Docket File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 2, 1987

Docket No. 50-400
(10 CFR 2.206)

Wells Eddleman
812 Yancey Street
Durham, North Carolina 27701

Robert Epting
Epting & Hackney
Coalition for Alternatives to Shearon Harris
214 W. Rosemary Street
Chapel Hill, North Carolina 27514

Steven P. Katz
Joseph T. Hughes, Jr.
Coalition for Alternatives to Shearon Harris
604 W. Chapel Hill Street
Durham, North Carolina 27701

Dear Messrs. Eddleman, Epting and Katz:

By a petition (Petition) filed pursuant to 10 CFR 2.206 and dated October 17, 1986, Mr. Wells Eddleman and the Coalition for Alternatives to Shearon Harris (CASH) requested that the Director of Nuclear Reactor Regulation issue an order to Carolina Power & Light Company (CP&L) to show cause why the construction permit for its Shearon Harris facility should not be modified, suspended or revoked and the issuance of its operating license denied or delayed pending resolution of certain issues. As a basis for the requested action, the Petition alleged deficiencies in CP&L's quality assurance program for electrical safety-related components, alleged lack of requisite character and technical capability to operate the Shearon Harris facility as evidenced by recent employee discrimination cases before the Department of Labor, and alleged improper documentation and performance of certain construction procedures.

On November 12, 1986, I acknowledged receipt of the Petition and informed you that the NRC had issued a low power operating license for Shearon Harris on October 24, 1986. Prior to issuing that license, the NRC considered the issues raised in the Petition and determined that the issues did not present significant safety concerns which needed to be resolved prior to issuance of an operating license. Subsequently, on January 12, 1987, CP&L was authorized to operate the Shearon Harris facility at full power.

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I also informed you in my November 12, 1986, letter that a final response to the Petition would be prepared in a reasonable time. For the reasons stated in the enclosed "Director's Decision Under 10 CFR 2.206, (DD-87-06), your Petition is denied.

Copies of this Decision will be filed in the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C. 20555, and in the local public document room for Shearon Harris at the Richard B. Harrison Library at 1313 New Bern Avenue, Raleigh, North Carolina 27610.

I have also enclosed a copy of a notice that will be filed for publication with the Office of the Federal Register.

Sincerely,

[Original Signed by H. R. Denton]

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:
1. Director's Decision DD-87-06
2. Federal Register Notice

cc: See next page
Licensee

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Docket File 50-400 w/incoming
NRC PDR
Local PDR
EDO #2233
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C. Rossi
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D. Miller
B. Buckley
J. Guillen
OPA
D. Mossburg (EDO #2233)
PAD#2 Rdg
L. Harmon
V. Stello
B. Clements, SECY, H-1149
OGC
J. Lieberman, OGC
ASLAB
ASLBP
ACRS (10)
J. Resner (2) (W-501)

*SEE PREVIOUS CONCURRENCE

LA:PAD#2*	PE:PAD#2*	PM:PAD#2*	PD:PAD#2*	OGC*	RII
DMiller	JGuillen	BBuckley:hc	LRubenstein		Received phone concurrence on 3/31/87 BGB
3/12/87	3/12/87	3/12/87	3/24/87	3/23/87	3/31/87

AD:DPLA*	DD:NRR	D:NRR
TNovak	JSniezek	HDenton
3/25/87	3/ /87	4/2/87

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Office of Nuclear Reactor Regulation

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DMiller	JGuillen	BBuckley:hc	LRubenstein	RWeisman	
3/12/87	3/12/87	3/12/87	3/24/87	3/23/87	3/ /87

AD:DPLA	DD:NRR	D:NRR
TNovak	RVollmer	HDenton
3/25/87	3/ /87	3/ /87

Mr. E. E. Utley
Carolina Power & Light Company

Shearon Harris

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Raleigh, North Carolina 27603-2008

DD-87-06

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION
Harold R. Denton, Director

In the Matter of	)	
	)	Docket No. 50-400
CAROLINA POWER & LIGHT COMPANY	)	
and	)	(10 CFR 2.206)
NORTH CAROLINA EASTERN	)	
MUNICIPAL POWER AGENCY	)	
	)	
(Shearon Harris Nuclear Power	)	
Plant)	)	

DIRECTOR'S DECISION UNDER 10 CFR 2.206

INTRODUCTION

By a petition dated October 17, 1986 (Petition), Messrs. Robert Epting, Steven P. Katz, and Joseph T. Hughes, Jr., on behalf of the Coalition for Alternatives to Shearon Harris (CASH), and Mr. Wells Eddleman (Petitioners), requested, pursuant to 10 CFR 2.206, that the Director of the Office of Nuclear Reactor Regulation institute a proceeding under 10 CFR 2.202 to modify, suspend or revoke the construction permit for the Shearon Harris facility and deny or delay issuance of an operating license for the facility in light of issues raised in the Petition. As a basis for the requested action, the Petitioners alleged (1) deficiencies in Carolina Power & Light's (CP&L or licensee) quality assurance program for electrical safety-related components, (2) lack of requisite character and technical capability to operate the Shearon Harris facility as evidenced by two recent employee discrimination cases before the Department of Labor, and (3) improper documentation and performance of certain construction procedures.

On November 12, 1986, I acknowledged receipt of the Petition and informed the Petitioners that the NRC had issued a low power operating license for the Shearon Harris facility on October 24, 1986. Prior to issuing that license, the issues raised in the Petition were considered in accordance with the Commission's Policy for Handling of Late Allegations (50 Fed. Reg. 48,506), and it was determined that the issues did not present significant safety concerns which needed to be resolved prior to the issuance of that license. Subsequently, on January 12, 1987, CP&L was authorized to operate the Shearon Harris facility at full power. The Commission, in approving the full power authorization, also was briefed on the specific issues raised in the Petition and concluded that they did not appear to have substantial safety significance or otherwise provide a basis for delaying full power operation. 1/

On December 15, 1986, CP&L filed a response to the Petition, which I have also considered. As explained in the discussion which follows, I have determined that the Petition should be denied.

DISCUSSION

I. Quality Assurance Program for Electrical Safety-Related Components

The Petition alleges a systematic breakdown in CP&L's Quality Assurance Program in the area of electrical safety-related components, as evidenced by a pattern of violations and failed implementation of the program. The electrical

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1/ Carolina Power & Light Company and North Carolina Eastern Municipal Power Agency (Shearon Harris Nuclear Power Plant), CLI-87-1, ___ NRC ___ (January 9, 1987). Slip opinion, pp. 6-7.

safety-related concerns encompassed by the Petition are the installation and fabrication of safety-related electrical cable tray supports, the fire protection separation requirements for individual electrical cables and the installation of electrical panels which, if they were to fall, could damage safety-related electrical cables. In addition, the Petition addresses several quality programs which are used for the processing and resolution of licensee-identified nonconformances and review of non-destructive testing data for adequacy, and which are also used by the Harris plant architect-engineer to preclude interaction between safety and non-safety-related equipment.

The NRC has reviewed the documentation provided by the Petitioners to support this allegation and has concluded that the information provided is not new and that all issues raised were previously reviewed and resolved by the NRC staff. All issues raised under this allegation are either NRC or licensee-identified and have been documented and resolved through NRC Inspection Reports. In each instance, appropriate corrective actions have been required of CP&L, evaluated by the NRC staff and found acceptable.

In addition, the NRC has a programmatic system for evaluating performance of a facility, whereby the results of inspections performed over a period of time are assessed to determine if quality assurance breakdowns have occurred. This program is the Systematic Assessment of Licensee Performance (SALP) and has been conducted six times for the Shearon Harris facility between 1979 and 1986. The NRC staff has reexamined the reports of these six SALP assessments, specifically focusing on the electrical and quality assurance functional area. All inspection activity on electrical cables and components is documented in the electrical equipment and cable SALP

functional area. The SALPs identify any programmatic breakdown in quality assurance in SALP sections entitled "Quality Programs and Administrative Controls Affecting Quality".

Focusing on the area of electrical equipment and cables, SALP report 400/83-10, covering January 1, 1982 to January 31, 1983 (SALP #3), identifed three violations in the area of cable tray supports and vendor welds in electrical panels. See Inspection Reports 400/81-25 and 400/82-05.

In addition, as identified in the next SALP report 400/84-18, covering February 1, 1983 to April 30, 1984 (SALP #4), an additional cable tray support violation was identified in Inspection Report 400/83-16. During this SALP period, two violations were identified against the installation of cables. See Inspection Reports 400/83-26 and 400/83-37. In the next assessment period, with the cable tray support and seismic installation problem identified and corrected, SALP report 400/85-41, covering May 1, 1984 to October 31, 1985 (SALP #5), identified three violations, specifically addressing cable and cable tray separation. See Inspection Reports 400/85-08, 400/84-24 and 400/85-04. Also during this period, an NRC headquarters construction appraisal team inspection identified cable separation problems in Inspection Report 400/84-41. In the latest SALP report covering November 1, 1985 to July 31, 1986, the NRC identified that the cable separation problem identified in SALP #5 had not been fully corrected, which resulted in escalated enforcement action being taken against the licensee for failure to take adequate corrective action. Inspection Report 400/86-66, dated November 21, 1986.

Based on Inspection Reports 400/86-62 and 400/86-66, for inspections conducted in July 1986 and August 1986 respectively, two management meetings conducted on August 29 and September 25, 1986, and an enforcement conference on October 9, 1986, the NRC determined that although the licensee's quality assurance program partially broke down in identifying and correcting deficiencies in cable separation, the licensee had resolved this problem sufficiently to warrant allowing completion of the cable separation rework after issuance of the low power license. The licensee's corrective actions were reviewed, inspected, and accepted by the NRC in Inspection Report 400/86-88. Accordingly, this issue was closed.

To assess whether problems in the electrical area had broader implications, the licensee conducted an analysis of root causes identified with the electrical separation problems and concluded that no similar problems existed in other construction areas. To verify this conclusion, Region II initiated a team inspection in other construction areas to determine if similar deficiencies existed. Specific areas inspected were in structural steel and electrical supports (See Inspection Report 50-400/86-69 dated November 14, 1986). The staff concluded that the electrical separation issue was an isolated case and did not extend to other portions of the licensee's Quality Assurance Program.

In conclusion, the NRC has reviewed the documentation provided by the Petitioners and concludes that the information is not new and that all issues have been previously reviewed and resolved by the NRC staff. The NRC staff review confirms that the Quality Assurance Program at Shearon Harris has been satisfactorily implemented over the construction life of the facility, and permitted the NRC to find that construction of the facility had been

completed in conformity with the construction permit and the rules and regulations of the Commission (see 10 CFR 50.57(a)(1)), and that the operating license should be issued.

II. Harassment of Employees

In its Petition, the Petitioners describe two cases brought by employees of CP&L or employees of CP&L contractors before the Department of Labor (DOL) alleging discriminatory action taken against the employees for raising safety issues at the Shearon Harris facility. Petitioners assert that these two incidents of alleged discriminatory behavior indicate that the licensee lacks the requisite character and competence to operate a nuclear plant and also calls into question the adequacy of the work performed by the individuals or others similarly situated.

One of the cases cited involved John J. McWeeney, who filed a complaint with DOL pursuant to Section 210 of the Energy Reorganization Act, 42 U.S.C. § 5851, claiming he was terminated for raising concerns about the acceptability of several safety-related issues concerning engineering design calculations. Following DOL's initial investigation, the Area Director found that Mr. McWeeney had been discriminated against for engaging in protected activity. The licensee requested a hearing, but on December 3, 1986, Mr. McWeeney and CP&L entered into a settlement agreement resolving all employment issues between them.

The technical issues raised by Mr. McWeeney related to adequacy of the electrical supports in the reactor building. These issues were analyzed by CP&L and, in some cases, modifications of specific supports were made in the facility from August to November 1986. (See affidavit of Michael D. Holveck,

submitted as part of the licensee's December 15, 1986 Response to the Petition). The NRC staff has reviewed the actions taken by the licensee and is satisfied that CP&L's actions adequately resolved the technical concerns.

The second instance of discriminatory conduct raised by the Petitioners concerned Mr. Marvin Lloyd Van Beck, an employee of the Daniel Construction Company, a contractor of the licensee at the Shearon Harris facility. He was terminated from his employment at the site in January 1986 when he refused to perform inspection work inside containment during hot functional testing because of fears for his personal safety. An Administrative Law Judge (ALJ) for DOL found that Mr. Van Beck was engaging in protected activity when he refused to work. The ALJ concluded that his refusal to work was reasonably based upon a belief that unsafe conditions existed in the containment and that the inspector's anxiety about those unsafe conditions could impair his ability to perform adequate inspections of electrical raceways. The licensee has informed the NRC that the Daniel Construction Company intends to appeal the ALJ decision. (See Licensee Response at 16).

In its Response to the Petition of December 15, 1986, CP&L provided the affidavit of Mr. R. A. Somers, who was a Construction Inspection Superintendent during the time Mr. Van Beck was employed as an electrical raceway inspector. In his affidavit, Mr. Somers described the program of supervisor audits that, on a sampling basis, reverified inspections done by Mr. Van Beck and others. A review of records of these audits for the time of inspections in containment during hot functional testing found no indications of inadequate inspection. Statements provided by each of the lead inspectors for electrical raceways indicate that none of them received any

indication from inspectors reporting to them that inadequate inspections were being performed. Consequently, technical concerns which were raised by the workers have been examined and have been satisfactorily resolved.

The NRC has also concluded that these two instances of alleged discrimination do not represent any pattern or practice of discriminatory conduct against workers for raising safety concerns. The NRC Office of Investigations (OI) has received five additional allegations of alleged intimidation or harassment of workers at the Shearon Harris facility during the past four years. In three of these cases, investigations by OI did not substantiate harassment or intimidation of workers. (OI Report Nos. 2-83-006, 2-84-021, 2-85-011). A fourth individual later reported his concern resolved. In the fifth case, a group of 11 individuals filed DOL complaints. One of these individual cases was investigated by DOL and no discrimination was found. Six other individuals settled their cases with the licensee and the cases of the four remaining individuals were dismissed by DOL for untimely filing. Another case was examined by CP&L's Q-1 program, which concluded no harassment occurred.

Additionally, the Atomic Safety and Licensing Board for the operating licensing proceeding for the Shearon Harris facility, in its consideration of a contention alleging harassment of employees at the facility to discourage them from bringing forward safety concerns, concluded that there might be

employees at the site with information about acts of harassment of workers. [2/] The Board directed the licensee to post a notice at the Shearon Harris site which invited employees who wished to provide information about any harassment incident related to nuclear safety to send it to the Board. [3/] The Board received two letters in response to its posted notice which were referred to OI. These two instances were investigated and no harassment was substantiated by OI. See OI Report No. 2-85-011.

Overall, the NRC staff concludes that, while there may have been isolated instances of intimidation and harassment at Shearon Harris, no problem or practice of discriminatory conduct existed during the construction of the facility. It was on this basis that the NRC staff supported issuance of an operating license to CP&L. In all instances where intimidation and harassment were alleged, the technical concerns raised by the individuals were examined and resolved by the NRC staff. A number of cases were investigated and intimidation or harassment could not be established. Isolated instances of intimidation and harassment do, however, appear to exist, and the NRC is considering what additional actions should be taken in these cases to preclude recurrence. No technical issues remain outstanding, and the

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2/ The contention was dismissed by the Board without reaching the merits. See Transcript of Telephone Conference Call, June 6, 1986, p.7756, lines 7-9.

3/ Carolina Power & Light Co. et. al. (Shearon Harris Nuclear Power Plant), ASLB Memorandum and Order, January 14, 1985.

limited nature of the problem can be resolved through actions less severe than your requested delay in issuance or a denial of an operating license.

III. Confidential Source's Allegations

In support of their request for relief, Petitioners raise a number of safety concerns based on disclosures made to them by a confidential source. Petitioners allege that:

1) the wrong individuals approved design of shear plates for traveling screens in the emergency water intake structure (Petition at 12);
2) the licensee compromised the integrity of Phillips expansion anchors in the reactor auxiliary building by installing them incorrectly (Petition at 12, 13);
3) the licensee used unapproved material in some safety-related components or structures (Petition at 13);
4) craft persons falsified design documents by which construction inspectors approved some construction work (Petition at 13, 14);
5) the licensee failed to check anchor bolt hole undercut tolerances in the emergency service water intake structure (Petition at 14);
6) craft persons installed material other than that approved for use in the emergency service water intake structure (Petition at 14);
7) craft persons changed the elevation and location of shear plates in the emergency service water intake structure without design engineering approval (Petition at 14); and,
8) the licensee used 1411 concressive epoxy (non-load bearing) grout to bear loads under base plates in the diesel generator building.

Based on these allegations, the Petitioners conclude that the licensee's quality assurance program failed to guarantee that the licensee built the plant's critical safety-related components according to design specifications and NRC regulations. 4/ The Petitioners request the NRC to revoke, suspend and modify the licensee's construction permit to alleviate this concern. Because, as described below, I find that Petitioners' allegations either have no factual basis or have no safety significance, I deny the requested relief.

In order to confirm the above allegations, most of which relate to concrete expansion anchors and baseplates, the licensee tested concrete expansion anchors and inspected concrete expansion baseplates. NRC resident inspectors observed these tests and inspections. Based on these tests and inspections, discussions with licensee engineers, review of licensee quality control inspection records and procedures, review of the licensee's response to the Petition and review of previous NRC inspections, the NRC staff finds no safety significance in the allegations for the following reasons.

A. Emergency Service Water Shear Plate Design Approval

Petitioners allege improper design approval for installation of steel plates that provide lateral support to traveling screens in the emergency service

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4/ On December 18, 1986, the NRC interviewed the confidential source, who clarified the Petition's concerns. While the NRC considered and inquired into all the confidential source's allegations, this decision addresses those concerns that the Petition raises. See Inspection Report 50-400/87-01.

water cooling water intake structure. Concrete expansion anchors hold the plates to the intake structure. Petitioners allege that the wrong persons signed the design approval block on certain concrete expansion anchor placement reports (APR).

The licensee's work procedure WP-33, "Installation of Wedge Expansion Bolt Anchors," specifies that the area or discipline engineer must sign the design approval block on the APR. Inspection Report 50-400/87-01 at 5. For the shear plate APR's in question, the discipline engineer's supervisors, the licensee's discipline managers, signed the APRs. Signature of the design approval block does not indicate approval of the design, however, but verifies that the APR refers to the appropriate design documents, i.e., drawings, procedures, and specifications. Id. Craft personnel used the APRs to install expansion anchors. The individuals who signed these APRs had the authority to do so, and the area or discipline engineer's failure to sign them did not violate the Licensee's procedure nor did it carry any adverse safety consequences. Id. Furthermore, NRC Region II inspectors randomly reviewed forty-two (42) other APRs, as well as those the confidential source referred to, and verified that those APRs referred to the correct design documents. Id. at 4. The NRC identified no discrepancies or violations of regulatory requirements.

B. Anchor Bolt Installation

The Petition alleges that the licensee installed anchor bolts incorrectly in the reactor auxiliary building (the Petition refers to this alleged incorrect installation as "sandbagging"). Specifically, the Petition alleges that the licensee erroneously drilled some anchor holes too large and poured fine

sandblasting sand in the anchor hole alongside the anchor body, so that the anchor would bind against the sand when it was tightened and torqued to minimum values.

Normally, the licensee used the following procedure to install an anchor. The licensee would follow the manufacturer's installation procedures that specified the size and depth of the anchor hole by carefully selecting the appropriate drill bit to drill the correct size anchor hole. The licensee would then drive the anchor into the hole with a hammer and set the anchor by torquing the nut on the anchor to a minimum torque value set in the manufacturer's procedures. The licensee's application of torque to the anchor nut causes the anchor to expand into the side of the hole, thus securing the anchor to the concrete. Inspection Report 50-400/87-01 at 6.

The Petition alleges that the licensee improperly installed certain concrete expansion anchors that are no longer accessible for testing, due to their proximity to installed electrical equipment. Although inaccessible for testing, NRC inspectors were able to examine those anchors visually, and reviewed their associated quality control installation records. Id. at 9. The inspectors' review found discrepancy report number DR-C-1761 that addressed problems with the installation of these anchors, among others. The discrepancy report revealed that anchor installation in the same baseplate adjacent to formerly installed anchors caused relaxation of those formerly installed expansion anchors, and that oversized drill holes did not cause the problem. The anchor relaxation problem occurred because the licensee installed between ten (10) and eighty (80) expansion anchors in the same large plate that supports electrical cabinets in the reactor auxiliary building.

Id. This problem was corrected when the anchors in these placements were reset to the proper torque value. Id.

Because the Petition questions the integrity of expansion anchors that are no longer accessible for testing, the licensee developed a sample test program. The licensee set concrete expansion anchors into concrete walls following the procedure the Petition described. The licensee then tested these sample anchors. The NRC Senior Resident Inspector observed this test program. When the licensee tested the sample anchors to 115% of their design capacities, as the original anchors had been tested, none of them failed. No anchor failed until the licensee increased the test load to 140% of the allowable design capacity. Id. at 7. The licensee conducted further testing on January 6 and 7, 1987, for which NRC Region II inspectors prescribed test methodology that more closely duplicated the practices described by the confidential source during a December 18, 1986, interview. These tests, which NRC inspectors observed, confirmed the conclusion that anchors installed according to the alleged procedure perform at least as well as correctly installed anchors. Id. The licensee installed four anchors according to the Petitioners' and the confidential source's procedures. Although the licensee could not torque one of these anchors to minimum values, under the licensee's quality control program, this failure would have mandated that the anchor be rejected and replaced. The other three anchors satisfied the design tension requirements. Id. at 7-9. Thus, even if the licensee incorrectly installed anchor tests as alleged, there would be no effect on the integrity of the concrete expansion anchors.

C. Material Substitution

The Petition alleges that unnamed persons substituted other grades of material for material approved for use in safety-related components or structures (Q material). These persons allegedly stamped non-Q material with metal stamps that identified the material as Q material. The Petitioners allege that the licensee then used this falsely identified material in places where only Q material should have been used, including pipe hangers and the fuel handling building.

The licensee's quality assurance program required the licensee to acquire all Q material from approved vendors and to maintain quality assurance records that would demonstrate that all Q materials delivered to the site met their respective purchase specification requirements. Inspection Report 50-400/87-01 at 10. The licensee's quality assurance/quality control inspectors inspected all Q materials delivered to the site to verify that those materials complied with purchase specifications and were undamaged when delivered. Id. The licensee's quality control inspectors exercised rigid control over metal stamp custody and use. If craftsmen used the licensee's metal stamps to mark metal components as Q material, the licensee's quality control inspectors supervised them and observed or possessed the stamps at all items. Id. at 11.

All the A-36 steel on the site complied with the quality assurance program's requirements. While the licensee had identified a problem with its material control for seismic pipe hangers and issued a discrepancy report in July, 1983, the licensee resolved that problem with NRC approval. Inspection Report 50-400/86-21 at 2. The licensee accepted the use of the suspect

material because the allowable stresses in the pipe hanger design in which the licensee substituted material were lower than the minimum yield strength of any postulated substitute material. Id. On numerous occasions, Region II inspectors have inspected the licensee's program by examining its procurement receipts, its material storage and handling and its material tracing procedures and records. With a few minor exceptions, the NRC has found the material control procedures and practices in construction of the plant adequate. Inspection Report 50-400/87-01 at 12. The NRC inspected the fuel handling building and found no large steel structural frames other than the fuel cask handling bridge crane. Because the licensee did not fabricate this crane on the site, craft persons could not have substituted non-Q steel for Q steel in the manner the Petition alleges. Id. at 12. Petitioners allege no other specific violations that the NRC could investigate. Based on the NRC's review of its previous investigations and the licensee's material control procedures, the Petitioners' allegation is not substantiated.

D. Document Control

The Petitioners allege that craft persons falsified the applicable design documents by altering them to reflect the work they had done before giving them to the licensee's quality control inspectors. The Petitioners further allege that the inspectors relied on those falsified documents to inspect construction. Allegedly, the craft persons replaced the authentic unaltered design documents after the licensee completed each of its inspections. According to the Petitioners, the craft persons did this because the licensee denied approval, on occasion, for cutting rebar, moving anchors and altering plate sizes.

The licensee's quality assurance program manages distribution of these controlled documents, which include field change requests, engineering change notices, permanent waivers, field modifications, etc., in accordance with the requirements of the Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, 10 C.F.R. Part 50, Appendix B, Criterion VI (1986). Inspection Report 50-400/87-01 at 13. The licensee's program precludes individuals from copying or changing these documents. NRC Region II inspectors extensively inspected the licensee's document control system and with the exception of some minor violations, none of which concerned falsified documents, this system complied with NRC requirements. Id.

NRC investigation further revealed that the licensee's QC inspectors did use, in some instances, craft personnel's copies of design documents in order to perform inspections. Id. The investigation also showed that the licensee routinely changed the design of baseplates when needed, by relocating anchors or baseplates, by cutting rebar, and by changing baseplate dimensions, among other things. When craft persons found that they could not install a piece of hardware in accordance with the design requirements, they would contact the licensee's engineering department for help. The licensee's engineering department would then make any design change required, and would issue the appropriate paperwork to document the change. Because craft persons were responsible for design documents at times, the possibility remains that those craft persons could have falsified some design documents. Id. at 13, 14. In order to evaluate this allegation, the licensee reviewed 1166 APRs that cover installation of safety-related expansion anchors

in 1982 and 1983. Only fifty (50) anchor placements required craft persons to cut rebar. In each of these fifty cases, the APR and the QC inspector's records showed that the craft persons had cut rebar to install the anchor, and the associated design documents confirmed that the craft persons made no error by cutting the rebar. Id. at 14. The NRC reviewed this item by examining procedures and specifications by which the craft persons installed the anchors. The NRC's review of the APRs referred to by the confidential source and three hundred (300) other APRs revealed no unauthorized rebar cutting. Id. The licensee's procedures did not require its construction inspectors (CIs) to document encounters with rebar while installing anchors until October, 1982, and did not require the CIs to document rebar cutting until April, 1984, but the CIs always documented rebar cutting and rebar encounters. Id. The NRC found no evidence tending to prove that any person falsified any of these documents. Id. at 15.

E. Emergency Service Water Intake Structure Allegations

Petitioners allege deficiencies in the emergency service water intake structure because the licensee 1) did not check undercut tolerances for "maxi-bolt" anchor bolt holes; 2) did not prevent the craft workers from substituting materials; 3) did not prevent craft workers from changing shear plate elevation and location and surveyed field location reference lines; and, 4) did not properly approve field location.

The NRC reviewed inspection records and procedures for "maxi-bolt" anchor holes and found that the licensee's QC inspectors had properly inspected the undercuts. Inspection Report 50-400/87-01 at 16,17. Furthermore, the licensee installed three sample maxi-bolts without any

undercut and tested their tensile strengths. The NRC Senior Resident Inspector observed these tests in which all three bolts performed as required. At the Senior Resident Inspector's instruction, the licensee tested one bolt to almost twice the required acceptance load before exceeding the testing device's capacity. Id. at 17. The NRC found that the licensee had properly inspected the undercut of maxi-bolt holes and that lack of undercut carries no safety significance.

In order to determine whether any craft persons had substituted materials, the licensee checked its inspection records and performed tests on the allegedly substituted material. The licensee drained the intake structure and tested twenty of the shear plates for hardness in place. Law Engineering Test Company independently verified the results of this in place testing program. Id. at 18. Furthermore, the licensee cut samples from eight of the approximately forty-five shear plates in the intake structure. The NRC Senior Resident Inspector selected the sample location at random. The licensee cut one inch by six inch samples from these shear plates, cut these samples in half, and delivered one set of specimens to the NRC, while retaining the other set on which to conduct tensile strength and chemical tests. Id. All test results, with the exception of one safety insignificant tensile strength test, showed that the shear plate material met the requirements for A-36 steel, which the licensee was required to use in this application. Id. at 19. The NRC found no evidence of material substitution in the shear plates.

As for the Petitioners' allegation that craft workers changed shear plate position in this intake structure, the licensee's QC inspectors verified that

the craft persons installed the shear plates in the correct places when the craft persons originally installed them and documented a survey of as-built shear plate location. Id. at 20. The licensee documented these inspections with inspection records. When the licensee drained the intake structure to check for material substitution, it also checked the locations and sizes of eight shear plates by measuring from known reference points in the intake structure. The NRC's Resident Inspectors observed and verified these measurements. Id. The NRC further confirmed the location of the shear plates by observing the shear plates in the intake structure above water. Id. Furthermore, all persons who signed off on these items had the authority to do so. Id. Neither the licensee nor the NRC could detect any discrepancies in the location or placement of these shear plates.

F. Alleged Improper Use of Concressive 1411 Epoxy Grout

Petitioners allege that the licensee installed concressive 1411 epoxy grout under baseplates to bear loads, and that such grout is incapable of bearing loads because of the effects of heating encountered during welding. While the latter part of the statement is true, with one limited exception noted below, the NRC could find no evidence tending to prove the former part. Petitioners specifically refer to baseplates in which the licensee placed anchor bolts according to placement numbers 1 DG 2610136 through 166. Inspection Report 50-400/87-01 at 23. Some of these baseplates required load bearing support but others required no such support. The licensee's QC inspection records show that the licensee used Portland cement grout under those baseplates that required load bearing support. Id. Those records also show that the licensee used concressive 1411 epoxy grout under only fifteen (15)

baseplates under which no bearing was required, with one exception. The licensee reanalyzed that exceptional baseplate assuming a gap underneath it, and found the stresses in the plate well below allowable values. Id. Furthermore, the licensee installed ¼" minimum thickness shims (i.e., load bearing shims) under baseplates not needing load bearing support. The NRC concludes that the licensee did not use concressive 1411 epoxy grout to bear loads under baseplates installed using concrete expansion anchors, with the aforementioned exception, and that exception has no safety significance. Based on the above, I find no basis to conclude the licensee's quality assurance program failed to guarantee that the licensee built the plant's critical safety-related components according to design specifications and NRC regulations.

CONCLUSION

I have considered the allegations of the Petition. For the reasons presented and discussed above, the allegations are not substantial and do not raise substantial health or safety issues and I have concluded that initiation of show cause proceedings is unwarranted.

The NRC will place a copy of this decision in the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C. 20555 and in the local public document room for the Shearon Harris Nuclear Power Plant located at the Richard B. Harrison Library at 1313 New Bern Avenue, Raleigh, North Carolina 27610. A copy of this decision will also be filed with the Secretary of the Commission for its review in accordance with 10 C.F.R. § 2.206(c) (1986) of the Commission's regulations.

In accordance with 10 C.F.R. § 2.206(c) of the Commission's Rules of Practice, this decision will constitute the final action of the Commission twenty-five (25) days after the date of issuance, unless the Commission on its own motion institutes review of this decision within that time.

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland
this 2nd day of April, 1987