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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONOFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCHBEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

APPLICANTS' RESPONSE TO PALMETTO
ALLIANCE'S ORAL MOTION TO REOPEN
DISCOVERY ON CONTENTION 6

Duke Power Company, et al. ("Applicants") herein respond to Intervenor Palmetto Alliance's September 9, 1983 oral motion seeking various forms of relief relating to Contention 6. In this motion, made during a transcribed conference call, Palmetto Alliance requests that discovery on this contention be "reopened" to permit further inquiry into several issues which are not currently within the scope of Contention 6 -- specifically, hangers; the auxiliary feedwater system; the residual heat removal (RHR) system; the heating, ventilation and air-conditioning (HVAC) system; and general design (Tr. 1304). Intervenor does not indicate either the scope or the duration of the reopened discovery that it seeks. In addition, Palmetto Alliance asks that the Board require under its sua sponte authority that "an independent design [and] construction verification program be conducted in certain

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specified areas of construction at the Catawba Station;" or, in the alternative, that the Board "require the conduct of such an audit at the expense of Duke Power Company as a license condition prior to operation above 5 percent power" (Tr. 1302).

Palmetto Alliance also requests that "further proceedings" on these new allegations be deferred pending both the conduct of such an audit and the resolution of several matters. These matters include: (1) a "request to the [NRC] Office of Investigations to conduct a review of Applicants' conduct with respect to what's been referred to as the welding [inspector's concerns]" (Tr. 1302-03); (2) a "pending investigation actually underway by the Office of Inspector and Auditor of . . . Region II's . . . handling of [the welding inspectors' complaints]" (Tr. 1303); (3) a "director's decision on a request to be made pursuant to §2.206" seeking to condition Applicants' construction permit "to provide for the conduct of the independent audit referred to" (Tr. 1303).¹

¹ Palmetto Alliance also indicated in the prehearing conference that a §2.206 petition recently filed by the Government Accountability Project (GAP) with the Commission may also contain additional "new information" which Palmetto Alliance wishes the Board to consider in ruling on its motion. Ruling on this request in its September 14 Order, the Board stated:

[W]e do not think it reasonable to require the parties or the Board to cull through an extensive filing from a non-party, particularly at
(footnote continued)

Applicants submit that in order for the five issues now raised by Palmetto Alliance to be considered in this proceeding, they must either constitute new contentions whose late filing is sanctioned under applicable NRC standards or, as the Board directed in its September 14, 1983 Order, must fall into the category of "new information about specific construction deficiencies" within the scope of Contention 6. Id., p. 6. As will be demonstrated below, Palmetto Alliance has failed to show that these issues fall into either category. Accordingly, Intervenor's request for an unspecified amount of time to pursue areas of alleged concern that Palmetto Alliance could have explored during discovery on Contention 6 should be denied. Its request for postponement of

(footnote continued from previous page)

this late stage. Accordingly, if Palmetto wishes the GAP filing to be considered, it shall specify exactly what in that petition, by page number and line, it considers to be new information about specific deficiencies, as defined herein.

. . .

The Palmetto specification shall be in the hands of the Applicants and Staff by Monday, September 19, 1983. [September 14 Order at p. 7. Emphasis in original].

Applicants have not received any "specification" whatsoever from the Intervenor, nor any indication that it intends to file one. By this failure, Palmetto Alliance must be viewed as having defaulted on its opportunity to raise matters contained in the GAP pleading; thus the GAP petition cannot be relied upon to support the subject motion.

"further proceedings" on the newly-raised matters would thus be mooted. Moreover, as Palmetto Alliance has also failed to show that it is entitled to any of the other relief requested in its oral presentation, Applicants submit that such relief too should be denied.

In order to place Intervenor's present request in its proper perspective, the events of the past nine months in this proceeding should be recalled. A review of these events makes patently clear that the only reason the Board and parties are now confronted with this latest in a series of pleas for additional time is Palmetto Alliance's persistent failure to carry out its discovery obligations diligently.

Palmetto Alliance has been granted every opportunity by the Board and the parties to obtain information necessary to support its contentions. It was accorded an unusual first right of discovery. It was accorded multiple extensions of time. It was advised by the Board last December to pursue discovery on Contention 6 by various means. It was provided timely access to relevant documents and information on Contention 6. However, despite being allowed great flexibility in its conduct of discovery, Intervenor has repeatedly sought one extension

of time after another. The conclusion which eventually emerges from such continuing requests is that Palmetto Alliance has not done its work when it should.

To explain, Applicants' document room at Duke Power Company's (DPC) offices in Charlotte, N.C. was open from October 4, 1982 through May 27, 1983. This document room contained thousands of documents made available for inspection and copying -- including §50.55(e) Significant Deficiency Reports listing construction deficiencies at Catawba; departmental audits "conducted pursuant to 10 CFR Part 50, Appendix B, Criterion XVIII of design and construction at Catawba which reflected deficiencies;" NRC Inspection Reports for the Catawba station,² as well as correspondence regarding any corrective action taken; NCI Reports, Technical Recourse Reports or task force reports reflecting disputes between QC inspectors and their supervisors or DPC management, etc. Yet despite the availability of this information, produced at Palmetto Alliance's insistence, Intervenor visited this document room approximately five times.

That the DPC document room was not used more frequently appears to stem from the fact that Palmetto Alliance essentially failed to pursue discovery on

² These Inspection Reports were provided as an accommodation to the Intervenor. They are also available in the local NRC Public Document Rooms (PDR) in Rock Hill, S.C. and in the Washington, D.C. PDR.

Contention 6 until after May 27, 1983. Despite the urging of the Board, it conducted no depositions at all until May 12, 1983; and no depositions on Contention 6 until June, during which an extension of discovery on the welding inspectors' concerns was granted. Applicants submit that Intervenor's eleventh-hour request to expand Contention 6 should take these facts into account.

ARGUMENT

In order for the five additional areas of alleged construction deficiencies raised by Palmetto Alliance to be considered in this proceeding, these areas of concern must fall into one of two categories. They must either be treated as new contentions -- in which case Intervenor must make a proper showing as to why they should be admitted -- or must constitute "new information on specific construction deficiencies," (as defined by the Board) within the scope of Contention 6. As will be shown below, these newly-alleged areas of concern do not meet the criteria for either category. Accordingly, discovery on Contention 6 should not be "reopened" to allow Intervenor additional time in which to attempt to substantiate its allegations in these areas.

- I. The five additional areas of concern raised by Palmetto Alliance do not meet the standard for admission of new contentions.

One method by which Intervenor might seek to have these new matters introduced into this proceeding would be to raise them as new contentions. A new contention filed later than 15 days prior to the special prehearing conference (which in this case was held January 12-13, 1982) is considered as late-filed (see §2.714(b)), and is admitted only if the petitioner makes a sufficient showing under §2.714(a)(1). In particular, the party which seeks to have an untimely contention admitted must address each of the five factors set forth in §2.714(a)(1).³ Since Palmetto Alliance has not addressed this standard, Applicants presume that Intervenor does not contend that these new areas of concern constitute new contentions, but has instead elected to rely on the theory that these new

³ These five factors are:

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

matters are within the ambit of Contention 6. If such is not the case, Applicants submit that Intervenor's failure to address the five factors warrants denial of the request.⁴

II. The five additional areas of concern raised by Palmetto Alliance do not constitute "new information" within the scope of Contention 6.

Palmetto Alliance's motion seems to constitute an attempt to characterize the five areas of alleged construction deficiency listed therein as "new information" under Contention 6. Such a characterization could allow consideration of these additional areas of concern under the terms of the Board's June 20, 1983 Order, in which it stated (p. 8) that:

⁴ If this Board itself weighs the five factors, Applicants submit the following:

- (i) The instant pleading demonstrates a lack of good cause; the subject information has long been available.
- (ii) Intervenor's interest is represented in GAP's petition to the Commission (See Tr. 1319).
- (iii) It is unclear whether Intervenor may be reasonably expected to contribute to a sound record.
- (iv) Intervenor's interest is not represented by other existing parties. However, the Staff must be viewed as protecting the public interest.
- (v) Litigation of these issues, on the eve of the commencement of the hearing, has the clear potential for delay.

[c]oncerns based on information first becoming available to Palmetto between May 27, 1983 and the time of hearing that are within the scope of Contention 6 may be litigated.

However, the Board has recently provided additional guidance on what may qualify as a "new" concern on Contention 6. In its September 14 Order (p. 6), the Board stated that Palmetto Alliance must come forward with "new information about specific construction deficiencies," which it defines as either

(1) deficiencies which occurred after May 27, 1983, or (2) deficiencies which occurred prior to May 27, 1983 but concerning which Palmetto did not know or reasonably could not have [known] prior to that date. [Id.]

Additional guidance in this regard is provided by the Appeal Board's "ironclad obligation" language.⁵ Surely, if petitioners are under such an obligation to support proposed contentions, an intervening party is under such an obligation to pursue information on admitted contentions.

Applying the Board's criterion, none of the documents which Palmetto Alliance cites in its oral presentation as "discovery information that has been made available to us

⁵ In Duke Power Company, et al. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 15 NRC 460, 468 (1982), the Appeal Board emphasizes petitioners' "ironclad obligation to examine the publicly available documentary material pertaining to the facility in question"

since the close of discovery, since May 27" (Tr. 1303), actually constitute "new information." Applicants will address each of these documents below.

- A. 1982 Duke Power Company Construction Project Evaluation for Catawba Nuclear Station (Duke's "Self-Initiated Evaluation")⁶
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The document upon which Palmetto Alliance appears to rely most heavily in support of its request to expand the scope of Contention 6 is Duke Power Company's "Self-Initiated Evaluation" of Catawba, which was performed by a selected team of Duke Power Company and Tennessee Valley Authority employees. The methodology which this evaluation team applied was developed by the Institute for Nuclear Power Operations; however, INPO did not conduct the evaluation. The Self-Initiated Evaluation was issued in October, 1982.

In assessing whether or not information contained in the Self-Initiated Evaluation should be considered in support of Intervenor's motion to expand Contention 6, one critical factor is whether or not this information can be classified as "new" (see p. 9, supra).⁷ ⁸ Applicants

⁶ Copies of this document were served upon the Board members at the September 12 prehearing conference.

⁷ Interestingly, Palmetto Alliance's first allegations of the existence of "additional construction deficiencies" during an August conference call predated its receipt of this document by approximately a month.

submit that neither the Self-Initiated Evaluation nor the information therein which is relied upon by Palmetto Alliance can satisfy the Board's criteria for "new information" on Contention 6.

To explain, the Self-Initiated Evaluation was published in October 1982 and thus cannot be said to fall within the first category established by the Board, i.e., "deficiencies which occurred after May 27, 1983." Rather, focus is placed on determining whether Palmetto Alliance reasonably could or should have known of this document and the information contained therein prior to May 27, 1983. In this regard, an examination of Palmetto Alliance's pattern of behavior in discovery is warranted.

As set forth in the introductory section, and as this Board well knows, Palmetto Alliance has simply not conducted proper discovery. Rather, it has consistently refused to avail itself of the NRC's local public document room in Rock Hill.⁹ It only visited Applicants' document room, which was open from October 1982 through May 1983, on approximately five occasions and, most important, it

⁸ The other critical factor to be considered by this Board is whether the matters raised are of significance. This factor is discussed in the Appendix to this response and the affidavit of Paul A. Evans attached thereto.

⁹ Applicants note that Palmetto Alliance's continuing refusal to use the local PDRs in Rock Hill and Columbia is well-documented.

failed to actively pursue matters until the very last days of discovery in May. Indeed, on this last point, despite repeated advice by the Board to take depositions that might lead to further discovery,¹⁰ Intervenor waited until two weeks before the close of discovery in May to conduct depositions, and even then it did not pursue Contention 6. Rather, as it itself acknowledged in a May conference call, it took its chances that the Board would permit it to pursue open-ended discovery on Contention 6.

This pattern of behavior, whereby limited work was done until the last days of discovery and beyond, has placed Intervenor in the position it now finds itself, viz, raising matters that could or should have been discovered well prior to the close of discovery. This point is underscored by an examination of information available within Applicants' discovery document room (to which, as

¹⁰ As early as its December 22, 1982 Order, the Board urged Palmetto Alliance to "consider taking the depositions of some key Applicant and Staff people during the months of January and February" (pp. 17-18). In its February 9, 1983 Order, the Board stated twice that the use of depositions on particular matters would be preferable to additional questions (pp. 6 and 12). Subsequently, in its April 18, 1983 Order the Board reiterated its suggestion about depositions, adding, "[w]e strongly suggest that [Intervenor] consider the deposition option in the limited time remaining for discovery." (p. 3). Had Intervenor not ignored the repeated urging of the Board to depose individuals knowledgeable on Contention 6, it would have heard of the Self-Initiated Evaluation months earlier merely by asking the same questions which it asked Mr. Wayne Henry on June 28.

noted, Palmetto Alliance has had access throughout discovery) or at the local public document room. Information contained therein reflects that Palmetto Alliance could or should reasonably have known about the matters it now raises prior to May 27, 1983. Examples of such information are set forth below:

(1) In NRC Inspection Report 50-413/83-02, 50-414/83-02, the following reference to the Self-Initiated Evaluation is found:

During the review of the [Design Engineering] design manual, criteria manual, and system description documentation, it was apparent that the administrative control of these DED documents was not timely. Similar concerns were identified in a self-initiated evaluation of the Catawba project performed by a team of Duke and TVA senior technical and management personnel from September 27 to October 14, 1982. The team utilized performance objectives and criteria developed by the Institute of Nuclear Power Operations. Improvements were recommended in a number of areas. The audit findings have been reviewed and corrective action is being taken. DED Project Management Division is tracking the DED punch list of commitments for the corrective actions for the self-initiated evaluation report findings. This will be tracked as inspector followup item 413/83-02-01, Followup of Self-Initiated Evaluation Report Findings for Design Engineering Department Findings.

This report has been available since March 18, 1983.

(2) NRC accession lists in the local Public Document Room in Rock Hill, S.C. indicate that the Self-Initiated Evaluation was forwarded there on May 5, 1983. Had

Intervenor availed itself of the local PDR,¹¹ it could have raised the existence of this report before the close of discovery, and certainly before its September 9 oral motion.

A copy of the Self-Initiated Evaluation was also placed in the NPC Public Document Room in Washington, D.C. on May 20, 1983 under the Catawba docket.

(3) A February 10, 1983 letter from James P. O'Reilly to Warren Owen of DPC, noting a March 1, 1983 meeting between Duke and the NRC regarding the Self-Initiated Evaluation, has been available via the Washington, D.C. and local PDRs.

As to the specific areas of concern raised by Intervenor with respect to the Self-Initiated Evaluation:

(4) References to the Heating, Ventilation and Air-Conditioning System at Catawba were made in NRC Inspection Report 413/82-21, 414/82-19, dated September 30, 1982. This report, which discussed an unresolved item relating to hangers in the HVAC System, was available to Palmetto Alliance during discovery. In addition, Inspection Report 413/82-13, 414/82-10, dated June 11, 1982, discusses the QA program of the HVAC contractor. This report was also available during discovery.

¹¹ Applicants note that Palmetto Alliance's continuing refusal to use the local PDRs in Rock Hill and Columbia is well-documented.

(5) References to the Residual Heat Removal System at Catawba were made in NRC Inspection Report 81-02, dated April 10, 1981. Part of one violation discussed therein involved defective piping (in which residual stress was found) going to the RHR pump. This report was available to Intervenor during discovery.

(6) References to potential problems in the area of hangers were made in Significant Deficiency Report 413/414 82-04, which was available to Palmetto Alliance in Applicants' document room during discovery.

(7) In the area of "design generally," which is mentioned by Intervenor, references to potential deficiencies are contained in the following NRC Inspection Reports, which were available to Intervenor during discovery:

80-05	May 5, 1980
81-02	April 10, 1981
81-06	April 8, 1981
81-22	October 26, 1981

All of these reports involved violations attributable to the Design Department.

Inspection Report 80-09, dated July 18, 1980, discussed a Design record storage facility which did not meet fire protection requirements and certain information in Design calculations not being documented. This report was also available.

Inspection Report 413/82-21, 414/82-19, dated September 30, 1982, discusses two NCIs (cited by Palmetto Alliance in its motion, Tr. 1317) which documented a failure by Design Engineering to appropriately address the generic implications of certain non-conforming conditions. This report was available during discovery.

There is yet another point that bears on this issue. Palmetto Alliance's initial discovery salvo utilized a "dragnet approach." February 9, 1983 Order, at p. 3. This approach produced the Technical Task Force Report, which identified the concerns of various welding inspectors. Upon receipt of this information Palmetto Alliance focused its attention on welding inspector concerns at Catawba. However, the fact remains that Palmetto Alliance had the opportunity in discovery to continue to pursue other matters which may have resulted in its obtaining, during discovery, the very information it relies upon. That Palmetto Alliance chose not to pursue such a course cannot now result in its ability to raise the matter and have it admitted into the proceeding.

To overcome the compelling case against it, Intervenor alleges that "[in discovery] we also asked for the results and documents reflecting audits that had been conducted of the as-built condition of the facility" (Tr. 1305), and that "although there were outstanding requests

for audits, there was no identification of the . . . self-initiated evaluation [during discovery]" (Tr. 1306). This assertion is simply incorrect.

None of the Intervenor's "outstanding requests for audits" can be read to encompass the Self-Initiated Evaluation. In its first set of interrogatories on Contention 6, filed in April, 1982, Palmetto Alliance asked (in Interrogatory 14) for identification of "all audits conducted pursuant to 10 CFR Part 50, Appendix B, Criterion XVIII which reflected deficiencies" Subsequently, in its follow-up interrogatories filed on March 16, 1983, Palmetto Alliance sought identification of "all audits conducted pursuant to 10 CFR Part 50, Appendix B, Criterion XVIII which reflected systematic deficiencies in plant construction" The Self-Initiated Evaluation was not conducted pursuant to Criterion XVIII; hence, there was no reason for it to have been produced in response to these interrogatories.

Moreover, none of Palmetto Alliance's other interrogatories or document production requests encompassed the Self-Initiated Evaluation, either. As noted above, despite its apparently broad initial interest in "systematic deficiencies in construction," and the extremely broad and system-wide concerns voiced by its witnesses Hoopingarner and McAfee, Intervenor's follow-up

interrogatories, by its own choice, focused largely on the area of welding. As a result, Palmetto Alliance never filed a discovery request which would have led to the production of the Self-Initiated Evaluation. Indeed, Intervenor admits (Tr. 1305) that it conducted only "limited discovery on Contention 6." This is not the fault of Applicants.

In sum, had Intervenor complied with its "ironclad obligation" to examine the material which was located in Applicants' document room and in the local PDR, had it pursued broader areas of inquiry within Contention 6 during its "first right of discovery," and had it taken depositions earlier in the discovery period scheduled by the Board, Palmetto Alliance could have obtained the Self-Initiated Evaluation during discovery. Its failure to do so should not allow Palmetto Alliance to attempt the shift the blame for this oversight upon the Applicants. Given Intervenor's patent failure to support its motion with any substantive showing as to why it could not have known of the Self-Initiated Evaluation (and the information in it) before May 27, its attempt to characterize this document as "new" under the Board's standard must fail and its motion must be denied.

In support of its claim that the Self-Initiated Evaluation identifies deficiencies "symptomatic" of plant-wide problems which were not known (and could not have been known) to the Intervenor until after May 27, 1983, Palmetto Alliance cites a number of specific references to the document. As explained above, Applicants take the position that none of these references raise areas of concern that should be considered "new information" under Contention 6. However, in order to make clear the insignificant nature of the evaluation team findings which Intervenor has cited, and the fact that none of these findings reflect problems symptomatic of "systematic deficiencies," Applicants have included a technical discussion of each reference. For the convenience of the Board and the parties, this discussion is set forth in a separate Appendix A attached to this response. Further, Applicants provide the affidavit of Paul A. Evans, evaluation team manager of the Self-Initiated Evaluation, as an attachment to the Appendix.

B. Systematic Assessment of Licensee
Performance Review Group (SALP) -
NUREG-0834

Palmetto Alliance also cites the NRC's 1981 SALP Report (NUREG-0834) as part of the "state of the record" which allegedly supports the relief requested (Tr. 1304). It is not clear why Intervenor chose to cite this document

at this late date, since it clearly does not fall into the category of "new" information on Contention 6. Published in August, 1981, the report was available to Intervenor at the time when it submitted its original contentions in this proceeding in 1981; indeed, this report formed the basis for both Palmetto Alliance's Contention 6 and Contention 7. There is no reason why the "findings of deficiencies" cited on p. 1305 of the transcript could not have been thoroughly explored by Palmetto Alliance months before now.

However, since Palmetto Alliance has chosen to rely on the SALP-1 report regardless of the fact that it is not "new," certain facts about this document should be made clear. First, a fair reading of the SALP review group's findings on Catawba should take into account the context in which they were made. For example, in its introductory comments on the report, the NRC explained that "[a] rating of below average does not mean that a facility was unsafe or that its operation or construction should be stopped." Rather, since the expected performance level for nuclear facilities is high, a below-average rating "means that the facility was not meeting the full measure of these high expectations and that, relative to the population of nuclear facilities, the facility's performance was judged to be less desirable than most other facilities" (p. i).

Moreover, the Review Group also pointed out that the SALP Report could not reflect the ongoing corrective actions being taken by NRC licensees. Indeed, since the Report was not issued until approximately 18 months after the end of the observation period, many (if not all) of the NCI's which had documented deficiencies had long since been resolved by the time the report was issued.

The effect of these corrective actions was clearly apparent in the NRC's 1982 SALP Report, wherein the NRC noted in its overall facility evaluation of Catawba that "management attention and involvement were present and were reflected by satisfactory performance with respect to construction activities during this review period. A major strength was identified in the area of the containment and other safety related structures." The Review Group further stated that "[t]he licensee's major strength appears to be his considerable dedication, at all levels, towards producing quality work." With respect to QA, it stated that "[i]n general, the Quality Assurance program has been adequate to identify and correct individual hardware problems." While some weaknesses in resolving NCI's were noted, the SALP Review concluded that Duke's upper management was "very involved" in dealing with these weaknesses and that "extensive programs have

been launched to correct NCI problems, procedures have been written to clarify the QA program, and training courses have been instituted."

The NRC's 1983 SALP Report reiterated the favorable 1982 findings as to "management attention and involvement," and overall "satisfactory performance with respect to construction activities during this review period." It further found that:

Major strengths were identified in the areas of piping systems and supports, and the quality assurance program. The licensee's continuing major strength appeared to be the considerable dedication, at all levels, towards producing quality work. Significant actions to improve quality assurance (QA) have been implemented during this appraisal period, such as increases in personnel in the QA organization and establishment of several group programs which address quality issues which involve both construction and QA personnel. The previous SALP assessment identified weaknesses in the licensee's corrective action program. The licensee has continued to improve in this area during this period. (p. 5).

In sum, the 1981 SALP Report is not "new" information on Contention 6. Moreover, Palmetto Alliance's citation of certain 1981 SALP Group findings -- even though presented without any acknowledgement of the context in which they were made and without any recognition of Duke's subsequent higher ratings in the 1982 and 1983 SALP Reports -- fails to demonstrate the existence of "systematic deficiencies" at Catawba.

C. Depositions of Duke Power
Company personnel.

Palmetto Alliance further asserts in support of its request to expand the scope of Contention 6 that its depositions of certain Duke Power Company employees "include evidence that the procedural breakdown in [the] quality assurance program was programmatic in nature and scope; that it extends to -- as far as we can tell -- all systems and craft areas in the plant, and it's not just in the welding area" (Tr. 1306-07).

An examination of the various references that Intervenor cites from these depositions reveals that none provides substantive support for this allegation. Indeed, with respect to three of the five depositions cited, Palmetto Alliance provides no specific references at all, relying instead upon unsubstantiated accusations and conclusory statements to support its assertions about Duke Power Co. employees William S. Lee, James R. Wells, and George Grier. Such unsupported assertions do not merit serious consideration.

Charles Baldwin

Palmetto Alliance's claim that the deposition of Charles Baldwin reflects the "extensive nature" of the QA problem is totally unsupported. In the portions of Mr. Baldwin's deposition cited by Intervenor (Tr. 97-103), Baldwin is asked to respond to a welding inspector's

allegation that Larry Davison and Mr. Baldwin did not always corroborate the inspectors' identification of problems on NCIs. Mr. Baldwin acknowledges in the ensuing dialogue with Mr. Guild that it was part of his job as a supervisor to review non-conforming items written up by his QA inspectors, and that upon occasion he did not agree with his inspectors that an NCI was the appropriate vehicle for raising particular types of problems. Making such technical judgments was part of Mr. Baldwin's job, as he points out: "I felt the supervision had the responsibility to review what the inspector was doing and give him directions" (Tr. 99).

Such directions would at times include instructions to the inspectors to void the NCI, because Mr. Baldwin would realize that the NCI was not the proper mechanism for identifying the condition or problem in question.¹² Thus, the fact that Mr. Baldwin (and previously Larry Davison) determined that some NCI's were not legitimate non-conformances and that they should not be processed further does not, as Palmetto Alliance suggests, indicate a management practice of "verbal[ly] overriding . . .

¹² A relevant factor which is not brought out in this portion of the deposition is that at this time, some Catawba QA inspectors used NCIs as a vehicle for asking questions or noting areas in which they sought clarification, rather than for identifying significant construction deficiencies as this form is designed to do.

construction deficiencies that were identified by quality control inspectors" (Tr. 1311). Rather, this review process by QA supervision reflects a continuing effort on their part to insure that NCI's were properly utilized by the QA inspectors. That this resulted in occasional differences of opinion between the inspectors and their supervisors (such as Mr. Baldwin) as to whether an NCI was the appropriate means of identifying a request or a question or a problem does not reflect any "procedural breakdown" of the QA program.

Larry Davison

Palmetto Alliance asserts that the deposition of Larry Davison, beginning at p. 43, "reflects that the problems of procedural breakdown in the handling of non-conforming items extended far beyond the welding area, . . . to other areas including hangers and electrical" (1312). During that portion of Mr. Davison's deposition to which Intervenor refers, he was questioned by Mr. Guild on the content of some handwritten notes taken by Mr. Lewis Zwissler of MAC during a February, 1982 interview with Davison. During this discussion, the following exchange occurred:

Q. What kind of serious errors regarding instructions have occurred with regard to hangers?

A. The only thing that comes to mind is one time with a hanger problem the discovery was made that some of the hanger specifications

from Design may have been misinterpreted in the field; and the problem was nonconformed and identified.(Tr. 44).

The 1981 incident to which Mr. Davison refers here involved the issuance of certain design specifications relating to hangers. These specifications, which were quite complex, provided insufficient detail as to the tolerances for the hangers (i.e., the degree to which the construction of the hangers could vary from specifications) to indicate whether the tolerances given should be applied on a limited basis or in all possible situations. Duke's construction technical support group developed construction procedures from these specifications which necessarily involved some degree of interpretation, given the limited instructions regarding tolerances. These procedures were followed by the craft involved and were reviewed by QA, until construction technical support realized that they might have misinterpreted the original specifications. As Davison pointed out on p. 45 of his deposition, this could have resulted in some of the tolerances accumulating where they should not have. After meeting to discuss the problem, an NCI (#13841) was written and personnel from technical support, QA, and design all worked to insure that the tolerance errors in the hangers were corrected. The

specifications and resulting construction procedures were changed, and the affected hangers were evaluated as necessary. (Tr. 44-46).

Applicants fail to see how this incident can be construed as an example of any "procedural breakdown in the handling of non-conforming items" in the area of hangers. As Mr. Davison indicated in his deposition, the problem was identified, documented through the NCI process and the Quality Assurance program of which it is an integral part, and corrected by the departments involved. Contrary to Intervenor's suggestion, this is how the NCI process is supposed to work. Counsel for Palmetto Alliance has apparently either misread the deposition transcript or did not understand the information which Mr. Davison provided on the hanger problem.

Palmetto Alliance's reference to "procedural breakdowns" in the handling of NCI's in the electrical area (Tr. 1312) is similarly misleading. During his deposition, Mr. Davison was repeatedly asked by counsel for Palmetto Alliance to specify any "serious problems" or "serious deficiency" in the electrical area that was nonconformed (Tr. 46-48). Mr. Davison replied that "[t]he only one that I can even recall that might come in that category is the inspection of Electrays, that is non-

safety related electrays." (Tr. 48-49).¹³ Because these electrays had been classified as non-safety related, they were not originally included in the QA inspection program. However, it was later determined that even though the electrays were not "nuclear safety related," their function was "seismically related" and they should therefore be inspected. (Tr. 49). Accordingly, an NCI was prepared requiring the inspection of the electrays. (Tr. 49-50). Davison indicated that since inspection of the electrays is not yet complete, this resolution of the NCI is still considered pending. (Id.)

As with the discussion of hangers, this portion of Mr. Davison's deposition does not suggest any "procedural breakdown" in the handling of this NCI. On the contrary, it indicates that the NCI process was correctly utilized to address this problem and that the error is currently being resolved by inspection of the electrays.¹⁴

¹³ Mr. Davison explained that an electray "is a form of support for cable that usually runs from the cable tray to a piece of equipment or center of whatever the cable is going to." (Tr. 49).

¹⁴ On pp. 1312-1313 of the transcript of his oral motion, counsel for Palmetto Alliance appears to object to the statement of Applicants' counsel Mr. Gibson (in an July 26, 1983 letter to Mr. Guild) that during the extended discovery period (between June 20, 1983 and July 15, 1983) Applicants had allowed Duke witnesses to respond to Mr. Guild's broad-ranging questions even though the Board had prohibited "exploratory depositions on [Contention 6] and limited the subject area of these depositions to "quality assurance in weld-

(footnote continued)

Applicants also note that information on electrays was available to Palmetto Alliance in the Duke document room during discovery on Contention 6. (See Significant Deficiency Reports 413/414 82-08, dated 4/8/82, which was identified in Applicants' 12/31/82 interrogatory response.)

Intervenor also alleges that the deposition of William S. Lee (Chairman of the Board and Chief Executive Officer of Duke Power Company) "reflects [Lee's] lack of concern and commitment to an independent quality assurance program" (Tr. 1310), and reveals his "disrespect for the importance of quality assurance. We think it reflects a primary programmatic weakness in the lack of independence of quality assurance as contrasted with construction" (Tr. 1309). Yet despite the serious nature of these accusations against Mr. Lee and against Applicants' Quality Assurance program, Palmetto Alliance does not include a single specific reference to the deposition

(footnote continued from previous page)

ing." See June 13, 1983 Order, at p. 2. Applicants fail to see the relevance of these remarks to the pending motion. It is true that Applicants permitted their witnesses, including Larry Davison, to answer questions not strictly within the scope of the Board's order (such as problems Mr. Davison recalled in the electrical area, deposition Tr. 47) because the Board Chairman was at that time unavailable to rule on this dispute, and because directing witnesses not to answer questions beyond the scope of QA in welding would have disrupted and delayed the depositions. However, this fact does not support Palmetto Alliance's current request.

itself to substantiate them. Given the obvious lack of any concrete evidence in support of these irresponsible allegations, Applicants submit that Intervenor's remarks and innuendos with respect to Mr. Lee must be discounted. In any event, the transcript of Mr. Lee's deposition speaks for itself. Suffice it to say that it does not support Intervenor's assertions.

Intervenor's allegations regarding the deposition testimony of Duke employees George W. Grier and James R. Wells are equally lacking in basis. Palmetto Alliance claims that Mr. Grier's testimony

reflects the numerous procedural changes that occurred as a result of the welding inspector complaints, procedural changes that largely had the effect of further compounding the problems that had been identified by the welding inspectors and problems which we believe extend to all areas of construction in the facility. (Tr. 1310).

As not a single citation to the deposition transcript is provided to support this assertion, it is difficult to see how Intervenor can expect it to be taken seriously by the Board.

Similarly, Palmetto Alliance's sole basis for singling out James R. Wells for criticism appears to be Palmetto Alliance's assertion that Mr. Wells "left precipitously one week after publishing a report on his planned corrective action for the welding inspector concerns," and that during his tenure at the Institute for

Nuclear Power Operations (INPO), Wells "was largely responsible for evaluating the self-evaluation criteria that have been employed in the 1982 INPO self-evaluation of Catawba" (Tr. 1310). No references to Mr. Wells' deposition are included which might indicate why it supposedly supports Intervenor's allegations. Moreover, as Palmetto Alliance well knows, because it was clearly explained in the depositions of Mr. Lee and Mr. Owen, the fact that Mr. Wells left was unrelated to his "planned corrective action for the welding inspectors' concerns."

In sum, Palmetto Alliance has made absolutely no showing that any of the five depositions mentioned above reveal "programmatic" or system-wide breakdowns in Applicants' QA program at Catawba whose existence supports an expansion of Contention 6.

III. None of the additional relief
requested by Palmetto Alliance
is warranted

In addition to a "reopening" of discovery on Contention 6 (which in reality would constitute an expansion of this contention to cover areas not now included), Palmetto Alliance also seeks other relief in its oral motion which is described at pp. 1-2, supra. Applicants address these additional requests for relief below.

Construction Audit

Intervenor first requests (Tr. 1302) that, pursuant to its sua sponte authority, the Board order "an independent design [and] construction verification program" in "certain specified areas of construction" (presumably the five areas listed on p. 1304 of the transcript) at Catawba. In the alternative, Palmetto Alliance asks that the Board require the conduct of such an audit at Applicants' expense as a license condition. (Id.).

It is unclear whether this Board has inherent authority to order such an audit in the event that the need for such an extraordinary measure has been established in the proceeding. Palmetto Alliance has failed to shed any light on this question. The closest analogy that comes to mind involves a licensing board's decision to call upon independent consultants, a decision which "should be reserved for the most extraordinary situation in which it is demonstrated beyond question that a board simply cannot reach an informed decision on the issue involved." South Carolina Electric and Gas Co., et al. (Virgil C. Summer Nuclear Station, Unit 1), ALAB-663, 14 NRC 1140, 1163 (1981). Explaining this standard in a subsequent decision, the Appeal Board added that a licensing board should give the parties involved every

opportunity to explain, correct or supplement their testimony before resorting to outside experts, and that its use of consultants "should be based on more than intuition and vague doubts" about the reliability of such testimony. Id. at 1156.

The Appeal Board's reluctance to encourage such measures in adjudicatory proceedings stems in part from the fact that licensing boards themselves "are intended to perform that auditing function" because they contain two technical members who provide scientific expertise. Id. at 1156.

In addition to Palmetto Alliance's failure to demonstrate in its oral motion that a construction audit is warranted, it should also be noted that the factual situation in this case is far different from that in a case where independent consultants might be brought in after a contention has been duly litigated, after the parties have addressed the issue, and after the showing called for by the Appeal Board in Summer has been made. Here, by contrast, we have only Palmetto Alliance's unsubstantiated allegations that "a vertical slice audit" (Tr. 1302) is warranted. To even consider granting such relief before determining that these are valid concerns and then thoroughly adjudicating such concerns in an

adjudicatory setting would be grossly unfair and patently inconsistent with precedent in this area. Palmetto Alliance's audit request must be denied.

Deferral pending resolution of
request for OI investigation

Intervenor also requests that further proceedings on these new matters it has raised be delayed "pending request to the Office of Investigations to conduct a review of the Applicant's conduct with respect to what's been referred to as the welding [inspectors' concerns]" (Tr. 1302-1303). This request for relief is groundless and must be denied.

First, from the language that Palmetto Alliance uses here, it appears that such a request has not even been made. Nor are we given a clue as to when Intervenor proposes to submit its request for an OI investigation, or, indeed, that such a request will ever be made officially. In essence, then, Palmetto Alliance is asking here for an open-ended deferral pending the NRC's pursuit of an investigation which Intervenor has not even asked for at this point. Since Palmetto Alliance has made absolutely no showing as to why this particular relief is warranted, Applicants submit that it must be denied.

Even more importantly, the OI investigation which Intervenor proposes to seek would focus on the welding inspectors' concerns, an area which is already included in

Contention 6 and which will be the subject of litigation in the upcoming hearing.¹⁵ Applicants fail to understand how such an investigation has any bearing upon the timetable for further consideration of these purportedly "new" matters, which are totally unrelated to the welding inspectors' concerns.

Investigation of NRC Staff by
Office of Inspector and Auditor

In addition, Palmetto Alliance seeks (Tr. 1303) to defer further consideration of the matters it has just raised until the completion of an "investigation actually underway by the Office of Inspector and Auditor of the NRC Staff at the Region II level, handling of complaints brought to the Staff's attention by Catawba welding inspectors" (Id.). As with the OI investigation which Intervenor asserts that it will seek, this internal NRC investigation will deal with the welding inspector concerns already included within Contention 6. This matter is not related to any of the five areas of concern listed in Palmetto Alliance's oral motion. Applicants therefore fail to see why the conduct of this investigation should

¹⁵ Counsel for Palmetto Alliance states that the Intervenor is "prepared to go forward in the welding area as originally scheduled" (Tr. 1304). This appears inconsistent with a decision to await the outcome of any such investigation.

have any effect upon the schedule for further consideration of these additional matters. This request should be denied.

Consideration of GAP's 2.206 petition

Finally, Palmetto Alliance requests that further proceedings in the five "new" areas of concern which it has raised be deferred pending issuance of a decision by NRC/NRR on the §2.206 petition filed by the Government Accountability Project (Tr. 1303). As Applicants have noted earlier in this response (footnote 1), Palmetto Alliance has failed to comply with the Board's specific order to "specify exactly what in [the GAP] petition, by page number and line, it considers to be new information about specific deficiencies" if it wishes the Board to consider the GAP filing in support of Intervenor's motion. September 14 Order, at p. 7. In view of Intervenor's failure to heed this directive from the Board, Applicants conclude that the allegations contained in the §2.206 petition need not be addressed in this response. Moreover, since Palmetto Alliance has made no showing as to why the resolution of the GAP petition will affect the conduct of "further proceedings" on the "new" areas of concern raised, this request for relief must be denied.

CONCLUSION

For all of the foregoing reasons, Applicants request that the Board deny Palmetto Alliance's September 9, 1983 oral motion, and all of the relief requested therein, as lacking in merit.

Respectfully submitted,

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'83 SEP 26 P1:09

AppendixApplicants' Response to Specific References
to the Self-Initiated Evaluation

In support of its claim that the Self-Initiated Evaluation identifies deficiencies "symptomatic" of plant-wide problems which were not known (and could not have been known) to the Intervenor until after May 27, 1983, Palmetto Alliance cites a number of specific references to the document. Applicants have categorized these references by general subject area and have addressed each one below.

Despite its having been afforded the unusual privilege of being allowed to make its motion orally (saving it considerable time and effort), Palmetto Alliance failed to use this opportunity to present the organized and well-documented showing which might have been expected at this late stage in the proceeding. Instead, Intervenor has merely provided a number of citations and page references for the Board to examine. In their selection, these citations reflect, at best, a cursory reading of the Self-Initiated Evaluation. In addition, no attempt is made in Intervenor's presentation to explain why any one of the findings cited is significant, or how these references demonstrate "systematic deficiencies" in plant construction which

should be included under Contention 6, or why it contends that these deficiencies remain uncorrected after corrective actions have been taken by Applicants.

In order to place these findings in perspective, Applicants have set forth below the nature of each one cited, along with a technical explanation of what corrective action, if any, was taken and why the findings do not reveal the existence of "programmatic" deficiencies which should be explored under Contention 6.

Auxiliary Feedwater System

With respect to this area, Intervenor refers (Tr. 1317) to the following observations in the Self-Initiated Evaluation:

- (a) The Auxiliary Feedwater Electrical System description does not agree with the elementary electrical diagrams and the mechanical system description. (p. 9, item 12)
- (b) The process for control design input documents does not require timely updating of system descriptions. The RHR and AFW System descriptions are not maintained current with system designs. (p. 11, item D.C.2-1)
- (c) Design documents relating to the design of the RHR System are in disagreement, creating a potential for error in the design. This is also true for the AFW System. (p. 15, item D.C.3-3)
- (d) A review of the Systems Group Document Storage File did not reveal any documented calculation (per QA Procedure MPR 101) to support data sheets information used to purchase safety related equipment for the AFW System. (p. 17, item 11)

- (e) A review of the document file (Systems Group) did not contain any documented calculation to support flow diagram information for the AFW System. (p. 17, item 12)
- (f) Information provided by Duke to Westinghouse Corporation to be used in the safety analysis to evaluate the effects of the secondary system (AFW) on the NSSS following various postulated accidents was not based on calculations verified, approved, and documented in accordance with Procedure MPR 101 or PR 101. (p. 17, item 13)

On p. 106 of the Self-Initiated Evaluation, Applicants explain that findings (a), (b) and (c), above, resulted from the "Design Engineering Department's philosophy pertaining to system descriptions." System descriptions are prepared very early in the design process. They are intended as preliminary and general working documents which provide an overview of the components and function of a particular system, and as a general reference in initiating the more advanced design of a system. System descriptions are used primarily as a means of communication between various divisions of the Design Engineering Department, where they are used as "supporting documents" or guides in the preparation of the more detailed flow diagrams and electrical elementary drawings. These flow diagrams and electrical documents,

rather than the system descriptions themselves, are the controlled sources of information used in the detailed design of a particular system.

Because of their limited and preliminary role as a guideline for developing advanced system designs, some system descriptions were not updated regularly before the Self-Initiated Evaluation because this was not considered a high priority matter. In response to the evaluation team's findings, however, DPC's Design Engineering Department agreed to implement various corrective measures to update system descriptions and to keep them current. (See pp. 106-107 of the Self-Initiated Evaluation). These measures have been implemented. This updating will benefit other departments which use the descriptions as reference information in the initial development of test and operating procedures, although the controlled sources of information are flow diagrams and elementary drawings.

The observations of the evaluation team with respect to system descriptions in the Auxiliary Feedwater Area have no bearing on the safety of the plant's construction or upon the quality of its design. The only effect of the previous time lag in updating system descriptions was minor delays in the initial development of some test procedures, which has since been corrected.

As to whether this area constitutes "new information," Applicants note that a similar problem as to the updating of system descriptions was identified in Duke Audit Report DE-82-2(MD), which was made available to Palmetto Alliance as part of Applicants' December 31, 1982 interrogatory responses (response to Interrogatory 14).

Observations (d), (e) and (f) cited by Intervenor also reflect a "housekeeping" deficiency rather than a substantive problem with the safety of the Auxiliary Feedwater System. Observations (d) and (e) do not state, for example, that the review revealed that no documented calculations had been performed. Rather, the procedural violation involved the fact that the calculations were not placed in the document file at the time the review occurred. (These calculations were subsequently placed in the file.) Similarly, observation (f) focuses on the fact that at the time certain preliminary information was provided to the vendor, it was based upon calculations which had not, at that point, been verified, approved and documented. This verification pursuant to internal procedure was, in fact, subsequently performed and there was no indication that the initial information was incorrect.

Observations (d), (e) and (f) are not significant in terms of the safety of the construction of the Auxiliary Feedwater System. Nor do any of them suggest the existence of "systematic deficiencies" in the construction of the Auxiliary Feedwater System.

Residual Heat Removal (RHR) System

In this area, Palmetto Alliance refers the Board (Tr. 1317) to the following observation of the evaluation team¹ in the Self-Initiated Evaluation:

Review of issued Mechanical and Electrical system descriptions showed the two system descriptions did not agree (RHR System). (p.8, item 9)

This finding is similar to item (c) listed in the above discussion of the Auxiliary Feedwater System. As explained in the previous section, some system descriptions were previously not updated on a regular basis. (The reasons for this practice are also covered in the previous section on the Auxiliary Feedwater System, pp. 3-4). The discrepancies noted by the evaluation team between the mechanical and electrical system descriptions resulted from this irregular updating.

¹ Intervenor also cites "page 29, items 3, 4 and 5" (Tr. 1317) as evidence of problems in the RHR system. This page reference is incorrect, as page 29 has no such items. Accordingly, it will not be addressed.

The fact that these two system descriptions were not identical is not significant in terms of the quality of the design or the safety of the Residual Heat Removal System because of the limited, preliminary role which system descriptions play in the design process. (They are never used in the field to determine whether a system is being built to design.) DPC has also verified that preliminary reliance on system descriptions has not resulted in any incorrect designs being used.

Heating, Ventilation and Air-
Conditioning (HVAC) System

As to this system, Intervenor cites (Tr. 1317) the following evaluation team observations as evidence of system-wide problems:

"During a walk-through in the HVAC Pipe Fab and Welding Equipment Shops, several weaknesses were observed:

C. In the HVAC Fab Shop:

1. A safety related galvanized steel angle used by the HVAC contractor is color coded on the ends when received at the site, but when fabrication begins (sectionalizing), no attempt is made to maintain this identification.
2. Procedure QFP-8.002 CNS, Rev 1A, (Control of Welding Filler Material) requires the return of unused filler material at the end of each shift. The procedure does not indicate what is the disposition of the unused filler material. The supervisor indicated that the coated electrodes are

placed back into the holding oven and are subject to reissue to the next shift. The QA engineer indicated that the returned coated electrodes are placed in a separate holding oven and are returned to Duke Power Company, who is responsible for the reconditioning of the electrodes. There is confirmation from Duke Power Company welding material issue station employee that the contractor does occasionally return coated electrodes. The effective Code, AWS D1.1, requires reconditioning of coated electrodes after exposure to the atmosphere." (p. 31)

Item C-1

In general, safety-related materials must be marked or tagged to insure that non-safety related materials are not used in place of safety-related materials. The finding described in item C-1, however, is more correctly viewed as an observation. It does not reflect a deficiency of any kind, since the proper material was used for the item being fabricated. The finding thus has no significance in terms of the safety of the HVAC system construction.

Item C-2

The gist of the finding as to item C-2 was that the station's procedure for control of welding filler material, which requires that unused filler material be returned at the end of each shift, did not specify the exact disposition of this unused material (i.e., where it

was placed between shifts). There is no suggestion here that the unused filler material was not being returned at the end of a shift, or that employees were placing in it an improper location -- merely that the location was not specified in the procedure. (As a matter of fact, the evaluation team cited statements by the supervisor and the QA engineer that the unused material was returned at the end of each shift and that the returned coated electrodes were returned to a particular DPC Office for reconditioning (rebaking)). The QC inspector monitored the control of filler weekly.

The procedure in question was revised in response to this observation to reflect the disposition of the unused material. However, the observation itself is not significant in terms of whether the HVAC system is constructed safely. This is particularly the case since DPC employees knew what to do with the unused filler material (i.e., the lack of detail in the station procedure on this point did not result in an improper disposition of the electrodes).

Palmetto Alliance also cites general finding 6 on p. 2-a of the Self-Initiated Evaluation, which states that: "Closer control and monitoring of activities conducted by the HVAC contractor is necessary." The basis for this finding was certain weaknesses observed in the control of

the HVAC contractor's welding program. (Self-Initiated Evaluation, p. 34.) These weaknesses, and Duke's responses to them, are as follows: (Id. p.36).

- (a) HVAC contractor's welders did not know the welding procedures they were working under.

Response: The welder does not need to memorize the procedure number. The welding foreman instructs him on the criteria and welding procedure to be used.

- (b) While all of contractor's welders knew required weld size and location, they did not know how they acquired that information.

Response: The welding foreman provided this information.

- (c) No process control was available to specify the welding procedure for plenum erection (from drawing CN-1684-VA-000H, Rev O).

Response: This drawing has a list of welding procedures that can be used. The welding foreman selects the procedure to be used depending upon welding parameters.

- (d) Welder was making welds without removing galvanizing material.

Response: This was an isolated incident, not a common practice. In addition, procedures now state that galvanizing must be removed from the area to be welded.

- (e) HVAC support 2-H-VC-4999 had undercut in excess of that allowed by AWS D1.1 code.

Response: This undercut was reviewed and found to meet all DPC Design Engineering Criteria. The incident was judged not to be significant.

- (f) Welder/supervisor [i.e., foreman] picks welding procedure from all available welding procedures. Supervisor documents welding procedure(s) used on a support after the support is complete.

Response: The welder does not need to memorize the procedure number. The welding foreman instructs him on the criteria and welding procedure to be used.

None of these findings raise significant questions as to the quality of the work performed by the HVAC contractor, or the safety of the construction of the HVAC system.

Hangers²

In the area of hangers, Intervenor refers to the following observation:

Thirty to forty percent of pipe hangers being installed in the Reactor Building are temporary hangers requiring replacement when Design Information on permanent hangers become available. (p. 16, item 7)

This observation does not denote a deficiency. The installation of temporary pipe hangers to support the piping system until final design information on the permanent hangers is available is not unusual. Moreover, this observation does not indicate that any permanent hangers were installed incorrectly. This is not a significant fact in terms of whether the hangers are constructed safely.

² Applicants' discussion of Larry Davison's deposition testimony on hangers is covered in the response.

Design

Intervenor also cites (Tr. 1317) several references to observations of the Evaluation team which deal with "design generally." The statements cited are:

- (a) Procedure for the responsibility, issuance and control of design input needs to be formalized. (p. 2a, item 1)
- (b) Coordination on Design changes between the design disciplines should be improved. (p. 2a, item 2)
- (c) In the [Unit 1 Auxiliary Building Penetration Room at Elevation 577] Design changes on items already installed provide potential for extensive rework and/or modifications. Such rework and/or modifications may alter the quality of installed items previously accepted. (p. 20, item 2.D.)
- (d) Conflicts between system design documents exist for extended periods of time, because system descriptions are not revised in a timely manner. (p. 23, item DC.5-1)³

³ On p. 1317 of the transcript, Intervenor also cites "an inspection report by the NRC Staff of November 1982 regarding NCI Numbers 14261 and 14086." This 1982 inspection report is clearly not "new" information; hence it does not support the instant motion. With respect to the NCIs cited, Applicants note that the resolutions of these two NCI's were not questioned because of their technical merit. Rather, the Resident Inspector noted concerns related to Duke's misuse of the word "generic" and its failure to have the groups most involved provide the NCI writeup. Both NCI's have been resolved. These NCI's do not demonstrate the existence of serious or "systematic" design problems.

Item (a)

Responsibility For and Issuance of Design Input

After the conclusion of the Self-Initiated Evaluation, a comprehensive review within each division of the DPC Design Engineering Department was conducted to determine whether procedural changes were necessary to "formalize" responsibilities for design input. It was decided that no changes in procedure would be implemented because the following practices and policies are now in effect.

a. The organizational responsibilities in the Design Engineering Department are formally documented in responsibility statements. In addition, significant commitments to provide design input are included in the punch list by the responsible group. At the supervisory level within Design Engineering, the design process is well understood; however, due to specialization in some functional groups, individual engineers may not be familiar with the overall process.

b. The Design Engineering Department Manual documents a Civil/Environmental interface concept which is very specific regarding required structural design inputs. Design input dates appear on design schedules, and information is submitted formally on marked sepia of structural drawings. This program is formalized, well controlled and well understood by responsible engineering

supervisors in the Mechanical & Nuclear Division and the Electric Division. The Civil/Environmental and Mechanical & Nuclear Divisions also use specific interface agreements to define responsibility for various aspects of pipe stress analysis and support restraint design.

c. The Mechanical & Nuclear Division defines responsibility for providing design input through its organizational structure by providing a logical flow of design inputs which progress from design criteria, to flow diagrams, to system descriptions and equipment data sheets, to equipment specifications, to piping and equipment arrangement designs, to formal documented system checkouts on a scale model, to final system verification analyses in a carefully controlled process. The Mechanical/Electrical instrumentation design process provides the necessary information through flow diagrams, system descriptions, I&C data sheets, I&C details, I&C lists, electrical elementaries and wiring diagrams.

d. The Electrical Division has considerable workplace procedures to address administrative control. This division defines responsibility for providing design input through its organizational structure by providing a controlled logical flow process in performing the electrical designs. For initial design, the Electrical Division makes use of the integrated schedule as a

valuable aid in defining, controlling, and scheduling inputs to the design process. This mechanism is used for internal division inputs and schedules as well as defining and documenting needed design inputs from other divisions. Mechanical system descriptions, flow diagrams, I&C information, vendor drawings, etc. which are needed as inputs to the Electrical Division's design process are defined as well as the specific "Need By" and "Responsible Originating" parties.

e. Once initial design is completed and released for construction, revisions to system design are authorized by Design Change Authorization Forms and later by Nuclear Station Modification Requests. These revisions are not entered into the integrated schedule but are tracked by a Data Base "Punch List" maintained by the Project Management Division. The "Punch List" is used to define parties involved in the revision along with design inputs (I&C information, vendor drawings, etc.) and serves as a method to define and control inputs to the design process.

f. A Milestone Management Team (MMT) has been established for Catawba Unit 1 work. (This was not an outgrowth of the Self-Initiated Evaluation.) This team is composed of experienced representatives from Design Engineering, Construction, and Nuclear Production departments. The Milestone Management Team defines the

total effort required for major milestone activities (e.g., reactor coolant system cold hydro, hot functional test, fuel load). The MMT schedule is extremely detailed and establishes clear responsibility and interface requirements to meet the schedule. The Design Engineering representative on MMT helps to assure that design inputs related to design changes and design inputs for problem resolution by field teams are properly defined.

Control of Design Input

After the Self-Initiated Evaluation, DPC conducted an internal review in the Design Engineering Department to ascertain whether procedural changes or the implementation of new procedures would be useful in insuring that Design input information is provided in a controlled manner. As to procedural controls, the results of this review revealed that present procedures impose adequate controls on engineering correspondence. Procedures regarding control of calculations were revised to tighten controls on the handling of vendor calculations and computer code certification. New procedures were established to assure substantial interdisciplinary control on design inputs.

With respect to process controls, Instrumentation and Control data sheets are now being utilized for the balance of Catawba original design and for future projects. These data sheets are controlled by a formal distribution code

established through General Services. In addition, the Electrical Division has developed a design process summary and associated checklists for each section.

On a broader scale, Design Engineering is considering a Computer Aided Engineering System which can, among other things, provide information about what functional organization produces what documents and what information is used to produce the documents. A layout compliance criteria/piping engineering concept, when fully implemented, will assure that designs are developed with the consideration of all design disciplines, and thus revisions will not be generated due to previously unfulfilled design criteria. A computerized interference detection system has been developed to minimize space conflicts between piping, supports, cable tray, and equipment.

The findings of the evaluation team with respect to the desirability of formalizing Design input procedures are not significant in terms of the overall safety of the design process. As the above discussion indicates, this finding was largely a question of the need to clarify various organizational controls rather than to implement substantive changes in Design. Clearly, this does not indicate the existence of "systematic deficiencies" in Design.

Item (b)

The basis for this finding was the observation by the evaluation team that several problems had been observed "involving the exchange of information and control of interfaces between the electrical and mechanical I&C groups and between support/restraint and piping layout sections." (Self-Initiated Evaluation, p. 11).

Acknowledging that there were occasional delays in the transfer of Design change information between divisions of the Design Engineering Department, Duke took two corrective actions. First, procedures were implemented to improve the timely transfer of Design change information. In addition, Duke reviewed the specific problems identified by the evaluation team and concluded that there had been no significant compromise of design. This finding is not significant in terms of the overall safety of the design process.

Item (c)

This is an observation of a potential, rather than actual problem. The significant point to be made here is that Duke has procedures for reworking or modifying all areas, including those (like this one) that are congested. There is no suggestion in this observation that such procedures would be inadequate. Moreover, though the area is congested, installation is still inspected and quality

verified by existing QA procedures. Experience on Unit 1 has been factored into the Unit 2 design. Supplementary frames are being designed to provide additional supporting steel, and piping rerouted in conjunction with the frame design. Any reworking needed due to revisions to resolve identified problems will be performed under existing Design and Construction QA procedures to insure that a quality end-product is obtained.

As this observation does not identify an actual problem, it is clearly not significant in terms of the safety of the design of this particular area. Moreover, the congestion in this one area does not indicate the existence of "systematic deficiencies" in design.

Item (d)

This observation is very similar to others cited by Intervenor in regard to the Auxiliary Feedwater System and the Residual Heat Removal System. As explained earlier in this section (see pp. 3-4), before the Self-Initiated Evaluation was conducted some system descriptions were not updated regularly because of the limited role they play in the design process beyond the initial stage. While the evaluation team's finding of discrepancies between various system design documents was not considered significant in terms of the safety of the plant's design, DPC nevertheless instituted corrective measures which have

resulted in system descriptions being updated in a timely fashion. It is thus clear that this observation does not reflect the existence of a serious or a "systematic" deficiency.

Quality Assurance

In addition to the specific systems and areas discussed above, Palmetto Alliance also refers to several observations of the evaluation team in the general area of quality assurance. As is the case with the other references in its motion, these do not reveal the existence of significant problems in QA, nor the existence of problems which are "symptomatic" of system-wide QA deficiencies.

For example, Intervenor cites (Tr. 1315) the evaluation team's finding (p. 2a, item 7) that "Inspection procedures need to be clearer in the definition of requirements." The corrective action proposed in response to this finding was to establish a procedures group to review and correct all nuclear procedures identified, to insure that there would be no further confusion as to whether or not an installed item being inspected met all requirements. This corrective action was completed in January, 1983.

Palmetto Alliance also refers to the evaluation team's recommendation that "Assessing generic implications of construction problems should be considered more often." (p. 2a, item 8). On p. 155 of the Self-Initiated Evaluation, Duke responds by agreeing to require the Construction Department to "trend" certain forms on which construction problems are reported by inspectors (i.e., the forms will be reviewed and records kept to determine the existence of any widespread and/or recurring problems in construction). This trending analysis of construction problems is currently conducted at Catawba.

Recommendation QP-3 (p. 2a, item 9), "Independent assessment of quality-related activities should be incorporated into a program," is also noted by Intervenor (Tr. 1315). The basis for this recommendation was the evaluation team's finding that independent assessments for some quality-related activities (in particular, post-weld heat treatment and pipe bending) had not been performed by the QA department for the preceding two years (Self-Initiated Evaluation, p. 73).

Deficiencies in assessment of these two areas were apparently cited because they are individually described by particular QA procedures, and QA could not identify a specific form which assessed these areas comprehensively. However, both the area of pipe bending and that of post-

weld heat treatment were included in QA's general surveillance of welding and of hydrostatic testing activities.

As corrective action, the QA surveillance checklists at Catawba were reviewed and revised as necessary to assure that these (and other significant areas) were specifically addressed; this was completed in early 1983. In addition, both processes were inspected in early 1983; no discrepancies were noted. (Before the Self-Initiated Evaluation, the NRC resident inspector had also reviewed the post-weld heat treatment process and noted no deficiencies). Plans were also made to audit other areas to insure that all quality-related activities were assessed. These audits have been completed.

Duke's failure to specifically survey post-weld heat treatment and pipe bending is not significant in terms of the safety of the plant. Both of these activities were independently assessed during certain routine NRC safety inspections.

Palmetto Alliance also directed the Board's attention to "remedial measures agreed to at p. 154," which it indicates is significant because these measures "deal with exactly the same subject as the welding inspector concerns" -- i.e., "the failure to effectively use . . . the R2-A procedure" (Tr. 1316). The finding in question (on p. 154 of the Self-Initiated Evaluation) states that

In some cases, QA approvals of inspection discrepancies (Form R-2A) was not sufficiently critical. Cases were noted where QA had approved R-2A Forms where the statement of required action did not address the root causes and where corrective action had not yet been taken.

The instance in which QA approved an R-2A where corrective action "had not yet been taken" involved QA's observation during a hydrostatic test that two instrument taps, while correctly installed per the design drawing, were not located as shown on the flow diagram used to describe the test boundaries. (This is a case of differing design documents.) The taps were installed per the installation drawing. The resolution of this discrepancy was to correct the flow diagram to show the taps located as called for by the design drawing.

The incident in which QA required a problem resolution which "did not address the root causes" involved the pressurization of pipe prior to its release for testing by the systems group in construction. Review shows the system pressurized to be a non-nuclear safety related system. For such systems it has been standard construction practice for craft to perform a low pressure leak test prior to hydrostatic testing in order to locate and repair major problems. The system in question was pressurized by the craft to 200 PSIG; this pressure did not exceed the planned test pressure. When these actions

occurred no procedural controls were violated; additionally, the application of test pressure did not damage the piping. The non-critical QA review is attributable in part to the non-safety related nature of the piping involved.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)	
)	
DUKE POWER COMPANY, <u>et al.</u>)	Docket Nos. 50-413
)	50-414
(Catawba Nuclear Station,)	
Units 1 and 2))	

AFFIDAVIT OF PAUL A. EVANS

1. My name is Paul A. Evans. I am currently employed by the Institute of Nuclear Power Operations as Assistant Manager, Design Evaluations, in the Construction Project Design Evaluation Division.
2. Immediately before taking this position, I was employed by Tennessee Valley Authority for approximately four months as Program Manager for the Bellefonte Nuclear Plant Project in the Office of Quality Assurance. Prior to that time, my position at TVA was Principal Mechanical Engineer in the Office of Engineering, Design and Construction. I held this position for approximately 12 years.
3. While employed by the Tennessee Valley Authority, I participated in Duke Power Company's "Construction Project Evaluation for Catawba Nuclear Station," commonly referred to as the "Self-Initiated Evaluation." My role in the Self-Initiated Evaluation

was the evaluation team manager. As team manager, my responsibilities included deciding upon the types of personnel needed to comprise the evaluation team, including specifying the desired experience levels and areas of expertise; and, once the team members were chosen, training them to perform evaluations. I also supervised the development and planning of the individual team members' evaluation activities and schedules. During the time that the Self-Initiated Evaluation was conducted, I managed and coordinated the overall effort of the evaluation team at Catawba, supervised the integration of data from various team members into the evaluation document, and worked closely with the team members in developing their various findings and in writing the Self-Initiated Evaluation Report.

4. The purpose of this affidavit is to respond to Palmetto Alliance's allegations that the Self-Initiated Evaluation identified problems which are "symptomatic" of systematic deficiencies in plant construction at Catawba. In particular, Palmetto Alliance contends that this study exposed problems in the areas of (1) hangers, (2) the auxiliary feedwater system, (3) the residual heat removal system, (4) the heating, ventilation and air-conditioning system, (5)

the area of design generally, and that these problems are sufficiently serious to warrant an expansion of Contention 6 to include their consideration.

5. In the area of hangers, I am aware that Palmetto Alliance has cited the evaluation team's observation that almost half of the pipe hangers then being installed in the reactor building were temporary hangers which would have to be replaced with permanent hangers once final information from Duke's design department became available.

This observation does not constitute a finding of a deficiency. On the contrary, the installation of temporary pipe hangers as support for the piping system in a plant until final design information on the permanent pipe hangers is available is common practice. This provides an expedient way of allowing installation of piping without waiting for finalized design information on supports. In this way, the final design of the pipe supports can, if necessary, be changed to accommodate changes in the piping as installed.

6. The practice of replacing temporary hangers with permanent ones has no bearing upon the safety of hanger construction at Catawba. Nor does it indicate the existence of "systematic deficiencies" in this

area. Moreover, I am not aware of any other significant problems in the area of hangers which were identified in the Self-Initiated Evaluation.

7. In the area of the Auxiliary Feedwater System, I am aware that Palmetto Alliance has cited the evaluation team's observation that some system descriptions were not updated regularly. This does not, in my opinion, constitute a serious problem. As explained in the text of the attached Appendix, system descriptions have a limited and preliminary use as guidelines for the development of flow diagrams and electrical elementary drawings. Thereafter, flow diagrams and electrical drawings are developed and that becomes the controlling document. While Duke procedure calls for the system descriptions to be updated, and we found Duke had not done so in this area, such failure cannot be said to be significant in terms of the safety of the construction or functioning of the auxiliary feedwater system. This is because Duke has a process for assuring that the design of the Auxiliary Feedwater System is kept current. This process consists of updating flow diagrams and electrical drawings which reflect the current design. Moreover, this fact does not suggest the existence of "systematic deficiencies."

I am also aware that Palmetto Alliance cited the evaluation team's observation that certain calculations were found not to be in the Systems Group Document Storage File at the time of the review. This is a "housekeeping" matter. It does not indicate that these calculations had not been performed, but only that they were not in the files at a particular time. This finding is not significant in terms of the safety of the construction or the functioning of the Auxiliary Feedwater System. Furthermore, it does not indicate the existence of "systematic deficiencies" in this area.

Finally, I am aware of the evaluation team's observation, cited by Palmetto Alliance, that certain information provided to Westinghouse by Duke Power Company was based on calculations which had not, at that time, been verified, approved and documented in accordance with internal Duke procedures. This finding does not in and of itself lead to the conclusion that the plant has been constructed, or will operate, unsafely. Indeed, if proper corrective action is taken this matter cannot be viewed as significant.

8. I am not aware of any other findings in the Self-Initiated Evaluation which would indicate the existence of significant problems in the Auxiliary Feedwater System.
9. In regard to the Residual Heat Removal System, I am aware that Palmetto Alliance has cited the evaluation team's observation that a review of the Mechanical and Electrical System descriptions showed an inconsistency between the system descriptions. This was deemed to result from the fact that these system descriptions had not been updated regularly.

As explained with respect to the Auxiliary Feedwater System, system descriptions play a limited and preliminary role in the Duke Power Company design process. From the general guidelines provided by these descriptions, diagrams and drawings are developed. While Duke procedure calls for the system descriptions to be updated, and we found Duke had not done so in this area, such failure cannot be said to be significant in terms of the safety of the construction or functioning of the Residual Heat Removal System. This is because Duke has a process for assuring that the design of the Residual Heat Removal System is kept current. This process consists of updating diagrams and drawings which reflect the current design.

10. The observation which Palmetto Alliance identified with respect to the Residual Heat Removal System becomes insignificant in terms of the safety of the construction or the functioning of this system once proper corrective action is taken. Moreover, it does not indicate a "systematic deficiency."

In addition, I am not aware of any other findings relating to the Residual Heat Removal System which revealed the existence of significant problems in this area.

11. I am aware that Palmetto Alliance has referred to two observations in the Self-Initiated Evaluation relating to the Heating, Ventilation and Air-Conditioning System. These observations concerned (1) the transfer of color coded tagging on a piece of safety-related material after it had been sectionalized for fabrication; and (2) the failure of a procedure to indicate the exact disposition of unused welding filler material.

In my opinion, neither of these observations is significant in terms of the safety of the construction or functioning in the heating, ventilation and air-conditioning system; nor do they suggest the existence of "systematic deficiencies." Finding (1) did not document a deficiency, since in that instance, the

proper material was used for the item being fabricated and there was no suggestion that it had been confused with non-safety related material. Finding (2) pointed out a lack of detail in the procedure in question, not an improper disposition of filler material. (The evaluation team determined that the unused filler material was in fact being disposed of properly). Moreover, I am unaware of any other findings relating to the Heating, Ventilation and Air-Conditioning System which suggest the existence of significant problems in the construction or function of this system.

12. I am also aware of the Self-Initiated Evaluation's finding that "closer control and monitoring of activities conducted by the HVAC contractor is necessary." The various irregularities noted in the control of the HVAC contractor's welding program which formed the basis for this finding do not in and of themselves reflect the existence of a significant problem with this contractor's welding work, nor the existence of "systematic deficiencies" in this area. To explain, Items (a)-(c) and Item (f) pertain to the state of knowledge of a welder. If it could be shown that the welder had been provided instruction by his supervisor these matters would not be significant.

With respect to item (d) there is no indication that this action was widespread. Further, if appropriate corrective action is taken this matter would not be viewed as significant. Lastly, as to Item (e) this matter does not in and of itself lead to the conclusion that improper work was performed. Rather, the matter should be reviewed by appropriate engineer capabilities to determine its significance.

13. In the area of design generally, I am aware that Palmetto Alliance has cited four points raised by the evaluation team. I will address each below.

First, Palmetto Alliance references Item 1 on page 2a, Section C, of the Self-Initiated Evaluation. The item states that "procedure for the responsibility, issuance, and control of Design input needs to [be] formalized." Our group made five findings in this area which are set forth in Section C, page 7. These findings in and of themselves do not lead to the conclusion that the plant has been constructed or will operate unsafely. Indeed, if proper corrective action is taken this matter can be viewed as significant.

Second, Palmetto Alliance references Item 2 on page 2a, Section C. The item states "Coordination on Design changes between the design disciplines should be improved." Our group made two findings in this

area which are set forth in Section C, page 11. These findings in and of themselves do not lead to the conclusion that the plant has been constructed or will operate unsafely. Indeed, if proper corrective action is taken this matter cannot be viewed as significant.

Third Palmetto Alliance references 2D on page 20 of Item C. This item states that in the above Unit 1 Auxiliary Building Penetration room at elevation 577, "Design changes on items already installed provide potential for extensive rework and/or modifications. Such rework and/or modifications may alter the quality of installed items previously accepted." This finding is really an observation of what might happen in the future. It does not address an actual problem. Accordingly, this item is not significant in terms of the safety of the construction for the functioning of the plant. Further, there is no evidence that Duke procedures concerning modifications will compromise the quality of installed items previously accepted.

Fourth, Palmetto Alliance references item DC 5-1 at page 23 of Section C. This item states that "conflicts between system design documents exists for extended period of time, because system descriptions are not revised in a timely manner." This finding is representative of similar findings previously

discussed in this affidavit in paragraphs 7 and 9. As was the case with the items discussed in those paragraphs, system descriptions have a limited and preliminary use as guidelines for development of flow diagrams and drawings. Thereafter, diagrams and drawings are developed and they become the controlling documents. While Duke's procedure calls for the system descriptions to be updated, and we found Duke had not done so in several areas, such failure cannot be said to be significant in terms of the safety of the construction or the functioning of these systems. This is because Duke has a process for assuring that the design of the subject system is kept current. This process consists of updating diagrams and drawings which reflect the current design.

I, Paul A. Evans, of lawful age, being first duly sworn, state that I have reviewed the foregoing affidavit and that the statements contained therein are true and correct to the best of my knowledge and belief.

Paul A. Evans

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD BRANCH

OFFICE OF SECRETARY
DOCKETING & SERVICE

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' Response To Palmetto Alliance's Oral Motion To Reopen Discovery On Contention 6" and Appendix in the above captioned matter have been served upon the following by deposit in the United States mail this 23rd day of September, 1983.

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** Designates those delivered by overnight courier.