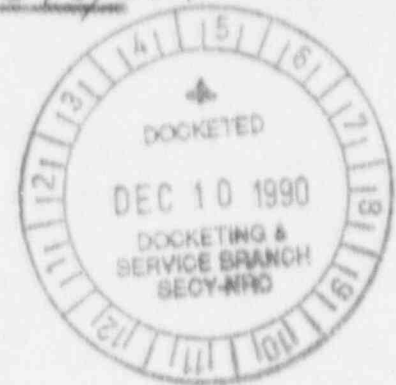




DOCKET NUMBER  
PROD. & UTIL. FAC. 50-348/364-CIVP  
UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

December 6, 1990



MEMORANDUM FOR: B. Paul Cotter, Jr.  
Chief Administrative Judge  
Atomic Safety and Licensing Board Panel

FROM: Samuel J. Chilk, Secretary *SB*

SUBJECT: REQUEST FOR HEARING OF ALABAMA POWER COMPANY

REFERENCE: EA 88-40

Attached is a "Request for an Enforcement Hearing" dated November 15, 1990 and filed by the Alabama Power Company. The hearing request was filed in response to an "Order Imposing a Civil Monetary Penalty" for violations of NRC requirements that occurred at the Joseph M. Farley Nuclear Power Plant Units 1 and 2. The Order was published in the Federal Register at 55 Fed. Reg. 35203 (August 28, 1990). (Copy of Notice attached)

The hearing request is being referred to you for appropriate action in accordance with 10 C.F.R. 2.772(j).

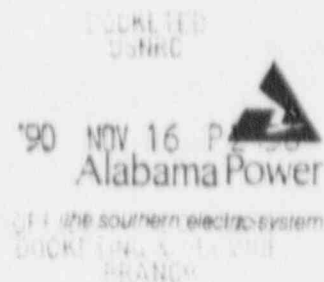
Attachments: As stated

cc: Commission Legal Assistants  
OGC  
EDO  
ASLAP  
NRR  
Director, Office of Enforcement  
Regional Administrator,  
Region II  
Nicholas S. Reynolds, Esquire  
James H. Miller, III, Esquire  
Counsel to Alabama Power Company  
W. G. Hairston, III, Senior Vice President  
Nuclear Operations  
Alabama Power Company

Alabama Power Company  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, Alabama 35201  
Telephone 205-868-5581

W. G. Hairston, III  
Senior Vice President  
Nuclear Operations

November 15, 1990



Docket Nos. 50-348  
50-364

Enforcement Action: 88-40

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

Attention: Document Control Desk

Joseph M. Farley Nuclear Plant - Units 1 and 2  
Request for an Enforcement Hearing

Dear Mr. Lieberman:

This letter transmits Alabama Power Company's request for an enforcement hearing on the issues raised by Enforcement Action 88-40 and the Order Imposing a Civil Monetary Penalty dated August 21, 1990. Such issues include, but are not necessarily limited to, whether Alabama Power Company violated the Nuclear Regulatory Commission's Environmental Qualification (EQ) regulations as set forth in the Notice of Violation and Proposed Imposition of Civil Penalty (NOV) and whether the Order Imposing a Civil Monetary Penalty should be sustained.

Alabama Power Company regrets having to request a hearing in this matter. In its detailed response dated November 14, 1988 to the NOV, Alabama Power Company presented clear and objective evidence that, in many of the instances identified as regulatory violations by the NRC staff, Alabama Power Company in fact exercised prudent and acceptable engineering judgment. Moreover, many of the deficiencies cited in Alabama Power Company's Environmental Qualification program were minor ones, lacking in safety significance, and do not provide a basis for an escalated enforcement action and the extraordinary civil penalty imposed. Even after reviewing and considering the NRC staff's recent written evaluation of the detailed response, Alabama Power Company still believes that its position is justified. Alabama Power Company therefore has no recourse now but to request a hearing.

Notwithstanding this request, please be assured that Alabama Power Company will continue to operate its licensed facilities with the highest possible regard for public health and safety. Alabama Power Company's objective in requesting a hearing in this enforcement action is to demonstrate through the adjudicatory process the professionalism and sound judgment which was exercised in complying with the EQ regulations. Moreover, you

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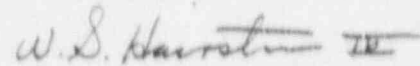
Mr. James Lieberman  
Director  
Office of Enforcement  
United States Nuclear Regulatory Commission  
Page 2

are assured that during the course of resolving the issues raised by the request for hearing, Alabama Power Company and its attorneys will cooperate fully with the NRC staff and its attorneys so that the matter can be concluded responsibly, courteously and expeditiously.

Of course, Alabama Power Company is always willing to discuss the matter further in any appropriate forum should you decide to do so.

Respectfully submitted,

ALABAMA POWER COMPANY

  
W. G. Hairston, III

WGH, III/RWS:mgd 25.40

Enclosure

cc: Mr. S. D. Ebnetter  
Mr. S. T. Hoffman  
Mr. G. F. Maxwell

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Alabama Power Company )  
Enforcement Action 88-40 )

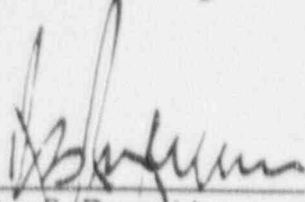
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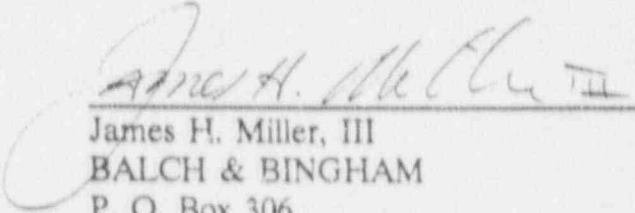
REQUEST FOR AN ENFORCEMENT HEARING

Pursuant to 10 CFR 2.205, Alabama Power Company (hereinafter referred to as "APCo") hereby requests a hearing on all of the issues raised by the Order Imposing a Civil Monetary Penalty dated August 21, 1990. Those issues include, but are not necessarily limited to, the following:

- 1) Whether APCo was in violation of the Commission's requirements as set forth in the Notice of Violation and Proposed Imposition of Civil Penalty dated August 15, 1988.
- 2) Whether, on the basis of such violations, the Order imposing a Category "A" violation and escalated civil penalty of \$450,000 is justified under the circumstances of this case.

APCo requests that the Nuclear Regulatory Commission issue an Order designating the time and place of such hearing, appoint a Presiding Administrative Law Judge and otherwise conforming to the Commission's Rules of Practice and Procedures.

  
\_\_\_\_\_  
Nicholas S. Reynolds  
David A. Repka  
WINSTON & STRAWN  
1400 L Street, N.W.  
Washington, D. C. 20005  
(202) 371-5700

  
\_\_\_\_\_  
James H. Miller, III  
BALCH & BINGHAM  
P. O. Box 306  
Birmingham, AL 35201  
(205) 251-8100

Attorneys for Alabama Power Company

*90H270011*

*2PP-*

CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing has been served upon all those listed below at the addresses shown by hand, or, as noted with an asterisk (\*) via Federal Express, or as noted by two asterisks (\*\*), by deposit in First Class United States mail, on this the 16th day of November, 1990.

Mr. James Lieberman, Director  
Office of Enforcement  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, Maryland 20852

Mr. Lawrence Chandler  
Assistant General Counsel  
for Enforcement  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, Maryland 20852

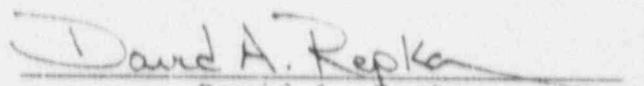
U.S. Nuclear Regulatory Commission\*\*  
Attn: Document Control Desk  
Washington, D.C. 20555

Mr. S.D. Ebner\*  
Regional Administrator, Region 2  
U.S. Nuclear Regulatory Commission  
101 Marietta Street, N.W.  
Atlanta, Georgia 30323

Mr. G.F. Maxwell\*  
Resident Inspector  
U.S. Nuclear Regulatory  
Commission  
Joseph M. Farley Nuclear  
Plant  
Highway 95 South  
Columbia, Alabama 36319

Mr. Samuel Chilk, Secretary\*\*  
U.S. Nuclear Regulatory  
Commission  
11555 Rockville Pike  
Rockville, Maryland 20852

Mr. Stephen T. Hoffman\*\*  
Senior Project Manager  
U.S. Nuclear Regulatory  
Commission  
11555 Rockville Pike  
Rockville, Maryland 20852

  
David A. Repka

**NATIONAL COMMISSION FOR  
EMPLOYMENT POLICY****Hearing: Vermont****ACTION:** Notice of hearing.

**SUMMARY:** Pursuant to the provisions of the Federal Advisory Committee Act (Pub. L. 92-463; 86 Stat. 770) notice is hereby given of a public hearing on "Overcoming Employment Barriers Experienced by Individuals with Disabilities", to be held in the Memorial Lounge of the Waterman Building, University of Vermont, Burlington, Vermont.

**DATE:** Monday, September 10, 1990; 9 a.m.—11:30 a.m.

**Status:** The hearing is to be open to the public.

**Matters to be discussed:** The purpose of this public hearing is to enable the Commission members to examine the challenges to public policy and publicly supported training and educational institutions resulting from the increasing numbers of individuals with disabilities who will be entering the labor force during the 1990's. Federal, state and local elected officials have been invited to attend. Other persons invited to testify are representatives of education, training programs, employers, and program participants.

Interested parties may submit written testimony either prior to or after the official hearing date, but no later than October 7, 1990 to the Commission headquarters, attn: Kathi Ladner. This will be the second of two in a series of hearings that will be conducted in September.

**FOR FURTHER INFORMATION CONTACT:** Barbara C. McQuown, Director, National Commission for Employment Policy, 1522 K Street NW., Suite 300, Washington, DC 20005 (202) 724-1545.

**SUPPLEMENTARY INFORMATION:** The National Commission for Employment Policy was established pursuant to Title IV-F of the Job Training Partnership Act (Pub. L. 97-300). The Act charges the Commission with the broad responsibility of advising the President, and the Congress on national employment issues. Handicapped individuals wishing to attend should contact the Commission so that appropriate accommodations can be made. Minutes of the hearing will be available for public inspection at the Commission's headquarters, 1522 K Street NW., Suite 300, Washington, DC 20005.

Signed at Washington, DC, this 23d day of August, 1990.

**Barbara C. McQuown,**

*Director, National Commission for  
Employment Policy.*

[FR Doc. 90-20283 Filed 8-27-90; 8:45 am]

**BILLING CODE 4510-25-M**

**Hearing: Rhode Island****ACTION:** Notice of hearing.

**SUMMARY:** Pursuant to the provisions of the Federal Advisory Committee Act (Pub. L. 92-463; 86 Stat. 770) notice is hereby given of a public hearing on "Overcoming Employment Barriers Experienced by Individuals with Disabilities", to be held in Courtroom 314, at 318 Federal Building, Providence, Rhode Island.

**DATES:** Friday, September 7, 1990; 9 a.m.—11:30 a.m.

**Status:** The hearing is to be open to the public.

**Matters to be discussed:** The purpose of this public hearing is to enable the Commission members to examine the challenges to public policy and publicly supported training and educational institutions resulting from the increased numbers of individuals with disabilities who will be entering the labor force during the 1990's. Federal and state elected officials have been invited to attend. Other persons invited to testify represent State and local government agencies that administer JTPA-funded and other training programs, as well as employers and educators.

Interested parties may submit written testimony either prior to or after the official hearing date, but no later than October 5, 1990 to the Commission headquarters, attn: Kathi Ladner. This will be one of two in a series of hearings that will be conducted in September.

**FOR FURTHER INFORMATION CONTACT:** Barbara C. McQuown, Director, National Commission for Employment Policy, 1522 K Street, NW., Suite 300, Washington, DC 20005 (202) 724-1545.

**SUPPLEMENTARY INFORMATION:** The National Commission for Employment Policy was established pursuant to Title IV-F of the Job Training Partnership Act (Pub. L. 97-300). The Act charges the Commission with the broad responsibility of advising the President, and the Congress on national employment issues. Handicapped individuals wishing to attend should contact the Commission so that appropriate accommodations can be made. Minutes of the hearing will be available for public inspection at the Commission's headquarters, 1522 K

Street NW., Suite 300, Washington, DC 20005.

Signed at Washington, DC, this 23d day of August, 1990.

**Barbara C. McQuown,**

*Director, National Commission for  
Employment Policy.*

[FR Doc. 90-20284 Filed 8-27-90; 8:45 am]

**BILLING CODE 4510-25-M**

**NUCLEAR REGULATORY  
COMMISSION**

[Docket Nos. 50-348 and 50-364; License Nos. NPF-2 and NPF-6 EA 66-40]

**Alabama Power Co.; Joseph M. Farley Nuclear Plant Units 1 and 2; Order Imposing Civil Monetary Penalty**

I

Alabama Power Company, Birmingham, Alabama (APCo or licensee) is the holder of Operating License Nos. NPF-2 and NPF-6 (licenses) issued by the Nuclear Regulatory Commission (Commission or NRC) on June 25, 1977 and March 31, 1981, respectively. The licenses authorize the licensee to operate the Joseph M. Farley Nuclear Plant Units 1 and 2 located near Dothan, Alabama in accordance with the conditions specified therein.

II

NRC inspections of the licensee's activities under the licenses were conducted on September 14-18, 1987, November 2-6, and November 16-20, 1987. The results of these inspections indicated that the licensee had not conducted its activities in full compliance with NRC requirements. A written Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was served upon the licensee by letter dated August 15, 1988. The Notice reflected application of the "Modified Enforcement Policy Relating to 10 CFR 50.49, 'Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants'" (Modified Policy) enclosed with Generic Letter 88-07 (April 7, 1988). The Notice stated the nature of the violations, the provision of the NRC's requirements that the licensee had violated, and the amount of the civil penalty proposed for the violations. The licensee responded to the Notice by letter dated November 14, 1988. In its response, the licensee denied all but two of the violations and contended that the Notice of Violation and Proposed Imposition of Civil Penalty should be

dismissed or that the proposed civil penalty should be fully mitigated.

### III

After consideration of the licensee's response and the statements of fact, explanations, and argument for full mitigation contained therein, the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations, and Research has determined that, as set forth in appendix A to this Order, the violations occurred as stated, the Modified Policy was properly applied, the violations were properly classified as a Category A problem under the Modified Policy, and the escalation and mitigation factors of the Modified Policy were properly applied to the base civil penalty. Accordingly, a civil penalty of \$450,000 should be imposed.

### IV

In view of the foregoing and pursuant to section 234 of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2282 (Act), and 10 CFR 2.205, it is hereby ordered that:

The licensee pay a civil penalty in the amount of Four Hundred Fifty Thousand Dollars (\$450,000) within 30 days of the date of this Order, by check, draft, or money order, payable to the Treasurer of the United States and mailed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555.

### V

The licensee may request a hearing within 30 days of the date of this Order. A request for a hearing shall be clearly marked as a "Request for an Enforcement Hearing" and shall be addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with copies to the Assistant General Counsel for Hearings and Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555; the Regional Administrator, Region II, 101 Marietta Street, N.W., Atlanta, Georgia 30323; and to the NRC Resident Inspector, Joseph M. Farley Nuclear Plant.

If a hearing is requested, the Commission will issue an Order designating the time and place of the hearing. If the licensee fails to request a hearing within 30 days of the date of this Order, the provisions of this Order shall be effective without further proceedings. If payment has not been made by that time, the matter may be referred to the U.S. Attorney General for collection.

In the event the licensee requests a hearing as provided above, the issues to be considered at such hearing shall be:

(a) Whether the licensee was in violation of the Commission's requirements as set forth in the Notice of Violation and Proposed Imposition of Civil Penalty referenced in section II above, and

(b) Whether, on the basis of such violations, this Order should be sustained.

Dated at Rockville, Maryland, this 21st day of August 1990.

For the Nuclear Regulatory Commission,  
James H. Sulezsek,  
Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations, and Research.

### Appendix A

On August 15 1988, the NRC staff issued a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) to Alabama Power Company (APCo or licensee) for failure to qualify electrical equipment important to safety as required by 10 CFR 50.49. The Notice identified three violations with eight examples, identified as I.A.1, I.A.2, I.B.1, I.B.2, I.C.1, I.C.2, I.C.3, and I.C.4, which were judged to be significant and warranting escalated enforcement under the "Modified Enforcement Policy Relating to 10 CFR 50.49, Environmental Qualification (EQ) of Electrical Equipment Important to Safety for Nuclear Power Plants" (Modified Policy) enclosed with Generic Letter (GL) 88-07 (April 7, 1988). One additional violation was classified in the Severity Level IV category (Violation II), for which no civil penalty was proposed.

APCo responded to the Notice in a letter dated November 14, 1988. In this reply and answer to the Notice, APCo denied all the violations except for two items of Violation I.C.1. In addition, APCo argued that (1) The Modified Policy legally deficient; (2) the Notice fails to apply the Modified Policy properly; (3) enforcement is not warranted because the "clearly should have known" test set forth in the Modified Policy was not met; (4) the NRC staff incorrectly classified the violations as significant; and, (5) the Notice does not appropriately apply the mitigation and escalation factors. Thus, APCo sought either withdrawal of the Notice or full mitigation of the civil penalty. The NRC staff's evaluations and conclusions regarding the licensee's response, including a restatement of each violation and a summary of the licensee's positions on each issue follow.

### Part I—Discussion of General matters Related to the Modified Policy

Attachment 1, Section II.A and Attachment 2, Section III: The Modified Policy Is Legally Deficient

Attachment 2, Section III.A: The Modified Policy Fails to Consider the Safety Significance of any EQ violations

Attachment 2, Section III.B: The Modified Policy was not Properly Promulgated

Attachment 2, Section V.F: The Staff's Assessment of the EQ Violation Category was Flawed

The licensee contended that the Modified Policy is contrary to Commission policy and practice and fails to consider sufficiently the safety significance of any alleged EQ deficiency. The licensee has therefore taken the position that "the Modified Enforcement Policy is legally flawed and any action pursuant to it should be set aside."

The licensee argued that (1) The NRC staff must consider actual safety significance to set the severity level of a violation and to assess civil penalties, and in failing to do so, improperly categorized these violations; (2) the NRC staff errs in declining to consider additional information regarding the qualification of equipment obtained or developed after an inspection; (3) the NRC staff was required to use notice and comment rulemaking procedures to adopt the Modified Policy; and (4) the effects of the Modified Policy are retroactive, and not prospective.

NRC Staff's Evaluation of Licensee's Response in Attachment 1, Section II.A and Attachment 2, Section III, Section III.A, Section III.B, and Section V.F

The licensee argued that the NRC staff must consider actual safety significance item-by-item to set the severity level of a violation and to assess civil penalties. However, the Commission in promulgating 10 CFR 50.49 determined that a licensee's failure to demonstrate the environmental qualification of electrical equipment important to safety was a significant safety matter. In the area of environmental qualification, a licensee's inability to present documented knowledge of whether equipment important to safety is capable of operating in a harsh environment indicates that the licensee cannot predict whether such equipment will operate in the event of an accident in which it is called upon to perform its intended safety function. Accordingly, a licensee who lacks such knowledge

cannot assure protection of the public health and safety in the event of an accident resulting in a harsh environment.

The environmental qualification regulations require licensees to qualify each item of electrical equipment important to safety. The regulations further require each licensee to list each item of electrical equipment important to safety on a master list. All such listed items, by definition, perform important safety functions. Thus, safety significance is inherent with respect to each item on the list or each item that should be on the list. In this case, all the electrical equipment for which the NRC staff found violations was important to safety as defined in 10 CFR 50.49(b).

As explained in the Modified Policy, the Commission has aggregated individual violations of 10 CFR 50.49 to determine the extensiveness of qualification problem represented by those individual violations in order to assess a civil penalty. The Commission developed Categories A, B, and C based on the extensiveness of the violations, which reflect the overall pervasiveness and general safety significance of the significant EQ violations. In instances where a licensee committed isolated individual violations, the licensee could not assure the operation during an accident of a limited number of systems affected by the isolated individual violations. Because a small number of safety systems or components could fail during an accident as a result, such violations are classified as Category C. If the violations affected a moderate number of systems, the violations would be more significant than those in Category C because the licensee could not ensure that a correspondingly greater number of systems would operate in the event of an accident. Accordingly, the likelihood that an accident could endanger public health and safety would be increased and such violations are classified as Category B. An extensive problem would be most significant because the licensee's lack of knowledge of equipment qualification would extend to many systems and the licensee would be unable to assure that these systems would perform their intended functions in an accident resulting in a harsh environment. Therefore, such violations are classified as Category A. In summary, while this method does not consider the specific effects of the postulated failure of each unqualified item of electrical important to safety, it does provide an appropriate measure of the safety significance of environmental qualification violations.

In this case, the licensee properly classified many components as important to safety as required by 10 CFR 50.49 but, as specifically described below, failed to have adequate documentation to support qualification of some of those components. Additionally, as described below, the licensee failed to classify other electrical components as important to safety and therefore did not demonstrate whether these components would function as required. Because the licensee failed to qualify many electrical components important to safety, which affected many systems, the licensee could not assure that these components and systems would function if called upon to do so, thus committed a significant safety violation, which the NRC staff properly classified as Category A.

As an example of the NRC staff's alleged failure to consider actual safety significance, the licensee argued that the violation is not safety significant if the unqualified component would have been qualified had the licensee performed the appropriate analysis or collected the appropriate data before the deadline given in 10 CFR 50.49. The NRC staff rejects this argument. As stated above, the licensee's failure to provide assurance prior to the deadline that the electrical equipment important to safety was qualified is a safety significant violation. The NRC staff requires licensees to have detailed knowledge of the quality of installed electrical equipment important to safety in the plant to ensure that licensees have a technically sound basis for making assessments of plant safety. While the licensee's action to qualify equipment after the discovery of the violations is important corrective action, which the NRC staff considers in deciding whether to take further enforcement action, including assessing further civil penalties, the licensee's performance of new analysis or collection of new data that yield fortuitously positive results does not affect the licensee's prior lack of knowledge. Neither the licensee nor the NRC staff could have known in advance whether the new analysis or data would indicate that such equipment would function when called upon to do so during an accident resulting in a harsh environment. The regulations required a licensee to know whether electrical equipment important to safety would function as intended during and following a design basis event before operating its nuclear reactor after November 30, 1985. In this case, the licensee's failure to qualify electrical equipment important to safety, and its

consequent lack of knowledge concerning that equipment resulted in the licensee's inability to assure that such equipment would function in the event of an accident, which is a significant safety violation.

The licensee also argued that the NRC staff erred in declining to consider additional information regarding the qualification of equipment obtained or developed after an inspection. As stated above, the NRC staff rejects this argument because 10 CFR 50.49 requires that the licensee have advance knowledge that its equipment is qualified. Favorable information developed after identification of a violation does not reduce the significance of the preexisting lack of knowledge concerning equipment qualification. The only exceptions to this rule include cases in which a documentation deficiency is essentially one of a minor nature which is readily correctable based on knowledge, tests, or analyses that existed prior to the qualification deadline and was then readily available to the licensee. The NRC staff would consider such violations as Severity Level IV or V. Accordingly, the licensee was incorrect in asserting that the NRC staff erred by failing to consider additional test data or analyses, whether already existing or developed after identification of the violations.

In this case, the licensee failed to have sufficient documentation, including adequate analyses, in qualification files prior to November 30, 1985, to support the environmental qualification of equipment important to safety affecting many systems and components. Moreover, the licensee could not have corrected the deficient files prior to the deadline because it did not have information, tests, or analyses available in any location that would demonstrate qualification. This is discussed in detail in other sections of the Appendix.

The licensee argued that the NRC staff was required to use rulemaking notice and comment procedures to adopt the Modified Policy. The Modified Policy is not a rule or regulation and, therefore, the Administrative Procedure Act (APA) rulemaking requirements, including the notice and comment provisions, do not apply. The Commission's "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR part 2, appendix C (General Enforcement Policy), provides general guidance on how the Commission intends to achieve the purposes set forth in it, namely, to promote and protect the health and safety of the public from radiological hazards. The General Enforcement



Policy is a policy, not a regulation. The Commission may deviate from this statement of policy and procedure as is appropriate under the circumstances of a particular case." The Commission has consistently taken this position since the proposed interim General Enforcement Policy was first published in October 1980. The General Enforcement Policy clearly allows such deviations, and the Commission need not promulgate a rule to do so. The Modified Policy sets forth how the Commission has deviated from the General Enforcement Policy in the context of environmental qualification violations existing after the November 30, 1985 deadline. Accordingly, neither the APA nor any other statute required the Commission to promulgate the Modified Policy or any other policy statement by using rulemaking notice and comment procedures.

The licensee argued further that the effects of the Modified Policy are retroactive, and not prospective. With respect to this argument, the licensee contended it did not have prior notice of how the NRC was going to exercise its enforcement discretion in environmental qualification cases. However, on August 6, 1985, the NRC's Director of Licensing sent Generic Letter (GL) 85-15 to all licensees of operating reactors informing them of how the Commission intended to exercise its enforcement discretion, in accordance with the General Enforcement Policy, in response to violations of 10 CFR 50.49. Thus, on August 6, 1985, well before the 10 CFR 50.49 deadline of November 30, 1985, the Commission informed licensees that violations of environmental qualification requirements would be dealt with differently from most other violations. Furthermore, GL 85-15 stated that the NRC staff would impose daily civil penalties for any unqualified item of electrical equipment and that such an item is unqualified if there is not adequate documentation to establish that it will perform its intended safety functions in the relevant environment. GL 85-15 prospectively gave notice that the Commission would treat every individual violation of 10 CFR 50.49 as safety significant. Additionally, insofar as application of the Modified Policy would lower the amount of civil penalties proposed for violations of 10 CFR 50.49 occurring prior to November 30, 1985, which is the general case, a licensee cannot claim that the Modified Policy prejudices it.

#### Attachment 1, Section II.B, and Attachment 2, Section IV: The Notice Fails to Apply the Modified Policy Properly

The licensee contended that the Notice issued by the NRC staff is deficient in the application of the Modified Policy in that: (1) The Notice fails to articulate clearly and concisely a sufficient factual basis for its conclusion that the licensee clearly should have known of the alleged violations; (2) such basis cannot be developed; (3) if consideration of APCo actions were to be based on the state of knowledge that existed in the industry in November 1985, the proposed violations would be unsupported; (4) the Notice fails to consider technical positions previously accepted by the NRC staff and now modifies those positions without performing the requisite backfit analysis; and (5) the Notice fails to consider the licensee's legitimate exercise of engineering judgment.

#### NRC Staff's Evaluation of Licensee's Response in Attachment 1, Section II.B, and Attachment 2, Section IV

The NRC staff disagrees with the licensee's contentions and concludes that the Notice provided to the licensee was consistent with the Modified Policy. In summary, and as further discussed in later sections, the NRC staff described the basis for its conclusion that the licensee clearly should have known of the EQ deficiencies in the cover letter transmitting the Notice to the licensee. In addition, the NRC staff considered the industry's state of knowledge and the NRC staff's past technical positions prior to November 1985, and maintains the conclusion that the licensee clearly should have known of the EQ deficiencies. Further, the NRC staff considered the licensee's use of undocumented engineering judgment, but also considered the requirements of 10 CFR 50.49 which specify that a record of qualification be maintained in an auditable form. Undocumented engineering judgment is not auditable. As described in detail in the following sections, the NRC staff believes that it has applied the Modified Policy properly and that the violations have been properly categorized.

#### Attachment 2, Section IV.A: The Notice of Violation Fails to Establish, In Accordance with Section II of the Modified Policy, That Alabama Power Company "Clearly Should Have Known" of the Alleged Violations

The licensee contended that the Commission directed the NRC staff to take enforcement action under the

Modified Policy only if a licensee clearly should have known that it was not in compliance with 10 CFR 50.49 by November 30, 1985, and that the Notice failed to establish that the licensee clearly should have known of the alleged violations. In addition, the licensee contended that the NRC staff was to balance the four factors described in GL 85-15 and GL 85-07 for each violation to determine if the "clearly should have known" standard was met. The licensee argued that the Notice failed to include a specific analysis of the four factors and the factors relied upon to conclude that the "clearly should have known" criterion had been met. The licensee concluded, therefore, that the NRC staff's action is contrary to law and violates the spirit of the General Enforcement Policy.

The licensee further contended that the NRC staff must recognize the evolving nature of EQ knowledge and that knowledge developed after the deadline should not serve as a basis for enforcement action.

#### NRC Staff's Evaluation of Licensee's Response in Attachment 2, Section IV.A

The NRC staff, in the context of applying the Modified Policy, agrees that the licensee should be provided with sufficient information regarding the staff's finding that it clearly should have known of the unqualified equipment to provide the licensee with an opportunity to contest that finding. The NRC staff agrees that, in general, a licensee's knowledge of the requirement alone might be insufficient to satisfy this test, as would the mere recitation that a licensee "clearly should have known" of a problem. Several steps have been taken so as to provide the licensee with the appropriate information. First, the Modified Policy was made available to the licensee, which describes how the test may be satisfied. Second, the NRC inspection report, which was sent to the licensee before the enforcement conference, and upon which the enforcement action is based, documents the NRC staff's findings that formed the basis for the "clearly should have known" conclusion. Third, an enforcement conference was held prior to issuance of the Notice at which each finding was discussed in detail. Finally, the NRC staff articulated in the cover letter which transmitted the Notice the reasons why it believes the licensee clearly should have known of the EQ deficiencies. In the cover letter the NRC staff has highlighted the significant facts supporting the staff's conclusion. The NRC staff disagrees that the cover letter's explanation of the staff's basis

for the conclusion must be exhaustive and include discussion of all facts and factors considered. The NRC staff's approach is consistent with the approach taken under the General Enforcement Policy whenever the NRC staff makes certain judgments in determining the severity level of a violation, applying the escalation or mitigation factors to a base civil penalty amount, or determining the degree of willfulness surrounding a violation.

In those cases, the NRC staff provides the licensee with notice and a meaningful opportunity to respond. The opportunities for the licensee to more fully explore the NRC staff's basis include a reply to the inspection report, discussions during the enforcement conference, a formal reply to the Notice, and a formal reply to the Order imposing the civil penalty requesting a hearing.

The NRC staff rejects the licensee's position that the NRC staff has to balance the factors in deciding whether the licensee clearly should have known of the lack of proper environmental qualification before the deadline. The Modified Policy states that the NRC staff will examine the circumstances in each case to determine whether the licensee clearly should have known that its equipment was not qualified. The factors set forth in the Modified Policy simply include the types of information the NRC staff will consider in examining the circumstances of each case. If one factor demonstrates that the licensee clearly should have had the required knowledge, the absence of facts under the other factors to demonstrate that knowledge does not negate the NRC staff's finding. The NRC staff does consider all available information and circumstances in making its finding, including extenuating factors that would prevent a licensee from knowing that it had unqualified equipment where otherwise the licensee clearly should have known of the deficiencies before the deadline. However, the Modified Policy does not instruct the NRC staff to balance factors that do not demonstrate that the licensee clearly should have known of unqualified equipment against those that do, nor is there any reason to do so. Accordingly, the NRC staff does not balance the factors listed in the Modified Policy to decide if the licensee clearly should have known that it had not qualified electrical equipment, important to safety, but examines the totality of the circumstances for facts that demonstrate that the licensee clearly should have had the knowledge. A specific discussion of the NRC staff's bases for concluding that the licensee

clearly should have known of each violation is provided herein.

The licensee further contended that the NRC staff must recognize the evolving nature of EQ knowledge and that knowledge developed after the deadline should not serve as a basis for enforcement action. The NRC staff agrees, and in making a determination of whether the licensee clearly should have known of an EQ deficiency, the NRC staff considers whether the nature of the issue was an evolutionary process or whether sufficient knowledge was available prior to the EQ deadline to conclude that the licensee clearly should have known of the deficiency. The NRC staff exercised careful judgment in reviewing the state of knowledge which existed in the industry prior to the November 30, 1985 deadline and based its findings only on information available prior to the deadline.

Attachment 2, Section IV.B: The Notice of Violation is Fundamentally Flawed in that the Staff has Failed to Adhere to Commission Requirements Applicable to Changes to NRC Staff Positions

The licensee contended that in some of the alleged violations the NRC staff has proposed citations which are based on new or changed staff positions on what is necessary to demonstrate qualification due to evolving or more detailed EQ requirements. The licensee argued that enforcement action is inappropriate where the licensee's position has been presented to the NRC staff and the staff did not communicate its lack of acceptance of the position in a timely manner. Similarly, the licensee argues that once the NRC staff has accepted qualification of a particular item or a licensee's position in the NRC staff's Safety Evaluation Report (SER), any new position on what is necessary to demonstrate qualification should be addressed as a backfit issue.

NRC Staff's Evaluation of Licensee's Response in Attachment 2, Section IV.B

The NRC staff argues that a change in position on a particular EQ issue from those positions previously accepted should not be considered for enforcement action. However, this principle cannot be construed so broadly as to encompass broad approval of a licensee's EQ program plan. A program to qualify equipment achieves its goals only to the extent a licensee implements it: the NRC staff's acceptance of a licensee's proposed program approach does not mean acceptance of each and every component on the EQ master list. The NRC staff specifically stated in SERs that the implementation of the licensee's EQ program would be subject to future

inspections. The NRC staff recognizes that the specific approval of a particular item or component would weigh in the licensee's favor in the evaluation of whether the licensee clearly should have known of the EQ deficiency, but in this case the licensee has not demonstrated that the NRC specifically accepted any of the equipment configurations identified in the Notice. Additionally, other factors would also be considered, such as whether there was a change in the underlying basis of the NRC staff's acceptance due to the licensee's mistakes, including improper installation of the component causing the qualification to be invalid, which the NRC staff would have no reasonable opportunity to identify without doing an inspection. NRC staff approval of the licensee's proposed approach to the solution of a problem does not constitute NRC staff approval of the licensee's actual actions in correcting the problem.

The NRC staff maintains, as described in the following sections, that it has not changed its positions from those communicated to the licensee and therefore believes the NRC staff has valid bases for concluding that the licensee clearly should have known of the EQ deficiencies. Accordingly, 10 CFR 50.109, the Backfit Rule, does not apply.

Attachment 2, Section V.A.1: Consideration of Undocumented Engineering Judgment to Support Equipment Qualification

The licensee asserted that the Notice fails to properly consider the licensee's legitimate (and necessary) exercise of engineering judgment in making determinations as to the qualification of electrical equipment.

The licensee argues further that a qualification file need only contain sufficient facts on which an experienced engineer could use engineering judgment to establish qualification in order to satisfactorily document qualification.

NRC Staff's Evaluation of Licensee's Response in Attachment 2, Section V.A.1

10 CFR 50.49(f) requires that each item of electric equipment important to safety be qualified by testing of, or experience with, identical or similar equipment under conditions identical or similar to postulated harsh environmental conditions, with a supporting analysis to show similarity, or by analysis in combination with partial type test data. In addition, 10 CFR 50.49(j) requires that a record of qualification be maintained in an auditable form for the entire period during which the covered item is

installed in the plant. The DOR Guidelines (Enclosure 4 to IE Bulletin 79-01B), issued on November 13, 1979, discuss qualification methods in Section 5. These guidelines state that the choice of qualification method employed for a particular application of equipment is largely a matter of technical judgment based on such factors as: (1) Severity of service conditions, (2) the structural and material complexity of the equipment, and (3) the degree of certainty required in the qualification procedure.

The DOR Guidelines further state that, based on these considerations, type testing is the preferred method of qualification and that, at a minimum, qualification for severe temperature, pressure, and steam service conditions for Class 1E equipment should be based on type testing. Also, Section 8 of the DOR Guidelines states that complete and auditable records must be available in order to document and validate qualification of equipment by any of the methods described in Section 5 of the DOR Guidelines. It further states that "these records should describe the qualification method in sufficient detail to verify that all of the guidelines have been satisfied."

The regulations as amplified in the DOR Guidelines establish the basis for the NRC staff position on the use of engineering judgment. The NRC staff has in the past and continues to find engineering judgment acceptable when used as part of a documented engineering analysis. For example, if testing a piece of equipment is precluded by physical size, then engineering judgments can be made as part of the qualification method to support engineering analysis. In addition, when equipment is qualified in accordance with 10 CFR 50.49(f), as noted above, and analysis is used as part of the qualification method, engineering judgment is an inherent part of the assumptions used. Therefore, the licensee is correct in its assertion that "the NRC has long recognized that engineering judgment is an important element of the nuclear regulatory scheme," and that "engineering judgment must necessarily be exercised in matters of design, calculation and assessment and compliance."

However, the licensee is incorrect in its assertion that the NRC staff should accept engineering judgment as a basis for demonstrating qualification in all cases. A record of qualification should be sufficiently detailed so that an individual knowledgeable in equipment qualification issues would be able to review and understand the basis for the determination that a component is

qualified. As stated above, the record shall contain "partial type test data \* \* \* to support the analytical assumptions and conclusions reached." (NUREG-0558, part I, § 2.1(2)). The DOR Guidelines state that "[t]he type test should only be considered valid for equipment identical in design and material construction to the test specimen. Any deviations should be evaluated as part of the qualification documentation." Further, "[t]he basis of qualification shall be explained to show the relationship of all facets of proof needed to support adequacy of the complete equipment." In short, in order to document the proper use of engineering judgment in qualifying under 10 CFR 50.49, the record should contain in an auditable form: (1) The partial data used in the analysis, (2) the assumptions on which the analysis is based, and (3) the reasoning that leads to the judgment of qualification. Therefore, the adequacy of information contained in the qualification file can only be determined on a case-by-case basis.

Undocumented engineering judgment does not provide a complete auditable record nor can it be independently scrutinized. Undocumented engineering judgment creates a void in that a licensee will not have an auditable record of the basis upon which a component was determined to be qualified. Such an approach can lead to significant problems over the life of a plant. The basis and details of the judgment could be re-defined by each individual who might attempt to reconstruct the rationale concerning qualification. Equipment qualification based on undocumented assumptions could later be inadvertently invalidated. Consequently, undocumented engineering judgment cannot demonstrate compliance with the EQ rule. Moreover, the licensee may not rely on engineering judgment to qualify equipment, even if documented, if that judgment is unreasonable. The NRC staff accepts documented engineering judgment only if it is technically sound.

Attachment 2, Section V.A.2: The Staff's Position Regarding the Nature and Scope of Walkdowns Expected of Licensees

The licensee asserted that neither the Commission's EQ regulations (10 CFR 50.49) nor written NRC staff guidance prior to the deadline stated that a licensee was required to conduct detailed walkdowns and disassembly of all equipment to confirm subcomponent part qualification. The licensee argued that the NRC staff has changed its position to require detailed walkdowns

and that the staff failed to comply with 10 CFR 50.109, the Backfit Rule, in changing its position. Moreover, the licensee argued that the regulations (which provide bounds for an acceptable EQ program) required that licensees have reasonable assurance that the equipment required to be qualified was identified and that the qualification documentation (coupled with acceptable engineering judgment) provided reasonable assurance that the equipment was qualified as installed. The licensee reasoned that it could rely on its Quality Assurance Program to install equipment as qualified and that it need not have disassembled components to inspect subcomponents therein.

NRC Staff's Evaluation of Licensee's Response in Attachment 2, Section V.A.2

The licensee asserts that "the Staff takes the position that 10 CFR 50.49 requires that licensees conduct detailed walkdowns and disassembly of EQ equipment to assure that the equipment is in the tested configuration and to provide an independent verification that subcomponent parts are indeed qualified." (APCo Response, Attachment 2, pg 15.) This assertion is incorrect. 10 CFR 50.49 does not explicitly require walkdowns or component disassembly, and the NRC staff does not assert that it does. Rather, the NRC staff's position is that at times licensees may need to rely on walk-downs to verify qualification of equipment. When a review of documentation or other information available to a licensee reveals or clearly should reveal apparent deficiencies, licensees are required to take additional action to establish compliance with 10 CFR 50.49. In this case, the failure by the licensee to perform walkdowns is not the reason for the violation; the essence of this enforcement action is the failure by the licensee to take appropriate action to establish equipment qualification when the nature of the existing EQ documentation and other information available to the licensee clearly did not establish that equipment was qualified. As stated in the Notice, "(APCo) failed to adequately review qualification files and walk down electrical equipment important to safety \* \* \* to ensure that the as-built configuration of electrical equipment and components were in accordance with [its] qualification files." (Notice at 2.) As the Notice emphasizes, adequate walkdowns would have assisted the licensee to discover a number of the violations. Given the inadequacy of the documentation and other information

available to the licensee for the individual violations discussed below, the licensee clearly should have known of the violations. While not required by 10 CFR 50.49, walkdowns would have been an appropriate action to take in certain cases in order to identify equipment, its location, and the need to qualify equipment at that location and thereby assist in establishing equipment qualification.

A licensee may have decided that walkdowns were not necessary and that qualification could be determined otherwise. However, this approach to equipment qualification has a significant liability. Specifically, this liability is that modifications made in the field are not always reflected in final design documentation or other documents. As a result, in some cases, this approach, absent adequate engineering or quality controls, may lead to the failure to qualify some pieces of equipment that 10 CFR 50.49 requires to be qualified. As previously stated, walkdowns are not a requirement of 10 CFR 50.49, however, because walkdowns provide a very reliable method of identifying equipment and its location, they help to identify field modifications. Moreover, the verification of equipment identity and location has arisen in regard to requirements other than equipment qualification. System walkdowns have repeatedly, both before and after November 30, 1985, been demonstrated as an important part of determining whether or not a system meets applicable NRC regulatory requirements; such walkdowns frequently have shown that system configuration is different from that which is documented.

As for the licensee's assertion of an NRC staff requirement of disassembly of all equipment to confirm subcomponent part qualification, the NRC staff's position in this regard has not changed. It has always been required that the installed configuration must represent the tested configuration. NRC Information Notice 83-72 provides an example where components (terminal blocks, wiring, etc.) internal to a Limitorque valve operator, which was obtained from a vendor, were found to be unqualified for the anticipated service condition. Therefore, if equipment is obtained for use in a plant, the licensee must verify that the test report used to demonstrate qualification is representative of the obtained equipment. This verification may involve disassembly. For example, in the case of Limitorque operators, as discussed in IN 83-72, different internal wiring, insulation, terminal blocks, or

other components different from those tested were found in installed Limitorque operators. Additionally, as discussed above, the licensee is responsible to ensure that modification made in the field after the equipment is installed in the plant do not invalidate the equipment's environmental qualification. Thus, it is the NRC staff's position that the degree of disassembly, if any, necessary to assure that components are properly qualified is subject to a case-by-case determination.

**Attachment 2, Section V.A.3: The NOV Incorrectly Equates Documentation Deficiencies with Unqualified Equipment, Contrary to Regulation and Staff Positions Taken Prior to November 30, 1985**

The licensee contended that the NRC staff is misinterpreting 10 CFR 50.49 in declaring that equipment for which qualification is merely undocumented is unqualified. APCo maintained that "unqualified" means exactly what it says, i.e., for whatever reason, the piece of equipment will not perform its intended function. APCo considered that this meaning is fully consistent with previous NRC staff practice. APCo contended that an appropriate application of this principle would result in the NRC staff finding a violation of 10 CFR 50.49(f) only in those instances where the equipment is neither qualified nor qualifiable, i.e., where there are severe anomalies or failure of the test specimen that would indicate the inability of the equipment to perform its intended safety function.

**NRC Staff's Evaluation of Licensee's Response in Attachment 2, Section V.A.3**

According to 10 CFR 50.49(f), equipment can be qualified by testing of, or experience with, identical or similar equipment under conditions identical or similar to postulated harsh environmental conditions with analysis sufficient to demonstrate similarity, or by analysis in combination with partial type test data. If documented test data and experience, together with analyses, do not demonstrate equipment will operate in a harsh environment during an accident when called on to do so, that equipment is unqualified. Section 50.49(j) has required licensees to document qualification by data and appropriate analyses since it was issued in 1983. Accordingly, the NRC staff rejects the licensee's definition of "unqualified."

Prior to issuing GL 85-15, however, the NRC staff generally used the expression "unqualified equipment" to refer to equipment that had failed a

qualification test. Equipment lacking the necessary qualification documentation was classed as "equipment qualification not established." This approach allowed licensees to pursue qualification by testing in order to comply with the EQ rule within the deadline. When the NRC staff issued GL 85-15 on August 6, 1985, it specifically stated that "unqualified equipment" meant equipment for which there was not adequate documentation to establish that the equipment would perform its intended functions in the relevant environment, as defined in the regulation. This definition was established before November 30, 1985, the EQ deadline. It is this definition which the NRC staff has used in its enforcement actions.

The approach or definition proposed by APCo would limit 10 CFR 50.49 applicability to equipment which has been tested. APCo's definition would permit the use of untested equipment, simply because such equipment would not have demonstrated any anomalies or failed any tests. Such an approach would defeat the clear purpose of the regulation.

Therefore, as established in GL 85-15, and consistent with 10 CFR 50.49, "unqualified equipment means equipment for which there is not adequate documentation to establish that this equipment will perform its intended functions in the relevant environment."

**Attachment 2, Section V.A.4: The Modified Policy Allows the Staff to Categorize as "Not Sufficiently Significant" Under Section III Certain Violations Identified By Licensees**

The licensee contended that licensee-identified violations, as well as NRC-identified violations, should not be deemed significant EQ violations if the deficiencies are promptly corrected by determining the equipment is qualified or qualifiable.

**NRC Staff's Evaluation of Licensee's Response in Attachment 2, Section V.A.4**

The NRC staff agrees that there should not be a distinction between licensee and NRC-identified violations if the equipment affected is demonstrated to be qualified with existing information within a short period of time. The licensee's identification of the violation, however, does not lessen the violation's significance. Rather, the scope of the corrective action required to achieve compliance with the regulations indicates the violation's significance. The intent of the Modified Policy was not to call EQ violations, for which

information was readily available or accessible, significant. Minor file deficiencies, which are resolved by adding references or inserting pertinent documents to the file are intended to be Severity Level IV or V violations, regardless of who found them. On the other hand, violations which take some effort to prove qualification, such as significant analysis, testing, or extended efforts to produce or find the necessary information, will be considered significant violations and therefore considered for a possible civil penalty. The NRC staff considered this when evaluating the severity of the proposed violations.

Contrary to APCo's suggestion, this policy does not put a licensee in a better posture if that licensee relies on NRC inspections to identify EQ violations before correcting them, rather than proactively identifying and correcting violations. In short, a licensee that proactively identifies and corrects violations may be granted mitigation of civil penalties proposed for significant violations, while a licensee's failure to do so may prompt escalation of a proposed civil penalty. Accordingly, the licensee's identification and correction of a violation does not affect the violation's significance, but influences the NRC staff's application of the escalation and mitigation factors.

#### Attachment 2, Section V.A.5: Certain Potential Violations Impacting EQ are Inappropriately Assessed Under Regulatory Provisions of 10 CFR 50.49

The licensee contended that enforcement action under the Modified Policy is inappropriate in those cases in which the underlying violation is not within 10 CFR 50.49, but within other NRC requirements. The licensee's basis is that some deficiencies may cause deviations from EQ requirements, but the regulatory concern is not with 10 CFR 50.49, but with the underlying practices which produced the deficiency, such as a failure of the quality assurance process.

#### NRC Staff's Evaluation of Licensee's Response in Attachment 2, Section V.A.5

The NRC staff disagrees with this view in that under 10 CFR 50.49 licensees were expected to take appropriate actions (e.g., field walkdowns, review of installation and quality control records, and hardware examination) in order to assure that equipment has maintained its qualification status through appropriate design, procurement, installation, and maintenance practices. EQ is not solely an engineering function. Further, it is not

sufficient for licensees to rely only on design and procurement records to assure that components are qualified as installed in the plant. While the licensee may have violated regulatory requirements other than 10 CFR 50.49, this enforcement action is focused on problems in environmental qualification. (The NRC staff expects the licensee to correct any other violation it might identify.) In summary, failures in any of the above functional areas can adversely affect the qualification of equipment and can be considered violations of EQ requirements.

#### Part II—Discussion of Individual Alleged Violations

##### Attachment 1, Section III.A, and Attachment 2, Section V.B Alleged Violations Relating to Electrical Splices (Alleged Violations I.A.1 and I.A.2)

Restatement of Violations I.A.1 and I.A.2. A. 10 CFR 50.49 (d), (f) and (j), respectively, require in part that (1) the licensee shall prepare a list of electric equipment important to safety covered by 10 CFR 50.49, (2) each item of electric equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and that such qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable; and (3) a record of the qualification of the electric equipment important to safety shall be maintained in an auditable form to permit verification that such equipment is qualified and that it meets the specified performance requirements under postulated environmental conditions.

Contrary to the above, from November 30, 1985 until the time of the inspection which was completed on September 18, 1987:

- APCo had V-type electrical tape splices installed on numerous safety-related electrical components including solenoid and motor operated valves. These tape splices were installed in various configurations and material compositions which were not documented as being environmentally qualified to perform their function under postulated accident conditions at the Farley Nuclear Plant (FNP) Units 1 and 2. The various configurations of V-type electrical tape splices had not been previously tested or demonstrated to be similar to an appropriately tested configuration. Furthermore, these tape splices were not installed in accordance with approved electrical design details or notes for splices or terminations, and were not identified on the environmental qualification (EQ) Master List of electrical equipment required to be qualified under 10 CFR 50.49.

- APCo did not have documentation in their EQ file to demonstrate that the in-line 5-to-1 field-to-pigtail tape splice configuration,

used on the Hydrogen Recombiners, which are important to safety, in both units, would perform its intended function during a design basis accident. The tape splices had not been tested nor demonstrated by supporting analysis to be similar to a tested configuration, and were not identified on the Master List of electrical equipment required to be qualified under 10 CFR 50.49.

##### Attachment 1, Section III.A, and Attachments 2, Section V.B, Alleged Violations Relating to Electrical Splices (Alleged Violations I.A.1 and I.A.2)

##### Attachment 2, Section V.B.1: V-Type Electrical Tape Splices (Alleged Violation I.A.1)

##### Attachment 2, Section V.B.2: In-line 5-to-1 Pigtail Tape Splices (Alleged Violation I.A.2)

The licensee argued that the qualification of V-type electrical tape splices is not appropriate for enforcement under 10 CFR 50.49 (d) or (f) because the violation was not attributable to the licensee's EQ program, but rather to a violation of some other requirement, for example, the licensee's quality assurance program. The licensee submits that, at most, a documentation violation of 10 CFR 50.49(j) may have existed. The licensee stated that the methodology used in preparing the master list was reviewed and approved by the NRC staff in 1984, and, therefore, if 10 CFR 50.49(d) requires the licensee to include splices on its master list, the staff must comply with 10 CFR 50.109, to impose the requirement and prepare a backfit analysis. The licensee also argued that splices are parts or subcomponents of electrical equipment important to safety and, therefore, are not "equipment" that must be qualified.

The licensee attempted to demonstrate qualification of the splices by using a Wyle Laboratories test report prepared for Commonwealth Edison Company (CECo). Additionally, the licensee had a test performed specifically for APCo which was to demonstrate qualification of the V-type tape splices in their "as-found configurations." The licensee states that the qualification status of V-type tape splices was, at most, uncertain on November 30, 1985. APCo argued that, while its documentation did not directly address V-type splices, it did qualify the procedure for sealing qualified straight-line splices, or terminations, and because the licensee used this procedure to install V-type splices, it provided reasonable assurance of qualification of V-type splices. APCo submitted that the failure to directly address V-type splices

at most could be construed as a documentation deficiency.

The licensee argued that, even if the NRC staff still considers these issues violations of 10 CFR 50.49 after considering the technical arguments presented above, the NRC staff has not satisfied its obligation to demonstrate that APCo clearly should have known of the violations before November 30, 1985. The licensee contended that for the V-type splices the NRC staff's Notices and Circulars are not adequate to support a finding or clearly should have known for this concern and that there was no requirement for the licensee to perform detailed walkdowns of equipment to inspect interconnections such as V-type splices. The licensee further contended that, in balancing the factors of the Modified Policy, its documentation and existing installation and installation review process provided reasonable assurance that these splices were implemented in accordance with approved instructions and produced a qualified interconnection. Additionally, APCo argued that it had no prior notice of this concern and was unaware of other licensees' actions regarding splice qualification. Finally, with respect to V-type splices, the licensee asserted that any violation was not sufficiently significant to warrant a civil penalty because the licensee promptly demonstrated qualification of the splices by testing and with Wyle Report 17859-02.

The licensee also denied the alleged violation that the in-line 5-to-1 pigtail-to-field tape splices in the hydrogen recombiners were unqualified. The licensee claimed that the splices were qualified by WCAP-9347, "Qualification Testing for Model B Electric Hydrogen Recombiner", and WCAP-7709-L, "Electric Hydrogen Recombiner for PWR Containments." The basis for qualification as stated by the licensee is similarity between the splices. The licensee also made the same generic arguments with respect to the appropriateness of the violation and claim of tacit NRC staff approval of the connection as it made with respect to V-type splices.

With respect to the in-line 5-to-1 pigtail-to-field tape splices the licensee reiterated its position that there was no requirement to perform detailed walkdowns to inspect interconnections. Further, the licensee argued that the information provided by Westinghouse regarding the proper methodology for connecting the hydrogen recombiner to its power supply and adherence to that methodology and accepted practices provided reasonable assurance that the

5-to-1 splices were qualified. APCo asserted that, accordingly, a fair application of the factors set forth in the Modified Policy would not show that APCo clearly should have known of this violation.

Finally, the licensee acknowledged that the available EQ documentation did not clearly identify the termination configuration within the hydrogen recombiner. The licensee contended that since these were documentation problems, they should not be considered for escalated enforcement. Additionally, the licensee argued that since JCOs were promptly developed, there was not sufficient safety significance to impose a civil penalty under the Modified Policy.

**NRC Staff's Evaluation of Licensee's Response in Attachment 1, Section III.A and Attachment 2, Section V.B.1 and Section V.B.2**

The licensee's argument that EQ splices, such as those involved in the Notice, are not required to be separately identified on the EQ Master List is not supportable. As discussed in many NRC generic issuances, splices as well as other connections, are items of electrical equipment important to safety, and 10 CFR 50.49 (d) and (f) apply to them. Accordingly, 10 CFR 50.49(d) required APCo to list the splices. Even though the facts may establish other violations, such as violations of 10 CFR part 50, Appendix B, those violations do not preclude the NRC staff from making citations for violations of environmental qualification requirements. The following shows in detail why the NRC staff did not expressly or tacitly approve the way the licensee handled qualification of splices.

The SER issued December 13, 1984 (See Appendix B, Reference 3), states that equipment for Farley Nuclear Plant (FNP) Units 1 and 2 is to be qualified to the requirements of either DOR Guidelines or NUREG-0588. NUREG-0588 states that "it is necessary to recognize and address equipment interfaces (e.g. mounting, seals, terminations) in the qualification process." The NRC staff agrees that its review accepted the licensee's methodology or approach used to identify systems and equipment within the scope of 10 CFR 50.49. However, the NRC staff's review did not include verification of completeness of the licensee's listing of safety-related equipment. As stated in the Franklin Research Center's (FRC's) TER for FNP, "[t]opics not within the scope of the evaluation (include) completeness of the Licensee's listing of safety-related equipment(.)" (FRC TER for FNP Unit 1, at 3-4.) The list of equipment that was

reviewed was supplied by the licensee and for the purposes of the TER, assumed to be complete. It has always been the position of the NRC staff that splices (terminations) are to be qualified and, therefore, must be included on the EQ master list with supporting documentation. Because this has always been the NRC staff's position, and the licensee should have been aware of that position by virtue of NUREG-0588, among other documents, the licensee's claim of backfit is not supported by the facts.

#### V-Type Splices

The licensee admitted that the documentation for the qualification of the V-Type tape splices did not exist on November 30, 1985 (a violation of 10 CFR 50.49(j)). In fact, the licensee admitted that the qualification status of these V-type tape splices was uncertain requiring additional testing, inspections, and analysis in an attempt to qualify the V-type tape splices.

The licensee's claim that the splices were subsequently shown to be qualified by the test report prepared for CECO is not adequately supported because there were failures of splices in that test. Those failures were not evaluated to demonstrate they would not invalidate the qualification of the splices used by APCo and therefore, without further analysis or testing, qualification was not demonstrated. Further, the licensee did not have an analysis that demonstrated the similarity of the splices installed at FNP and those tested for CECO. APCo's later tests do not qualify the V-type splices because they, as the test discussed above, were conducted in 1987, well after the EQ deadline. Putting aside the date of the later testing, APCo was again unable to show that the tested configurations encompassed all installed configurations. That situation resulted from APCo's failure to ensure that the installed splices had been installed in accordance with appropriate design drawings. Therefore, while APCo was able to approximate the various installed configurations during the testing it could not exactly reproduce any of them because there were no records of how they were installed. That being the case, qualification of the installed configurations could not be assured. In summary, as of November 30, 1985, APCo had not tested the V-type splices nor had it analyzed them to show similarity to a tested splice. Accordingly, APCo had not qualified or documented qualification of V-type splices.

The assertion that the NRC staff has not satisfied its obligation to demonstrate that APCo clearly should have known that it had not qualified these splices by the deadline is also incorrect. The basis on which the NRC staff concluded that escalated enforcement was warranted for tape splices was stated in the Notice dated August 15, 1988 (page 2). The NRC staff considered all four factors listed in the Modified Policy in making the determination that APCo clearly should have known that the V-type tape splices were not qualified. As explained earlier, the NRC staff does not balance these factors. Moreover, all four of the factors provide information to show that APCo clearly should have known of this violation before the deadline.

Factor number one was applicable because the Okonite splice documentation, available in the qualification file prior to the deadline, clearly only addressed shielded power cables and therefore should have alerted the licensee to the need for more specific information. Factor two applied because APCo records did not show what kind of splice was installed in a particular location, nor did its quality control procedures assure that these splices were installed according to drawings for an environmentally qualified splice. In fact, only one qualified splice, for 4160 volt power circuits, was shown on the drawings. Moreover, licensee walkdowns or field verifications were inadequate because they did not consider electrical connections which were components that licensees were required to account for in demonstrating qualification. Factor three was considered applicable because NUREG-0588 states that it is necessary to recognize and address equipment interfaces to qualify equipment. In addition, while the NRC staff did not specifically identify V-type splices as causing qualification deficiencies, the NRC staff did give the licensee prior notice of splice problems by issuing generic documents, as described below. Factor four was considered applicable because other licensees had identified qualification problems with cable splices. For example, NRC Circular 78-08, at page 3, describes when electrical cable splices associated with electrical penetration assemblies were determined to be unqualified by a licensee during a search for qualification documentation. In addition, NRC Circular 80-10 identifies another example where the wrong class of insulating material had been used on the motor leads of a containment fan cooler. In that Circular

the NRC staff emphasized the "importance of properly installing and maintaining environmentally qualified equipment which clearly requires more than a review of QA records."

The NRC staff reviewed the various NRC inspection reports referenced by the licensee to support its position that the safety significance of the violation was judged to be inappropriately higher than that of similar violations cited at other plants. Based on that review, the NRC staff concluded that there were two important differences between the condition found at FNP and those cited by APCo that make the FNP condition more significant. First and most importantly, the other licensees cited by APCo had accurate records of the splice configurations used and therefore, similarity arguments to qualified configurations, albeit after-the-fact, could be made. Second, in at least one case (Grand Gulf) the type of splice used was substantially different than that used at FNP. Therefore, given the dissimilar circumstances of the two actions, it is not apparent to the NRC staff what the licensee's specific basis is for concluding that similar dispositioning of these two issues is appropriate.

10 CFR 50.49 required splices to be on the master list as separate items or to be explicitly considered as parts of other listed equipment. Because 10 CFR 50.49 required the above and also required the demonstration of splice qualification by testing and necessary similarity analysis, the licensee clearly was in violation of 10 CFR 50.49 (d), (f), and (j) at the time of the finding. A second test developed specifically for APCo which ostensibly confirmed qualification of the V-type splices in their as-found configuration is outside the bounds of GL 88-07 because it was viewed by the NRC staff as done after-the-fact in a situation where APCo clearly should have known that its documentation was not sufficient. Moreover, as described above, this test was technically insufficient to establish qualification of the splices. Therefore, classification of this item as significant, as set forth in the Modified Policy, is warranted. The licensee's contention that this violation should not be considered for enforcement action under 10 CFR 50.49 or the Modified Policy is also considered invalid because the EQ program implemented by the licensee must ensure that the equipment is installed similar to the way it was tested. In the case of the V-type tape splices, at the time of the inspection the licensee did not have documentation in its EQ files which would support the qualification of

V-type tape splices inside containment in instrument circuits, control circuits, or power circuits other than in-line shielded power cable tape splices. Moreover, APCo could not correct the documentation deficiencies with information already in its possession, but had to obtain new information by testing and through analysis. The Modified Policy evaluates such deficiencies as significant. Therefore, the violation stands as stated.

#### 5-to-1 Tape Splice

The licensee's claim that the hydrogen recombiner splices were qualified by similarity to splices qualified by Westinghouse reports WCAP-0347 and WCAP-7709-L is not valid. These reports do not indicate the materials used or the configuration of the splices. Therefore, a similarity analysis cannot be made nor, at the time of the inspection, was there sufficient documentation provided to support a similarity argument. The NRC letter from J. Stolz, dated June 22, 1978, which approved qualification of the hydrogen recombiners, did not approve the specific type of splices APCo installed at FNP and did not provide further information with which APCo could have performed a similarity analysis to the splices discussed in the Westinghouse reports.

The NRC staff agrees that the Westinghouse test reports discussed above demonstrate qualification for the heaters and power cables that are subcomponents of the recombiner. The NRC staff also agrees that the tested sample had some type of splice configuration. However, Westinghouse states in its installation literature for hydrogen recombiners that the purchaser is to use its own installation procedures to install qualified splices on the pigtail connections. Therefore, it was incumbent on APCo to ensure a qualified splice was used. Further, given that the type of splice used by Westinghouse was not specifically described, it was APCo's responsibility to provide other documentation of the qualification besides a reference to an unknown splice, in order to qualify the particular type of splices that were used.

The assertion that the NRC staff has not satisfied its obligation to demonstrate that the licensee met the "clearly should have known" test is incorrect. As stated earlier in the response to V-type tape splices, the NRC staff's position regarding escalated enforcement for 5-to-1 tape splices on the hydrogen recombiners was stated in the Notice dated August 15, 1988 (at page 2). The NRC staff considered all

four factors of the Modified Policy in making the determination that APCo clearly should have known that the 5-to-1 tape splices on the hydrogen recombiners were not qualified. The NRC staff did not balance those factors but, each of them provide information to demonstrate that APCo clearly should have known of the violation before the deadline.

Factor one was considered applicable because the vendor documentation does not address what type of splice was used in the test report. The licensee indicated that the splice were made in accordance with vendor instructions which provided direction regarding the construction of connections with the power leads. Because the vendor instructions referred to the unidentified splice of the test report, the licensee should have clearly known that its procedures were inadequate to construct a qualified splice similar to the tested configuration. Additionally, the licensee also clearly should have known that the configuration was not similar to the qualified shielded power cable configuration. Specifically, the qualification file for power shielded cable splices only addressed a one-to-one splice and not the 5-to-1 splice used by APCo.

Factor two was considered applicable because the licensee's documentation and walkdowns or field verifications were inadequate as discussed earlier for V-type tape splices. Factor three was considered applicable because NUREG-0588 states that it is necessary to recognize and address equipment interfaces to qualify equipment. In addition, while the NRC staff had not previously provided notice specifically identifying qualification questions regarding the hydrogen recombiner power lead splices or terminations, the NRC staff did give prior notice of splice problems. Factor four was considered applicable because other licensees had reported problems with unqualified splices (NRC Circulars 78-08 and 80-10, as described above), although not specifically on hydrogen recombiners.

The licensee argues that at least two other licensees had not addressed this question to the satisfaction of the NRC inspectors and that this suggests that the matter was not so clear that APCo "clearly should have known" of the existence of the problem. The NRC staff rejects this argument. The failure of two other licensees to address similar problems does not necessarily lead to the conclusion that APCo should not clearly have known of the violation. The information provided under the four factors, considered collectively as

described, supports the NRC staff's determination that APCo clearly should have known of this violation as of the deadline.

In the case of the 5-to-1 tape splices factors one, two, three, and four were determined to demonstrate that the licensee clearly should have known, therefore, the violation stands as stated.

The NRC staff's position concluding that all of the cited violations were significant is addressed in the response to Section III.B of Attachment 2 of APCo's response. (See *supra* p. 2.) Further, that position was previously addressed in a letter from the NRC staff to the Nuclear Utility Group on EQ (see Appendix B, Reference 6). With respect to 5-to-1 tape splices in particular, APCo had to develop new information by test or analysis to qualify such splices. The Modified Policy describes cases where the data already exists or can be developed to establish qualification in a very short time as insufficiently significant to warrant a civil penalty. Such was not the case with 5-to-1 tape splices. Accordingly, this was a significant violation.

For both 5-to-1 and V-type splices, the licensee's preparation of a Justification for Continued Operation (JCO) is irrelevant to safety significance. A licensee that failed to prepare a JCO in response to identified violations of 10 CFR 50.49 would have been required to shut down. The Modified Policy clearly states how the NRC staff will evaluate the significance of violations of 10 CFR 50.49, as described earlier, and nothing in a JCO can change that determination.

The licensee argues that escalated action is not warranted because the NRC staff chose not to impose escalated action on at least two other licensees with similar problems. The NRC staff rejects this argument because the action taken for apparently similar problems at other plants, for whatever reason, are irrelevant to this action. Moreover, the differences in the equipment involved and the circumstances surrounding the violations at the other facilities (Grand Gulf and Catawba) resulted in the NRC staff classifying those violations at Severity Level IV.

Restatement of Violations I.B.1 and I.B.2, B, 10 CFR 50.49 (f) and (k), respectively, require in part that (1) each item of electric equipment important to safety shall be qualified by testing of, or experience with, identical or similar equipment, and that such qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable; or (2) electric equipment important to safety which was previously required to be qualified in

accordance with NUREG-0588 (for comment version), Category II. . . . . Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment" need not be requalified to 10 CFR 50.49. NUREG-0588, Category II, Section 5.1(1), states in part that, "the qualification documentation shall verify that each type of electrical equipment is qualified for its application and meets its specified performance requirements, and data used to demonstrate the qualification of the equipment shall be pertinent to the application and organized in an auditable form."

Contrary to the above, from November 30, 1985 until the time of the inspection which was completed on November 20, 1987:

1. The documentation in APCo's FNP qualification file did not demonstrate by testing, supporting analysis, or verification that States terminal blocks (Model Nos. NT and ZWM) would maintain acceptable instrument accuracy, a performance requirement, during design basis accidents. In addition, APCo did not have adequate documentation to demonstrate General Electric (Model No. CR151) terminal blocks would maintain acceptable instrument accuracy during design basis accidents in that a qualification file for these components did not exist.

2. APCo did not document qualification of the Chico A/Raychem seals used for limit switch and solenoid valve cable entrance seals in that the available file was incomplete, and test data and supporting analysis provided by the licensee were insufficient to demonstrate qualification. Specifically, the testing performed did not consider possible chemical interactions and the temperature profile used in the testing did not simulate the initial thermal shock of a loss of coolant accident (LOCA) transient.

Attachment 1, Section IIB and Attachment 2, Section V.C: Alleged Violations Relating to Instrument Accuracy and Cable Entrance Seals (Alleged Violations I.B.1 and I.B.2)

Attachment 2, Section V.C.1: States/General Electric Terminal Blocks (Alleged Violation I.B.1)

The licensee denied that it lacked documentation for States terminal blocks models Nos. NT and ZWM to satisfy EQ requirements. The licensee based its denial on the assertion that such documentation should be considered with the then ongoing process of evaluating terminal block performance. The licensee claimed that



on November 30, 1985. Its files contained "Wyle Test Report 44354-1," dated March 8, 1979, which demonstrated the overall LOCA qualification of these blocks. The licensee stated that the report, while not specifically recording leakage current values during the test, did record leakage current values at the conclusion of the test for terminal point-to-point and point-to-ground, and that those values were recorded for multiple connections with an applied voltage of 137.5 VDC.

The licensee stated that it supplied Westinghouse the leakage current values to have a set-point accuracy analysis performed. The licensee informed the NRC staff of the analysis and responded to a question regarding the effects of leakage current on the equipment within the scope of 10 CFR 50.49. The licensee contended that it supplied this analysis to the NRC staff on February 29, 1984, in response to the NRC staff's question, and that the NRC staff accepted this answer because the SER concluded that "the proposed resolution for each of the environmental qualification deficiencies . . . is acceptable." APCo further asserted that, because the NRC staff issued its SER for Farley after it issued IN 84-47, the NRC staff tacitly approved APCo's approach to answering the questions raised in IN 84-47. Furthermore, the licensee claimed the NRC staff acknowledged this dispute as a reasonable difference of professional opinion in a meeting on November 25, 1987.

The licensee further denied that documentation for General Electric terminal blocks was nonexistent. The licensee admitted that "certain of the documentation for the General Electric terminal blocks was not in the EQ file at the time of the audit." The licensee also stated that such documentation was made available for audit at the exit interview. The licensee argued that the NRC staff tacitly approved its approach to the leakage current problem for the GE terminal blocks, just as the NRC staff did for States terminal blocks.

The licensee asserted that it qualified all these terminal blocks in September 1987 by similarity analysis; under the licensee's definition of "qualified," there would be no violation.

The licensee argued that if these deficiencies do represent a violation, they are not of sufficient safety significance to impose a civil penalty under the Modified Policy. The licensee relied on its JCO presented on November 25, 1987, to support this position. The licensee asserted that IN 82-03 and 84-57, and IE Circular 78-08 were insufficient to clearly lead it to this

issue because they do not refer to instrument loop accuracy.

Attachment 2, Section V.C.2: Chico A/Raychem Seals (Alleged Violation I.B.2)

The licensee denied the failure to document the qualification of the Chico A/Raychem seals for NAMCO limit switch cable entry seals. The licensee contended that there was sufficient documentation in an auditable form to qualify the seals for their intended application. The licensee stated that the Notice implies that the performance requirement is "to prevent possible degradation of the metal pipe nipple." The licensee contended that the purpose of the seal was to prevent short circuits and not pipe nipple degradation. Because of this implication, the licensee argued that the requirements in the Notice exceed those of the appropriate regulations. The licensee also argued that the test condition for thermal shock was more extreme than the postulated accident environment. Moreover, the licensee asserted that test reports it possessed before the deadline showed that the Raychem bonding material would not cause the metal pipe nipple to corrode.

The licensee further argued that there was no evidence to support the clearly should have known test. The licensee contended that if this is found to constitute a violation, there is not sufficient safety significance to impose a civil penalty under the Modified Policy. Furthermore, the licensee alleged that the NRC staff has considered similar violations by other utilities at Severity Level IV.

NRC Staff's Evaluation of Licensee's Response in Attachment 1, Section III.B, and Attachment 2, Section V.C Violation I.B.1 (Terminal Blocks)

The SER dated December 13, 1984, stated that APCo was performing additional analysis or submitting new documentation for deficiencies identified in the Franklin Research Center (FRC) TER. The SER went on to state, however, that the NRC staff had not reviewed the additional analysis or documentation, but had discussed with APCo what the content of the new analysis or documentation would have to be to resolve the identified deficiencies. (SER at 4.) The SER continues by stating that the qualification files would be audited at a later date to verify that they contained the necessary documentation to support the licensee's conclusion that the equipment was qualified. At no time did the NRC staff expressly or tacitly approve the use of leakage current

measured after a test, rather than during a test, to qualify terminal blocks used in instrument circuits. While the NRC staff approved APCo's proposed approach of referencing a particular test report to resolve this deficiency, the NRC staff did not then review or approve what APCo actually did. Had the test report contained the appropriate data, further analysis could have resolved the issue. Wyle Test Report 44354-1, however, contained data for circuits operating at 137.5VDC (control circuits) and not circuits operating at nominally 45VDC or below (instrumentation circuits). The effects of small leakage currents on a control circuit may be inconsequential, but, demonstrating that fact would not necessarily demonstrate the acceptability of the component for use in an instrument circuit where even a small amount of leakage current can have a significant effect. Accordingly, because the Wyle test report contained data for only control circuits, it did not qualify States terminal blocks for use in instrument circuits. Additionally, while IN 84-47 relates to the deficiency identified in the TER, the SER does not refer to it but only to information that APCo related to the NRC staff before the NRC staff issued IN 84-47.

Accordingly, the December 13, 1984, SER did not approve APCo's resolution of the issues raised in 84-47 for any terminal blocks. Finally, the NRC staff disagrees with the licensee's assertion that this dispute was only a reasonable difference of professional opinion. In the November 25, 1987 meeting which was documented in a letter from the NRC staff dated December 2, 1987, it was acknowledged that there was disparity in EQ test data for like and different terminal blocks. Further, it was acknowledged there were differences in interpretation of the EQ test data to be applied at FNP. The NRC staff never agreed that the data presented demonstrated qualification for the terminal blocks. In fact, the NRC staff considered the licensee's arguments to be non-conservative. However, any exchange at that meeting could not affect either APCo's pre-deadline knowledge of what was required to qualify terminal blocks in instrument circuits or the documentation that existed in the APCo files at the November 30, 1985 deadline.

At the time of the inspection, the FNP files for the States terminal blocks did not contain sufficient information to support qualification for use in instrument circuits. The licensee admits in the reply to the Notice that the leakage current values were taken after the LOCA testing was completed, not

during as was required, and that the voltage level was for control circuits, not instrument circuits. The values of insulation resistance provided to Westinghouse, after the deadline, were not the values supported by test data for the States terminal blocks and were not supported by other test data and accompanying analysis. Therefore, the conclusion that the use of the terminal blocks in instrument circuits was acceptable was not adequately supported.

The NRC staff agrees that the licensee did present a test report that included information on the subject GE terminal blocks, but disagrees that the report demonstrated qualification of the terminal blocks. The qualification file for the GE penetrations was not auditable in that it did not include any test data or reference any test report for the installed GE terminal blocks and therefore, qualification was not demonstrated by the GE penetration qualification file. At the time of the inspection the licensee did not present any additional information that would specifically qualify the GE terminal blocks for instrumentation circuits. However, the licensee did attempt to show qualification by similarity to Connectron Inc. terminal blocks tested by Conax but failed to analyze design, material and construction differences between the terminal blocks. Additionally, as addressed above for States terminal blocks, the licensee failed to analyze acceptability of instrument accuracy if the GE terminal blocks were used in instrument circuits. Accordingly, GE terminal blocks number CR 151 were not qualified for use in instrument circuits.

APCo's contention that GE and States terminal blocks were qualified by additional analysis and testing in 1987 and that there was no violation fails because the regulation requires qualification by November 30, 1985. The violations were significant in that the terminal blocks were not qualified for use in instrumentation circuits and involved instrumentation penetrations for the safety-related instruments within containment (See supra pp. 2-4).

The assertion that the NRC staff has not satisfied its obligation to demonstrate that APCo clearly should have known that the terminal blocks were not qualified before the deadline is incorrect. The basis on which the NRC staff concluded that escalated enforcement was warranted for States and GE terminal blocks that were unqualified for use in instrument circuits was stated in the Notice dated August 13, 1988 (page 2). The NRC staff

considered all four factors listed in the Modified Policy in making the determination that APCo clearly should have known that these terminal blocks were not qualified. It is the NRC staff's position that, as described earlier in this Appendix, any one of the factors can establish that the licensee clearly should have known of the violation. For terminal blocks, each of the four factors provided information to establish that the licensee clearly should have had the required knowledge.

Factor number one was applicable because the documentation provided by the licensee was not only inadequate to demonstrate qualification of either the State or GE terminal blocks but clearly applied only to control circuits. Therefore, the licensee should have clearly recognized that qualification in instrument circuits was not demonstrated.

Factor two was applicable because the licensee's documentation was inadequate to demonstrate that the installed configuration was the same as the tested configuration. Moreover, the licensee's walkdowns or field verifications did not consider whether the installed configuration was similar to the tested configuration. This is significant in that the installed configurations differed from the tested configuration because they had top entry conduits, the terminal boards were vertical, and the boxes did not have weep-holes, all of which would make the installed configuration more likely to fail than the tested configuration for control circuits. Therefore, the licensee's contention that it should not have clearly known that the terminal blocks were unqualified is not supported.

Factor three was considered applicable because the NRC staff had previously issued Information Notices specifically addressing the qualification of terminal blocks. Information Notice 82-03 specifically stated that NRC requires qualification of all electrical connections, cable splices, as well as terminal blocks, for accident conditions. Information Notice 84-47 provided guidance on appropriate corrective action when leakage current data was missing from tests to qualify terminal blocks. This available information should have led a knowledgeable engineer to conclude that terminal blocks were not qualified for use in instrumentation circuits in a harsh environment.

Factor four was considered applicable because other licensees had identified qualification problems with terminal blocks and had replaced them with qualified cable splices. For example,

NRC Information Notice 84-47, even though not specifically mentioned in the Notice, should have been evaluated by the licensee and appropriate corrective action taken. This should have led the licensee to determine that terminal blocks were not qualified for use in instrumentation circuits.

The NRC does not accept the licensee's argument that the issuance of an SER relating to EQ at about the time of the issuance of Information Notice 84-47 was a reasonable basis for the licensee to conclude the licensee need not review the Notice and the information evaluated. As stated above, the SER was clearly issued to resolve only issues previously identified by the NRC consultant's review of the APCo EQ program. Any conclusions drawn by the SER were based on the licensee's satisfactory resolution of the previously identified issues and not on the licensee's actions relating to emerging issues such as those discussed in the Information Notice, which just happened to come to light at about the same time.

For the reasons set forth above, the NRC staff determined that the licensee clearly should have known prior to November 30, 1985, that the States and GE terminal blocks were not qualified for use in instrumentation circuits in a harsh environment. Thus, the violation stands as issued.

Consistent with the NRC staff's earlier position, the States and GE terminal blocks are clearly a safety significant issue warranting escalated enforcement under the Modified Policy. APCo did not provide information during or shortly after the inspection that qualified these terminal blocks; accordingly, APCo did not satisfy the criterion set forth in the Modified Policy for considering a violation insufficiently significant to warrant assessment of civil penalty.

#### Violation I.B.2 (Chico A/Raychem Seal Configuration)

With respect to the Chico A/Raychem seal configuration, the licensee contended that the NRC staff had only two concerns which were the failure to consider possible chemical interactions and the adequacy of the tested temperature profile. The NRC staff considers the licensee's reading of the Notice as overly narrow. The Notice states that the temperature profile must simulate that of a LOCA transient. In other words, temperature cannot simply be considered in isolation from other effects. Clearly, both moisture and pressure must be considered because they are LOCA effects that are inseparable from the temperature profile. The NRC staff's position to that

effect is stated on page 40 of NRC Inspection Report 50-348 and 50-349/87-20 dated February 4, 1988. As discussed in that inspection report the NRC staff concluded that the Chico A/Raychem configuration used by APCo was unqualified not only because the testing relied on by the licensee did not include chemical spray but also because the environment of the testing was not as harsh as that of the plant LOCA profile. Specifically, the test was deficient because moisture was absent and peak pressure was not simultaneously applied with peak temperature.

By relying on testing that did not include moisture and the application of maximum pressure on that moisture during the period of maximum temperature the licensee would never know if moisture could intrude into the electrical components. With the application of peak pressure simultaneously with peak temperature in a steam/moisture environment it might well have been demonstrated that moisture leakage through the seal would occur during a period of differential expansion between the pipe nipple and the seal material and electrical shorting, which is clearly the NRC staff's concern, could occur. In the NRC staff's judgment, the examination of the thermal profile without the LOCA factors of simultaneous pressure and moisture, is meaningless and arguments about the initial temperature conditions are of little import without considering the other factors.

With respect to chemical interaction, the licensee provided information that stated Raychem material (including the bonding material) had previously been qualified with chemical sprays. A separate statement was made that there were no known deleterious effects from chemical sprays on the Chico A/Raychem seal configuration, and separate information was provided to demonstrate chemical spray would not affect galvanized steel conduit. From the information provided, the licensee concluded that its engineers made a reasonable engineering judgment to determine that chemical spray would not impact qualification of the seal configuration.

It was incumbent on the licensee to demonstrate that there would be no deleterious effects from chemical spray on the Chico A/Raychem seal configuration before the deadline. There are presently no known deleterious effects on the Chico A/Raychem configuration simply because, to the NRC staff's knowledge, the testing has not been conducted. Wyle Test Report 58730, relied on by the licensee to

support its position that chemical spray would not affect galvanized steel, was not present in the FNP files at the time of the inspection, was apparently not known to the licensee at the time of the enforcement conference, and clearly was not relied on by APCo engineers in making their judgment about the qualification of the seal configuration prior to November 30, 1985. Finally, the licensee has not provided any basis to show how a test report on the effects of chemical spray on Raychem material and another report on the effects of chemical spray on galvanized steel demonstrate that the adhesion between the two materials will be unaffected by the chemical spray.

The licensee argues that such a level of documentation is beyond that required by the appropriate regulations. Further, specific to possible chemical interactions, the licensee asserts that the NRC staff provided no basis in the Notice as to why APCo clearly should have known of the possibility of interaction between metal and the chemical spray causing an adhesion problem between the metal surface and the Raychem material.

With respect to the licensee's general argument about the level of documentation it had, the NRC staff must reiterate that it is clear from the licensee's response, that not all of the documentation now relied on to make a qualification argument, was available at the time of the inspection. More importantly that documentation was not in the FNP files prior to the EQ deadline. Nevertheless, the NRC staff concludes that even with the information provided subsequent to the inspection the licensee has not demonstrated qualification of the Chico A/Raychem seal configuration (which was subsequently replaced) and clearly should have known that qualification had not been demonstrated. First and most fundamentally, none of the testing relied on by the licensee demonstrated that the Chico A/Raychem seal configuration or a similar configuration would function in a full LOCA environment. APCo clearly should have known what parameters it would have to evaluate, including temperature, pressure, humidity and chemical spray, because 10 CFR 50.49 specifically identifies them. Second, with regard to the licensee's specific argument about possible chemical spray interactions the NRC staff stands by the conclusion reached in the cover letter to the Notice. Possible chemical interactions are a fundamental area of concern specifically identified in the regulation which APCo clearly should have considered.

All Raychem installation instructions provide detailed guidance for surface preparation to ensure proper adhesion of the bonding material. Clearly, if the surface to which the bonding material is applied might corrode, as indicated by Wyle Test Report 58730, the physical and chemical properties of that surface may change and there would no longer be any assurance that the bonding material will properly adhere. Therefore, water could leak past the seal and cause an electrical short circuit. With respect to this violation, it was not necessary for the NRC staff to consider any of the factors of the Modified Policy to conclude that the licensee clearly should have known before the deadline of the failure to qualify the seals. As described earlier, the NRC staff determined that APCo clearly should have had the appropriate knowledge because (1) it acknowledged that the seals required qualification and (2) the testing did not apply harsh conditions simultaneously, nor did analysis demonstrate that the testing established qualification. Accordingly, the testing and analysis to qualify the seals was inadequate on its face so that it could not satisfy the requirements of 10 CFR 50.49. Under such circumstances, the licensee clearly should have known before the deadline that the seal configuration was not qualified.

As described above, even the licensee's after-the-fact analysis failed to demonstrate qualification. Accordingly, this violation does not fall within the Modified Policy's exception for violations not sufficiently significant to warrant assessment of civil penalties. Failure to demonstrate the qualification of the Chico A/Raychem seal configuration is clearly a significant violation in accordance with the NRC staff's position detailed earlier in this Appendix.

In its response APCo cited a number of violations issued by the NRC staff related to "seal qualification" problems in an attempt to show that the general position of the NRC staff on such problems was that they are of lesser significance. Consequently, the licensee argued that the severity level of the problem at FNP should accordingly be reduced. The NRC staff has reviewed the cited violations and concluded that while it is true that all the violations deal with "seal qualification" problems, the similarities end there. In at least one of the cases (Callaway) the seal in question was only one of two seal mechanisms that existed in that particular configuration. Clearly, in such a case the lack of qualification of one of two seals is less significant than the

lack of qualification of the single Chico A/Raychem configuration at FNP. In short, the licensee has failed to demonstrate, beyond stating that all the cited violations are "seal qualification" problems, how those issues are directly applicable to the FNP violation. Further, the NRC staff, based on the facts of the individual cases, has taken other escalated enforcement actions under the Modified Policy and issued proposed civil penalties for "seal qualification" violations. However, it should be noted that those actions were taken subsequent to issuance of the Notice in this case.

Restatement of Violations I.C.1, I.C.2, I.C.3, and I.C.4. C. 10 CFR 50.49 (f) and (j), respectively, require in part 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 the equipment to be qualified is acceptable, and (2) a record of the qualification of the electric equipment shall be maintained in an auditable form to permit verification that the required equipment is qualified and that the equipment meets the specified performance requirements under postulated environmental conditions.

Contrary to the above, from November 30, 1985, until the time of the inspection which was completed on November 20, 1987 (September 18, 1987 for #4):

1. The APCo EQ files did not document qualification of several Limitorque valve operators 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 more of the operators, unqualified or mixed grease was used in the gear compartment, T-drains were missing, motor leads had unqualified splices, terminal blocks were unidentified and unqualified, and a limit switch with an aluminum housing, which does not meet environmental qualification standards, was used inside containment (Valve No. MOV3441D).

2. The APCo EQ files did not document qualification of the cable entrance seals for the Target Rock head vent solenoid valves.

3. APCo found wide range and narrow range containment sump level transmitters, on both units, in a configuration for which existing test data did not demonstrate qualification. Specifically, one or more of the GEMS type level transmitters did not contain

the required silicone oil in the housing, and/or wires were terminated using an unqualified V-type tape splice configuration.

4. APCo did not have documentation in a file to demonstrate qualification of Premium RB grease for use on fan motors inside containment and room coolers outside containment.

Attachment 1, Section III.C, and Attachment 2, Section V.D. Alleged Violation Relating to Limitorque Valve Operators, Target Rock Solenoid Valves, Sump Level Transmitters, and Grease (Alleged Violations I.C.1, I.C.2, I.C.3, and I.C.4)

Attachment 2, Section V.D.1: Limitorque Valve Operators (Alleged Violation I.C.1)

Attachment 2, Section V.D.2: Target Rock Cable Entrance Seals (Alleged Violation I.C.2)

Attachment 2, Section V.D.3: Containment Sump Level Transmitters (Alleged Violation I.C.3)

Attachment 2, Section V.D.4: Premium RB Grease on Fan Motors (Alleged Violation I.C.4)

Violation I.C.1

The licensee responded by addressing the specifics stated in the Notice. By responding in this manner, the licensee denied that there was a violation of 10 CFR 50.49 as stated in Violation I.C.1, for Limitorque operators because of unqualified or mixed grease, T-drains, and unqualified splices. The licensee admitted that the examples regarding terminal blocks and the aluminum limit switch housing existed; however, it contended that these examples do not warrant imposition of a civil penalty under the Modified Policy.

The licensee contended that grease is not within the scope of 10 CFR 50.49. Specifically, the licensee argued that grease is not electrical equipment and, therefore, need not be qualified. The licensee also argued that its consultant demonstrated the qualification of mixed grease on June 25, 1986. The licensee argued that no enforcement action should be taken "... since there has been no explicit guidance, applicable to APCo, which states that grease or other lubricants should be considered in equipment qualification." Accordingly, the licensee contended it should not clearly have known that grease is electrical equipment that must be qualified. The licensee also contended that this issue was not of sufficient safety significance to impose a civil penalty under the Modified Policy. The licensee supported this last argument

with the analysis provided by the outside consultant.

The licensee contended that the Limitorque test reports, along with engineering judgment, were adequate to demonstrate qualification of the valve operators without the T-drains. The licensee stated that the test reports in combination with engineering judgment established qualification and that engineering judgment does not need to be documented.

The licensee once again argued that the NRC staff gave no basis in the Notice why the licensee clearly should have known before the deadline that Limitorque operators were not qualified. The licensee contended further that the NRC staff did not require detailed walkdowns before the deadline and that the first real notice of the problem was IN 86-03, which the NRC staff issued after the deadline. The licensee also argued that if the lack of T-drains constitutes a violation, then it is not of sufficient safety significance to impose a civil penalty under the Modified Policy.

The licensee stated that the argument for the tape splices is addressed by the response to the alleged violations relating to V-type electrical splices.

While admitting the examples of unqualified terminal blocks and an aluminum limit switch housing, the licensee contended that there is no requirement to disassemble all equipment and identify all subcomponent parts, and that disassembly would have been required to identify these components. With respect to terminal blocks, the licensee asserted that IN 83-72 was insufficient to constitute clear notice of a problem, and that Limitorque supplied the operators directly, so that no third party could make improper modifications. Moreover, the licensee alleged that the unqualified terminal blocks and aluminum housing were isolated incidents which the NRC staff could not reasonably expect the licensee to find. With respect to the terminal blocks, the licensee stated that the Notice gives no reason why the licensee clearly should have known the blocks were unqualified and that the NRC staff gave tacit approval to the APCo's qualification of terminal blocks in Limitorque operators. The licensee characterized the discovery of the aluminum housing as an unforeseeable event. APCo also argued that it informed the NRC staff during the inspection that the operator with the aluminum housing did not need to be on the master list, and, under the Modified Policy, the violation is insufficiently significant to warrant a civil penalty.

**Violation I.C.2**

The licensee denied that the lack of qualified cable entrance seals constitutes a violation of 10 CFR 50.49. The licensee contended that the valves are designed to operate in conditions which are beyond those of design basis accidents according to 10 CFR 50.44(c)(3)(iii) and need not be qualified under 10 CFR 50.49. Moreover, the licensee argued that it stated this position in its letter to the NRC staff dated February 24, 1984, and that the staff tacitly accepted this position in its SER dated December 13, 1984. The licensee also stated that the valves were qualified with or without cable entrance seals. The licensee contended that the condition is not of sufficient safety significance to impose a civil penalty under the Modified Policy. The licensee argued that the NRC staff issued a Severity Level IV violation to the Union Electric Company for an identical violation at the Callaway Plant.

**Violation I.C.3**

The licensee denied that, even though four of the GEMS level transmitters were found without the required level of silicone fluid, this is a violation of 10 CFR 50.49 (f) and (j). Insofar as the NRC staff asserts the presence of unqualified V-type tape splices, the licensee referred to arguments made with respect to Violation I.A.1. The licensee asserted that any violation resulting from the condition of the containment sump level transmitters was not of 10 CFR 50.49, but some other requirement. APCo further argued that the fluid level in two of the four transmitters was only one inch low, and, therefore, posed no significant safety concern. APCo acknowledged that qualification of the transmitters with low silicone fluid was not addressed by test data available on November 30, 1985, but that two of the four transmitters were qualified even with the low fluid level. APCo further argued that the transmitters' qualification status was undetermined, and none of them were shown to be unqualified. Should the NRC apply 10 CFR 50.49 to the transmitters, APCo conceded a violation of 10 CFR 50.49(j). The licensee contended that it should not have clearly known of the violation by the deadline because it recognized the need to qualify the transmitters, maintained documentation to do so, and installed them and verified installation according to applicable instructions and normal procedure. APCo argued further that no walkdowns were required prior to the deadline, and that any walkdowns would have required opening the transmitters to inspect the

silicon fluid level. The licensee claimed that the violation is not of sufficient safety significance to impose a civil penalty under the Modified Policy. The licensee contended that a civil penalty is not warranted because Bechtel analyzed the two transmitters with slightly low silicon levels and determined that qualification was not materially affected, and that the NRC staff was informed of this at the enforcement conference in March 1988, and in writing on May 27, 1988. APCo further contended that there would be no adverse safety consequences if the transmitters did not function.

**Violation I.C.4**

As discussed above in Violation I.C.1, the licensee contended that grease is not an item of electrical equipment as defined in 10 CFR 50.49(b). The licensee argued that a Texaco evaluation demonstrated reasonable assurance that the Premium RB Grease would not adversely affect the qualification of the motors and coolers. Further, the licensee again claimed that it should not have clearly known that 10 CFR 50.49 required it to qualify grease because (a) grease is not electrical equipment, (b) vendor information showed that the grease was acceptable for use on the motors in question, (c) APCo stated the grease was inspected on receipt to assure it was in conformance with specifications, (d) the NRC staff's SER accepted APCo's master list that did not include lubricants, and (e) APCo is unaware of any other licensee that listed grease as electrical equipment before the deadline. Because APCo and Texaco concluded that tests would show the grease acceptable, and expected testing was to be complete by December 1988, APCo concluded that the violation is not of sufficient safety significance to impose a civil penalty under the Modified Policy.

NRC Staff's Evaluation of Licensee's Response in Attachment 1, Section III.C and Attachment 2, Section V.D

**Violation I.C.1a: Unqualified or Mixed Grease:** Lubricants are an integral part of motors and motor operated valves. They are subject to degradation as a result of exposure to radiation, temperature, aging, and humidity. The issue concerning this violation is whether the Limitorque motor operators are qualified when used with grease different than that used when those operators were tested in a simulated harsh environment. 10 CFR 50.49(f) requires that 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 the equipment to be qualified is acceptable. Additionally, the DOR Guidelines state that the tested specimen should be the same as that being qualified and should be of identical design and material construction.

In the case of Limitorque motor operators, the licensee's EQ program did not evaluate the significance of using a different grease from that which was tested, nor the mixing of different soap bases. The Limitorque lubrication data form and other Limitorque information state which lubricants the licensee could use so that the operators would be qualified for use inside containment and specifically warned that lubricants of different soap bases should not be mixed. Material construction of the tested specimen differed from that installed. Therefore, the licensee did not have qualified motors and motor operators in that they were lubricated with greases other than that specified by the vendor and the licensee did not have documentation of testing or analysis to support the types of grease or mixed grease used. Because vendor documentation clearly specified the grease used in testing the motor operators, the licensee clearly should have known that using different grease without analysis or further testing would result in the operators not being qualified as installed. The electrical equipment the licensee clearly should have known was not qualified (because it was lubricated with the wrong grease) included motors and motor operators specified in the Notice.

The licensee provided an analysis which concluded that the mixing of the greases was not a significant technical problem in this case, and the NRC staff does not disagree with the conclusion for the particular mixture that was found. However, the NRC staff concludes that there was a violation and that it was significant. That determination was made based on three factors: (1) the analysis was dated June 25, 1988, after-the-fact; (2) some grease combinations have been demonstrated as incompatible; (3) the analysis was substantial as evidenced by the use of an outside consultant to determine the acceptability of the mixture. (As discussed earlier, the licensee's definition of "unqualified" is incorrect and safety significance is not determined by subsequent analysis.) Moreover, the licensee had to perform substantial analysis to qualify the operators with grease other than as specified by the vendor, and did not

satisfy the Modified Policy's criterion for finding a violation insufficiently significant to warrant a civil penalty. Therefore, the violation stands as stated.

**Violation I.C.1.b: T-Drains:** The NRC staff disagrees with the licensee's position that T-drains are not required for qualification. For example, Limitorque test report B0058 (See Appendix B, Reference 4) states that T-drains be installed to accommodate the extreme temperature and pressures of a design basis event environment. As stated earlier in the response to Attachment 1, section II.B, it is the position of the NRC staff that engineering judgment must be documented in order to demonstrate qualification in accordance with 10 CFR 50.49. Therefore, this violation stands as stated. The licensee clearly should have known that the operators were unqualified because it knew of Limitorque test report B0058, which as described, which requires that installation of T-drains. APCo's argument that it qualified motor operators in 1986 with undocumented engineering judgment shortly after it discovered that T-drains were missing, and that this renders any violation insufficiently significant to warrant a civil penalty under the Modified Policy, fails because: APCo's undocumented engineering judgment could not qualify the operators, as described in the answer to Attachment II, section V.A.4, so the exception in the Modified Policy does not apply. Accordingly, this was a significant violation.

The NRC staff acknowledges that the issue of motor operator T-drains has been handled differently at different plants. However, the NRC staff does not find such a situation inconsistent with the Modified Policy, as the licensee implied. Contrary to the licensee's assertion, the issue of motor operator T-drains is not the exact same issue at each plant. Numerous factors went into the NRC staff's case-by-case determination of the severity of violations involving motor operator T-drains. Factors considered in making such decisions included the quality of the documentation supporting qualification that was available at the time of the inspection or shortly thereafter, the plant LOCA profile, the type of motor used in the operator, and the operator orientation. Whether the Limitorque report qualifying a motor operator without a T-drain can be used to qualify operators at a particular plant is implicit in considering these factors. A plant with a LOCA profile like that in the test report, using the proper type of

motor in the proper orientation would likely be able to demonstrate similarity. Application of these factors in other cases distinguish them from this case.

**Violation I.C.1.c: Unqualified Splices:** NRC staff's position on V-type tape splices is addressed in the response to Attachment 1, section III.A. (See supra, pp. 17-19).

**Violations I.C.1.d and e: Terminal Blocks and Aluminum Limit Switch Housing:** The licensee admitted that these violations existed. NRC staff's position on the nature and scope of walkdowns is discussed in the response to Attachment 2, section V.A.2 (See supra, pp. 10-11). That discussion forms the general position, that given the information available from the NRC staff and other sources, as discussed below, the licensee should have performed walkdowns or other detailed investigations of the problems identified by IN 83-72, and had it done so, clearly should have known of the violations.

With regard to the limit switch housing, the licensee clearly should have known of the violation because the test report did not allow the use of aluminum limit switch housings. The licensee's argument that because proper and NRC-accepted procurement inspection procedures were employed, it did not have a reasonable opportunity to detect the use of the aluminum housing is not persuasive. Given that only a single aluminum housing was found, and given that APCo's records for the operator do not show that environmental qualification was considered and assured, it is far more likely that the housing was installed after the operator was in the plant rather than prior to receipt of the operator at FNP. Therefore, it is more likely that the problem was one of the licensee failing to maintain EQ rather than a receipt inspection problem. The NRC staff reaches that conclusion because there have been few, if any other, instances in which such housings have been improperly supplied by motor operator vendors for use in EQ applications. In sum, because its equipment records did not show that the licensee had maintained its equipment in accordance with environmental qualification requirements, the licensee clearly should have known of this violation.

The NRC staff acknowledges that the licensee did inform the NRC inspectors that the operator in question was not required to be on the master list. However, the licensee not only made that argument after the fact but based the argument on placing administrative controls on the valve to keep it in its

safety position. Such controls may have formed an adequate basis for removing the valve from the list at the time of the inspection but since the controls were not in place prior to the deadline the NRC staff rejects the licensee's arguments.

As discussed above for V-type splices (See supra, p. 17), the NRC staff's SER issued December 13, 1984 did not tacitly approve APCo's qualification of terminal blocks in Limitorque operators.

The NRC staff acknowledges that identification of problems with terminal blocks in motor operators was handled differently at different plants. The issue was handled on a case-by-case basis considering such factors as whether the terminal blocks were used in motor operators inside or outside containment, whether they were used in control or instrument applications, and the quality of the documentation supporting qualification available at the time of the inspection. After reviewing the specific violation at River Bend referenced by the licensee in its response, the NRC staff concludes that, in retrospect, the inspection report for River Bend (Inspection Report 50-458/87-21) probably should have more fully explained the NRC staff's rationale for reaching the conclusion that the violation was most appropriately categorized at Severity Level IV. Briefly, the violation at River Bend was categorized at Severity Level IV based on two factors, location (outside containment) and application (control).

With regard to the licensee's argument concerning its response to Information Notice (IN) 83-72, the NRC staff concludes that relying on 1980 information to respond to a 1983 issue which calls into question the applicability of that earlier information (see Attachment 1 to IN 83-72, page 16 of 16, #8) is improper. The thrust of the information provided by the IN was that third party involvement after the operators had been shipped by Limitorque and improperly reviewed modifications after installation were likely causes of the existence of unqualified terminal blocks in the motor operators. Therefore, to do no physical inspections at FNP was unreasonable given the information provided.

**Violation I.C.2: Target Rock Cable Entrance Seals:** The NRC staff disagrees with the licensee that seals are not required for qualification of Target Rock Solenoid Operated Valves (SOV). The head vent valves were required to be installed by 10 CFR 50.44. This regulation requires that these valves be operable post-LOCA (10 CFR 50.44(c)(3)(iii)). In order to be operable

post-LOCA, they must be environmentally qualified. Even accepting the licensee's argument, the SOVs form part of the reactor coolant pressure boundary, as stated in 10 CFR 50.44(c)(3)(iii), and are defined by 10 CFR 50.49(b)(1)(i) as important to safety. They must then be qualified for a design basis accident.

The NRC staff's SER approved only the licensee's approach and schedule for completing the full environmental qualification of the Target Rock solenoid valves. At no time did the NRC staff tacitly approve the licensee's claim that the reactor vessel head vent valves did not have to be environmentally qualified to the rule. The NRC staff position on TMI Lessons Learned Equipment, as stated in Supplement 2 to IEB 79-01B, has always been that this equipment is subject to the same requirements as other safety-related equipment. This position was also reiterated in the TER (at page 2-3 and 2-4) as further discussed in Supplement 3 of IEB 79-01B. The NRC staff clearly stated in this supplement as it related to TMI Lessons Learned Equipment that, "... no change has occurred in staff position regarding the scope of the 79-01B Supplement 2 review." The licensee's statements as it related to the scope of the 50.49 review were always related in the context of a completion schedule for the full qualification of the solenoid valves. In its letter of February 29, 1984, (See Appendix B, Reference 8) to the NRC staff, the licensee stated:

The qualification report [for the Target Rock SOVs] is currently under development by Westinghouse with a scheduled completion in 1984. APCo has reviewed the draft qualification report and determined that these solenoids are qualified for use in the FNP containment. APCo will review the final report when issued to ensure qualification is maintained.

The licensee went on to argue that the SOVs were not required to be qualified. However, given the licensee's statements that the SOVs were qualified, there was no reason for the NRC staff to dispute the licensee's assertion that the equipment was not required to be qualified. Therefore, it was not necessary for the NRC staff to respond to the assertion, and the staff's silence on the matter cannot be construed as tacit approval of the licensee's position.

The licensee's response to the Notice mentioned a 1984 test report that has not been provided to NRC staff for evaluation. Therefore, there is no basis for the NRC staff to conclude that the test report would demonstrate that the equipment was suitable for its application. Further, that test report was

not in the licensee's files at the time of the inspection. The test report that was in the licensee's files specified that a qualified entrance seal was required, but such a seal was not installed. By not presenting the new information during or shortly after the inspection, or even at the enforcement conference held months after the inspection, APCo did not satisfy the Modified Policy's criterion for finding a violation insufficiently significant to warrant a civil penalty by allowing for further documentation during or shortly after the inspection. Moreover, this new test report does not qualify the seals for the valves because it was submitted long after the deadline. (See discussion of APCo's definition of "qualified", supra, pp. 12-13.)

With regard to the clearly should have known test, factor one was considered applicable because the licensee's test report required a qualified seal to be installed on the valves. This factor alone was sufficient to consider escalated enforcement since only one factor is required to be met. Therefore, this violation stands as stated.

The NRC staff's position relating to seal qualification issues, including Target Rock valves, is addressed in the response to the Chico A/Raychem violations (See supra pp. 26-29).

*Violation I.C.3: Gems Sump Level Transmitters:* With respect to V-type splices on the transmitters, the NRC staff responds with the same analysis made for Violation I.A.1 (See supra, at pp. 17-19). Although the licensee argued that these facts formed the basis for citation of a violation other than of 10 CFR 50.49, the NRC staff identifies no reason why it could not issue a citation for violation of 10 CFR 50.49 as well. The licensee's claim that a citation for violation of 10 CFR 50.49 is inappropriate is simply not supported by the facts. APCo admitted this violation by stating that, by the deadline, it had no data on GEMS level indicator performance with low silicone levels. APCo contended, however, that two of the transmitters were qualified based on its definition of the term that the NRC staff rejected above (See supra, pp. 12-13). APCo continued by stating that the transmitters were not unqualified, and, therefore, this was not a violation. Such an interpretation of the regulation would require the NRC staff to demonstrate the equipment would fail rather than requiring the licensee to assure it would not. 10 CFR 50.49 requires licensees to qualify electrical equipment important to safety for harsh environments and maintain records of qualification, and this requirement clearly applies to the GEMS sump level transmitters. The NRC staff need not prove that equipment will

fail in a harsh environment to show a violation of 10 CFR 50.49. Moreover, the licensee concedes a violation of 10 CFR 50.49(j). Accordingly, APCo violated 10 CFR 50.49 (f) and (j) by failing to qualify the GEMS level transmitters by the deadline.

The licensee claimed that it should not have clearly known of this violation. However, vendor test reports indicated that the silicon fluid was required for the level transmitters to remain qualified. The information would have led an engineer knowledgeable in the requirements of 10 CFR 50.49 to reach that conclusion, and to verify that the level transmitter fluid levels were correct.

The second factor of the Modified Policy applied because the licensee's equipment records did not demonstrate that the installed configuration matched the tested configuration. Moreover, the licensee did not perform adequate field walkdowns or other verifications to assure that the installed configuration was the same as the tested configuration. NRC staff's position on the nature scope of walkdowns is discussed in response to Attachment 2, section V.A.2 (See supra, pp. 10-11). Additionally, the licensee did not ensure adequate maintenance controls were implemented to maintain the qualification status of the level transmitters. With regard to identification of this violation, the NRC staff agrees that the licensee found the deficient condition. However, the identification resulted from questioning by an NRC inspector and therefore was not considered as independently identified by the licensee, according to the Modified Policy's definition.

In responding to this issue APCo referred to the fact that the NRC staff had subsequently classified a similar violation to be of lesser significance at another Region II plant. The NRC staff acknowledges that a similar violation was considered of lower severity. However, given the specifics of that case such a determination was appropriate. Specifically, in that case the licensee was able to demonstrate that the junction box of concern would not have been subjected to a submerged environment as previously assumed. The analysis performed for APCo by Bechtel was performed after the deadline and consistent with the NRC staff's position (See supra pp. 12-13) such analysis could not demonstrate qualification of the transmitter prior to the deadline.

*Violation I.C.4: Premium RB Grease:* The importance of grease in equipment qualification is discussed in the

response to Violation I.C.1.a. Given that the vendor specifically identified the grease used on the fan motors and room coolers, the licensee clearly should have known that those components would not be qualified with different greases. The documentation that is claimed to be from the licensee's maintenance files (not the EQ qualification file) was not presented during the inspections, nor at the enforcement conference held months after the inspection. Further, that information alone does not support the qualification of the fan motors and room coolers lubricated with Premium RB grease and located in a harsh environment. Specifically, although a reference to operating temperature range for the grease was provided there was no documentation to support qualification in a full LOCA environment. As demonstrated by the licensee's response, grease testing was not completed as of November 14, 1988. The length of time necessary to establish qualification of these components with different greases clearly falls outside the exception given in the Modified Policy. Accordingly, this violation is sufficiently significant to warrant assessment of a civil penalty. Therefore, this violation stands as stated.

The failure to adequately demonstrate the qualification of each of the items discussed above is a significant violation in accordance with the NRC staff's position detailed earlier in this Appendix.

Attachment 1, Section II.D and Attachment 2, Section V.G: Mitigation, Not Escalation, of the Base Civil Penalty Is Appropriate. Attachment 2, Section V.G: The Staff's Assessment of the Mitigation Factors Was Flawed

The licensee denied that a violation occurred and contended that escalated enforcement is not warranted because the alleged deficiencies are not of sufficient safety significance to impose a civil penalty under the Modified Policy. However, if the violations are sustained, the licensee argued that it is entitled to full mitigation of the base civil penalty. APCo alleged that the NRC staff incorrectly applied the escalation and mitigation factors in the Modified Policy. NRC Staff's Evaluation of Licensee's Response in Attachment 1, Section II.D and Attachment 2, Section V.G

*Identification and Reporting*—Of the eight violations cited in the Notice, APCo independently identified the deficiencies that formed the basis for five violations. Of the remaining violations, the NRC staff identified one (terminal blocks in instrument circuit),

and APCo, in response to inquiries from NRC inspectors, identified two violations (CEMS level transmitters and Chico A/Raychem seal configuration). Reduction of the base civil penalty by 50% is warranted only if a licensee identifies the full scope of virtually all the violations. In view of the circumstances described above, 25% mitigation of the base civil penalty is more appropriate in this case than the full 50% mitigation.

The NRC staff does not accept the licensee's argument that some type of notice after the November 30, 1988 deadline is a necessary condition for considering NRC staff identification of deficiencies under this factor. The licensee has a continuing obligation to assure compliance with NRC requirements. If information became available after the deadline to aid in identifying a deficiency and the licensee failed to do so, that would certainly contribute to escalation of the civil penalty, because that would reflect the failure to take advantage of an opportunity to identify and correct the deficiency. However, escalation or less than full mitigation of the civil penalty can also be based on the number and type of unqualified components identified by the NRC staff. NRC inspections are performed on an audit basis, with a relatively small number of inspectors who focus on a small percentage of the plant components to confirm that regulatory requirements are met. Therefore, given the limited scope of NRC inspections, each item identified is of added significance and escalation or less than full mitigation is appropriate. In this case, the same reasoning applies for the two licensee identified violations that resulted from inquiries by NRC inspectors.

The NRC staff recognizes that it could not perform all the inspections at approximately the same time. However, there was an extended period of time before the deadline for licensees to conduct programs for self-identification and therefore the advantage one licensee may have gained by being inspected a few months or a year after another is really inconsequential. Further, the issue of inspection timing is not unique to the Modified Policy issues but is inherent in much of the NRC inspection program because of limited inspection resources.

*Best Efforts*—The NRC staff agrees with APCo that licensees should be encouraged to address emerging issues. However, the NRC staff does not view the EQ issues discussed in the Notice or the whole area of equipment procurement as emerging issues. The

need to ensure that components of the proper type and qualification are procured has been and continues to be an essential part of any nuclear safety-related program including the plant EQ program. Because EQ is not solely an engineering function, the NRC staff would expect that a licensee demonstrating best efforts to have undertaken an EQ review of procurement records before the deadline to assure that qualification of equipment had been maintained despite part replacement and equipment repair. However, APCo's in-depth review of procurement records did not occur until after the deadline and the NRC staff concludes that little if all was done in this area before the deadline.

The NRC staff's technical positions on the issues of equipment walkdowns and qualification of equipment using lubricants other than as tested are presented in other portions of this Appendix. In the context of the factor of best efforts in those two areas, it is the NRC staff's position that APCo's efforts fall well short of the standards which reasonably could be deemed to constitute best efforts in attempting to comply with 10 CFR 50.49. For example, when APCo's documentation indicated a problem with respect to qualification, its failure to perform walkdowns or other appropriate investigation demonstrate a failure to exert its best efforts to comply with 10 CFR 50.49. This conclusion is supported by many of the statements summarizing APCo's own evaluation of its EQ program made in Enclosure 1 to the NRC's Enforcement Conference Summary dated April 13, 1988 (See Appendix B, Reference 5).

The escalation of the base civil penalty for a lack of best efforts does not suggest that APCo made no efforts to comply with EQ requirements. The NRC staff recognizes the programmatic efforts made by APCo in the 1979-1985 time frame. However, such efforts do not single out APCo over other licensees who also were assessed a civil penalty despite devoting significant efforts to establish an EQ program. Escalation for best efforts does not rest on lack of resources devoted to the equipment qualification program, but on the basic deficiencies in that program. The efforts discussed in the licensee's response also do not consider program implementation and verification efforts. Implementation and verification of a proper EQ program rests with the licensee. Based upon the identified deficiencies in the program, even though in some other areas a satisfactory EQ program was formulated for the FNP units, best efforts were not made in general in the areas of



implementation and verification and therefore escalation of the civil penalty was appropriate. Accordingly, 50% escalation of the base civil penalty based on this factor is appropriate.

**Corrective actions.** When considering a licensee's actions to correct deficiencies under this factor the NRC staff is specifically focusing on the licensee's corrective actions for the identified violations. The overall programmatic corrective actions the licensee took before identification of the violations and prior to the deadline were considered as part of the licensee's best efforts. This application of the corrective actions factor under the Modified Policy is consistent with its application under the General Enforcement Policy.

Given that most of the deficiencies that formed the basis of the August 15, 1988 Notice were contained in the February 4, 1988 inspection report, it is clear that the comments referenced by the licensee about "significant improvements," which were also contained in that report, were not made with regard to corrective actions taken to correct the deficiencies at issue. The violations along with the above referenced comment were concurrently identified to the licensee and therefore the NRC inspectors were not commenting on the corrective actions for violations which were just being transmitted to the licensee. The NRC inspection of the licensee's long-term corrective actions for the violations is discussed in NRC Inspection Report 50-348 and 50-349/89-23 issued October 31, 1989. Based on both of the above points, the "significant improvements" discussed in the earlier report do not warrant consideration under this factor. However, as indicated above, any of those improvements made prior to the deadline were taken into consideration when considering the best efforts factor.

Regarding the licensee's comments on its corrective actions for the fan motor problem, the NRC staff concludes that a number of comments need to be made to clarify the licensee's submittal. First, the licensee's inclusion, in its reply to the Notice, of a statement from the Systematic Assessment of Licensee Performance (SALP) report might leave the impression that the matter was not of significant concern to the NRC staff and more importantly that the NRC staff in making the statement had taken a final position on the appropriateness of the licensee's corrective actions. Neither of those conclusions is correct. The sentence in the SALP report that follows the one cited by the licensee stated that

consideration, making it clear that the matter was both of significant concern and still being evaluated. The NRC staff will not comment on APCO's recollection of statements, regarding the licensee's handling of the fan motor issue, supposedly made at the July 7, 1988 SALP meeting, except to say that the NRC staff's documented position as contained in the SALP report does not support the licensee's assertion that the NRC staff found its action acceptable. Second, because the NRC staff had continuing concerns over the fan motor V-type splice issue at FNP, a meeting was held in Bethesda, MD on September 24, 1987. That meeting was followed by a Confirmatory Action Letter dated October 6, 1987 which confirmed various followup actions on the part of the licensee in the area of EQ including further specific actions relating to the V-type splices. Clearly, such a course of action on the part of the NRC staff demonstrates a concern with the licensee's actions to satisfactorily resolve this issue.

With specific regard to the handling of replacement of the fan motor splices, the licensee admits in its response to the Notice that a JCO, as called for in GL 86-15, was never completed. The licensee claims that the need for the JCO was unnecessary given the fact that the splices were replaced prior to completion of the JCO. The NRC staff still maintains that the licensee's course of action was non-conservative. Absent a JCO, the licensee had no documented or approved basis to justify the continued operation of a system required by the plant Technical Specifications and therefore, had no documented basis for the continued operation of Unit 2 that occurred during splice replacement. Clearly upon discovery of the improper splices on Unit 1, the licensee had a reasonable basis to suspect a problem on Unit 2. The delay of nine days in taking action on that unit without a documented basis was non-conservative. As documented elsewhere in this Appendix, the NRC staff does not accept undocumented engineering judgment or after-the-fact analysis or testing as a sufficient basis for continued operation and that is what the licensee in fact relied on. In claiming that it went beyond the Generic Letter recommendation, that licensees take immediate steps to establish a plan with reasonable schedule to correct the deficiency, the licensee demonstrates a lack of understanding of the NRC staff's concern. Not only does a JCO justify long term continued operation should the licensee choose such a course of action, but it also justifies short term

continued operation (the time it takes to effect corrective actions). Prior to any corrective actions, either a documented and approved basis must be provided for continued operation (a JCO) or the licensee must comply with the applicable requirement, which in this case was the Technical Specification. The mere fact that the licensee plans to take prompt corrective action does not remove the obligation to have a documented and approved basis for operating during the time it will take to effect the necessary actions.

In summary, the NRC staff finds that the licensee's arguments for mitigation under this factor are either not applicable or do not demonstrate a basis for mitigation. Further, in at least one significant instance (V-type splices), the licensee's corrective actions were clearly inappropriate and thus partial (25%) escalation of the base civil penalty is warranted.

#### Conclusion

Based upon the above considerations, no additional information has been provided that would cause the NRC staff to either withdraw a violation or reconsider its categorization. The violations affect a sufficient number of systems and components that are important to safety to warrant classification of this EQ problem as a Category A problem. Therefore, the NRC staff adheres to its classification of the violations as a Category A problem under the Modified Policy, and concludes that the proposed civil penalty of \$450,000 should be imposed.

#### Restatement of Violation II

10 CFR part 50, appendix B, Criterion I, Organization, requires that persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems, to recommend solutions, and to verify implementation of solutions. 10 CFR part 50, appendix B, Criterion XVI, Corrective Action further requires that measures shall be established to assure conditions adverse to quality are promptly corrected. The accepted QA program (FNP-FSAR-17) section 17.2.1.2, which in part implements 10 CFR part 50, appendix B, as required by 10 CFR 50.54(a), states that Safety Audit and Engineering Review (SAER) under the direction of the manager (MSAER), has been established to provide a comprehensive independent audit program of safety-related activities to verify that such activities are in compliance with the Operational Quality Assurance Program (OQAP). FNP-FSAR-17 further states

that the Supervisor-SAER and his staff stationed at FNP shall conduct the audit program, and he has the authority to identify problems, recommend solutions, and verify corrective actions.

Section 17.216 states that an administrative procedure has been written to assure that conditions adverse to quality are promptly identified and corrected.

Contrary to the above, SAER is not ensuring effective execution of the quality assurance program in that conditions adverse to quality associated with the EQ program have not been promptly corrected. The following Corrective Action Request (CAR) describe deficiencies identified by SAER for which corrective actions had, at the time of the inspections, not yet been completed.

CAR No.	Date Identified	Estimated completion date
830	Nov. 1983	Mar. 03, 1988
1251	Oct. 1988	Mar. 31, 1988

This is a Severity Level IV violation (10 CFR 2, appendix C, supplement I).

Attachment 1, Section III.D: Alleged Violation Relating to the Quality Assurance Program for Safety-Related Activities (Alleged Violation II.)

Attachment 2, Section V.E: Alleged Violations Under NOV Section III

The licensee denies the alleged violation. The licensee contends that CAR 830, prepared December 29, 1983, was to address only instruction books and vendor drawings for EQ equipment. The licensee expanded the scope to cover subsequent vendor manual revisions. As items were closed, the licensee identified new items as a result of the issuance of GL 83-28. These new items, the licensee claimed, were the cause of the completion date being revised. The licensee contended that the length of time that elapsed was appropriate.

The licensee further contended that the actions taken to close CAR 1251 were prompt. The licensee stated that the completion of this item was tied to the evaluation performed for NRC Bulletin 85-03.

The licensee argued that a review of the time period in which these CARs were open, along with consideration of the surrounding circumstances, would not indicate a deficiency in the execution of its quality assurance program.

NRC's Evaluation of Licensee's Response in Attachment 1, Section III.D

CAR 830 was initially prepared on December 29, 1983, and identified a deficiency that involved failure of the design change program to identify vendor technical manuals and vendor drawings as requiring update upon implementation of a plant modification. The licensee's preventive maintenance program for EQ equipment required that appropriate vendor technical manuals be referenced for performance of preventive maintenance activities. Failure of the design program to identify vendor technical manuals and shop drawings that should have been updated resulted in the preventive maintenance program referencing incorrect vendor documents. The licensee claimed that completion of the CAR was delayed because of new issues created by GL 83-28.

The NRC staff will not discuss whether CAR 830, in its final expanded form was addressed in a timely manner because discussions with the licensee on GL 83-28 issues have continued for some time. However, the NRC staff maintains that the original concerns in CAR 830 were not addressed in a timely manner. In retrospect, the licensee should have issued a separate CAR to address the emerging issues rather than indefinitely extending the completion date for the corrective actions of the older issues. The NRC staff recognizes that some of the emerging GL 83-28 issues could affect the resolution of the earlier concerns. However, it was incumbent on the licensee, at a minimum, to have interim guidance in place to assure vendor information was properly referenced and updated for preventive maintenance procedures whose use was on going, while final resolution of all the emerging issues was being addressed.

The licensee stated that completion of CAR 1251 was delayed by the completion of the Limitorque evaluation conducted pursuant to NRC Bulletin 85-03. Since this CAR was closely related to the issues covered by NRC Bulletin 85-03, the NRC staff is withdrawing CAR 1251 as an example.

The violation will be modified in our records to reflect the deletion of the example dealing with CAR 1251.

#### Appendix B

##### References

1. Steven A. Varga, NRC, Letter to F.L. Clayton, Alabama Power Company, Subject: Safety Evaluation Report for Equipment Qualification of Safety-related Equipment Unit 1, NRC February 4, 1983

2. Steven A. Varga, NRC, Letter to F.L. Clayton, Alabama Power Company, Subject: Safety Evaluation Report for Equipment Qualification of Safety-related Equipment Unit 2, NRC February 4, 1983
3. Steven A. Varga, NRC, Letter to R.P. McDonald, Alabama Power Company, Subject: Safety Evaluations on Environmental Qualification of Electric Equipment at Farley Units 1 and 2, NRC December 13, 1984
4. Limitorque Test Report B0058, Limitorque Valve Actuator Qualification for Nuclear Power Station Service, January 11, 1980
5. J. Nelson Grace, NRC, Letter to R.P. McDonald, Alabama Power Company, Subject: Enforcement Conference Summary (NRC Inspection Report Nos. 50-348/87-30 and 50-364/87-30), NRC April 13, 1988
6. J.M. Taylor, NRC, Letter to Nuclear Utility Group on Equipment Qualification, Subject: Response to Group Provided Comments on GL 88-07, NRC February 13, 1989
7. F.L. Clayton, Jr., Letter to S.A. Varga, NRC, Subject: Joseph M. Farley Nuclear Plant—Unit 2, Environmental Qualification of Safety Related Electrical Equipment, APCO June 23, 1982
8. F.L. Clayton, Jr., Letter to S.A. Varga, NRC, Subject: Joseph M. Farley Nuclear Plant—Units 1 and 2, Environmental Qualification, APCO February 29, 1984

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[Docket No. 50-322

#### Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1); Exemption

I

Long Island Lighting Company (the licensee) is the holder of Facility Operating License No. NPF-82 which authorizes operation of the Shoreham Nuclear Power Station (SNPS). The facility is a boiling water reactor located at licensee's site in Suffolk County, New York. It is currently defueled and the licensee, in its letter of January 12, 1990, committed not to place nuclear fuel back into the Shoreham reactor without prior NRC approval. By Confirmatory Order dated March 29, 1990, "the licensee is prohibited from placing any nuclear fuel into the Shoreham reactor vessel without prior approval from the NRC." This license provides, among other things, that it is subject to all rules, regulations and orders of the Commission now or hereafter in effect.

II

Pursuant to 10 CFR part 26, each nuclear power reactor licensee, shall implement a fitness for duty (FFD) program. Pursuant to 10 CFR 26.2, the provisions of the fitness for duty program must apply to all persons