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RECIP.NAME RECIPIENT AFFILIATION
LIEBERMAN,J. Ofc of Enforcement (Post 870413)

SUBJECT: Responds to 880616 notice of violation & proposed imposition of civil penalty re EQ of electrical equipment.

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SEP 1 1988

SERIAL: NLS-88-188
10CFR50.49
10CFR2.201
10CFR2.205

E. E. UTLEY
Senior Executive Vice President
Power Supply and Engineering & Construction

Mr. James Lieberman, Director
Office of Enforcement
United States Nuclear Regulatory Commission
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
ENVIRONMENTAL QUALIFICATION OF ELECTRICAL EQUIPMENT
REPLY AND ANSWER TO A NOTICE OF VIOLATION
EA 87-166

Dear Mr. Lieberman:

On June 16, 1988, the NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) for alleged deficiencies relating to environmental qualification (EQ) of electrical equipment at H. B. Robinson Steam Electric Plant, Unit 2 (HBR). Carolina Power & Light Company (CP&L) requested and, by your letter dated August 10, 1988, received an extension until September 1, 1988 to respond to the Notice. CP&L has thoroughly reviewed the Notice and related issues. In accordance with 10CFR2.201, CP&L provides in Attachment 1 its Reply to the Notice of Violation. Pursuant to 10CFR2.205, CP&L protests the proposed civil penalty as set forth below in the Answer to the Notice of Violation.

I. INTRODUCTION

On May 4-8, 1987, the NRC Staff conducted an inspection of the HBR EQ Program as part of the first round of NRC EQ inspections. The results of that inspection are documented in a report dated July 23, 1987. While the inspection report noted that CP&L has "implemented a program to meet the requirements of 10CFR50.49," it identified seven Potential Enforcement/Unresolved Items and requested that CP&L attend an enforcement conference to discuss the potential issues on September 17, 1987. In the conference, CP&L presented relevant information and responded to Staff questions. Based upon the enforcement guidance in effect at the time[1], CP&L contended that no escalated enforcement was warranted. The information provided in the presentation was documented in a letter to the NRC Staff dated October 15, 1987.

1 Generic Letter 85-15, dated August 6, 1985; Generic Letter 86-15, dated September 22, 1986; and Memorandum from James Taylor, Director of the Office of Inspection and Enforcement, to Regional Administrators, dated April 10, 1987.

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On April 7, 1988, the NRC Staff issued a modified enforcement policy relating to violations of 10CFR50.49 (Generic Letter 88-07) which supplemented the previous guidance. Based on this new policy, the NRC issued the Notice and proposed a $450,000 civil penalty. The Notice cites four violations (eight deficiencies) of 10CFR50.49, which are cited as a "Category A Problem."

II. REPLY TO THE NOTICE OF VIOLATION

Pursuant to 10CFR2.201, CP&L provides in Attachment 1 its Reply to the Notice of Violation. In its reply, CP&L agrees that seven of the identified deficiencies violate regulatory requirements. The Reply provides the reasons for the violations, the corrective steps which have been taken and the results achieved, the corrective steps which will be taken to avoid further violations, and the date when full compliance was achieved. CP&L denies the violation associated with loop accuracy (Violation D) for the reasons set forth in the Reply.

III. ANSWER TO THE NOTICE OF VIOLATION

Pursuant to 10CFR2.205, CP&L provides below this Answer to the Notice of Violation (Answer). As set forth more fully below, CP&L submits that the Notice is legally insufficient to establish that CP&L "clearly should have known" of the violations. Accordingly, CP&L maintains that the Staff is compelled to supplement its Notice to provide CP&L with an adequate basis for its position or, pursuant to the EQ Enforcement Policy, take no escalated enforcement action on the violations. In any event, in its Answer CP&L denies one violation and maintains that two of the other cited deficiencies are not "significant" (as defined by the EQ Enforcement Policy) and accordingly do not warrant escalated enforcement action. Finally, CP&L submits that after full analysis of the mitigation factors set forth in the EQ Enforcement Policy, it should receive greater mitigation of the proposed civil penalty than provided in the Notice.

A. The Notice Fails to Establish that CP&L "Clearly Should Have Known" of the Deficiencies.

The EQ Enforcement Policy provides that "if violations of the EQ rule identified at plants operating after November 30, 1985, existed before the deadline and the licensee 'clearly knew or should have known' of the lack of proper environmental qualification, then enforcement action may be taken [under this policy]." On the other hand, "[i]f the licensee does not meet the 'clearly knew or should have known' test, no enforcement action will be taken." The importance of this finding is apparent. Absent such a finding, enforcement action is unwarranted.

The Notice states that the Staff has determined CP&L "clearly should have known" of the alleged deficiencies. In reaching this critical finding, however, the Staff has failed to analyze the factors set forth in Generic Letters 88-07 and 86-15, and has failed to describe in the necessary detail, for each alleged deficiency, the facts relied upon in concluding that CP&L "clearly should have known" of the deficiencies.

This failure is contrary to law and violates the spirit of the "tough but fair" enforcement policy announced by the Commission in Generic Letter 88-07. Fairness and equity compel the Staff to provide an adequate explanation of the factual basis for its finding on each alleged violation of 10CFR50.49 requirements. Without this factual basis, CP&L is deprived of a meaningful opportunity to respond to the

Notice, while a response is required by 10CFR2.201(a). Further, the NRC is required by Section 9(c) of the Administrative Procedure Act, 5 U.S.C. §558(c), to provide to a licensee against whom a sanction is being considered, written notice of the facts or conduct which may warrant the action.[2] To exercise its statutory power to impose civil penalties, the NRC is required by Section 234b of the Atomic Energy Act, 42 U.S.C. §2282b, to

> . . . notify such person in writing (1) setting forth the date, facts, and nature of each act or omission with which the person is charged . . . .[3]

A mere recitation of the conclusion that the licensee "clearly should have known" is legally insufficient without full and complete support. A Notice of Violation that imposes civil penalties must contain a discussion of the facts and reasoning upon which the Staff's conclusion is based. This is required not only by §234 of the Atomic Energy Act and §558 of the Administrative Procedure Act, but also by fundamental principles of fairness and notice. In Matlovich v. Secretary of the Air Force, 591 F.2d 852, 857 (D.C. Cir. 1978), the Court of Appeals explained why such notice is essential to the administrative process:

> The fundamental principle of reasoned explanation . . . serves at least three interrelated purposes: enabling the court to give proper review to the administrative determination; helping to keep the administrative agency within proper authority and discretion, as well as helping to avoid and prevent arbitrary, discriminatory, and irrational action by the agency; and informing the aggrieved person of the grounds of the administrative action so that he can plan his course of action (including the seeking of judicial review).

These statutory principles have been incorporated by the Commission in its guidance on application of the "clearly should have known" test. This guidance states that a detailed factual inquiry by the Staff is required in each case:

- In the Enclosure to Generic Letter 86-15, the Staff lists four specific criteria to be considered in each case where the "clearly should have known" issue is raised. These factors are then applied by the Staff to a hypothetical case involving valve operator internal wiring. The Staff concludes (at p. 2) thus: "After consideration of all these factors, the Staff has concluded that in the case of the wiring, licensees 'clearly should have known' that the vendor documentation was not adequate to support qualification" (emphasis added).

- In Generic Letter 88-07, issued April 7, 1988, the Staff restates the four factors to be applied in each case and adds additional guidance on the relevance of information supplied by the NRC or by industry (top of page 2 of Enclosure). The Staff then states that it would "carefully consider these criteria when evaluating whether a licensee clearly should have known of a deficiency prior to the deadline" (emphasis added).

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2 Codified in NRC regulations at 10CFR2.201.
3 Codified in NRC regulations at 10CFR2.205.

While it is possible that the Staff has conducted such a detailed inquiry in this case, the Notice provides only a cursory and legally insufficient summary of the conclusions reached. This summary fails to analyze or balance the four factors noted above, and provides, at best, only a brief and conclusory sentence as the basis for Staff conclusions.

Based on this staff finding that CP&L "clearly should have known," the NRC proposes a $450,000 civil penalty. While the Commission has endeavored through the EQ Enforcement Policy to provide objective criteria for determining whether a licensee "clearly should have known," the issue nonetheless requires a subjective judgment which ultimately hinges on (1) the selection of relevant facts and (2) the interpretation of those facts. In these circumstances, basic fairness dictates that CP&L be informed of all facts relied upon by the Staff in concluding that the test has been met and the Staff's reasoning in determining that CP&L "clearly should have known" of the violation. Each of the four factors should be applied--as was done by example in Generic Letter 86-15--to each of the violations alleged to meet the test.

When this information is provided, CP&L will be able to provide a complete written response to the Notice which identifies (1) any factual errors in the Notice and (2) areas where the facts may be subject to more than one interpretation. The Notice issued in this case does not provide an adequate factual basis on which a reasoned and complete response can be formulated. If the Staff cannot, or does not, document its analysis and balancing of (at least) the four factors leading to its conclusion that CP&L clearly should have known of the deficiencies, enforcement action pursuant to the EQ Enforcement Policy is improper.

In summary, CP&L maintains that the NRC has failed to provide a legally sufficient factual basis for each and every "clearly should have known" finding, and thus, (1) cannot conclude that CP&L "clearly should have known" of the violations and (2) has deprived CP&L of a meaningful opportunity to respond to the Notice.

While CP&L cannot speculate on the Staff's undocumented analysis regarding whether CP&L "clearly should have known" of the violations, CP&L has chosen, by way of example, two instances, where the Staff is incorrect in such a conclusion. These examples are discussed in Attachment 2.

B. CP&L Denies Proposed Violation D Regarding Loop Accuracy

1. Statement of Staff Finding (Proposed Violation D)

"10CFR50.49(f) and (k) respectively require that: (1) each item of electric equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electric equipment important to safety which was previously required to be qualified in accordance with DOR Guidelines need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.5, requires that operational modes tested must be representative of the actual application requirements and that failure criteria should include instrument accuracy requirements based on the maximum error assumed in the plant safety analysis.

"Contrary to the above, from November 30, 1985 until the time of inspection, CP&L files did not adequately address instrument accuracy in that the files did

not contain documentation specifying required accuracies and comparisons of those accuracies with instrument errors from LOCA type tests. Specifically, required accuracies were not documented and shown to be satisfied for Rosemount 1153A transmitters and 176KF Resistance Temperature Detectors."

2. Evaluation of Finding

Proposed Violation D states that, contrary to the DOR Guidelines, CP&L did not adequately address instrument accuracy in that the files did not contain documentation specifying required accuracies and comparison of these accuracies with instrument errors from LOCA type tests. Specifically, the Staff notes that required accuracies were not documented and shown to be satisfied for Rosemount 1153A transmitters and 176KF Resistance Temperature Detectors. However, CP&L maintains that the proposed violation defines instrument accuracy in broader terms than previously contemplated; that is, it defines instrument accuracy as loop accuracy.

The Notice does not indicate why the documentation that was in place was insufficient. However, Inspection Report 50-261/87-10, dated July 23, 1987 states the following:

> The licensee provided a typical transmitter loop accuracy calculation, which was acceptable as far as its scope extended except for the treatment of containment penetrations. The Crouse-Hinds connectors were not included and a WCSF-N Raychem splice was assumed instead of the actual heat shrink sleeve. The calculation scope was insufficient as follows: Rosemount Model 1153A transmitter generic file 4.0 does not specify required accuracy, so there is no way of determining whether the calculated accuracy -- or the transmitter -- is acceptable. Both the calculation and generic File 10.0 failed to define the accuracy required for Continental instrument cable. A closely related deficiency applied to Kerite control and low voltage power cable . . . in that no analysis was provided to show that connected equipment would function with the cable performance measured during LOCA testing.

Two things can be established from this statement. First, the NRC recognizes that HBR had an instrument accuracy calculation in place at the time of the inspection. Second, the analysis was acceptable with the exception of the treatment of certain attributes. That is, the Staff questions not whether instrument (sensor) accuracies had been addressed, but how insulation resistance or leakage current values for individual components are summed to establish an overall circuit accuracy; i.e., loop accuracy.

Carolina Power & Light Company is not arguing whether or not loop accuracy is a technically valid concern today, in light of current knowledge. CP&L denies, however, that its actions violated any NRC requirement in light of how those requirements were interpreted and applied by the NRC Staff during its prior regulatory review and acceptance. CP&L maintains that it was in compliance with "instrument accuracy" requirements as defined and accepted by previous NRC Staff practice, NRC consultant practice, and industry practice.

Carolina Power & Light Company contends that until the recent round of EQ inspections (starting in mid-1986), the Staff has consistently interpreted the "instrument accuracy" requirement as not requiring a detailed review of all

"inaccuracy" from other components in the instrument loop; e.g., splices, cable, and penetration. The NRC Staff and its consultants, along with industry, assumed that contributions to inaccuracy from these other components were negligible by comparison. This position is supported by previous Staff acceptance of CP&L qualification data (as noted in CP&L's Reply set forth in Section III, H. of Attachment 1, incorporated herein by reference) and the two affidavits enclosed with Attachment 2 to this letter (also fully incorporated into this answer).

The two affidavits are submitted by three former NRC Staff members and two NRC consultants. Significantly, this collective group constitutes the entire front-line NRC Staff managers and consultants responsible for review of industry qualification files for compliance with 10CFR50.49 during the period before 1980 through 1985. It was during this time that the entire industry was being evaluated for compliance with 10CFR50.49 requirements. The affidavits provide a historical account of the evolution of the "loop accuracy" issue. As the affidavits explain, "lack of instrument loop accuracy or of insulation resistance measurements were not considered to be qualification deficiencies" during this time frame. Instrument accuracy, as defined in the DOR Guidelines, was limited to the accuracy of the instrument sensor. CP&L relied on this Staff interpretation to develop its EQ program. As discussed in Attachment 2, Section II, B, at the time of the NRC inspection, the HBR EQ files contained an instrument accuracy analysis that exceeded early Staff interpretation(s) of what was required to demonstrate instrument accuracy; therefore, no violation has occurred.

As noted above, CP&L does not argue whether loop accuracy is a valid technical concern. As a matter of fact, the instrument accuracy analysis in place at the time of the Staff inspection was close to the new Staff position on loop accuracy. What is more, since the inspection, as described in Attachment 1, Part III, H, CP&L has enhanced the loop accuracy analysis to address the Staff's concerns.

Carolina Power & Light Company submits that if the Staff has changed its underlying assumptions or its interpretation of what is proper regarding loop accuracy, it should utilize an appropriate method to inform licensees, such as an NRC Generic Letter or an NRC Bulletin. It should not seek to impose the new assumptions or interpretations during inspections followed by escalated enforcement. A new interpretation that is tantamount to a requirement should be issued with an appropriate implementation time to allow for the additional work that may be required. Moreover, the Staff should recognize that such a new position could raise concerns pursuant to 10CFR50.109.

Under 10CFR50.109(a)(1), backfitting is defined, among other things, as "the imposition of a regulatory Staff position interpreting the Commission rules that is either new or different from a previously applicable Staff position . . . ." In the Statement of Considerations the Commission pointed out how Staff interpretations of what is necessary to comply with a regulatory requirement may result in backfits. The Commission noted that "Staff interpretations of broadly stated rules are often necessary to give a rule effect and in some instances may be a causal factor in initiating a backfit." 50 Fed. Reg. 38097, 38102 (1985).

Although a modification or action necessary to achieve compliance with a binding regulatory requirement is not a backfit, it is understood that in some cases the Staff's interpretation of the requirement may change over time. What the Staff considers necessary for compliance today may be different from what it accepted before. When the Staff's interpretation of what is necessary for compliance is based on new or changed positions, this constitutes a backfit. As the NRC states in Manual Chapter 0514, "NRC Program for Management of Plant-Specific Backfitting of Nuclear Power Plants" (at 28):

> Throughout plant lifetime, many individuals on the NRC Staff have an opportunity to review the requirements and commitments incumbent upon a licensee. Undoubtedly, there will be occasions when a reviewer concludes the licensee's program in a specific area does not satisfy a regulation, license condition or commitment. In the case where the Staff previously accepted the licensee's program as adequate, any Staff specified change in the program would be classified as a backfit.

In short, there is no practical difference between backfits imposed by new regulations, and those imposed by new Staff interpretations of what is necessary to demonstrate compliance with an existing regulation.

4. Conclusion

For the foregoing reasons, CP&L maintains that it was in compliance with NRC requirements regarding instrument accuracy, and it denies the proposed violation.

C. EQ Violations not Sufficiently Significant to Merit a Civil Penalty Under the Modified Policy

Carolina Power & Light Company submits that proposed violations A.2 and B.4 are in the category described in Part III of Generic Letter 88-07, which addresses those violations of 10CFR50.49 not sufficiently significant to warrant a civil penalty. The policy indicates that (1) if sufficient data exists or is developed during the inspection to demonstrate qualification of the equipment, or (2) if based on other information acceptable to the inspectors reflecting that the specific equipment is qualifiable for the application in question, then the qualification or deficiency is not considered sufficiently significant for assessment of civil penalities.

With respect to proposed Violation A.2 -- Tag Files for Limitorque Valve Operators -- CP&L explained to the NRC Staff during the inspection that the required operation time of Limitorque Valve Operators 744 A and B is such (15 seconds into the accident) that consideration of the deficiencies identified by the Staff did not reflect lack of qualification of the motor operators. The Staff acknowledged this in the inspection report. The report states:

> The tag files for V-744A and B contained no reference to qualification documentation, only an obsolete justification for continued operation dated September 19, 1984. The licensee stated that tag files do exist, although they require updating. The required operating time for V-744A and B is very short (about 15 seconds), and the inspectors concluded that this factor contributed to the licensee's failure to properly address qualification of these two operators.

Therefore, since the actuators were qualifiable for their application "as is," and since the Staff acknowledges having received the information during the inspection, proposed Violation A.2 is not "significant" and should not be considered for escalated enforcement action under the modified EQ Enforcement Policy.

Carolina Power & Light Company further submits that proposed Violation B.4 -- Qualification of Tape Splices -- is in a category analogous to the category noted above and described in Part III of Generic Letter 88-07. The Policy addresses the situation in which a licensee is able to timely correct a deficiency identified during an inspection (by demonstrating equipment to be qualified or qualifiable). HBR proposed Violation B.4 differs only in that it was discovered by CP&L personnel instead of an inspector. It was corrected within days of identification. (Background information regarding the proposed violation is contained in Section III.F of Attachment 1, incorporated herein by reference.) Given two identical EQ deficiencies that are promptly resolved, CP&L maintains that it is inappropriate to apply escalated enforcement for the case where the violation is discovered by the licensee, and no escalated enforcement for the case discovered by an NRC inspector. This inconsistency leads to the undesirable result that licensees are in a better enforcement posture if they simply rely on an NRC inspection to identify and correct potential deficiencies, rather than pursue efforts that may result in self-identification of deficiencies. The NRC has encouraged self-identification in the past (see 10CFR2, Appendix C, V.B). It should continue to do so by excluding from civil penalty consideration those deficiencies identified by the licensee and promptly corrected by demonstrating qualification.

In summary, for proposed Violation B.4, CP&L was able to demonstrate, based on data available to the engineers evaluating the conditions, that the components were qualified or qualifiable. The resolution had been performed in a time period commensurate with the time that a licensee would have had during an inspection to respond to an inspector. Given these considerations, the violation should be classified as not sufficiently significant for assessment of civil penalties.

D. Mitigation/Escalation Factors

Generic Letter 88-07 lists four mitigation/escalation factors that will be applied to EQ Category A, B, or C violations. CP&L submits that an analysis of the factors compels greater mitigation than reflected in the Notice.

1. Factor 1: Identification and Prompt Reporting (+/- 50 percent)

Under this factor, the Staff has proposed that HBR receive escalation of the base civil penalty by 25 percent "because the NRC identified many of the EQ violations involved in this matter." CP&L maintains that this reflects an inappropriate application of the factor.

Carolina Power & Light Company maintains that escalation is not appropriate solely because the Staff identified the deficiency. Rather, escalation should be considered only where the licensee had a reasonable "opportunity" after November 30, 1985 (i.e., information that should have alerted the licensee to the condition, such as an NRC Bulletin issued on the deficiency) to identify and report, if appropriate, the violation and failed to do so. If the licensee did identify and report, as appropriate, the violation, such action should be rewarded by mitigation. If no additional information was issued after November 30, 1985, which would have lead a reasonable licensee to self-identify the condition, and the Staff discovered the condition during the inspection, there

should be no escalation or mitigation. To escalate such a case would incorrectly place the enforcement emphasis on the Staff inspector's schedule (i.e., was a licensee lucky enough to receive a late inspection providing greater opportunity to self-identify) as opposed to reasonable licensee action in the face of new information. CP&L also believes that the information which would call this factor into play must be information other than that upon which the NRC bases its position that the licensee "clearly should have known" of the deficiency. If the Staff escalates the civil penalty based on information which it also relied on to establish the civil penalty (i.e., a finding that the licensee "clearly should have known" of the deficiency), this would result in escalation of every civil penalty under the factor and would be "double counting" contrary to sound administrative practice.

The numerical value assigned to this factor should be the aggregate of the contributions from each deficiency that would warrant consideration under this factor; i.e., for each deficiency for which new information provided the licensee a reasonable opportunity. As explained below, for HBR, the only violations that warrant consideration under this factor contribute in a mitigating manner. Two of the proposed violations (B.3 and B.4) were identified and corrected by CP&L well before the NRC inspection and thus should serve as mitigating contributors. Proposed Violation D is not a violation as discussed in Section III.B above, and thus would make no contribution in this factor. Proposed Violation A.2 identified a concern previously identified by CP&L, thus should be a mitigating contributor. For proposed Violations A.1, B.1, B.2, and C, CP&L had no reasonable opportunity to identify and correct the deficiencies. They would be non-contributors. In summary, for Factor 1, the only considerations are mitigating. Since for the cases in which CP&L had an opportunity to identify the deficiencies, it did so in an effective and expeditious manner, the Staff should propose mitigation of the base civil penalty by 50 percent.

2. Factor 2: Best Efforts (+/- 50 percent)

This factor pertains to the best efforts to complete EQ within the November 30, 1985 deadline. Under this factor, the Notice states that "escalation of the base civil penalty by an additional 50 percent is appropriate because of . . . lack of best efforts to complete environmental qualification of electrical equipment within the November 30, 1985 deadline, as evident by the fact that significant fundamental EQ program deficiencies such as the lack of appropriate qualification documentation existed for such basic components as the cables serving numerous Class 1E electrical systems."

Carolina Power & Light Company maintains that in evaluating this factor, the NRC Staff should consider whether licensees had used best efforts to implement an EQ Program to meet the requirements of 10CFR50.49 prior to the deadline and not whether individual violations existed at that time. It would be "double counting" for the NRC Staff to seek escalated enforcement action because of violations that a licensee "clearly should have known" as of November 30, 1985 and then to also escalate the penalty because the licensee did not use best efforts to identify and fix those deficiencies prior to November 30, 1985. Further, if a licensee had used best efforts, it should obtain the full 50 percent mitigation authorized. If it used "average" efforts, these should be neither mitigation or escalation. Finally, only if a licensee demonstrated virtually no effort to implement an effective EQ program prior to the deadline should escalation apply.

In proposing full 50 percent escalation regarding this factor, the Staff states simply that CP&L did not use "best efforts" to complete the EQ Program prior to the EQ deadline. Such a position implies that a licensee either receives full mitigation if it used best efforts or full escalation if it did not. If this is the Staff's position, CP&L maintains that it is contrary to the Commission direction and sound administrative practice. If this is not the Staff's position, CP&L submits that the Staff has not provided an adequate basis for proposing full escalation for this factor.

Carolina Power & Light Company submits that its efforts to implement an effective EQ Program prior to the deadline were significant. These efforts are reflected by the thousands of man-hours of effort of both CP&L and its EQ consultants, the millions of dollars expended to complete the program within the prescribed time, and the Staff review and acceptance of CP&L's qualification information during the 1980 to 1984 time frame (see Staff SER dated March 19, 1985). Further, the Staff inspection report giving rise to this enforcement action concluded that "the results of the inspection showed that you have implemented a program to meet the requirements of 10CFR50.49" (emphasis added). Significantly, CP&L's efforts resulted in completion of the program by March 31, 1985, prior to the extended deadline.

In evaluating the inspection findings giving rise to the enforcement action, the Staff identified four proposed violations (eight deficiencies). The violations did not relate to findings of fundamental breakdowns that would be reflective of complete failure to use significant efforts to implement a sound program. Further, the number of findings are not significantly greater than some inspections of other facilities where no civil penalties at all were issued, or where significant escalation under the factor was not proposed. Indeed, these other inspections found flaws with similar "fundamental" equipment such as splices, transmitters, and cables.

In summary, CP&L maintains that its efforts to complete its EQ Program prior to the deadline were significant and on the whole effective and do not warrant 50 percent escalation. While CP&L believes its efforts warrant mitigation, as a minimum the Staff should propose no escalation based on this factor.

3. Factor 3: Corrective Actions (+/- 50 percent)

This factor relates to the licensee's corrective actions and efforts to achieve full compliance. CP&L submits that a licensee's corrective actions must be judged only after a licensee reasonably determines that a violation exists. This determination may involve evaluating a "finding" (whether by the licensee or the Staff) to ascertain its validity in the first instance. A licensee's obligation of reasonable diligence must take into account an opportunity to ascertain the accuracy and validity of the finding and, once determined to be a violation, to act on the violation.

For HBR, the Notice indicates that "mitigation of the base civil penalty by 25 percent is appropriate because of . . . extensive corrective actions once EQ deficiencies were properly identified. . . ." CP&L submits that, considering the corrective action measures described in Attachment 1 (incorporated herein by reference), HBR warrants receiving 50 percent mitigation under this factor. These corrective measures included remaining in a shutdown mode until full resolution of the deficiencies, additional testing and analyses of related EQ

questions, and change-out of equipment. During the entire process, CP&L kept the Staff fully informed of all actions and progress. In short, after the conditions were reviewed and determined to be deficiencies, CP&L's actions were exemplary--what more could have been done?

In summary, CP&L maintains that evaluation of the mitigation/escalation factors should be revised to consider the circumstances described above. The net effect should be mitigation of the base civil penalty by 100 percent.

IV. SUMMARY

Carolina Power & Light Company agrees, with one exception, that the deficiencies noted in the Notice constitute violations of 10CFR50.49. However, due to the circumstances that apply to the specific violations and following the guidance of the modified enforcement policy, CP&L contends that the proposed civil penalty is excessive and inappropriate for these EQ violations.

CP&L considers this Answer to be complete and to contain sufficient information to substantiate every point addressed. However, CP&L recognizes that the issues at hand are complex and may require additional dialogue. Should you disagree with this Answer or require additional information, CP&L requests an opportunity to meet with you.

If you have any questions, please call me at (919) 836-6464. For detailed questions by your Staff, please contact our licensing engineer, Mr. Pedro Salas, at (919) 836-8015.

Yours very truly,

E. E. Utley

PSA/che (5445PSA)

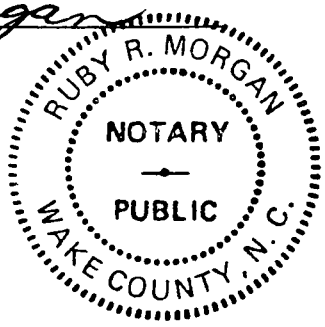
Attachments

cc: Dr. J. Nelson Grace (NRC-RII)
Mr. J. M. Taylor (NRC)
Mr. R. Lo (NRC-NRR)
Mr. L. Garner (NRC-HBR)
Mr. N. Merriweather (NRC-RII)
Mr. R. C. Wilson (NRC-NRR)
Mr. Howard Wong (NRC-OE)
Document Control Desk

E. E. Utley, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.

Ruby R. Morgan
Notary (Seal)

My commission expires: 11/27/89



ATTACHMENT 1

CAROLINA POWER & LIGHT COMPANY

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

Reply to June 16, 1988 Notice of Violation and
Proposed Imposition of Civil Penalty (EA 87-166)

I. INTRODUCTION

Pursuant to 10CFR2.201, Carolina Power & Light Company provides below its Reply to the June 16, 1988 Notice of Violation and Proposed Imposition of Civil Penalty for alleged deficiencies related to environmental qualification of electrical equipment. The proposed violations stem from issues raised in Inspection Report No. 50-261/87-10, dated July 23, 1987. Most of this information was previously presented during a September 17, 1987, NRC Region II enforcement conference and in CP&L's Letter to the Regional Administrator, dated October 15, 1987. Section II, Background and Summary, provides an executive overview of CP&L's perspectives regarding the proposed violations raised in the Notice and certain of CP&L's programmatic corrective actions. Section III, Reply to the Proposed Violations admits seven of the eight alleged violations, provides the reasons for the violations, the corrective steps taken, and the date when full compliance was achieved.

II. BACKGROUND AND SUMMARY

A. Background

In response to Commission direction issued in the late 1970's (e.g., IE Bulletin 79-01B), CP&L initiated development of a formal environmental qualification program at HBR based upon the DOR Guidelines. This effort was particularly difficult because HBR was licensed prior to the promulgation of 10CFR Part 50, Appendix B. Hence, certain documentation readily available at later-vintage plants did not exist at HBR, and extensive additional engineering effort was required to compensate for this handicap.

In the period 1980-1985, the HBR EQ program was subjected to close scrutiny by the NRC Staff via an EQ audit, the Franklin Research Center/NRC review process and subsequent meetings and written exchanges between the Staff and CP&L. At the conclusion of the review process, the Staff stated that the information supplied to the NRC and its consultants during the process "was evaluated for the Staff by Franklin Research Center (FRC) in order to (1) identify all cases where the licensee's response did not resolve the significant qualification issue, (2) evaluate the licensee's qualification documentation in accordance with established criteria to determine which equipment had adequate documentation and which did not, and (3) evaluate the licensee's qualification documentation for safety-related electric equipment located in harsh environments required by TMI Lessons Learned Implementation" (March 19, 1985 SER to CP&L, Attachment, at 2). All deficiencies noted by the Staff during that period were addressed and closed by CP&L on the HBR docket. Based on these interactions, by the close of 1985, CP&L reasonably believed that the EQ program at HBR met applicable regulatory requirements.

B. NRC Findings

During a May 1987 inspection of the HBR EQ program, the NRC Staff identified the following seven "Potential Enforcement/Unresolved Items": (1) cable qualification (87-10-01); (2) Limitorque motor operators (87-10-03); (3) cable entrance seals (87-10-04); (4) Raychem splices (87-10-05); (5) Crouse-Hinds penetrations (87-10-02); (6) loop accuracy (87-10-06); and (7) tape splices (87-10-07).

The June 16, 1988 Notice reclassifies these findings into eight violations. Carolina Power & Light Company's position with respect to each proposed violation is set forth below in Section III.

C. Program Assessment

Carolina Power & Light Company concludes that on the whole the EQ program at HBR is sound and complies with industry standards and relevant NRC guidance. Further, CP&L management is committed to achieving improvement in the program to enhance aspects of the program and to address new questions resulting from the continually evolving state of knowledge in the EQ area. In response to Staff findings and other recent events, for example, CP&L has further enhanced the HBR EQ program by taking the following steps:

- Site accountability has been increased. The role of the EQ Coordinator has been broadened to include responsibility for review of plant activities that affect the EQ program. (completed)

- An extensive equipment walkdown has been performed and some modifications made as a result. (completed)

- Qualification files are being reevaluated to integrate the continually evolving state of knowledge in the EQ area. (ongoing)

- Additional procedural guidance for plant staff has been prepared and continues to evolve. (ongoing)

- A review of the EQ implications of previous modifications has been made. (completed)

- Additional training has been provided, and will continue as necessary, for plant personnel. (ongoing)

- Carolina Power & Light Company wishes to emphasize that its management has a strong commitment to maintaining an EQ program which appropriately reflects the evolving nature of this area of regulation. Thus, CP&L anticipates that other measures may also be taken in the future to further enhance the HBR EQ Program.

III. REPLY TO PROPOSED VIOLATIONS

A. Identification of Cable (Proposed Violation A.1)

1. Staff Finding

10CFR50.49(d) requires that each item of electrical equipment important to safety shall be identified, be placed on a list and information such as performance specifications and environmental conditions be provided.

Contrary to the above, from November 30, 1985 until the time of inspection, the CP&L files did not contain documentation of the environmental qualification (EQ) of plant electrical cable in that electrical cables used in many systems important to safety inside containment were not identified as requiring EQ qualification, nor traceable to any available qualification documentation.

2. CP&L's Perspective

CP&L admits that this deficiency violated regulatory requirements. Based upon CP&L's review of prior findings and discussions with the Staff at the Enforcement Conference, CP&L perceives the above finding to refer only to Staff questions concerning PVC cable. CP&L maintains that the method it used to identify cable to be placed on the EQ Master List (i.e., review of procurement and design documentation) was reasonable and acceptable by the industry standards at the time. However, CP&L concurs that a deficiency existed in that some PVC cable was later discovered that was not supported by adequate qualification documentation. Although the cable was replaced with fully qualified cable, subsequent testing and analysis has provided additional supportive documentation to establish that the original PVC cable was qualifiable.

3. Background

The HBR EQ Master List regarding cables was compiled based upon a review of original procurement documentation consisting of cable specifications (A/E generated), purchase orders (constructor), QC evaluations (CP&L) and correspondence (CP&L, A/E, supplier). Following the documentation "trail" was a particularly challenging exercise because of the lack of QA records (as noted, HBR was licensed prior to the promulgation of 10CFR Part 50, Appendix B). This review identified four types of cable used in applications needing qualification: Kerite, Continental, Rockbestos, and Samuel Moore. This method of identification was also used at other utilities. Further, in 1980, a sample walkdown provided support for the adequacy of this identification process.

During the recent inspection, the Staff raised questions regarding the method of identifying cable used in applications requiring qualification. While the walkdown of cables in containment, conducted following the Staff inspection, confirmed the reasonableness of CP&L's initial identification methodology for the bulk of the cables, some PVC cable was found that was not supported by qualification documentation. CP&L promptly reported the discrepancy and replaced all the questioned PVC cable with qualified cable. Subsequent testing and analysis reflected that the original PVC cable was qualifiable.

4. Root Cause

The root cause of the failure to identify some PVC cable as requiring qualification was an inadequate review of procurement/design documents during compilation of the HBR Master List in the 1979-80 timeframe. While subsequent reviews and walkdowns reflect that the initial identification process was reasonable and for the most part accurate, the PVC cable was inadvertently overlooked.

5. Corrective Action

A walkdown of cables in EQ applications inside containment was conducted. As noted, some PVC cable was identified in this walkdown which did not have adequate qualification documentation. This cable was immediately replaced with qualified cable.

An additional confirmatory document review was conducted to provide further assurance of proper cable identification.

6. Summary

- Carolina Power & Light Company concurs that a violation exists in that PVC cable was identified for which documentation did not establish qualification.
- The deficiency was promptly reported.
- Prior to startup, undocumented PVC cable was replaced with cable known to be qualified.
- Subsequent corrective action provides further assurance that cables in EQ applications have been properly identified.
- Subsequent tests and analyses reflected that in fact the questioned PVC cable was qualifiable.
- With the above noted corrective actions, CP&L considers that full compliance has been achieved.

B. Tag Files for Limitorque Valve Operators (Proposed Violation A.2)

1. Staff Finding

10CFR50.49(d) requires that each item of electrical equipment important to safety shall be identified, be placed on a list, and information such as performance specifications and environmental conditions be provided.

Contrary to the above, from November 30, 1985 until the time of the inspection, the EQ tag Files did not provide any EQ information concerning two valve operators (V-744 A and B) which were required to be environmentally qualified.

2. CP&L's Perspective

Carolina Power & Light Company admits that this deficiency violated regulatory requirements. CP&L acknowledges that qualification documentation was not complete at the time of the inspection. However, CP&L maintains that the required operation time (15 seconds into the accident) is such that consideration of the deficiencies identified by the Staff does not reflect lack of qualification of the motor operators. The function of operators 744 A and B, and the test reports on which its short duration qualification were based, were discussed with the inspectors during the inspection.

3. Background

Carolina Power & Light Company had determined that valve operators 744 A and B are required for only the first 15 seconds into an accident and, accordingly, would not experience a substantially harsh environment. This analysis, however, was not fully reflected in the qualification files.

4. Root Cause

The root cause of this deficiency was an incomplete evaluation of the requirements during the upgrade of EQ equipment.

5. Corrective Action

The qualification files have been supplemented to reflect the pertinent information. In addition, the program enhancements described in Section II.C above address the root cause.

6. Summary

- Limitorque valve operators 744 A and B were qualified as installed, and documentation now reflects this position.
- With the above noted corrective action, CP&L considers that full complicance has been achieved.

C. Crouse-Hinds Electrical Penetrations (Proposed Violation B.1)

1. Staff Finding

10CFR50.49(f) and (k) respectively require that: (1) each item of electrical equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electrical equipment important to safety which was previously required to be qualified in accordance with the Division of Operating Reactors (DOR) "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors," dated November 1979 (DOR Guidelines) need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen.

Contrary to the above, from November 30, 1985 until the time of the inspection, the CP&L files did not adequately document qualification of Crouse-Hinds electrical penetrations in that the plant equipment was not identical in design and material construction to the qualification test specimen, and deviations were not adequately evaluated as part of the qualification documentation. Specifically, electrical connectors and shrink-fit sleeve splices were not type-tested and were not qualified by similarity analysis.

2. CP&L's Perspective

Carolina Power & Light Company admits that this deficiency violated regulatory requirements. However, CP&L maintains that the NRC Staff previously accepted the qualification of these penetrations. Accordingly, enforcement action is not appropriate. Nevertheless, as a conservative measure CP&L responded to the new Staff concern raised during the inspection by replacing the connectors and splices with new splices acceptable to the Staff.

3. Background

The Crouse-Hinds (C-H) penetrations were purchased as a unit, including the pigtail assemblies with a specific requirement for environmental seals at each end of the pigtail cables. CP&L reasonably believed that the shrink-fit sleeve splices were qualified as part of the qualified penetration assembly. Further, CP&L reasonably believed that electrical connectors at issue were qualified by a similarity analysis.

In 1980, the NRC conducted an inspection where it reviewed C-H connector qualifications. The NRC Inspection Report (50-261/80-20), dated September 30, 1980 discusses C-H penetrations. With regard to the penetrations, NRC requested additional information be provided in two areas: (1) similarity between Robinson and Brunswick penetrations, and (2) radiation thresholds. Specifically with regard to the C-H connectors, additional information was requested only on resistance to salt spray. The inspection report states that "no items of noncompliance were disclosed."

Further, all qualification documentation was supplied to the Staff during the SER/TER review process previously discussed. Noted below is specific documentation that discusses the C-H penetrations in question as it was reviewed during this process:

- Carolina Power & Light Company 45-Day Report in response to IE Bulletin 79-01B (March 1980) contains a System Component Evaluation Worksheet (SCEW) for the penetrations, supporting references, and a Westinghouse letter on test results.

- Carolina Power & Light Company 90-Day report in response to IE Bulletin 79-01B (Revision 2, November 1, 1980) identifies C-H penetrations as part of the EQ program and thoroughly describes the basis for their qualification. (Section 3.2.1) References are supplied containing the information relied upon by CP&L in evaluating qualification of the penetrations.

- NRC SER dated May 21, 1981, indicates that further information is required to support qualification of C-H penetrations (Appendix B at B-2).

- NRC SER/Franklin TER dated January 5, 1983, quotes verbatim much of the information provided to the Staff on C-H connections. While the TER does not reach a final conclusion, it does not take issue with any of the information it quotes.

- Carolina Power & Light Company Response to 10CFR50.49, dated May 20, 1983, states that Franklin had been provided documentation on the C-H penetrations in 1982 (TER Item No. 24). A duplicate set was attached for NRC review. CP&L stated its positions that the penetrations were qualified.

- Carolina Power & Light Company letter dated March 2, 1984, responding to the 1983 SER, notes that the C-H penetration data had been supplied to the NRC in the May 20, 1983 submittal.

- NRC SER dated March 19, 1985, makes the following finding: "[That] the proposed resolution for each of the environmental qualification deficiencies identified for Robinson 2 is acceptable."

- As the qualification information previously provided to the Staff was the same information available for review during the later EQ Inspection, the Staff's new position is inconsistent with its prior conclusion. Accordingly, enforcement action is inappropriate.

4. Specific Findings and Responses

The qualification deficiency alleged is a lack of similarity between the installed and as-tested penetrations in regard to splices and connectors.

The 1980 Staff inspection did not question the C-H penetration qualification with regard to these issues.

The May 21, 1981 NRC SER (Appendix B) indicated that additional information was needed for C-H penetrations in the following areas: radiation, qualification time, required time, chemical spray, and aging (replacement schedule/surveillance). While the Franklin TER quoted directly much of the information provided on C-H connectors and found no fault with the information, the Franklin TER and the Staff's SER transmitting the TER (January 5, 1983) place C-H penetrations in the "documentation not made available" category. CP&L's May 20, 1983 submittal provided the qualification data directly to NRC for review. Neither Franklin nor the Staff subsequently informed CP&L of any deficiencies in the documentation provided.

In this case, both Franklin and the Staff were supplied with the qualification information relied upon by CP&L as the basis for concluding that the penetrations were qualified. No deficiencies were noted with regard to lack of similarity between as-tested and as-installed configurations.

In any event, after the finding was made by the Staff, prior to startup from the outage during which this concern was raised, CP&L replaced all questionable connectors and splices with qualified Raychem splices.

5. Summary

- The splices and connectors at issue were purchased as part of a qualified penetration assembly.
- The qualification was previously reviewed extensively by the Staff without any finding of the deficiency raised in the recent inspection.
- The finding or noncompliance is inconsistent with prior Staff reviews and acceptance of qualification. Therefore, enforcement action should not be taken.
- In any event, after becoming aware of the issue, CP&L promptly reported it and took prompt and extensive corrective action by replacing before restart the questioned components with qualified Raychem splices.
- With the above noted corrective action (i.e., replacement of questionable connectors and splices), CP&L considers that full compliance has been achieved.

D. Limitorque Valve Operators V866A and 866B (Proposed Violation B.2)

1. Staff Finding

10CFR50.49(f) and (k) respectively require that: (1) each item of electrical equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electrical equipment important to safety which was previously required to be qualified in accordance with the Division of Operating Reactors (DOR) "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors," dated November 1979 (DOR Guidelines) need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen.

Contrary to the above, from November 30, 1985 until the time of the inspection, the CP&L files did not adequately document qualification of two Limitorque valve operators (V-866A and 866B) in that the plant equipment was not identical in design and material construction to the qualification test specimen and deviations were not adequately evaluated as part of the qualification documentation. Specifically, in one or both of the valve operators, unqualified grease was used for the geared limit switches, T-drains and grease relief valves were missing, motor leads had unqualified taped splices, a terminal block was unidentified and/or unqualified, and qualification or a motor brake was not documented.

2. CP&L's Perspective

Carolina Power & Light Company admits that this deficiency violated regulatory requirements. CP&L concurs that the installed configuration of two Limitorque valve operators (866A and B) was not in accordance with qualification documentation. However, CP&L notes that the Texaco grease used for the Limitorque has subsequently been demonstrated to be fully qualified.

3. Background

The qualification questions associated with Limitorque valve operators are an industry-wide issue. CP&L had analyzed the Limitorque issues as they were evolving and took action to resolve them.

With regard to valve operators 866A and B, the qualification issues of grease relief fittings, T-drains, motor lead splices and grease were identified. It should be noted that during the time period when CP&L upgraded the 866 A and B operators to qualified status, industry groups were in the process of seeking clarification of deficiencies associated with Limitorque motor operator qualification, including the necessity for T-drains and grease relief fittings. Although CP&L did not install T-drains and grease relief fittings during the upgrade of valve operators 866 A and B, they did so immediately upon consultation with the Staff during the inspection. CP&L had selected and used grease consistent with recommendations of both Texaco and Limitorque.

Finally, when the problem was identified, CP&L promptly reported the issue.

4. Root Cause

The root cause of this deficiency was the inadequacies in the Limitorque testing information (an industry-wide concern) and an inadequate engineering evaluation of requirements during the upgrade of EQ equipment.

5. Corrective Action

Qualification packages associated with each of the Limitorque valve operators have been augmented and upgrades to the 866A and B operators were made, where necessary, to address each identified issue. Grease that had been used in the geared limit switches was replaced with a qualified grease. CP&L notes that the grease that had been used was subsequently confirmed by test to be qualified.

Additional procedural guidance has been provided for design configuration control and installation/maintenance control of EQ equipment. Further, previous modifications have been reviewed to provide further assurance that similar issues do not exist. Finally, a broad-range review of EQ files has been initiated, as discussed in Section III.B.5 of this attachment.

6. Summary

- Carolina Power & Light Company concurs that a deficiency existed in that Limitorque valve operators 866 A and B had undocumented motor lead splices installed and did not have T-drains and grease relief fittings installed in accordance with tested configurations. These valves have

been modified to correct this situation. Grease used in these valve operators was in accordance with vendor recommendations and was subsequently determined to be fully qualified but was not documented at the time.

- From industry testing data and review of the safety functions of the subject valves, CP&L maintains that the 866 A and B valve operators would have likely performed their safety function in the as-installed condition.
- The deficiencies were promptly reported and corrected prior to restart.
- With the above noted corrective action, CP&L considers that full complicance has been achieved.

E. Qualification of Raychem Splices (Proposed Violation B.3)

1. Staff Finding

10CFR50.49(f) and (k) respectively require that: (1) each item of electrical equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electrical equipment important to safety which was previously required to be qualified in accordance with the Division of Operating Reactors (DOR) "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors," dated November 1979 (DOR Guidelines) need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen.

Contrary to the above, from November 30, 1985 - until the time of the inspection, the CP&L files did not adequately document qualification of numerous electrical splices using Raychem sleeving in that the plant equipment was not identical in design and material construction to the Raychem test specimens addressed in the files and deviations were not adequately evaluated as part of the qualification documentation.

2. CP&L's Perspective

Carolina Power & Light admits that this deficiency violated regulatory requirements. CP&L concurs that a deficiency existed in that some Raychem splices were not made in accordance with established installation procedures for which qualification had been established.

3. Background

In mid-1986, inspections at several utilities noted problems with installation of Raychem splices. CP&L worked closely with the Nuclear Utility Group on Equipment Qualification in providing information to the Staff on this issue and assisting industry and the Staff in fully understanding its implications and potential safety consequences.

On June 26, 1986, the NRC issued IN86-53 and formally alerted licensees to the possibility of improper installation of Raychem heat shrink tubing splices. CP&L review of this notice came shortly after the tape splice repairs discussed in the proposed violation.

This had created a high level of sensitivity to cable splice techniques inside containment, and coupled with CP&L's earlier work with the Utility Group, led to the decision to inspect the Raychem splices at the next refueling outage, scheduled for early 1987.

During the 1987 outage, CP&L discovered a questionable Raychem installation in the plant. On April 15, 1987, CP&L notified the NRC of the discovery. CP&L provided the NRC a followup LER on May 15, 1987, explaining the issue and providing a schedule of corrective action. Thus, the Staff was well aware of CP&L's corrective actions associated with discovery of this problem.

Carolina Power & Light Company has completed the inspection of the Raychem splices. The results of the inspection confirm that while a number of splices were not installed in accordance with the installation procedures established, all but one of the splices were bounded by subsequent industry qualification testing and analysis, in much of which CP&L participated.

The single splice not in accordance with qualification documentation affected only a single redundant train of the Safety Injection system. The splice was located in the power lead of Valve SI866A which is redundant to Valve SI866B.

During the recent Staff inspection, the Staff found that CP&L's inspection criteria used to review the Raychem splices were acceptable. The inspection program was completed, and appropriate corrective actions were taken prior to plant restart.

4. Root Cause

The root cause of the problem regarding improper adherence to Raychem installation procedures was inadequate training concerning selection and installation of Raychem splices.

5. Corrective Actions

An inspection program to evaluate splice adequacy was established and has now been completed. All splices which were of questionable qualification have been replaced. Qualification packages for all of the installation configurations have been completed.

Procedures associated with installation of splices have been revised to include independent verification of splice adequacy. Additional personnel training has been provided regarding selection and installation of splices.

6. Summary

- Carolina Power & Light Company concurs that a deficiency existed in that Raychem splices were not installed in accordance with established procedures. CP&L believes that this is a violation of Appendix B to 10CFR Part 50, and not an EQ violation.

- The problem was identified by CP&L well before the recent inspection.
- When the problem was identified, CP&L immediately alerted the Staff and kept the Staff fully informed of its proposed actions to address the issue.
- The end result of review of this issue reflects that only one splice at HBR was deemed to be ultimately outside industry qualification test data. However, the splice was located in a single train of a redundant system.
- The Staff inspection team concurred with CP&L's actions in response to this concern.
- Carolina Power & Light was proactive and intimately involved in working with the Staff and industry to resolve this problem on an industry-wide basis.
- With the above noted corrective actions, CP&L considers that full complicance has been achieved.

F. Qualification of Taped Splices (Proposed Violation B.4)

1. Staff Finding

10CFR50.49(f) and (k) respectively require that: (1) each item of electrical equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electrical equipment important to safety which was previously required to be qualified in accordance with the Division of Operating Reactors (DOR) "Guidelines for Evaluating Environmental qualification of Class IE Electrical Equipment in Operating Reactors," dated November 1979 (DOR Guidelines) need not be requalified in 10CFR50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen.

Contrary to the above, from November 30, 1985, until the time of the inspection, the CP&L files did not adequately document qualification of tape electrical splices in that the tape splices were not identical in design and material construction to a qualification test specimen and deviations were not adequately evaluated as part of the qualification documentation.

2. CP&L's Perspective

Carolina Power & Light Company admits that this deficiency violated regulatory requirements. With regard to this Staff concern, CP&L maintains that the similarity analysis developed upon discovery of the splices was acceptable in that it referenced supporting documentation that was acceptable and was maintained in the vendor's file.

3. Background

During the first refueling outage after November 30, 1985, CP&L's Quality Assurance Personnel discovered that certain cables in a conduit to a pressurizer level transmitter were spliced using Scotch 88 tape. Investigation revealed that CP&L did not have a qualification file for this tape splice. In investigating the issue, CP&L found several other splices made using Scotch 88 tape for which qualification files were not available. In each case it was determined that the splices were made during modifications implemented in 1980.

Carolina Power & Light Company immediately contacted Patel Engineers (vendor) and requested information regarding the qualifiablity of Scotch 88 tape in these configurations. Patel stated in a letter dated March 18, 1986 that qualification was established based on similarity with Scotch 33 and 17 tapes. The letter referenced information in the Patel files supporting the similarity analysis. Based on review and analysis of this letter CP&L concluded that the splices were qualified, and accordingly, the deficiency was not reportable. Patel Engineers' determination of similarity noted in their March 18, 1986, letter was based on several factors. First, the chemical and physical attributes of Scotch 88 tape were determined to be similar to Scotch 17 tape. Scotch 17 tape had been tested successfully to environmental conditions more severe that the postulated HBR environmental profile (340°F and 104 psig tested versus 265°F and 46 psig needed at HBR). Second, the splices in question were located within conduit fittings and would not have experienced direct chemical spray impingement. Finally, the required installed configuration (two wraps) was conservative configuration that envelops industrial applications. Subsequent discussions with craft personnel have confirmed that the HBR practice is to provide greater overlap, which in turn provides greater protection.

Although the Patel Engineer's letter to CP&L confirming the similarity between Scotch 88 tape and Scotch 17 tape did not itself contain the above level of detail, as HBR's prime contractors for the EQ program, Patel's files are considered part of HBR's files, as it applies to EQ. As a qualified vendor to CP&L, this documentation was available in an auditable form to both CP&L and the NRC.

In any event, during the same refueling outage, CP&L elected to replace the splices with splices for which qualification documentation was in the CP&L files. No JCO was required since corrective action was taken prior to restart.

Later, the issue of qualification of tape splices became widely known in industry. CP&L worked closely with the Nuclear Utility Group on Equipment Qualification to provide information to the industry and the Staff on this issue.

During the recent Staff inspection, the Staff reviewed CP&L's handling of this issue and made the finding noted above.

4. Root Cause

The root cause of the problem regarding failure to have a qualification file for several splices that used Scotch 88 tape was that the modification during

which the tape was installed occurred before the EQ program was in force and the modification was not adequately reviewed after the program was in place.

5. Corrective Action

The Scotch 88 tape splices were removed during the 1986 outage and replaced with splices whose qualification was fully documented in CP&L files. Further, a review of previous modifications has been performed to provide additional assurance that similar problems are not present.

6. Summary

- Carolina Power & Light Company maintains that the documentation of qualification of the tape splices using the similarity analysis was sufficient in view of the back-up information contained in the vendor's files which was referenced in the CP&L files.
- The issue was self-identified by CP&L well before the general problems associated with tape splices were identified in the industry.
- When the issue was identified, CP&L took prompt and extensive corrective action to resolve the situation prior to restart from the 1986 outage during which the problem was identified.
- The issue was not reportable since a determination was made that the tape splices were qualified by similarity.
- No JCO was required since corrective action was taken prior to restart.
- The specific problem associated with the tape splices, and the programmatic problem, have been addressed and corrected.
- With the above noted corrective action, CP&L considers that full complicance has been achieved.

G. Cable Entrance Seals (Proposed Violation C)

1. Staff Finding

10CFR50.49(f) and (k) respectively require that: (1) each item of electric equipment important to safety shall be qualified by testing of or experience with identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electric equipment important to safety which was previously required to be qualified in accordance with DOR Guidelines need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.6 requires that equipment mounting and electrical or mechanical seals used during the type test must be representative of the actual installation for the test to be considered conclusive.

Contrary to the above, from November 30, 1985 until the time of the inspection, the installed configuration of Automatic Switch Company (ASCO) solenoid valves and Rosemount 1153A transmitters was not qualified in that electrical connection penetrations in the device housings were left unsealed while the test reports specified that the housings were to be sealed.

2. CP&L's Perspective

Carolina Power & Light Company admits that this deficiency violated regulatory requirements. CP&L concurs that a deficiency existed in that the installed configurations of some ASCO solenoid valves and Rosemount 1153A transmitters were not supported by qualification documentation.

3. Background

In reviewing the Rosemount and ASCO qualification testing information, CP&L inadvertently misinterpreted the information to reflect that qualification of these components without seals was supported for the configurations present at HBR. (The testing configuration for the Rosemount transmitters implied use of seals was not needed.)

At the conclusion of the inspection when this issue was identified, CP&L promptly reported the issue and immediately corrected the problem by providing seals in electrical connection penetrations on the instruments in question.

4. Root Cause

The root cause of this problem was misinterpretation of test reports and testing information for the CP&L configurations.

5. Corrective Action

Seals were installed on the instruments and solenoid valves in question prior to restart. In addition, CP&L initiated a systematic review of EQ file documentation to determine if other similar problems may exist. Much of this review was accomplished as part of the completion of Regulatory Guide 1.97 commitments which imposed additional requirements on the already DOR qualified equipment. Equipment changeouts to meet Regulatory 1.97 have provided additional assurance of properly installed configurations on affected equipment.

6. Summary

- Carolina Power & Light Company concurs that a deficiency existed and that some installed configurations of ASCO Solenoid valves and Rosemount 1153A transmitters were not supported by qualification documentation.

- When the problem was identified, CP&L immediately reported the problem, took prompt and extensive corrective action by modifying affected equipment prior to restart, and initiated a broad-range review of EQ documentation.

- With the above noted corrective action, CP&L considers that full complicance has been achieved.

H. Loop Accuracy (Proposed Violation D)

1. Staff Finding

10CFR50.49(f) and (k) respectively require that: (1) each item of electric equipment important to safety shall be qualified by testing of or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electric equipment important to safety which was previously required to be qualified in accordance with DOR Guidelines need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.5, requires that operational modes tested must be representative of the actual application requirements and that failure criteria should include instrument accuracy requirements based on the maximum error assumed in the plant safety analyses.

Contrary to the above, from November 30, 1985 until the time of the inspection, CP&L files did not adequately address instrument accuracy in that the files did not contain documentation specifying required accuracies and comparisons of those accuracies with instrument errors from LOCA type tests. Specifically, required accuracies were not documented and shown to be satisfied for Rosemount 1153A transmitters and 176KF Resistance Temperature Detectors.

2. CP&L's Perspective

Carolina Power & Light Company denies that this concern violated regulatory requirements. CP&L maintains that the issue of loop accuracy is an emerging issue for which enforcement action against CP&L is not appropriate. Contrary to the position it is now taking, the Staff had previously accepted qualification documentation related to this issue.

3. Background

Carolina Power & Light Company is not aware of the issue of loop accuracy being raised by the Staff prior to the first round of Staff EQ audits. During the extensive Staff SER/TER review process, the issue was not raised with CP&L.

Noted below is specific documentation generated as a result of this review process which addresses aspects of the issue and equipment in question.

- Carolina Power & Light Company 45-Day Report in response to IE Bulletin 79-01B (Revision 2) identified the uses of Rosemount 1153A transmitters, Rosemount 176 KF RTDs, Continental instrument cable, and Kerite control and low voltage power cable. The report thoroughly discusses the basis for qualification.

- NRC SER/Franklin TER dated January 5, 1983, indicates that instrument accuracy was specifically evaluated as part of the review. The Report concluded that there were no instrument accuracy deficiencies for any of the components. In addition, the Report noted that for cables, instrument accuracy was not an applicable consideration.

While the issue was not raised by the Staff in the 1980-1985 review cycle, CP&L did develop a typical transmitter loop accuracy calculation based on representative components which showed acceptable results. This analysis, above and beyond the qualification accepted by the Staff for HBR, provided an additional layer of margin to the EQ program. This calculational model was reviewed by the Staff inspection team and the methodology was found acceptable.

4. Specific Findings and Response

The deficiency alleged by the Staff is that CP&L did not evaluate instrument accuracy and provide a corresponding loop accuracy analysis. As noted above, the Staff/Franklin review process accepted qualification without noting this issue as a deficiency on any components. Further, inspections conducted in 1980 to assess qualification also did not raise this as an issue.

Based on our information to date, the loop accuracy issue was first raised at EQ inspections during the 1986-87 timeframe. No information notice or bulletin has been issued on this concern. After learning of the concern (prior to the HBR 1987 inspection), CP&L began working with the Nuclear Utility Group on Equipment Qualification to resolve the issue.

Enforcement action based on the inspection finding is therefore inappropriate and contrary to the NRC Manual Chapter 0514 (implementing the backfit rule) and related guidance provided by the Staff.

In any event, after the Staff made the finding, CP&L began developing loop accuracy calculations based on actual cable test data and will add these calculations to the files. In no case has it been determined that equipment was unqualified.

5. Summary

- Loop accuracy is an emerging issue and was not raised during the extensive Staff SER/TER review process.
- The Staff findings resulting from the SER/TER process reflect no deficiencies regarding instrument accuracy for the equipment of concern. Accordingly, CP&L does not believe enforcement action is appropriate.
- In any event CP&L had developed prior to the inspection typical transmitter loop accuracy calculations.
- Further, after the finding made by the Staff, CP&L undertook prompt and extensive corrective action to develop the loop accuracy calculations and to include them in appropriate files.
- Calculations do not indicate any instances in which instruments were unqualified even upon consideration of full loop accuracy.
- As discussed in Section III.B of the cover letter, CP&L denies that it was in violation of the "instrument accuracy" provisions of the DOR Guidelines.

ATTACHMENT 2

CAROLINA POWER & LIGHT COMPANY

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

Discussion of Certain "Clearly Knew or Should Have Known" Findings Noted in a June 16, 1988 Notice of Violation and Proposed Imposition of Civil Penalty (EA 87-166)

I. INTRODUCTION

Carolina Power & Light Company (CP&L) contends that the NRC Staff has failed to establish that CP&L "clearly should have known" of the violations noted in the June 16, 1988 Notice of Violation and Proposed Imposition of Civil Penalty (EA 87-166) for environmental qualification (EQ) deficiencies. While CP&L cannot speculate as to the Staff's bases for its position regarding "clearly should have known," CP&L provides below, by way of example, two violations that are not appropriately categorized as "clearly should have known" based on the four factors presented in Generic Letter 88-07.

II. PROPOSED VIOLATION ON LOOP ACCURACY

A. Finding (Proposed Violation D)

10CFR50.49(f) and (k) respectively require that: (1) each item of electric equipment important to safety shall be qualified by testing of or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electric equipment important to safety which was previously required to be qualified in accordance with DOR Guidelines need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.5, requires that operational modes tested must be representative of the actual application requirements and that failure criteria should include instrument accuracy requirements based on the maximum error assumed in the plant safety analyses.

Contrary to the above, from November 30, 1985 until the time of inspection, CP&L files did not adequately address instrument accuracy in that the files did not contain documentation specifying required accuracies and comparisons of those accuracies with instrument errors from LOCA type tests. Specifically, required accuracies were not documented and shown to be satisfied for Rosemount 1153A transmitters and 176KF Resistance Temperature Detectors.

B. Evaluation of Finding

Carolina Power & Light Company's evaluation of this finding as it related to compliance with 10CFR50.49 is contained in Section III of the letter transmitting this Attachment. That discussion provides background relevant to this analysis.

In that discussion, CP&L denies the violation. In any event, CP&L maintains that enforcement action is unwarranted because the NRC Staff is not justified in concluding that CP&L "clearly should have known" prior to November 30, 1985 of any deficiency.

Application of the "Clearly Should Have Known Test"

Enclosed with this Response are two affidavits. The first affidavit is submitted jointly by Vincent S. Noonan, Phillip A. DiBenedetto and Robert G. LaGrange. Mr. Noonan is a former Chief of the Equipment Qualification Branch, Division of Engineering, Office of Nuclear Reactor Regulation (NRR), U. S. Nuclear Regulatory Commission. Mr. DiBenedetto was the first Section Leader of the Equipment Qualification Branch of NRR. Mr. LaGrange is also a former Section Leader of the Equipment Qualification Branch of NRR.

The second affidavit is submitted jointly by Cyril J. Crane and Gary J. Toman. Mr. Crane was formerly employed by Franklin Research Center (FRC), consultants in the EQ area to the NRC Staff, as Manager of Equipment Qualification Analysis and Planning (1979-82). Mr. Toman was formerly the Head of the Nuclear Engineering Section at FRC (1982-87).

These affidavits speak primarily to the "notice" issue, the third factor set forth in the Modified Enforcement Policy to determine whether a licensee "clearly should have known" that its equipment was not qualified. Each of these factors, and CP&L's responses, are summarized below:

1. Factor 1: "Did the licensee have vendor-supplied documentation that demonstrated that the equipment was qualified?"

   This factor is not applicable to the issue of instrument loop accuracy. Vendor-supplied or other documentation that demonstrates equipment was qualified addresses only the particular piece of equipment for which that documentation was supplied. Addressing instrument loop accuracy requires that the documentation supplied with each piece of equipment within the loop be considered simultaneously to determine the acceptability of overall instrument loop accuracy when the potential contribution to error from each piece is accounted for. Documentation supplied with the equipment can demonstrate that the equipment was qualified, irrespective of whether overall instrument loop accuracy has been addressed.

2. Factor 2: "Did the licensee perform adequate receiving and/or field verification inspection to determine that the configuration of the installed equipment matched the configuration of the equipment that was qualified by the vendor?"

   This factor also is not applicable to the issue of instrument loop accuracy. A complete and thorough receiving and field inspection that shows that installed configuration was identical to the vendor-qualified configuration of equipment does not demonstrate that instrument loop accuracy is or is not acceptable.

3. Factor 3: "Did the licensee have prior notice from any source that equipment qualification deficiencies might exist?"

   No. As discussed in detail in the affidavits attached to this Response, there was no notice to licensees prior to November 30, 1985, that loop accuracy calculations were required for equipment qualification. Prior to November 1985, the NRC, its consultants, and licensees considered the issue of accuracy to be related primarily to instrument sensors (i.e., the transmitters). Up until sometime in 1986, the industry and regulators approached "instrument

accuracy" as it relates to environmental qualifications generally on a component-by-component basis. It was believed that devices could be qualified by device type without significant concern for potential problems resulting from the integration of devices into a qualified system configuration. Thus, instrument loop accuracy, as a configured system concern, was not, in the 1979-1985 time-period, the subject of any regulatory or industry guidance, or any NRC EQ inspection reports or audits per se. Thus, Franklin Research Center, reviewing licensee test reports for qualification purposes on behalf of the NRC, did not reject any test reports on cable or penetrations for lack of insulation resistance (IR) data. What is more, the staff accepted the Franklin TERs and, indeed attached SERs to them, indicating that in its view the components were qualified without IR data. Also, the EQ Inspection Modules prepared by FRC for NRC inspectors in 1984 contained nothing regarding loop accuracy or IR measurements. Nor was the issue raised by the NRC staff in any of the meetings it held with licensees prior to issuance of the final round of SERs. Accordingly, it cannot be said that CP&L or any other licensee "clearly should have known" to focus on loop accuracy prior to the EQ deadline. To the extent the issue of "accuracy" was raised at all as an EQ issue prior to November 30, 1985, it was raised only on an individual component basis. (Even if some form of the accuracy issue had been raised in isolated instances in early inspection reports, this would not be tantamount to "notice" to licensees, since these would not have been widely disseminated or precisely germane.) As the affidavits explain, although the seeds of the loop accuracy issue may have been planted prior to November 30, 1985, the full-blown loop accuracy issue as we know it today was not brought into focus by the NRC, its consultants, or licensees until after the EQ deadline. That new information and perspectives have been gained since the deadline should not alter licensees' reasonable reliance on information available to them at the time. The entire thrust of the EQ deadline and the "clearly should have known" test is that licensees not be penalized by hindsight.

4. Factor 4: "Did other licensees identify similar problems and correct them before the deadline?"

   No. To CP&L's knowledge, prior to November 30, 1985, potential deficiencies with regard to instrument loop accuracy were not identified by licensees. Again, EQ was assessed generally in that period on an individual equipment basis, without considering the integration of each piece of equipment into a functional instrument loop. Having had their test reports accepted by Franklin, and no other indications in regulatory or industry guidance, licensees did not consider the issue during their efforts to achieve compliance with NRC's EQ requirements.

III. PROPOSED VIOLATION ON LIMITORQUE TERMINAL BLOCKS

A. Finding (Proposed Violation B.2)

10CFR50.49(f) and (k) respectively require that: (1) each item of electrical equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable, and (2) electrical equipment important to safety which was previously required to be qualified in accordance with the Division of Operating Reactors (DOR) "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in

Operating Reactors," dated November 1979 (DOR Guidelines) need not be requalified to 10CFR50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen. Contrary to the above, from November 30, 1985 until the time of the inspection the CP&L files did not adequately document qualification of two Limitorque valve operators (V-866A and 866B) in that the plant equipment was not identical in design and material construction to the qualification test specimen and deviations were not adequately evaluated as part of the qualification documentation. Specifically, in one or both of the valve operators, a terminal block was unidentified and/or unqualified.

B. Evaluation of Finding

Violation B.2 partially deals with Limitorque motor operator terminal blocks.

1. Factor 1: "Did the licensee have vendor-supplied documentation that documented that the equipment was qualified?"

   Carolina Power & Light Company maintains that the regulatory standard required to "demonstrate" qualification of a piece of equipment is the familiar "reasonable assurance" standard. Reasonable assurance of qualification is demonstrated by a number of factors which, depending on the circumstances, may include the vendor qualification report, the vendor quality assurance program, audits by a licensee and the NRC Staff of the quality assurance program, and analysis by the licensee. For example, if a vendor has an audited quality assurance program that complies with Appendix B, a vendor qualification report on its own product that addresses the pertinent environmental parameters and provides information on the model numbers of the products which are qualified by the report, should provide reasonable assurance of qualification.

   With regard to vendor-supplied documentation, CP&L should also not be held to a standard of "20/20 hindsight." Instead, this factor should be evaluated on the basis of the vendor-supplied information available to the licensee at the time the decision was made as to the qualified status of the equipment.

   Carolina Power & Light Company procured the Limitorque valve actuators as complete assemblies and upgraded them following Limitorque guidance. Therefore, it is reasonable that this factor should be interpreted to mean that CP&L was required to conduct receiving and/or field verification in accordance with current quality assurance procedures (which the Staff has reviewed on many occasions in the past). CP&L does not consider this factor to mean that each component of a piece of equipment must be inspected to determine if it conforms to some listing and description in a qualification report supplied by the vendor. The practical effect of such a requirement would be the complete dismantlement, inspection, and reassembly of a piece of equipment to verify the vendor's test report representation regarding qualification. Such a requirement would fail to recognize proper reliance on a vendor's quality assurance program or elements of assurance specified in Answer 16 of Supplement 2 to IE Bulletin 79-01B. Further, the requirement is impractical in that (1) some pieces of equipment cannot be dismantled without invalidating qualification and (2) qualification reports (as noted above) rarely have this detailed information. CP&L submits that the vendor report need not

list and provide detailed information regarding each and every subcomponent part of a tested or analyzed piece of equipment, and CP&L is not required to verify qualification of each such subcomponent part.

In summary, CP&L relied on the vendor-supplied documentation to demonstrate qualification. This information did not list or provide detailed information regarding each and every subcomponent part as tested, nor took any exception with regard to the qualification of such subcomponent part. Therefore, application of this factor does not support a "clearly should have known" finding.

2. Factor 2: "Did the licensee perform adequate receiving or field verification inspections to determine that the configuration of the installed equipment matched the configuration of the equipment that was qualified by the vendor?"

Carolina Power & Light Company agrees, in hindsight, that additional field verifications could have revealed the existence of these deficiencies earlier. However, as noted earlier, "20/20 hindsight" is not the test that should be applied for enforcement purposes. Field verifications conducted were in conformance with Appendix B, QA practices, and requirements fully reviewed and accepted across the nuclear industry by the NRC Staff. We believe that the need for additional inspection (over and above that required by Commission regulations) of equipment supplied by certain vendors is part of the evolving nature of equipment qualification.

In summary, CP&L believes that the initial field verifications were consistent with the knowledge on November 30, 1985. Upon receipt of specific information from the Staff, CP&L conducted additional inspections. Therefore, application of this factor does not support a "clearly should have known" finding.

3. Factor 3: "Did the licensee have prior notice from any source that equipment qualification deficiencies might exist?"

Carolina Power & Light Company is concerned that the phrase "prior notice from any source" has been improperly and unreasonably interpreted in the Notice of Violation. This factor could become unbounded and unreasonably subject licensees to elevated enforcement action based on vague, informal information that the licensee has no safety or legal obligation to pursue, e.g., newspaper articles, casual conversations between utilities, and trade press articles. Further, overly broad interpretation of this phrase may penalize licensees for aggressively seeking information that could impact safety and might even encourage "the less you know the better you are" philosophy, an attitude that is neither in the interest of NRC licensees nor the public. CP&L maintains that the phrase "from any source" must be reasonably limited and should not be defined to discourage licensees from seeking or exchanging information.

The Notice cites that CP&L "had information available which discussed environmental qualification concerns of similar components." While not stated, CP&L presumes that reference is to Limitorque motor operators and I&E Information Notice No. 83-72 (IN 83-72). The Notice implies that the 1983 notice provided strong evidence that each licensee "clearly should have known" before November 30, 1985 of any qualification problem which may have surfaced regarding terminal blocks in Limitorque valve operators.

While IN 83-72 provided detailed information regarding Buchanan 0524 and 0824 terminal blocks, the only reference to other terminal blocks is as follows:

> Unidentifiable terminal blocks (nonpower lead connectors inside the operators) were observed in other Limitorque operators. It is not presently known whether these components are qualified for the service conditions.

Attachment 1 to IN 83-72 at 16.

Carolina Power & Light Company submits that the limited information presented in IN 83-72 regarding identification of Limitorque terminal blocks other than Buchanan 0524 and 0824, without more, cannot be said to have put recipients on notice (at peril of escalated enforcement) of a potential generic problem regarding qualification of Limitorque and terminal blocks.[1]

In any event, in response to the 1983 notice, Limitorque provided a "form-type" letter (sent to many, if not all, licensees) that addressed this issue and concluded that "Limitorque does not recommend that any corrective action be taken as a result of this Information Notice." (Letter of Daniel S. Warsing, Technical Manager of Limitorque Corporation, to, among others, Cliff Reynolds of Babcock and Wilcox dated July 19, 1984 at 4.) Licensees certainly could reasonably have relied on this information as the basis for their response to the identification concern noted in IN 83-72.

Further, starting in late 1984, the staff began 10CFR50.49 audits of licensees. During this time, many NTOL qualification inspections and audits were also conducted by the Staff and its consultants. Significantly, despite these efforts to assure the adequacy of utility equipment qualification programs, the concern regarding Limitorque terminal blocks was not recognized by either industry or the Staff to be a possible generic problem.

In short, after the issuance of IN 83-72, there was widespread belief (held by architect/engineers, consultants, vendors, utilities, and NRC Staff) that the Limitorque terminal blocks had been qualified as an integral part of the actuators in a fashion similar to other wiring, e.g., motor leads. This belief was reasonable in light of, among other things, Limitorque's response to IN 83-72, the clear acceptance of that response by the Staff and industry, lack of any similar concern raised during the exhaustive Staff and Staff consultant reviews of qualification status of each licensee during the 1983-1984 time frame, and the lack of any similar concern raised during the numerous NTOL qualification audits and 50.49 inspections prior to late 1985. From the foregoing, CP&L submits that there is no rational basis for concluding that before the November 30, 1985 deadline CP&L clearly should have known that they had unqualified terminal blocks at HBR.

In summary, for the reasons noted above, the information provided to CP&L with regard to Limitorque should not constitute notice of the terminal block issue. Therefore, application of this factor does not support a "clearly should have known" finding.

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1 In this regard, lack of specific identifying marks on each subcomponent part does not equate to lack of qualification.

4. Factor 4: "Did some licensees identify similar problems and correct them before the deadline?"

With regard to the fourth factor, CP&L recognizes that some licensees may have identified and corrected specific qualification problems as a result of focused inspections. However, CP&L submits that for this to be relevant for enforcement purposes, (1) the identification must be in a process which reflects a systematic, planned inspection or review effort which led to identification and (2) a substantial number of licensees must have identified the problem. If a licensee "stumbled on" the problem, this provides little basis for concluding that the reasonable licensee should also have so "stumbled." Further, if only a few licensees discovered the problem, this likewise provides little evidence that the reasonable licensee should have been focusing on that particular item at that particular time.

With regard to the Limitorque issue, it is CP&L's understanding that only a few licensees identified and corrected the problem before November 30, 1985 and that most, if not all, such licensees identified the problem by "stumbling on" it. Accordingly, CP&L maintains that application of this factor does not support a "clearly should have known" finding.

III. CONCLUSION

Carolina Power & Light Company submits that in applying the factors to the concerns raised in the Notice regarding loop accuracy and qualification of terminal blocks in Limitorque valve operators there is little evidence to conclude that CP&L clearly should have known prior to November 30, 1985 of the specific qualification problems specified in the Notice. In fact, the bulk of the evidence available before that time indicated that no such problems existed.