; Apps. Exh. 34, Ross, p. 5).

Second, Palmetto criticizes the Technical Task Force for allegedly not attempting to discover all the evidence behind the concerns (PA PFF ¶261, p. 159). This criticism does not accurately reflect the record. The Technical Task Force relied, in the first instance, on the inspectors' descriptions of their concerns and did not question the accuracy of the concerns (Apps. PFF ¶86, p. 197). Where the Task Force needed additional information to evaluate a concern, it sought out such information, in some cases through interviews with the inspectors (Apps. PFF ¶81, p. 192). This is clear from a review of the Technical Task Force Report. In several cases the inspector's description of his concern was so sketchy that the Task Force clearly obtained additional information in order to address the concern (for one example, see Concern D-11 in T.F. Report, Vol. II). Palmetto has identified only one case in which it appears that the Task Force may have been mistaken on the facts. This is Mr. Jackson's concern about the foreman performing the welding for another welder (Concern L-1). While Mr. Jackson insists that the foreman was actually welding (Tr. 8892-8900) the Task Force, on the basis of the statements of "numerous craftsmen", found that the foreman was only "guiding" the

welder's hand (T.F. Report, Vol. II, L-1). This factual discrepancy, however, is of no safety importance, because the foreman was a certified welder and the weld was on a nonsafety-related system (Tr. 8918, Jackson 11/30/83).

Third, Palmetto claims that the definition used for determining what constituted a "technical" concern was overly restrictive in that some concerns with technical implications did not get addressed by the Technical Task Force (PA PFF ¶¶263-268, pp. 160-163). This allegation is based on a misconception. What Palmetto fails to realize is that all the concerns were originally given to the Technical Task Force for its review (see Apps. Exh. 2, Grier, p. 49). It was the Technical Task Force that made the general determination after an initial review of the concerns that some of them were non-technical in nature (Id.). In addition, Mr. Alexander, who headed the Non-technical Task Force, discussed the concerns with the Technical Task Force whenever uncertainty arose as to which group should have responsibility (Apps. PFF ¶126, p. 252). Thus, it is reasonable to conclude that all the concerns that required an engineering review by the Technical Task Force were adequately addressed.^{34/}

^{34/} Palmetto also alleges that the technical/non-technical distinction casts doubt on MAC's review of the investigation of the inspectors' concerns (PA PFF ¶¶268-271, pp. 163-165). The point seems to be that MAC's review was deficient because it did not include non-technical concerns. We show elsewhere that this
(footnote continued)

Finally, Palmetto attacks the qualifications of MAC and Mr. Zwissler to conduct the independent review of the Technical Task Force effort (PA PFF ¶272, pp. 165-166). For the reasons set forth at p. 142 et seq., supra, this position lacks merit.

(2.) Specific Concerns

It must be kept in mind that Palmetto's discussion of specific welding inspector concerns reflects only part of the story. Palmetto seeks to build its case solely on the evidence of the welding inspectors. During cross-examination Palmetto never asked Mr. Cobb, the Chairman of the Technical Task Force and a Registered Professional Engineer, a single question about a specific technical concern, though he was on the stand for three days.

This deficiency is fatal to Palmetto's case. The primary purpose of the Technical Task Force was to determine whether any actual or potential technical inadequacies existed at Catawba (Apps. PFF ¶80, pp. 191-192). Because the welding inspectors do not possess the engineering expertise to say, from an engineering standpoint, whether a particular concern represents a technical inadequacy (see, e.g., Tr. 6375, Rockholt, 11/8/83; Tr. 6758, 6988, Ross 11/10/83), there is no basis on the record made by Palmetto to find that the Technical

(footnote continued from previous page)
does not call into question the effectiveness of the Non-technical Task Force effort.

Task Force erred in any of its conclusions.^{35/} For Palmetto to have established the existence of a technical inadequacy, they would have had to present a direct case of their own or cross-examine Mr. Cobb on specific concerns.

Palmetto seeks to discredit the Technical Task Force effort simply by showing that some of the welding inspectors disagreed with the findings of the Task Force that certain concerns represented potential rather than actual procedural violations.^{36/} Again, Palmetto failed to question Mr. Cobb on this subject. In any event, this showing is misplaced. It is clear from a review of its Report that the Technical Task Force, in determining whether a matter presented an actual, a potential or no procedural violation, was examining the concern in light of the ultimate resolution, and was not making a judgment

^{35/} Even where an inspector expressed an opinion disagreeing with the Task Force on whether a concern represented an actual technical inadequacy, it is clear that there was no real substantive difference. As the Staff explains, "The Task Force treated technical problems that were corrected, or in the process of being corrected, as 'potential' inadequacies. . . ." (NRC Staff PFF ¶220, p. 110).

^{36/} See, e.g., PA PFF ¶276, p. 168: "Technical adequacy can only mean work performed in strict compliance with documented procedures. . . ." This bit of hyperbole is flatly contradicted by the record. It has been firmly established that an item that deviates from procedures may still be technically adequate because of the conservatism built into the Applicants' QA procedures (Apps. Exh. 2, Grier, p. 42; Tr. 6763, Ross 11/10/83).

on whether the item should or should not have been documented by the inspector (see, e.g., T.F. Report, Vol. II, Concern D-27). As the Staff explains in its Proposed Findings (PFF ¶219, p. 110):

The Task Force appears to have treated procedural violations that were caught by inspectors and corrected as 'potential.' Van Doorn, Tr. 9719-20. Moreover, resolution of potential procedural violations were treated as actual violations for purposes of resolution by Applicants, and for purposes of evaluation by the NRC Staff. Van Doorn, Tr. 9691-93.

Thus any disagreements over whether a concern represented an actual or potential procedural violation have no substantive effect on the adequacy of the Technical Task Force effort.^{37/}

We now turn to the specific concerns which warrant discussion beyond that contained in Applicants' Proposed Findings.

Concern D-3. Palmetto highlights this concern in an attempt to show that the Technical Task Force resolution was inadequate (PA PFF ¶¶283-297, pp. 171-176). This concern involved a structural steel weld on a cable tray

^{37/} One other point made by Palmetto may be disposed of briefly. Palmetto alleges that the inspectors who were not permitted to testify had raised "significant quality assurance allegations . . ." (PA PFF ¶280, p. 170). It must be noted, however, that 14 welding inspectors did testify, and the welding inspectors' technical concerns accounted for roughly 20 hearing days. The testimony of the other inspectors was excluded as cumulative. Thus, if any inference is to be drawn about this testimony, it is that no significant additional allegations were presented by these other inspectors.

system in the auxiliary building (see Apps. PFF ¶103, p. 219). Palmetto criticizes the Technical Task Force for allegedly not addressing the inspector's concern about welding over foreign contaminants and not dealing with the implications of the supervisor's "verbal voiding" of the NCI initiated on this item.

As to Palmetto's first point, the Task Force did in fact address the question of foreign contaminants and concluded that it did not present a problem. Noting that a full penetration weld had been achieved when only a partial penetration weld was required, it stated: "The indications described by the inspector were in the root area. Again, part of the weld not required by design." (T.F. Report, Vol. II, D-3). The "verbal voiding" in this case did not present a problem because, as the Staff recognizes, this item did not require the processing of an NCI (NRC Staff PFF ¶162, p. 83; see also Apps. PFF ¶103, p. 219). The generic implications of verbal voiding have been adequately addressed by Applicants (see Apps. PFF ¶¶373-383, pp. 395-401).

Concern D-7. Palmetto alleges that this concern is indicative of a failure to document non-conforming items. This concern related to the fact that two welders had failed to stencil one of their welds (see Apps. PFF ¶121, p. 246). The inspector, Mr. Bryant, wanted to initiate an NCI but was instructed to have the welders stencil the

work instead. Since the Task Force indicated that the inspector should have sought to resolve this problem by means other than an NCI, Palmetto now argues that this is "the first tangible suggestion of use of the R2 procedure at Catawba to down-grade and dilute the documentation of non-conforming work" (PA PFF ¶312, p. 181). On the contrary, the use of an NCI in this situation, where the deficiency could readily be corrected, would have diluted the effectiveness of the Q-1 procedure. As the Staff recognizes, documentation of this problem was not required (NRC Staff PFF ¶176, p. 91).

Concern D-15. This concern arose out of an inspection in which Mr. Bryant discovered an indication on some piping which he believed to be a crack as opposed to a handling mark. The discussion of this concern in the Proposed Findings of Palmetto (PA PFF ¶¶329-338, pp. 187-189) and the Staff (NRC Staff PFF ¶189, p. 96) is misleading. In fact, the Staff misstates the record in saying that "when the craft went to repair the surface indication, they ground right through the pipe. . . ." (NRC Staff PFF ¶189, p. 96, citing the testimony of Mr. Ross at Tr. 6754).

What actually occurred was as follows. Mr. Bryant initiated NCI 13053 on this matter. The resolution of the NCI required craft to perform grinding to remove the indication, then PT the pipe "to insure removal," and

finally measure the remaining wall thickness of the pipe to determine whether the pipe was acceptable (Tr. 6171, Bryant, 11/4/83). Contrary to what the Staff believes, the grinding did not go right through the pipe. Had it done so, there would have been no reason to perform a PT examination. The PT examination in fact showed that the indication had been removed (Id.). But it was ultimately determined that the remaining wall thickness of the pipe was below the minimum requirement and the pipe was replaced.

Concern D-22. This concern relates to an incident in which Mr. Bryant noticed what he believed to be lack of fusion in a portion of a weld previously accepted (see Apps. PFF ¶103, p. 220). Mr. Bryant believed the weld was unacceptable (Id.) And the Staff, in its Proposed Findings, states that an NCI or similar documentation would have been appropriate (NRC Staff PFF ¶167, p. 87). Instead of permitting the initiation of an NCI, however, the QA supervisor, Mr. Baldwin, knowing that the weld had been judged acceptable on a prior inspection, ordered liquid penetrant testing to determine which inspector was correct. This was appropriate because the determination of lack of fusion is a matter of judgment (Tr. 4410, Baldwin, 10/25/83). Since the PT showed no lack of fusion (Apps. PFF ¶103, p. 220), it is Applicants' position that

an NCI or similar documentation was unnecessary. We agree, however, that if the PT had detected lack of fusion, then an NCI would have been appropriate.

Concern D-23. Palmetto alleges that Mr. Bryant's concern about downhill welding reflects a failure by Applicants to document non-conforming items (PA PFF ¶¶384-390, pp. 206-207). In that case Mr. Baldwin had directed Mr. Bryant not to initiate an NCI but instead to permit craft to correct the work. Welders at Catawba are not qualified for downhill welding. The Technical Task Force investigated this concern and concluded that "The practice of not initiating proper notification (Q-1, R-2) of an obvious violation of the welding program is not acceptable." (T.F. Report, Vol. II, R-50, D-23). It directed that verification be provided that the weld in question has passed all required inspections (Id.). While Applicants admit that this deviation from procedures should have been documented under Q-1 or R-2, it must be noted that this incident did not involve a technical deficiency. Both inspectors who raised this concern agreed that the weld had been adequately corrected (Tr. 6136, Bryant 11/4/83; Tr. 6734-37, Ross 11/10/83).

Concern D-24. Palmetto appears to believe that the Task Force failed to resolve the technical problem associated with this concern (PA PFF ¶378, p. 204). This was a case in which the inspector, Mr. Bryant, found a

pin-hole indication in a Class C weld. Such an indication does not constitute a rejectable condition under L-80 (see T.F. Report, Vol II, D-24). Thus, no documentation of this item was required under the procedures, and Mr. Bryant was instructed by his supervisor to accept the weld on the M-4A. Mr. Bryant took issue with the resolution of this concern because he considers it his duty as an inspector to identify any deficiencies he finds even if they do not constitute violations under the specific procedures (PA PFF ¶376, pp. 203-204). The Task Force agreed that this may be a proper approach, but it fully explained that the pin-hole indication is not a technical problem for such a Class C weld because of the greater pipe thickness and weld sizes prescribed (T.F. Report, Vol. II, D-24).

Concern D-30. Palmetto alleges that this concern reflects a failure by Applicants to document deficiencies (PA PFF ¶¶405-412, pp. 215-217). Mr. Bryant had been instructed by his supervisor to indicate acceptance on an M-4A of a weld on the inside of a pipe which had been repaired by remote grinding. The weld was approximately seven feet up a six inch pipe, well beyond the accessibility range for a visual inspection under M-4 (Tr. 7087, Ross 11/11/83). Mr. Ross testified that the inspector should have been able to "NA" the visual inspection on the M-4A rather than sign off on it as

acceptable (Tr. 7090, Ross 11/11/83). The Staff seems to agree, noting that "the problem was, at least initially, not failure to properly document, but completing a document -- the M-4A -- with misleading information " (NRC Staff PFF ¶168, p. 88). The Staff goes on to say that "[e]xcept for the corrective action of the Technical Task Force evaluation and follow-up, a violation of Appendix B, Criterion XVI would have existed" (Id.).

The Technical Task Force investigated this concern and found that the supervisor had improperly instructed the inspector to sign off when remote inspection means were required by M-4. It must be noted, however, that the obvious intent of the supervisor's action was simply to deal with a sign-off step that was unnecessary because M-4 did not require a visual inspection in this case. Most importantly, as established by the resolution of NCI 13955 (Apps. Exh. 35, last page), this concern did not present a problem with the technical adequacy of the work. The NCI resolution determined that the grinding on the pipe, which reduced the wall thickness slightly below the minimum requirement, would not have been of any safety or structural significance even if it had not been repaired (Apps. Exh. 35, last page; Tr. 7035, Ross 11/11/83). Furthermore, this pipe will receive UT, pre-service and in-service inspections (Apps. Exh. 36; Tr. 7044-46, Ross

11/11/83). Thus, the Staff is in error in stating that a violation of Criterion XVI would have existed absent the corrective actions taken.

Concern Q-1. Palmetto alleges that Rockholt's concern about the plate in the decontamination pit evidences a failure to document deficiencies (PA PFF ¶¶430-437, pp. 222-224). In this case Mr. Baldwin had instructed Mr. Rockholt to accept the identification of the plate on the basis of its physical configuration. Mr. Rockholt, however, believed that this was not permitted by Procedure H-5 and he sought to initiate an NCI, which was not done until ten months later. Palmetto would have the Board find that the failure to allow the origination of the NCI at the time of the incident was a violation of Procedure Q-1 and Appendix B.

Mr. Rockholt's concern, however, was based on a misconception of Procedure H-5. The revision of H-5 in effect at the time of the incident in fact permitted identification of material by dimensional configuration (Tr. 6396, Rockholt 11/8/83). Mr. Baldwin, therefore, acted appropriately in directing Mr. Rockholt to accept the item on this basis. NCI 13627 was initiated in order to address his concern, and the engineering resolution of that NCI was that the plate could be identified by dimensions (PA Exh. 89). This determination was bolstered by the fact that only two plates of this type were at the

site, as established by the purchase order attached to the NCI resolution (PA Exh. 89). Thus, the initiation of an NCI for this problem was unnecessary, and the substantial documentation that now exists for it goes beyond anything required by Appendix B.

Concerns Q-2 and Q-3. Palmetto claims that these concerns reflect a failure by Applicants to document deficiencies (PA PFF ¶¶439-446, pp. 226-230). In the case of concern Q-2, the inspector had observed craft cutting some A-36 steel without transferring the material identification. His supervisor directed him not to initiate an NCI, but rather to allow craft to mark the material (Apps. PFF ¶111, p. 236). As the Staff points out, an engineering evaluation was not required for this condition (NRC Staff PFF ¶160, pp. 82-83). The discrepancy was easily corrected by having craft mark the material and no NCI was necessary.

Concern Q-3 was similar in nature. The inspector had found craft cutting some Class B pipe without transferring the traceability number. The pipe was to be used in a nonsafety-related system. Since QA Procedure H-4 requires marking only of "QA condition" piping, there was no violation of procedures in this case (see NRC Staff PFF ¶160, p. 82; Apps. PFF ¶111, p. 236). Documentation and an engineering review under Q-1 were therefore unnecessary.

Concern E-5 (R-5). This was a concern raised by Mr. Cauthen involving a welder who was not in control of his filler material, in violation of QA Procedure H-3 (see Apps. PFF ¶111, p. 233). In its Report on this concern, the Technical Task Force did not identify a specific basis for the concern, that is, a specific NCI, weld, etc. Because of this, Palmetto challenges the adequacy of the Task Force investigation of this concern, alleging that "no evidence at all suggests that Duke or the Task Force ever asked the inspectors or others involved for further identification of the hardware involved" (PA PFF ¶458, p. 233). Palmetto's allegation is unfounded. In the first place, Mr. Cauthen testified that he is not aware of any deficient welds at Catawba (Tr. 6575-76, Cauthen, 11/9/83). Moreover, the Task Force explained (T.F. Report, Vol. II, R-5 and E-5) why it was not necessary to seek out the specific hardware involved:

H-3 and the ASME QAPs require verification of filler material traceability prior to acceptance of the weld. All other welding is inspected fully or by spot surveillance to assure use of acceptable filler materials. Only ASME Section III approved welding consumables are released to the crafts. These safeguards assure the use of proper filler materials at the Catawba site.

Concerns J-1 and R-28. Palmetto discusses these concerns at some length in its Proposed Findings (PA PFF ¶¶467-479, pp. 236-241). This was the concern raised by Mr. Godfrey involving a Class E pipe with three heat

numbers on it (see Apps. PFF ¶111, pp. 233-234). An NCI was initiated on this item, with the disposition that the item was "acceptable as is," though the NCI resolution noted that craft had carelessly marked the pipe (PA Exh. 113). The basis of the resolution was that the traceability requirements of M-49 do not apply to Class E piping (Id.). While the inspector was concerned that the pipe could be cut and part of it used in a safety-related system, he admitted that there was little possibility that this could happen without being detected (Tr. 8316, Godfrey, 11/28/83). The Staff describes this concern as an "overly zealous application of construction procedures. . . ." (NRC Staff PFF ¶193, p. 97)

Concern E-1 and E-3. Palmetto challenges the resolution of two concerns raised by Mr. Cauthen. Concern E-1 related to an incident in which one of Mr. McKenzie's fitters cut out a piece of pipe which Mr. Cauthen was going to NCI on the ground that it had an erroneous heat number (see Apps. PFF ¶121, p. 247). Palmetto charges the Technical Task Force with "sloppy investigation," stating that "no one with the Task Force ever asked him to identify the specific peice [sic] of pipe or the NCI itself which would document the basis for his concern." (PA PFF ¶484, p. 243) Palmetto's allegations are unavailing. As Mr. Cauthen testified, the hardware associated with his concerns had been corrected by the

time the Task Force investigation began, so that there was no reason for the Task Force to examine the specific hardware (Tr. 6556, Cauthen, 11/9/83). Further, he testified that he was satisfied with the technical resolution of NCI 7696 (Apps. Exh. 33) which was written on this item (Tr. 6570-73).

With respect to Concern E-3, relating to the need to purge a stainless steel weld performed by a member of Mr. McKenzie's crew, Palmetto alleges that this concern is evidence of "systematic efforts by Ed McKenzie and his crew to circumvent and violate Quality Assurance procedures." (PA PFF #494, pp. 245-246) This allegation is based on the fact that Mr. Cauthen, instead of writing an NCI on this condition, directed craft to correct it, because he felt that the crew would have corrected the weld before he could get back with an NCI anyway (T.F. Report, Vol. II, E-3). This condition, however, was on a Class E or F system (Tr. 6443, Cauthen, 11/8/83), and the Task Force found that an NCI would not have been appropriate (T.F. Report, Vol. II, E-3). His belief that craft would have corrected the condition before he could return with an NCI was based solely on the incident described in Concern E-1 (Tr. 6442, Cauthen, 11/8/83). This hardly amounts to a "systematic" effort to circumvent QA procedures.

Concern L-1. This concern of Mr. Jackson's related to an incident in which a welding foreman had executed a weld for a welder without having signed out the filler material or stenciled the weld. The discussion of this concern in Palmetto's Proposed Findings (PFF ¶¶517-525, pp. 253-256) blows this matter completely out of its just proportions, alleging that this was a case of falsification of QA records. The welding in question was done on nonsafety-related Class G piping, so that the problem could be documented on Form CP-49A. As Mr. Jackson testified, the CP-49A may be resolved by either a written or verbal response (Tr. 8892-93, Jackson, 11/30/83). In this case, the resolution was in the form of a verbal instruction from Construction Technical Support to accept the work as is (Tr. 8889, Jackson, 11/30/83). The resolution was technically sound because the foreman was and is a certified welder (Apps. PFF ¶114, p. 238). According to the Technical Task Force, there was no need for the foreman to sign out the materials or stencil the weld because "numerous craftsmen" had confirmed that the foreman was only guiding the welder's hand, not actually doing the welding (Id.). Mr. Jackson disagrees, since he allegedly saw that the foreman was in fact doing the welding (Tr. 8892-8900, Jackson, 11/30/83). In any case, it is clear that the foreman was merely trying to train the welder, and as the Task Force pointed

out, such training should be carried out only on training pieces or temporary piping (T.F. Report, Vol. II, L-1). However, this incident simply did not present a technical inadequacy of any sort.

Concerns D-14 and R-64. These concerns related to the fact that certain process control forms did not specify the fillet weld sizes ("L" dimensions). Palmetto would have the Board find that these concerns represent uncorrected technical inadequacies and indicate the potential for "thousands" of undersized fillet welds at Catawba (PA PFF ¶530, p. 259). The Technical Task Force Report, however, explains how this problem is being resolved (see Apps. PFF ¶99, p. 209). In addition, the Staff describes the substantial corrective actions the Applicants have taken, including reinspection of 12,500 socket welds and a Design Engineering analysis of which fillet welds required weld metal build-up, and indicates that this will prevent any reduction in safety margin (NRC Staff PFF ¶¶135, p. 71). It should also be noted that Mr. Bryant and Mr. Ross both agreed with the resolution of this concern (Apps. PFF ¶99, p. 209).

R. POTENTIAL TECHNICAL INADEQUACY
[PA PFF ¶¶526-530 (pp. 257-260) ¶534 (p. 262)]

Palmetto would have the Board find that a review of the record discloses no substantive evidence that twenty-four of the welding inspector concerns involving potential

technical inadequacies have been sufficiently identified and corrected (PA PFF ¶¶526-530, pp. 257-260). If Palmetto Alliance had discussed the totality of the record, it would be clear that the twenty-four potential technical inaccuracies were sufficiently identified and corrected.

The twenty-four potential technical inadequacies arise from the Technical Task Force. (Apps. Exh. 11, Cobb, p. 8; Staff PFF ¶117, pp. 61-62). The Technical Task Force investigation revealed that there were no actual technical inadequacies but twenty-four concerns were identified as potential technical inadequacies which would require further investigation (Id.).

Mr. Grier stated that as a result of the Technical Task Force's recommendations a Management Implementation Plan was developed by Mr. Grier and several members of the QA Department. (Apps. Exh. 2, Grier p. 49). The Plan included the appointment of an Implementation Coordinator and a number of implementation objectives which covered the programmatic and general recommendations of the task force (Id., see, also, Apps. PFF ¶82, pp. 193-194).

Mr. William H. Bradley was appointed by Mr. Grier to be the coordinator for implementing the Technical Task Force recommendations (Apps. Exh. 16, Bradley, p. 3). Mr. Bradley's duties were to assure that appropriate individuals were assigned to carry out the action by the

various recommendations. Mr. Bradley developed a plan to document the action taken, collected the documents attesting to the action, and submitted the documentation to Mr. Grier (Id.).

Included with the programmatic and general recommendations of the Technical Task Force were specific action recommendations covering, among other things, the twenty-four potential technical inadequacies. Accordingly, these twenty-four items were investigated in the course of carrying out the specific action recommendations (Apps. Exh. 2, Grier, p. 53, Attachment 4). The result of the investigation of the twenty-four potential technical inadequacies was that in all cases the existing work was found to meet Design Engineering requirements. The conclusion of each potential technical inadequacy was that no technical inadequacy existed (Apps. Exh. 2, Grier, p. 53-54).

Mr. Lewis E. Zwissler stated that as part of his responsibility to review the Technical Task Force effort he audited the documentation supporting the completed corrective actions implementing the Technical Task Force Management Implementation Plan (App. Exh. 13, Zwissler, p. 10-11). Within the context of his review of the Technical Task Force effort and the documented resolutions of the concerns expressed by the welding inspectors, every concern that was expressed was adequately resolved from a

technical standpoint, and in his opinion, no residual quality-related problems remain in the construction of Catawba (Id.). Subsequently, Mr. Zwissler reviewed all twenty-four potential technical inadequacies and the Technical Task Force's resolutions and concluded that they were technically valid. (Tr. 3532-33, Zwissler 10/18/83).

The Board is satisfied that a record exists to conclude that the twenty-four potential technical inadequacies were properly identified, evaluated and considered not technically inadequate.

S. NRC Response To Technical Task Force
[PA PFF ¶¶536-539 (pp. 263-269)]

At the end of its discussion of the Technical Task Force investigation, Palmetto adds a "few passing words" regarding the NRC Staff's response to the welding inspectors concerns (PA PFF ¶¶536-539, pp. 263-269). Palmetto considers the NRC's response to have been inadequate. Specifically, they allege that Mr. Van Doorn "defaulted" in his attempt to review the Applicants' investigation of the concerns, and they criticize the NRC for not citing the Applicants for violations which they believe the concerns presented (Id.).

The allegation that Mr. Van Doorn's review was inadequate finds no support in the record. Contrary to what Palmetto suggests (PA PFF ¶539, pp. 268-269), Mr. Van Doorn actually began his review of the welding inspector

concerns in the February-April 1982 time-frame (NRC Staff Exh. 7, Van Doorn, p. 17). At that time he conducted a preliminary review, covering approximately half the concerns, to determine whether there appeared to be any significant technical discrepancies (Id. at 17-18). It should be noted that Mr. Van Doorn, being a metallurgical engineer by education and experience, is particularly qualified for such a review (Id. at 2-4). In August 1982 he began a more in-depth review of both technical and non-technical concerns for the purpose of verifying that the Applicants had adequately evaluated the concerns for violations of the QA program and that adequate corrective actions were being implemented (Id. at 14, 18-19). As he explained (Id. at 18-19):

The review included a review of the Applicant evaluations to assure that each concern had been addressed; a review of each of the evaluations to assure that objective evaluations were performed and adequate corrective actions were specified; verification of implementation of corrective actions on a sample basis; observation of actual installations on a sample basis; formal interviews of 9 QA supervisors and 19 QA welding inspectors to discuss specific concerns and help assess the adequacy of the corrective actions implemented. Individuals interviewed included all of the 15 inspectors who had technical concerns and 13 of 17 inspectors who had non-technical concerns.

Mr. Van Doorn ultimately concluded that the technical evaluations were adequate and that appropriate corrective actions were specified and were being properly implemented (Id. at 46).

Palmetto suggests that Mr. Van Doorn acted improperly in disclosing his conclusions and notes from interviews to Duke management in December, 1982 (PA PFF ¶539, pp. 268-269). They point to PA Exh. 121, which is a memorandum to file from Mr. Grier with Mr. Van Doorn's observations attached. It is clear from a review of PA Exh. 121, however, that the information conveyed by Mr. Van Doorn to Mr. Grier was not information that would reveal a confidential communication from an inspector. It consisted in the main of general findings that would serve to better the QA program by, for example, indicating the need for improved communications between management and inspectors.

Palmetto's allegation concerning "Staff's lack of zeal in enforcement against Duke" (PA PFF ¶537, pp. 265-267) is equally unfounded. As Palmetto recognizes, the Commission's policy on the issuance of a notice of violation is set forth in 10 CFR Part 2, Appendix C, as follows:

Because the NRC wants to encourage and support licensee initiative for self-identification and correction of problems, NRC will not generally issue a notice of violation for a violation that meets all of the following tests:

- (1) It was identified by the licensee;
- (2) It fits in Severity Level IV or V;
- (3) It was reported, if required;
- (4) It was or will be corrected, including measures to prevent recurrence, within a reasonable time; and

(5) It was not a violation that could reasonably be expected to have been prevented by the licensee's corrective action for a previous violation.

Mr. Van Doorn has testified that under these criteria no notices of violation were warranted as a result of the welding inspector concerns (NRC Staff Exh. 7, Van Doorn, p. 14). Mr. Van Doorn found that none of the procedural violations associated with the welding inspector concerns rose to Level III; none exceeded Level IV. (Tr. 9937-38, Van Doorn 12/6/83; NRC Staff Exh. 7, Van Doorn, p. 45). With respect to technical inadequacies, Mr. Van Doorn found there to be none. (See NRC Staff Exh. 7, Van Doorn pp. 18, 35, 36, 38-39). In sum, the record clearly reveals a basis for the Staff's action in refraining from issuing notices of violation. This Board finds such record basis to be persuasive.

T. Issues Raised By The In Camera Witnesses^{38/}
[PA PFF ¶¶540-621, pp. 270-98]

^{38/} Section T, pp. 176 through 204 of this Reply, addresses the issues raised by the in camera witnesses. It is being supplied separately to a limited number of recipients due to the confidential nature of matters discussed.

U. DES CONTENTION 17 - ADVERSE METEOROLOGY
[CESG PFF ¶B.2, p. 24]

This contention asserted by Intervenors Palmetto Alliance and CESG was framed as a challenge to the adequacy of the Staff's consideration of the "extreme" weather conditions of inversion and very slow air movement in its evaluation of the impacts of design basis and severe accidents. (CESG PFF ¶B.2., p. 24). Said differently, at issue was whether the Staff gave thorough consideration to the reasonably foreseeable meteorological conditions which occur at the Catawba site in making its design basis and severe accident consequence calculations. The scope of the contention, simply put, was what weather conditions were used by the Staff in its calculations and how were they used, and whether such use complies with the Commission's Regulations and the requirements of the National Environmental Policy Act (42 USC §432 et seq.).

While the scope of this contention was apparent to the Applicants and Staff, as demonstrated by their Proposed Findings and Conclusions on this contention, it must not have been so to PA/CESG who, in their Proposed Findings and Conclusions on this contention, focused entirely on the results reached by the Staff regarding specific accident consequences. Rather than address whether weather was adequately treated in Staff's accident consequence analyses, PA/CESG instead contested the

Staff's accident consequence estimates on the basis of alleged "substantial uncertainties" e.g., evacuation effectiveness, inadequate communication, weather impeded travel, tornadoes, floods, sabotage, seismic events, etc. involved in estimating accident consequences. (CESG PFF ¶B.15-23, p. 27). In short, PA/CESG have "missed the boat" by failing to deal with the heart of their own contention.

From our review of the record regarding this contention, the Board has no doubt that adverse or "extreme" weather conditions of inversion and very slow air movement were fully accounted for in the accident evaluations contained in the FES for the Catawba Nuclear Station. Meteorological data, including wind direction and speed, ambient and dew point temperatures, vertical temperature gradient and precipitation, were collected at the Catawba site from December 17, 1975 through December 16, 1977 (Apps. Exh. 94, Casper, p. 2). According to both the Staff and Applicant, the predominant meteorological condition at the site during this two-year period in terms of joint frequency was the "extreme" condition of stable air and low wind speed (NRC Staff Exh. 20, Read, Fairbent, Wohl, p. 5; Apps. Exh. 94, Casper, p. 4). Applicants' witness Casper testified, based upon his research, that these weather conditions for the two-year period, including the frequency of stable air inversion -

low wind speed conditions, were representative of historical conditions and were likely to occur over the next forty years (Apps. Exh. 94, Casper, p. 2; Tr. 11,575-77, Casper 12/14/83). The Staff used this site meteorology data as the underlying foundation for its calculations of postulated design basis and severe accidents.

The Board's initial uncertainty as to how unfavorable weather was factored into the Staff's severe accident calculations has been cleared up. We understand that the Staff used site specific meteorological data collected for one complete year at hourly intervals along with a computer code (CRAC) to calculate relative concentration values for ground level exposures (NRC Staff Exh. 20, Read, Fairbent, Wohl, p. 10). Because the Catawba meteorological data used contained so many entries with stable atmospheric conditions accompanied by low wind speeds, almost every one of the computer model runs contained such entries (Staff Exh. 20, Read, Fairbent, Wohl, p. 6).

PA/CESG has offered no evidence to challenge the accuracy of any of the meteorological data gathered at the site and used by the Staff in its analyses. PA/CESG's own witness, John Purvis, agreed, based on his years of experience, that the data was accurate and further admitted he did not have the expertise to review the

Staff's use of this data in its accident analyses (Tr. 11,651, 11,662 Purvis 12/14/83). In their Proposed Findings and Conclusions on this contention, PA/CESG have not contested Staff's incorporation of this weather data into Staff's accident analyses. Staff's and Applicants' evidence regarding the use of adverse or "extreme" weather conditions as the basis underlying Staff's accident consequence calculations, therefore, stands unchallenged and uncontroverted.

Having reviewed all the evidence regarding this contention, the Board is completely satisfied that Staff has conducted a thorough consideration of all reasonably foreseeable meteorological conditions at the site. We can find no basis in record of this proceeding for reaching any other conclusion.

V. CONTENTION 18/44 - EMBRITTLEMENT
[PA/CESG PFF ¶¶1-44, pp. 4-23]

Intervenors in their Proposed Findings characterized this contention as being "concerned with the possible inadequacy of present means to predict end of life reactor embrittlement." (PA/CESG PFF, Summary, p. 1) It is incumbent upon this Board to confine itself to the issue addressed in the contention and to avoid expanding the contention. Intervenors' proposed findings are replete with attempts to impermissibly expand the contention. Indeed, Intervenors have sought to have the Board indicate that focusing upon the issue of embrittlement would not discharge the Board's obligation:

On examining the testimony, both oral and prefiled, the exhibits and supporting documents, and the proposed findings of fact submitted by the parties, this Board concluded that reaching a conclusion on the narrow question of whether the end of life nil ductility reference temperature forecast variously by Applicant and staff gave reasonable assurance that Catawba reactor embrittlement with operation would not be excessive would not satisfactorily discharge its obligations. (Id., pp. 1-2).

The Board has chosen to reject this invitation to expand the contention, viewing as its obligation the rendering of a conclusion on the narrow issue of embrittlement which has been presented. The Board adopts the statement of the central issue presented in Applicants' proposed findings:

Intervenors' contention revolves around the determination of the shift in RT_{NDT} [reference nil-ductility temperature] values over the lives

of the two Catawba reactor vessels, and the corresponding determination of the end-of-life ("EOL") RT_{NDT} values. [Apps. PFF ¶2, p. 530.]

The Board notes that the essence of this contention is the prediction of radiation-induced embrittlement that the Catawba reactor vessels will experience during their operating lives. The contention is not (nor can it be) addressed to the adequacy or viability of the methods of predicting EOL RT_{NDT} established by the regulations (See 10 C.F.R. §2.758). Intervenors' proposed findings are replete with attempts to challenge the existing regulations. Thus, the Board addresses this issue in the context of applying the existing regulations and regulatory methods of determining the extent of radiation-induced embrittlement in reactor vessels.

Discussion of Intervenors' Proposed Findings

Intervenors' proposed findings are divided into four categories: (1) those with evidence in the record directed toward the contention; (2) those which seek to expand the contention; (3) those which seek to challenge the Commission's regulations; and (4) those which seek to alter the standard by which the Commission measures its confidence that the public health and safety are protected. The Board notes with displeasure that a significant majority of Intervenors' Proposed Findings fall into the latter three categories, all of which are impermissible. The attempt by Intervenors to challenge the Commission's rules and regulations is in direct contravention of the Board's order

excluding such attacks from the contention. (Memorandum and Order, September 8, 1983, pp. 8-10). The Board disposes of Intervenor's Proposed Findings by category.

A. Intervenor's Proposed Findings
Addressed to the Contention

As noted, the Intervenor has sought impermissibly to expand the embrittlement contention while simultaneously challenging the Commission's regulations. The Board has taken pains to admonish Intervenor of their obligation to confine their arguments to the contention and to comply with the Board's September 8, 1983, Order eliminating from the contention challenges to the Commission's regulations. Nonetheless, the Board has distilled from Intervenor's Proposed Findings those aspects which are addressed to the admitted contention.

The first step in this distillation process is to extract the issue from the Summary to Intervenor's Proposed Findings: ". . . whether the end of life nil ductility reference temperature forecast variously by Applicant and Staff gave reasonable assurance that Catawba reactor embrittlement with operation would not be excessive" (PA/CESG PFF Summary, pp. 1-2.)

The Board, in examining the 44 Intervenor Proposed Findings, refers to those which appear to be focused upon the question which Intervenor so blatantly chose to blur. This is not to say that some such findings do not themselves

either impermissibly expand the contention or challenge the regulations. Rather, such Proposed Findings at least hint at the admitted contention.

Intervenors discuss various aspects of the calculation of EOL RT_{NDT} and the methods of estimating the change of RT_{NDT} with irradiation in Proposed Findings 3, 4, 6-8, 14-28. This represents the core of Intervenors' Findings which are properly focused on the issue in contention. To the extent that other proposed findings are focused on this issue, they are either redundant or tainted by impermissible surplusage.

It must be stated initially that the initial values of RT_{NDT} are not at issue. Intervenors admit that the initial RT_{NDT} values were determined in accordance with appropriate regulations. (Apps. PFF ¶2, p. 530; Tr. 11, 164, Riley 12/13/83).

Intervenors state a number of factors about RT_{NDT} which are not in dispute because they are in compliance with the regulations. Thus the use of changes in values of RT_{NDT} of reactor vessel materials (PA/CESG PFF ¶¶3-4, p. 5) is not in dispute because this is mandated in the capsule surveillance program. Likewise, truisms such as irradiation causing embrittlement (PA/CESG PFF ¶7, p. 5), the definition of RT_{NDT} (PA/CESG PFF ¶6, p. 5) and the use of Charpy V-notch tests for RT_{NDT} determination (PA/CESG PFF ¶8, p. 5) are not in dispute.

To the extent that Intervenor's seek to challenge the use of Charpy V-notch data, they impermissibly challenge the regulations. The surveillance program is mandated in 10 C.F.R. Part 50, Apps. G and H. The crux of Intervenor's attack is on the adequacy in the modeling of the shift in RT_{NDT} with irradiation. This encompasses much of Intervenor's concerns expressed in PA/CESG PFF ¶¶14-28, pp. 8-12.

Intervenor's trace the data and models used in determining the EOL RT_{NDT} (PA/CESG PFF 14-23, pp. 8-10). Based upon the models and data bases outlined, Intervenor's urge upon the Board a finding

"that the methodology for estimating EOL embrittlement is in a state of flux and is not yet demonstrated as a reliable art The testimony of this proceeding amply demonstrates the dubious and necessarily unreliable procedures for estimating RT_{NDT} shift with EOL neutron fluence." [PA/CESG PFF ¶23, p. 10].

Intervenor's further urge that

"[t]he Board does not find that the Staff has, by its procedures involving RT_{NDT} measurements and predictions provided reasonable assurance that the Criteria 14, 30, and 31 will be met for the Catawaba reactors." [PA/CESG PFF ¶31, p. 13].

The Board refuses to adopt the position urged by the Intervenor's. The Board finds that the methodology and data bases are properly supported by testimony of Applicants and Staff and that the EOL RT_{NDT} values have been properly determined. The Board is in agreement with Applicants' Proposed Findings 5-8 (Apps. PFF ¶¶5-8, pp. 531-534).

In addition to attacking the determination of EOL RT_{NDT}, Intervenor also urge this Board to find that means are not available which provide reasonable assurance that reactor vessels which have been subjected to neutron irradiation will withstand operational transients or faulted conditions. This attack is directed at the Staff's Pressurized Thermal Shock (PTS) screening criteria (PA/CESG PFF ¶¶28, 31-32, pp. 11-13). Applicants and Staff have adequately addressed the PTS issue in their testimony. The Board rejects Intervenor's Proposed Findings and adopts those of Applicants (Apps. PFF ¶¶9-12, pp. 533-535). The Board notes that the Staff supports Applicants in Proposed Findings on PTS (Staff PFF ¶¶388-391, pp. 188-190). Therefore the Board is in agreement with Applicants and Staff and finds

"reasonable assurance that the fracture toughness of the Catawba reactor pressure vessels is adequate to prevent breach of reactor vessel integrity due to PTS events."
[Staff PFF ¶391, pp. 190).

Finally, the Board addresses the issue of the adequacy of the surveillance program. Intervenor sought to challenge the material surveillance program (PA/CESG PFF ¶39, pp. 18-20). The Board finds that this was adequately addressed in Applicants' testimony and Proposed Findings (Apps. PFF ¶¶13-14, pp. 535-537) and was supported by the Staff (Staff PFF ¶¶381-387, pp. 184-188). Therefore the Board finds that the surveillance programs used to predict shifts in RT_{NDT} are in compliance with the relevant NRC

regulations, and provide additional assurance that accurate and timely information on shifts in RT_{NDT} will be available for use in establishing pressure-temperature operating limits for hydrostatic tests and any condition of normal operation, including anticipated operational occurrences. (Staff PFF #387, p. 188).

B. Intervenors' Proposed Findings Which Seek To Expand The Contention.

Intervenors seek to expand the contention in a number of their proposed findings. The Board treats this as an attempt to introduce a new contention. Such attempt is untimely and is barred by the regulations as not meeting the relevant standards for a late-filed contention. 10 C.F.R. §2.714(a)(1).

Intervenors attempt to expand the contention from radiation-induced embrittlement to include flaw size, stresses, and material properties. This is sought by attempting to include all aspects of General Design Criteria (GDC) 14, 30, 31 and 32 (10 C.F.R. §50, App. A) in the contention (PA/CESG PFF #2, p. 4). The Board rejects this attempt to expand the contention and notes further that the mere existence of the GDC or other rules by which an applicant or licensee must abide does not result in additional contentions.

Intervenor seeks further to expand the contention by arguing that Applicants have focused only on reactor vessel materials without considering the reactor vessel materials in a reactor which has undergone thermal cycles and pressurization/depressurization cycles (PA/CESG PFF, ¶¶3-5, p. 5). Again, the Board limits its consideration to the issue in contention -- radiation-induced embrittlement of the reactor vessel materials.

Intervenors suggest that the screening criteria the staff has employed for PTS fail to take into account factors other than neutron fluence embrittlement (PA/CESG PFF ¶28, pp. 11-12). This represents another attempt to expand the contention.

Another impermissible attempt to expand the contention is clearly admitted by Intervenors. Intervenors seek to have the Board address a number of "collateral concerns" recognizing that "[t]his Board could exclude from consideration the collateral concerns evinced by intervenor." (CESG/PA PFF ¶33, pp. 13-14). These collateral concerns include the question of using unstressed coupons and the effects of thermal and pressure stress fatigue (a clear challenge to the regulations) and advocating the use of a real time strain gauge monitoring technique (also a challenge to the regulations) (CESG/PA PFF ¶32, p. 13). Intervenors seek to justify this simultaneous expansion of the contention and challenge to the regulations by citing a litany of authority (CESG/PA PFF ¶33, pp. 13-

14). This Board is conscious of its duties in this proceeding, among which are upholding the Commission's regulations and conducting a focused inquiry. Intervenor cavalierly ignore this in their proposed findings.

Intervenor seeks to expand the contention further by raising the issue of stress fatigue (CESG/PA PFF ¶40, p. 20), and stress corrosion cracking (CESG/PA PFF ¶41, pp. 20-21). The Board rejects these attempts to impermissibly expand the contention.

C. Intervenors' Proposed Findings Which Seek to Challenge the Commission's Regulations

In addition to attempting to expand the contention, Intervenor also take the impermissible step of challenging the Commission's regulations. Intervenor describe and then denigrate the use of Charpy V-notch tests in determining RT_{NDT} values (CESG/PA PFF ¶¶6-11, pp. 5-7). Intervenor overlook the mandate for use of these tests expressed in 10 C.F.R. §50, App. G and H. This represents an impermissible challenge to the Commission's regulations under 10 C.F.R. §2.758.

Such blatant attacks on the regulations are best exemplified by Intervenor's criticism of the use of the ASME Code in Appendix G (CESG/PA PFF ¶12, p. 7). This completely overlooks the fact that the ASME Code has been expressly incorporated into Appendix G. (10 C.F.R. §50, App. G.I). Intervenor further mischaracterize requirements in Appendix G as staff implementation (CESG/PA PFF ¶12, p. 7).

Intervenors seek further to challenge the Commission's regulations by suggesting that "[i]t has been assumed, but not demonstrated, that the response to neutron fluence and temperature cycles of the small Charpy specimens will be representative of the changes of the enormously larger double welds of the reactor vessel which are additionally exposed to pressure stresses and thermal stresses."

(CESG/PA PFF ¶29, p. 12). Intervenor further challenges the use of Charpy specimens (CESG/PA PFF ¶30, p. 12). These proposed findings ask the Board to challenge the Commission's regulations in 10 C.F.R. §50, Appendices G and H, an impermissible invitation the Board refuses.

Intervenors seek further to challenge the regulations in asserting the effects of thermal and mechanical stresses on reactor brittleness and the inappropriateness of using a nil ductility criterion rather than a full ductility criterion (CESG/PA PFF ¶42, pp. 21-22). The Board notes that in addition to being impermissible challenges to the regulations, the premise upon which the challenge is based is incorrect (Apps. PFF ¶30, p. 545)..

The attempt to have the Board adopt a real time monitoring technique is a challenge to the regulations (CESG/PA PFF ¶43, p. 22) as is the adoption of full ductility criterion and the rejection of the Charpy capsule samples (CESG/PA PFF ¶44, pp. 22-23).

D. Intervenors Attempts to Alter
Finding Standard

As Applicants indicate in their proposed findings, "[n]either the Atomic Energy Act nor the applicable regulations require perfection; rather they require a finding of reasonable assurance." (Apps. PFF, p. 20) (emphasis added). This standard originated in the U.S. Supreme Court case, Power Reactor Development Co. v. Electrical Union, 367 U.S. 396 (1961) and was subsequently incorporated into the Commission's regulations, 10 C.F.R. § 50.57(a)(3). Intervenors engage in an impermissible attack upon this regulation when they urge this Board to require "positive assurance." (CESG/PA PFF ¶¶35, 36, 38, pp. 15-18). The Board notes that Intervenors either misread the regulations and hence engage in an uninformed attack upon the appropriate standard or deliberately choose to challenge the regulations (and statute) in violation of the Board's September 8, 1983, Order.

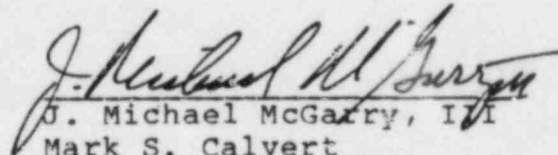
Conclusion

In light of the Board's examination of Intervenors' Proposed Findings which were addressed to the issue in contention, the Board adopts Applicants' Proposed Finding 35:

The Board finds that based on the evidence presented by Applicants, Staff and Intervenors, there is reasonable assurance that the increase in RT_{NDT} over the life of the Catawba reactor vessels will not be more rapid than has been estimated. Further, the Board finds that there is reasonable assurance that the data to be provided by the Catawba reactor surveillance program will accurately reflect the effects of

neutron fluence on the vessel materials, and will give advance warning of any unexpected increase in RT^{NDT} such that corrective action, if necessary can be taken to assure protection of the public health and safety. Further, the Board notes that all evidence indicates that the Applicants are meeting all applicable regulations with respect to vessel integrity. (Apps. PFF #35, p. 549).

Respectfully submitted,


J. Michael McGarry, III
Mark S. Calvert

Anne W. Cottingham
BISHOP, LIBERMAN, COOK,
PURCELL & REYNOLDS
1200 Seventeenth Street, N.W.
Washington, D.C. 20036
(202) 857-9833

Albert V. Carr, Jr.
Ronald L. Gibson
DUKE POWER COMPANY
P.O. Box 33189
Charlotte, North Carolina
28242
(704) 373-2570

Attorneys for Duke Power
Company, et al.

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD
OFFICE OF SECRETARY
BOARDING & SERVICE
BRANCH

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 "Applicants' Reply to Proposed Findings of Fact and Conclusions of Law of Intervenor and the NRC Staff" in the above captioned matter has been served upon the following by deposit in the United States mail this 15th day of March, 1984.

*James L. Kelley, Chairman
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

*George E. Johnson, Esq.
Office of the Executive Legal
Director
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

*Dr. Paul W. Purdom
235 Columbia Drive
Decatur, Georgia 30030

Albert V. Carr, Jr., Esq.
Duke Power Company
P.O. Box 33189
Charlotte, North Carolina 28242

*Dr. Richard F. Foster
P.O. Box 4263
Sunriver, Oregon 97702

Chairman
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

*Richard P. Wilson, Esq.
Assistant Attorney General
State of South Carolina
P.O. Box 11549
Columbia, South Carolina 29211

*Robert Guild, Esq.
Attorney-at-Law
P.O. Box 12097
Charleston, South Carolina 29412
(hand-delivered to Palmetto)

Chairman
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Palmetto Alliance
2135 1/2 Devine Street
Columbia, South Carolina 29205

* Jesse L. Riley
854 Henley Place
Charlotte, North Carolina 28207

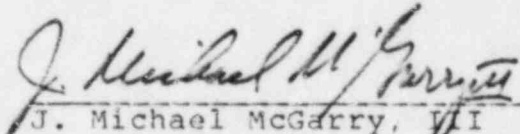
Scott Stucky
Docketing and Service Section
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Karen E. Long, Esq.
Assistant Attorney General
N.C. Department of Justice
Post Office Box 629
Raleigh, North Carolina 27602

Don R. Willard
Mecklenburg County
Department of Environmental
Health
1200 Blythe Boulevard
Charlotte, North Carolina 28203

John Clewett, Esq.
236 Tenth Street, S.E.
Washington, D.C. 20003

* Bradley Jones, Esq.
Regional Counsel,
Region II
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555


J. Michael McGarry, VI

* Due to confidentiality only these parties were served with Applicants discussion dealing with the in camera witnesses.