UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

NOV 19 1984

MEMORANDUM FOR: A. R. Herdt, Chief, Engineering Branch, DRS

A. F. Gibson, Chief, Operations Branch, DRS

THRU: P. Bemis, Acting Director, Division of Reactor Safety

FROM: J. B. Lankford, Investigation/Allegation Coordinator

SUBJECT: SHEARON HARRIS - ALLEGED DISCRIMINATION AND POSSIBLE HANGER DEFICIENCIES

CASE NO: RII-84-A-0143

The enclosure is the CP&L response to allegations contained in the affidavit of Mr. Chan Van Vo, and is provided for your use in reviewing the allegations.

J. B. Lankford

Enclosure:
CP&L Response to Affidavit of
Mr. Chan Van Vo

cc w/o encl:
J. A. Olshinski, DRP
J. J. Blake, ENG/DRS
D. Verrelli, PB1/DRP

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This is CP&L's response. Jackson is looking at one aspect of Van Vo's allegation this week (11/26) at Harris. According to Lankford, there are others.

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Exhibits

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addressed, on the record, the five lateness factors set forth in 10 C.F.R. § 2.714(a). Tr. 5730-45. At the hearing held on October 30, 1984, counsel for the Conservation Council of North Carolina ("CCNC") distributed two late-filed contentions (CCNC WB-1 and WB-2). CCNC adopted the earlier oral statement of Mr. Eddleman as its position on the five lateness factors. (A copy of the CCNC pleading which proffered the two proposed contentions is attached hereto as Exhibit C.) Pursuant to the schedule established by the Board for reply (Tr. 5750), Applicants Carolina Power & Light Company ("CP&L") and North Carolina Eastern Municipal Power Agency hereby respond in opposition to the admission of the late-filed contentions.

Applicants oppose admission of all of the late-filed contentions because:

(1) Each of the six proposed Eddleman contentions is overly-broad in its scope -- the far-reaching allegations are not supported by the specific concerns raised in the Van Vo Affidavit.

(2) The reliability of the Van Vo Affidavit has been seriously questioned and cannot serve as the basis of a contention.

(3) Both Mr. Eddleman and CCNC have failed to demonstrate good cause for raising these new issues at this late date and have failed to demonstrate that application of the five lateness factors weigh in favor of admission of the late contentions.

(4) Even assuming <u>arguendo</u> that the statements in the Van Vo Affidavit are factually correct, in the case of each proposed contention Mr. Eddleman and CCNC have failed to plead a litigable issue with adequate basis and specificity. Particularly, in this regard, many of the statements in the Van Vo Affidavit allege deficiencies in procedures that were in effect over

one year ago and that have been subsequently revised and any identified defects in work were corrected; to litigate such issues would be to litigate issues only of historical interest.

II. Background on the Van Vo Affidavit

The Board has previously considered the Van Vo Affidavit in this proceeding in some detail (Tr. 5315-63), having accepted the Van Vo Affidavit as a limited appearance statement. Tr. 5316. Furthermore, the Board ruled that the allegations in the Van Vo Affidavit were not relevant to Eddleman Contention 41. Tr. 5571-72. During the hearing, counsel for Applicants provided background with regard to the Van Vo Affidavit. The Affidavit was received by Applicant CP&L, in mid-October in response to an inquiry initiated by CP&L's Corporate Quality Assurance Department ("Corporate QA") under the Harris Plant Quality Check Program to obtain more information from Mr. Van Vo on the quality concerns he raised in a complaint to the Department of Labor. Tr. 5320. The Van Vo Affidavit was publicly released at a press conference called by the Government Accountability Project on October 22, 1984. Tr. 5360.

The allegations set forth in the Van Vo Affidavit first came to light as a result of a complaint dated August 28, 1984, from Mr. Van Vo to the Department of Labor charging CP&L with a violation of the employee protection provisions of the Energy Reorganization Act (a copy of the complaint is attached hereto

as Exhibit D). Mr. Van Vo alleged inter alia that he had "been subject to repeated harassment, intimidation, pressure and other discrimination because of [his] actions in performing [his] assigned duties which included the identification and documentation of design and construction deficiencies." See Exhibit D at 2. On October 12, 1984, the Department of Labor issued its findings and concluded that it could not substantiate Mr. Van Vo's allegations.2/

As indicated by counsel for Applicants during the hearing (Tr. 5322), an additional investigation of the quality concerns raised by Mr. Van Vo was initiated by the CP&L's Corporate QA. Further, an independent consultant, Mr. A. Parks Cobb, Jr., a Senior Manager at Duke Power Company, was retained to perform part of the Quality Assurance investigation. The results of Mr. Cobb's investigation are set forth in a report (the "Cobb Report") dated October 31, 1984 (attached to the Affidavit of A. Parks Cobb, Jr. -- Exhibit F hereto). Mr. Cobb has considerable training and experience to qualify him to perform such an investigation. See Affidavit of A. Parks Cobb, Jr., at ¶¶ 1, 2; Attachment 1. Mr. Cobb's independent investigation was also unable to substantiate the allegations set forth in the Van Vo Affidavit. Indeed, Mr. Cobb's report describes a

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2/ A copy of the letter setting forth the findings of the Department of Labor is attached hereto as Exhibit E.

Philadelphia Electric Company (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 A.E.C. 13, 20-21 (1974). In this regard, a contention must be material to those findings which precede licensing, as set forth in 10 C.F.R. § 50.57. See Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-106, 16 N.R.C. 1649, 1654-55 (1982).3/ With respect to the specific issues raised by CCNC and Mr. Eddleman regarding QA/QC of certain aspects of construction, we note that error-free construction is not a precondition for an operating license under either the Atomic Energy Act or the Commission's regulations. What is required instead is a finding of reasonable assurance that the plant, as built, can and will be operated without endangering the public health and safety. 42 U.S.C. §§ 2133(d), 2232(a); 10 C.F.R. § 50.57(a)(3)(i); Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-756, 18 N.R.C. 1340, 1345 (1983); Union Electric Company (Callaway Plant, Unit

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3/ Not only must the contention be relevant to the Board's ultimate findings, but it must provide a foundation sufficient to warrant further exploration. Philadelphia Electric Company (Peach Bottom Atomic Station, Units 2 & 3), 8 A.E.C. 13, 21 (1974); Duquesne Light Company (Beaver Valley Power Station, Unit No. 1), ALAB-109, 6 A.E.C. 243, 246 (1973). See also Seabrook Station, supra, LBP-82-106, 16 N.R.C. 1649, 1655 (citing Consumers Power Company (Midland Plant, Units 1 and 2), CLI-74-5, 7 A.E.C. 19, 32 n.27 (1974), rev'd sub nom., Aeschliman v. NRC, 547 F.2d 622 (D.C. Cir. 1976), rev'd sub nom., Vermont Yankee Nuclear Corp. v. NRDC, 435 U.S. 519, 553-54 (1978)), for the proposition that a contention must be sufficient to require reasonable minds to inquire further.

> So that is why I drafted it that way. But, basically, what I am saying is now I think the kind of scoping of the contention depends a good bit on the schedule, it depends I think in part on the response of the Applicants and the Staff.
>
> Say, for example, the Staff says yes we think you ought to hear a specific part of this or one of them, than that would be a different situation.
>
> And, likewise, I can't predict what the Applicants are going to do, but I think that is open. I am just trying to address in a sort of general way.

Tr. 5739-5740. By his own admission, Mr. Eddleman's approach was to attempt to draft the broadest statements that he could possibly attempt to support with the allegations in the Van Vo Affidavit and then see "how much might be lurking out there." Such an approach to drafting contentions is clearly impermissible.

In contrast, the two contentions proposed by CCNC, while objectionable on other grounds, do put Applicants on notice specifically as to the allegations that CCNC would desire to litigate. Compare CCNC WB-1 with Eddleman 41C, 41D and 41E.

In dealing with the eight proposed contentions in this response, we have combined CCNC WB-1 and Eddleman 41C, 41D and 41E as constituting essentially the same allegation with regard to material traceability of pipe hangers. Thereafter, we will treat CCNC WB-2 and Eddleman 41F, 41G and 41H separately. However, as a threshold objection, Applicants submit that all six

interviews with senior CP&L management. Cobb Report at 3-8.

2. Mr. Van Vo's allegations of technical problems with the steam generator feedwater pump and lines and his allegations of material traceability problems with pipe hangers resulted from his relatively minor and isolated exposure to two complex situations about which he drew incorrect conclusions. Cobb Report at 4, 12-15.

3. In any event, Mr. Van Vo displayed his lack of familiarity with Harris Plant systems by characterizing the steam generator feedwater pump and piping as "Safety Category 4, Seismic Category 1," upon which "the integrity of rector temperature and pressure control is dependent" and therefore "nuclear safety significant." Van Vo Affidavit at ¶ 5. In fact, both the pump and piping are non-safety related. Cobb Report at 14, 16; see discussion of CCNC WB-2 infra.

4. Mr. Van Vo supports his allegations regarding material traceability with an instance where he found a Purchase Order ("PO") had been "voided." Van Vo Affidavit at ¶¶ 18-20. It simply turns out that the documentation was difficult to find and Mr. Van Vo assumed that it had been destroyed. Another engineer was assigned to review the problem identified by Mr. Van Vo and traced the material in question to another specific purchase order. This situation was later investigated by Dr. Elleman's Nuclear Safety Review Panel and found not to be a safety concern. Cobb Report at 17.

5. While Mr. Van Vo ends his monologue regarding material traceability for pipe hangers with a rhetorical question regarding the 300 pipe hangers that had successfully passed inspection prior to changes in procedure to provide for material verification (Van Vo Affidavit at ¶ 13), Revision 9 to WP-110 (referenced by Mr. Van Vo) provided that all of the hangers that had been previously installed and inspected under the

Runkle knew at least of the substance of Mr. Van Vo's allegations in September and waited until late October to present this new information to the Board. Tr. 5578; 5736. The intervenors have an obligation to do more than wait for the information to fall into their laps.

More importantly, information putting the intervenors on notice of a potential concern regarding material traceability of pipe hangers (CCNC WB-1; Eddleman 41C, 41D and 41E) was publicly available in the form of NRC Inspection and Enforcement ("I&E") inspection reports that were available over a year ago. Similarly the questions of nonconformance reporting (Eddleman 41F) and Construction Inspection independence (Eddleman 41H) were also raised in I&E inspection reports over a year ago.9/ Therefore, the issues raised by these six contentions are not "wholly dependent upon" the content of the Van Vo Affidavit and could have been advanced with even a greater degree of specificity over a year ago based on concerns raised in I&E inspection reports.10/ Thus for these six contentions, Mr.

9/ The specific inspection reports are identified in Section IV.D infra, in discussing the lack of basis and specificity for the individual contentions.

10/ As will be discussed infra, the concerns raised in these I&E inspection reports have since been resolved to the satisfaction of I&E. The information in the Van Vo Affidavit is stale and often inaccurate; on the other hand, information that relates to at least the substance of certain of his concerns was publicly available in late 1983.

on safety issues necessarily will extend the proceeding significantly. Mr. Eddleman's assertions that he is prepared to go forward on his new proposed contentions in a couple of weeks is totally unrealistic. At this late date, the introduction and litigation of new contentions threatens a substantial and unreasonable delay in the proceeding.

Accordingly, all five factors militate against admitting the intervenors' late-filed contentions.

D. THE LATE-FILED CONTENTIONS FAIL TO STATE LITIGABLE ISSUES WITH THE REQUISITE BASIS AND SPECIFICITY

Even if the Board were to reject Applicants' position regarding the unreliability of the Van Vo Affidavit and were to weigh the five lateness factors in the intervenors' favor, an analysis of each proposed late contention clearly demonstrates that the intervenors have failed to state a litigable issue with adequate basis and specificity. The intervenors have failed to advance a thesis that would link the isolated incidents described by Mr. Van Vo -- upon which the proposed contentions are solely based -- with the finding that the Harris Plant, as built, can and will be operated without endangering public health and safety. Indeed, Mr. Van Vo describes, in part, his supporting role in determining the quality of pipe hanger installations, noting that deficiencies were found but that procedures were modified to ensure quality construction --

including verification of materials used in the pipe hanger installations. Mr. Van Vo draws a number of unsupportable conclusions; many of his statements, however, confirm that the quality inspection program worked and that errors in construction are detected. The intervenors have utterly failed to address the program that presently exists at the Harris Plant for pipe hanger quality inspections, for nonconformance reporting, for Construction Inspection independence and for ensuring worker concerns will be dealt with.

CCNC WB-1; Eddleman 41C, 41D and 41E (Pipe Hanger Material Traceability)

CCNC WB-1 asserts that the QA program at the Harris Plant is deficient in that "nuclear safety material traceability documentation was falsified and other QA documents relating to safety were falsified or destroyed." See Exhibit C. Eddleman 41C repeats the same allegation. Eddleman 41D is a variation on this same theme, refering to "inadequate or nonexistent documentation of material used in safety related equipment." Eddleman 41E alleges "wholesale discarding of documents." See Exhibit B.

All but five paragraphs (¶¶ 5, 10, 11, 12 & 25) of the Van Vo Affidavit are cited by Mr. Eddleman in support of Eddleman 41C, 41D and 41E. CCNC simply cites to the Van Vo Affidavit for basis. Yet Mr. Eddleman has admitted he really does not know what the statements in the Van Vo Affidavit mean other

than what they appear to say. Tr. 5351-54.13/ It appears that the intervenors are principally relying on statements by Mr. Van Vo about "Speed Letters" that were allegedly discarded (which discussed the problem relating to the Steam Generator Feed Water Pump) and the saga of the voided Purchase Order as basis for these four contentions. See Van Vo Affidavit at ¶¶ 9, 18-20, 26.

With respect to use of "Speed Letters" to document QA problems, the only instance cited by Mr. Van Vo relates to the Steam Generator Feed Water Pump and piping which are non-nuclear safety and do not require QA documentation under 10 C.F.R. Part 50, Appendix B. Mr. Cobb could not substantiate any use of "Speed Letters" in lieu of the proper forms to report nonconformances. Cobb Report at 16-17. In any event, new procedures have been established to ensure consistency in non-conformance reporting. See discussion of Eddleman 41F infra.

The only specific instance of alleged "false documentation" of pipe hanger material was the voided Purchase Order -- P.O. #21022. Van Vo Affidavit at ¶ 20. DDR 1775 (Deficiency and Disposition Report) referenced by Mr. Van Vo does refer to

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13/ Mr. Eddleman even attempts to clarify one statement in the Van Vo Affidavit by reference to a telephone conversation with Van Vo's counsel -- thereby offering hearsay speculation as basis. See note at Eddleman 41E.

a voided P.O. #21022. (DDR 1775 is attached hereto as Exhibit J). As explained in the disposition of the DDR, the material which referenced P.O. #21022 was actually received on another Purchase Order (P.O. #19019). P.O. #21022 was administratively created to account for material stored in the fabrication shop. The material in question was released by the fabrication shop by reference to the "storage" P.O. #21022. The Purchase Order was subsequently voided in error. However, the material was still traceable to the original P.O. #19019. See DDR 1775 (Exhibit J) at Page 2 of 17. As noted in the Cobb Report, another engineer was able to determine this information after Mr. Van Vo had jumped to the conclusion that QA documents were being falsified or destroyed. Cobb Report at 18.

What the Van Vo Affidavit itself demonstrates is that quality problems with material verification of pipe hangers were being identified and properly reported on nonconformance reports. Van Vo Affidavit at ¶ 20. When concerns were identified, a stop work order was issued; work and QA procedures were "substantially changed, including particularly WP-110, and TP-34, which provided for hanger installation and inspection." Id. at ¶ 22. Mr. Van Vo states that CP&L noted "that hanger documentation should be checked to insure 'that the surplus hanger number/purchase order number is legitimate.'" Id. Mr. Van Vo describes a situation which CP&L was at the time taking strong efforts to resolve.

While Mr. Van Vo expresses a concern about the 300 out of 18,000 seismic pipe hangers that had already successfully passed inspection prior to the issuance of the revised procedures, all hangers were reinspected. Cobb Report at 15-16. Thus the Van Vo Affidavit itself does not support the broad sweeping allegations of QA/QC deficiencies found in these four contentions.

Furthermore, I&E Inspection Reports, as early as 1981 reported concerns regarding verification of material in pipe hangers.14/ Thus the general issue of pipe hanger material control could have been raised much earlier. More recent I&E Inspection Reports detail the implementation of the revised procedures, which the intervenors have failed to address.15/

Accordingly, these contentions fail to state litigable issues with the requisite basis and specificity and must be rejected.

14/ See I&E Inspection Report 50-400, 401, 402, 403/81-19 dated October 2, 1981 (in which CP&L was cited for material substitutions in pipe hangers without documentation); I&E Inspection Report 50-400, 401/83-22 dated August 3, 1983 (in which CP&L was cited for installation of incorrect material in a pipe hanger); I&E Inspection Report 50-400, 401/83-25 dated October 19, 1983 (in which CP&L was cited for failure to provide documentation for material substitution).

15/ See I&E Inspection Report 50-400/84-25 dated August 22, 1984, and I&E Inspection Report 50-400/84-35 dated October 22, 1984 (which reported on the inspection of CP&L's pipe hanger installation program, closed-out previously noted deficiencies, reviewed the efficacy of revised procedures and found no violations or deviations).

Report at 14, Harris Plant quality inspection picked up the misalignment as a nonconformance. In fact, a Deficiency Notice (Exhibit K hereto) was written on the problem with the pump piping on July 30, 1982. Mr. Van Vo claims to have discovered this problem in mid-August 1982. Thus there is clearly no basis for a contention that would assert that the alleged improper installation went undetected or that Plant personnel ignored ligitimate safety concerns raised by Mr. Van Vo.

NNS def Notice

CCNC WB-2 must be rejected for failing to state a litigable contention.

Eddleman 41F (QA Concerns Not Documented Properly)

This contention broadly alleges that "QA concerns [are] not documented properly at Harris . . . ." Mr. Eddleman cites to twelve paragraphs from the Van Vo Affidavit for basis. See Exhibit B.

This contention is so broadly worded, Applicants must resort to speculation to determine what the principal concern is alleged to be. For that reason alone, it should be dismissed. See Section IV.A supra.

The first paragraph from the Van Vo Affidavit referenced in Eddleman 41F is ¶ 26 (which is also underlined), where Mr. Van Vo alleges CP&L employs a "confusing and ineffective array of different documenting systems for controlling nonconformances such as DR's, DDR's, NCR's and such commonly used

uncontrolled paperwork as Memos and 'Speed Letters.'"17/

Applicants assume that this statement summarizes the principal concern being raised by Eddleman 41F.

In I&E Inspection Report 50-400/83-25 and 50-401/83-25 dated October 19, 1983, "Inspector Follow-up Item 83-25-14" reads:

> Another offshoot of the multiple quality control type organizations at Harris is the number of different forms and methods to document conditions adverse to quality. Although having many forms is in itself not a problem, the potential to lose tracking control of identification and correction increases greatly with increased forms. The use of the DR, DDR, NCR and punchlists for documenting the same type of problems can eventually lead to missing items and inconsistent handling of problems.

In I&E Inspection Report 50-400/84-22, dated August 14, 1984, Inspector Follow-up Item 83-25-14 is "closed":

> Multiple Formats for Identification of Similar Problems. The inspector confirmed that CP&L procedure CQA-3, R3, has been issued to require a single NCR form for the Harris project. All disciplines must therefore report nonconformances on the same form.

Thus, it is clear from I&E Inspection Report 50-400/83-25, that this issue could have been raised over a year ago. See Section IV.C supra. Further, the concern identified in Eddleman 41F

17/ Mr. Cobb was unable to substantiate the allegation that speed letters are utilized in place of prescribed quality assurance documentation at the Harris Plant. Cobb Report at 17.

Eddleman 41H (Construction Inspection Independence)

This contention asserts that CP&L fails "to give sufficient independence to Construction Inspection (CI) and other QA personnel to perform their duties without pressure or harassment . . . ." See Exhibit B. It is supported by a brief paragraph in the Van Vo Affidavit which utterly lacks any specificity. Van Vo Affidavit at ¶ 25.

As early as 1977, I&E identified the need to ensure inspection personnel would have sufficient independence from cost and scheduling responsibilities to avoid compromise of quality. I&E Inspection Report 50-400, 401, 402, 403/77-3, dated November 2, 1977. In 1979 the organization of Harris site inspection personnel was again reviewed in detail by I&E. The inspector noted that CP&L is responsible for managing construction activities performed by the constructor, Daniel Construction Company, and for verifying (auditing, inspecting, and testing) the quality of construction. At that time the CP&L Construction Inspection Unit reported directly to the Senior Resident Engineer and was an autonomous organization, separate from the CP&L construction engineering unit disciplines. The CP&L site QA Unit monitored both Daniel and the CI Unit and reported to the Engineering and Construction QA Manager -- independent of site construction management. The inspector found "sufficient independence from cost and scheduling has been established for the CP&L Construction Inspection organization to

avoid compromise of quality." I&E Inspection Report 50-400, 401/79-15 and 50-402, 403/79-14 dated September 5, 1979.

In 1983 this same organization created concerns for an NRC inspector, who noted that having the responsibility for both engineering and quality control activities reporting to the Senior Resident Engineer "can create a conflict of interest." I&E Inspection Report 50-400, 401/83-25 dated October 19, 1983 (Inspector Follow-up Item 83-25-12).

In I&E Inspection Report 50-400/84-22 dated August 14, 1984, this Inspector Follow-up Item was closed:

> Potential for Inadequate QC Inspection. The inspector verified that the Construction Inspection (CI) group has been positioned directly under the Project General Manager as of October 10, 1983, thereby eliminating the CI group from reporting to engineering. This change allows more freedom for independent QC inspections.

Two points must be made. First, the concern was raised in considerably greater detail and much earlier than the Van Vo Affidavit. See Section IV.B., supra. Second, the NRC's concern was addressed by an organizational change whereby the CI group reported directly to the Project General Manager rather than the Senior Resident Engineer.20/ This change was effective some months before Mr. Van Vo was terminated although it

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20/ Even more recently, Mr. Roland Parsons was named Project General Manager of Completion Assurance with the CI Group continuing to report directly to him. This change moves in the direction of providing even greater independence for the CI Group. See Tr. 5754.

1.0 Overview

This report documents results of discussions held with CP&L personnel related to statements contained in an Affidavit submitted by Chan Van Vo, a former CP&L employee in the construction organization at the Shearon Harris Nuclear Power Plant (SHNPP). The discussions pertained to the statements made in Paragraphs #12, 13, 14, 15, 23, and 24, which address CP&L management responsiveness to alleged safety concerns by Chan Van Vo. The purpose of the discussions with CP&L personnel was to ascertain facts related to CP&L involvement in the events cited in these paragraphs. Parties cited as contacts made by Chan Van Vo were interviewed, and others were interviewed who might have been in a position to confirm or contradict events recalled by those primary contacts. Personnel cited as contacts by Chan Van Vo and who were interviewed were Alex Fuller, Ed Willett, R M Parsons, M A McDuffie, and E E Utley. Others interviewed were John Ferguson, Dr. T S Elleman, and Darren Dasburg.

2.0 Background

Statements cited in Paragraphs #12, 13, 14, 15, 23, and 24 of the Affidavit were part of a sequence of events that occurred during Chan Van Vo's employment at SHNPP. Discussion with personnel involved, especially Alex Fuller and Ed Willett, provided a description of events related to Chan Van Vo's employment. This sequence of events is important to place statements made in the Affidavit in perspective.

documentation which describes the operation of the Quality Check Program and selected Quality Check interview forms and logs being maintained at the Shearon Harris Nuclear Power Plant Site. I brought to this task my experience at Duke in serving as chairman of a Duke task force assigned to investigate technical concerns of welding inspectors at the Catawba Nuclear Station Construction Site.

3. On October 15, 1984, Mr. H. R. Banks, Manager, CP&L Corporate QA Department requested my assistance in reviewing, investigating and addressing concerns raised in an Affidavit they had received from a former employee, Mr. Chan Van Vo. In performing this activity, I first reviewed the Affidavit and identified items in the Affidavit I considered to be significant issues. I recommended to Mr. Banks that I focus my attention on concerns raised in the Affidavit related to management responsiveness, particularly those raised in paragraphs #12, #13, #15, #23, and #24. I also recommended a course of action on other issues. For the issues I was to focus on, I recommended an approach utilizing personal interviews with management personnel identified by Mr. Chan Van Vo as well as any other CP&L personnel likely to have knowledge relating to the inquiry. Mr Banks concurred with this approach.

in accordance with CP&L's promotion policy whereby an entry level engineer is promoted at the end of two years if performance is satisfactory.

7. Counseling for performance problems in Chan Van Vo's work under Alex Fuller began formally in March 1983. This counseling was received in a resentful hostile manner by Chan Van Vo, who denied any unsatisfactory performance even though he was presented with documented examples.

8. Counseling continued until August 1983, at which time Chan Van Vo was placed on probation and provided again with a clear statement of areas of his performance that were unsatisfactory.

9. Counseling continued from August 1983 until February 1984 without noticeable improvement in performance in the areas cited when Chan Van Vo was placed on probation.

10. In late February 1984, a final counseling session was held and Chan Van Vo was informed that progress on items requiring improvement in performance had not been satisfactory. He was given an opportunity to resign in order to prevent having a job termination on his record. He refused to resign and was terminated on that same day. He was escorted to the gate on that day in accordance with standard procedure.

? Was not reduction in grade back to entry level Engr or R.A.2.

Technical items cited in the Affidavit which relate to the fitup of piping to a steam generator feedwater pump and related to the Phase II hanger program occurred during the time frame that Chan Van Vo worked under Alex Fuller's supervision in the hanger area and was receiving counseling for unsatisfactory performance. Both the steam generator feedwater pump piping and the Phase II hanger program situations were complex and covered a substantial span of time (months). Chan Van Vo became involved in these situations either due to actions of his own or by virtue of assignment and worked on isolated aspects of each. He collected an isolated sample of data, drew his own conclusions, and may have pursued some actions on his own as he was prone to do. Since both situations were already being attended to by assigned CP&L personnel who had knowledge of the entire situations, Chan Van Vo's information provided little help and nothing new and was likely not given special attention. As can be ascertained from information later in this report, individuals who he supposedly contacted and provided specific information regarding these two situations have no recollection of any such contacts. To aid in understanding of events that actually transpired related to steam generator feedwater pump piping and the Phase II hanger program, individuals interviewed provided an overview which is documented later in this report.

3.0 Paragraph #12 Items

In Paragraph #12 of the Affidavit, Chan Van Vo made reference to "increasing pressure from Fuller and Willett." He stated that he sought a transfer which was refused by Willett. Based on the time frame he is

referring to, this was the time frame during which counseling for performance problems unrelated to the steam generator feedwater pump piping was taking place. He requested a transfer and the transfer was approved by all levels of supervision. He was interviewed once or twice for assignment to other areas, but other organizations were not interested. Willett had no other areas under his supervision available in which to transfer Chan Van Vo and, in fact, needed his assistance in the hanger area due to the magnitude of the hanger work. Chan Van Vo did not contact R M Parsons directly with respect to his request for transfer or concerns with Fuller and Willett. Although he saw him frequently, Parsons recalls only two contacts with Chan Van Vo, one related to organizational information which he provided and one contact made in the field where statements were made about the installability of diesel generator piping and pipe supports.

4.0 Paragraph #13 Items

Chan Van Vo relates incidents associated with a discussion he held with M A McDuffie in 1982. According to McDuffie, he talked with Chan Van Vo sometime in 1982, the exact date of which was not recorded. He recalls the discussion because Chan Van Vo requested to come talk with him on a Saturday morning, and McDuffie was particularly impressed that an employee would take his own time in the attempt to provide information which might improve the work situation at SHNPP. In that discussion, which lasted for a considerable time, Chan Van Vo complained about his work situation and expressed concern about not being fully utilized and work in general being done in an inefficient and costly manner. There

specifically the job performance-related concerns supervision had with Chan Van Vo. In Paragraph #14, Chan Van Vo noted that he requested assistance from R M Parsons; however, to the contrary, Parsons has no recollection of any contact from Chan Van Vo related to concerns about this counseling. There were no instructions provided from Parsons to Fuller and Willett to alter their course of counseling with Chan Van Vo. Parsons confirmed that he stayed aware of the counseling that was being conducted as he did with counseling of any person in the construction organization.

6.0 Paragraph #15 Items

In Paragraph #15, Chan Van Vo refers to a second visit to M A McDuffie. McDuffie confirms that a second visit was held sometime in 1983, but events suggest this visit was held later than April. At this meeting, Chan Van Vo laid out a plan he had developed for the as-built program for piping and hangers at SHNPP. He provided a hand written document to McDuffie which consisted of a compilation of his ideas, along with information he had collected from sources at the site. Since this was the second proposition he had made to McDuffie regarding substantial reorganization of the operation at SHNPP, McDuffie was less interested and the conversation took less time. At no time in this conversation did Chan Van Vo raise concerns regarding the technical competence of work at the site or safety concerns in general. Mr. McDuffie has no recollection of making the quoted statement in the Affidavit which is attributed to him regarding Chan Van Vo being a soldier and Ed Willett being his lieutenant and that he should obey orders. As followup, McDuffie sent

As followup to this meeting, E E Utley sent the package of information left with him by Chan Van Vo to Dr. T S Elleman, Vice President of Corporate Nuclear Safety, for his evaluation for potential safety concerns. At about this same time, Dr. Elleman had been made Chairman of a review panel to investigate potential concerns by personnel at SHNPP. Mr. Utley received no input from Chan Van Vo indicating that there were technical concerns contained in this package. Discussion with Dr. Elleman indicates that he reviewed the package and was unable to determine what Chan Van Vo was attempting to communicate. The package contained a collection of site procedures, non-conformance reports, and as he recalls, possibly some speed letters. There was no documentation as to what the compilation of information was intending to communicate. Dr. Elleman contacted Chan Van Vo by telephone and had a long and somewhat disjointed conversation. Chan Van Vo's main concerns expressed to Dr. Elleman related to his own job stability and the fairness of his supervision and the fact that people were not listening to his ideas about how the job should be conducted. Dr. Elleman tried to obtain specific concerns from him. After a lengthy conversation, Dr. Elleman obtained information from Chan Van Vo regarding concerns he had on the following items:

1) Q-List nut and bolt control (PO-40924)
2) Purchase orders for steel plates (PO-21022, PO-21021)
3) Vibration of installed air compressor

The first two of these items were converted to Review Panel Concern C-23, which was addressed by the Review Panel and resolved. The third item was

converted to Review Panel Concern C-24, which the Review Panel addressed and resolved. In none of these cases did information provided by Chan Van Vo constitute new information that had not been obtained previously by means of programs in place at SHNPP and solution paths had either been already taken or were in process.

After the Review Panel completed its work on these items, Dr. Elleman made repeated attempts to get back in contact with Chan Van Vo to relate the resolution of these items to him. After repeated attempts, he made contact and explained the resolutions. Chan Van Vo indicated that he was satisfied and had no further concerns with these items. At that time, Dr. Elleman inquired as to the basis of information Chan Van Vo had provided to E E Utley. Chan Van Vo related to Dr. Elleman that this information was brought to Mr. Utley to prove to him that Chan Van Vo was a capable performer and was doing his job satisfactorily. Following the completion of the Review Panel work, Dr. Elleman did not retain the package of information passed to nim by Mr. Utley.

9.0 Events Related To Steam Generator Feedwater Pump Piping Installation

Based on discussions primarily with Willett and Dasburg, the situation that existed with regard to installation of the steam generator feedwater pump piping was as follows. Normal practice generally requires installation of piping such that the final closure weld does not occur at a piece of equipment such as a pump. Normally, piping is installed beginning with the connection at the pump and installed moving away from the pump, and a closure weld with other piping is made somewhere at a

there was indication that adverse movement had in fact occurred and, because welding was virtually completed at that time, the misalignment could not be corrected by further iterative welding on one side or another. At this point, CI (Construction Inspection) Inspector Ed Williams wrote a non-safety nonconformance because the alignment was unsatisfactory. There were several options considered to correct or compensate for the unacceptable alignment. Two options considered were breaking the joint and rewelding or adjusting the motor installation position to compensate for the misalignment. Considerable amount of time passed while these options were being evaluated and work priorities in the field shifted such that the situation was not at that time resolved and had not as of the interview date been resolved. In the time that has passed since the welding to the pump, the pump vendor has visited the site and has observed that the barrel is out of round, which may now necessitate breaking the weld and rewelding. The nonconformance that was written at the time the misalignment was observed is apparently still open and will have to be resolved before the item can be considered closed. Based on the above sequence of events, it appears that CP&L was both knowledgeable and in control of events that occurred to the degree that could be reasonably expected. Although the pump welding did produce an unacceptable alignment, the program for inspection picked up the misalignment as a nonconformance. This particular event does not relate to safety since both the pump and piping in question are non-safety related.

10.0 Events Related to Phase II Hanger Program

Early in the program for installation of the pipe hangers, CP&L utilized a two phase hanger program. Phase I consisted of partial erection of hangers whereby some portion of the hangers was not installed or was left in an adjustable state to facilitate piping erection. The Phase II program was intended to complete the installation of partially installed hangers and to complete all necessary inspections. When the Phase II program was started, CP&L performed a number of routine checks to ensure that final inspections under Phase II were accomplishing the intended purpose. Most of these checks proved the opposite, and it was clear that they were not achieving the level of quality desired and required. The QA surveillance in which Chan Van Vo was involved was one such exercise initiated by CP&L that demonstrated to CP&L management that they were not achieving the desired level of quality in Phase II. This particular surveillance was one of the final events before CP&L stopped the inspection program and redesigned the entire hanger erection and inspection program. The program was redesigned to utilize a one step process whereby total hanger installation and inspection was performed at one time, as opposed to the original Phase I and Phase II approach. Results of the particular QA surveillance activity to which Chan Van Vo was assigned produced several nonconformance reports. These and others were written based on findings of surveillance activities. The stop work order referred to by Chan Van Vo was a stop work on inspection until a formal and detailed checklist could be developed to ensure that hanger inspections would achieve the level of quality required by CP&L's QA program. All of the hangers that had been installed and inspected under

the old Phase II program were reinspected under the new program to ensure that the desired level of quality was achieved. Since restart of the program, which occurred approximately December 1, 1983, the hanger program at SHNPP has proceeded satisfactorily according to Parsons.

11.0 Isolated Incorrect Statements in the Affidavit

Based on interviews with CP&L personnel and review of the Affidavit in general, there appear to be several incorrect statements in the Affidavit. Information related to these is provided below.

Affidavit Paragraph #	Information
6	Contrary to Chan Van Vo's claim that he contacted D M Dasburg regarding the steam generator feedwater pump piping, Dasburg has no recollection of ever being contacted by Chan Van Vo regarding concerns he had with this piping installation.
9	Alex Fuller has no recollection of ever being contacted by Chan Van Vo regarding concerns he had with the steam generator feedwater pump piping installation. Fuller has no recollection of receiving a speed letter or throwing a speed letter in the trash can. Fuller acknowledges that he may have been contacted on the item and, if so, would have in turn contacted the

F.E Lead Pipe Engr - Jim Smith

HPES ? R Stewart

responsible piping engineer, who would likely have confirmed that they were aware of the situation regarding the installation of this piping and had it under control. Having received this feedback, he would likely have discarded any information he had received such as a speed letter. Again, he has no recollection of being contacted at all by Chan Van Vo, either verbally or by speed letter regarding steam generator feedwater pump piping installation.

9 Chan Van Vo refers to his concern with steam generator feedwater pump piping as a safety deficiency. CP&L engineering should be able to confirm that neither the piping nor the pump are safety related items at SHNPP.

9 Chan Van Vo alleges that speed letters are utilized in place of prescribed quality assurance documentation. There is no information to support this allegation. R M Parsons and others interviewed confirmed that speed letters are used to transmit information from one party to another, and occasionally the information contained on the speed letter is converted to a nonconformance if deemed appropriate. The speed letter itself is not considered sufficient documentation for nonconformances and is not used for that.

1.0 SCOPE

1.1 This procedure describes the steps to be followed for the installation of seismic pipe supports and spring hangers on seismically analyzed pipe.

1.2 For construction purposes, a pipe hanger can be identified to be in accordance with this procedure if it supports a Safety Class I, II, or III pipe or MS or FW pipe by means of a spring cannister except hangers east of the seismic break as defined by FCR-H-1145, or if the hanger sketch is stamped seismic, or if the format of the load sheet is in accordance with Exhibit 6 or if it is a Bergen-Paterson fire protection pipe hanger.

2.0 REFERENCES

2.1 WP-06, General Welding Procedure for Structural Steel and Hangers

2.2 TP-34, Inspection of the Installation of Safety Related (Seismic Class I) Hangers

2.3 WP-112, Control of Materials and Equipment That May Be Harmful to Stainless Steel

2.4 WP-48, Temporary Construction Loads Supported From Permanent Plant Equipment

2.5 WP-102, Installation of Piping

2.6 WP-06, General Welding Procedure for Carbon Steel Weldments

2.7 WP-07, General Welding Procedure for Stainless Steel Weldments

2.8 CAR 2165-G-801 Flow Diagram - Reactor Coolant System

2.9 TP-04 Calibration of Controlled Tools

2.10 WP-108, Protective Coatings - Service Level I Embedded Steel Plate, Service Level II Steel Surfaces and Balance-of-Plant Steel Surfaces

2.11 SD/C-A-1018, Identification of Bergen Paterson Hanger Parts

2.12 SD/C-A-1019, Neutral Axis of Odd-Shaped Structural Members

2.13 WP-25, Field Engineering

2.14 MP-05, Permanent Marking of Site Material and Components

2.15 WP-139, Pipe Hanger Work Package Preparation

2.16 WP-140, QA Records Review (Seismic Pipe Hangers and Supports for Seismically Analyzed Pipe)

2.17 CAR 2165-G-107501, Field Installation Tolerances for Pipe Hangers

CAROLINA POWER & LIGHT COMPANY
CORPORATE QUALITY ASSURANCE DEPARTMENT

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RPT No. 1-4065 1-4080

DEFICIENCY AND DISPOSITION REPORT

(Procedure CQC-?)

Item/Activity Name or Description	Shop Order	Code Class	Quantity	Unit	Quality Assurance No (PO & Item No.)
PIPE HANGER INSTALLATION	NA	SEISMIC I	SEE DETAIL	1+2	QA- NA

Serial, Heat or Other Identification No.	Supplier or Manufacturer	Type of Procurement
SEE DETAIL	N/A	☐ CP&L PO ☐ A-E PO N/A ☐ Transfer ☐ NSSS PO

Violation (Specification, Drawing, Procedure or Other)	NCR No.	Reporting Inspector
WP-110	NA	[signature] 7-25-83

Deficiency Details: A QA SURVEILLANCE OF TWELVE (12) PIPE HANGERS THAT HAVE BEEN INSPECTED AND ACCEPTED BY CI FOR PHASE II REVEALED THE FOLLOWING MATERIAL SUBSTITUTION/CONTROL PROBLEMS ON FIVE (5) OF THE HANGERS. ONE ADDITIONAL PROBLEM WAS NOTED DURING THE SURVEILLANCE PERTAINING TO MATERIAL CONTROL. THE PROBLEMS ARE LISTED BELOW.

1. NON SEISMIC MATERIAL WAS ISSUED FOR A SEISMIC PIPE HANGER (1-SW-H-1570) ON CONSTRUCTION MATERIAL REQUISION (CMR) # 087571 ITEM # 3 AND # 9

2. A SPEED LETTER DATED 4-25-80 ISSUED ITEM # 6 (PL 1"x7"x9½") FOR PIPE HANGER 1-CC-H-105 FROM PURCHASE ORDER (P.O.) # 21022, ALTHOUGH P.O. # 21022 WAS VOIDED AND NO DOCUMENTATION ~~EXISTS~~ THAT MATERIAL WAS RECEIVED. EXISTS

Why speed LTR Why not Construction Material Requisition

DDR Evaluation

- ✓ Construction Phase
- Engineering Phase
- QA Program Violation
- Specification Deviation
- ✓ Procedural Deviation
- Unacceptable Workmanship
- Damage/Defect
- Other
- ✓ Not Reportable *

	Site QA/QC	QA Engr.	HPES	NPCD
Eval. By -	CLF			EEW
Date	8-9-83			

* DETERMINED NOT TO BE REPORTABLE UNDER 10CFR21 AND 10CFR50-55(e)

[signature] 7/26/83
QA/QC Specialist/Engineer Date

Final Disposition: Verified [initials] Hold Tags Removed N/A NO HOLD TAGS APPLIED

Remarks:

AO 10-9-84

Christopher M Cane 10-9-84
QA/QC Inspector Date

Accepted by:
[signature] 10/12/84 [signature] 10-9-84
QA/QC Specialist/Engineer Date

Distribution:
Orig: Director - QA/QC - SHNPP
CC: Proj. Gen. Mgr./Sr. Res. Engr.
Gen. Mgr. (SU/Operations)
Reg. Comp. Unit (SU/Operations)
Initiating QA/QC Specialist
Accounting
Mgr. - E&C QA/QC
☐ Mgr. - HPES
☒ Start-Up ☒ Ed WILLETT (CAR)
☐ NSSS Site Rep.
☐ ANI

ANI Concurrence (ASME Code Section III Items Only)

N/A
Authorized Nuclear Inspector Date

Report Closed:

[signature] for CLF 10-15-84
Director - QA/QC - SHNPP Date

CA-1
8/20/82
Rev. 6

CAROLINA POWER & LIGHT COMPANY
CORPORATE QUALITY ASSURANCE DEPARTMENT

CORRECTIVE ACTION REPORT
(Procedure CQC-2)

DDR No. 1775
Issue Date 7/20/84
Page 1 of ~~16~~ 17
Revised

Proposed Disposition:

☐ Repair ☐ Rework ☐ Reject (Return to Vendor) ☐ Reject (Scrap) ☐ Permanent Waiver (Accept-as-is)

☐ Upgrade Code Certification ☐ Downgrade Item ☒ Other (describe below)

Details:

UPGRADE MATERIAL DEFICIENCIES LISTED ON THE REFERENCED DDR TO ACCEPTABLE STATUS.

Recommended By: PWH 9/26/84
Discipline Engineer / Responsible Supervisor — Date

Approved By: for RMP 9/26/84
Proj. Gen'l Mgr./Sr. Res. Engineer/ Mgr. HPES/ General Mgr. — Date

RCM 10-5-

Corrective Action and Final Disposition:

Documented Cause & Preventive Measures required: ☒ Yes ☐ No

Signature — Date

Details: SEE ATTACHED PAGES 2, 3, 4 of ~~16~~ 17 FOR DETAILS.

MAC 9-26-84

Cause:

PWH 9/26/84 ~~INADEQUATE~~ MATERIAL PROGRAM — WITHOUT SUFFICIENT CHECKS & BALANCES.

Preventive Measures:

A MATERIAL CONTROL PROGRAM HAS BEEN ESTABLISHED ACCORDING TO WORK PROCEDURE #110, REV 11. TRAINING CLASSES HAVE BEEN HELD TO INSTRUCT HANGER PERSONNEL CONCERNING IMPLIMENTATION OF THE PROGRAM.

Approved By:

PWH 10/5/84 MHF 9/26/84

Discipline Engineer / Responsible Supervisor — Date

for RMP 9/26/84

Proj. Gen'l Mgr./Sr. Res. Engineer/ Mgr. HPES/ General Mgr. — Date

RCM 10-5-

A134