

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Power Authority of the State of New York  
Indian Point 3

Docket No. 50-286  
License No. DPR-64  
EA 88-148

During several NRC inspections conducted between April 16, 1986 and September 25, 1987 of the licensee's program for environmental qualification (EQ) of equipment, NRC inspectors identified violations of NRC requirements and reviewed other violations identified by the licensee. In accordance with the "Modified Enforcement Policy Relating to 10 CFR 50.49, Environmental Qualification of Electrical Equipment Important to Safety of Nuclear Power Plants," contained in NRC Generic Letter 88-07, the Nuclear Regulatory Commission proposes to impose a civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205. The particular violation and associated civil penalty are set forth below:

I. VIOLATION ASSESSED A CIVIL PENALTY

10 CFR 50.49(d), (f), and (j), respectively, require, in part, that (1) a list of electric equipment important to safety be prepared, and information concerning performance specifications, electrical characteristics and postulated environmental conditions for this equipment be maintained in a qualification file; (2) each item of electric equipment important to safety shall be qualified by testing and/or analysis of identical or similar equipment, and the qualification based on similarity shall include a supporting analysis to show that the equipment to be qualified is acceptable; and (3) a record of the qualification shall be maintained in an auditable form to permit verification that each item of electrical equipment important to safety is qualified and that the equipment meets the specified performance requirements under postulated environmental conditions.

Contrary to the above, from November 30, 1985 until certain dates specified herein, the following items were not demonstrated to be environmentally qualified.

- a. As of September 2, 1986, qualification of the containment High Range Radiation Monitors (Nos. R-25 and R-26) cable connector assembly was deficient in that the cable/connector assembly was installed in a configuration different than tested in that the installed assembly was missing the environmental Raychem heat shrink tubing.
- b. As of September 2, 1986, qualification of six series 200-300 Marathon Terminal Blocks inside containment (used in safety related circuits for containment sump level indication, recirculation sump level indicator, and containment water level indication) was deficient. Specifically, these terminal blocks are not qualifiable for the

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particular inside containment application because of the potential for electrical shorting due to moisture buildup.

- c. As of August 21, 1987, the qualification of 480 volt motor lead splices, used as power leads for twenty-nine motors in Engineered Safeguards, Auxiliary Feedwater and Auxiliary Coolant Systems, was deficient in that an evaluation had not been performed of differences between installed and tested configuration.
- d. As of September 25, 1987, the qualification of Lewis Thermocouple cable used in Hydrogen Recombiners (for monitoring the temperature of the recombiner elements for control of the recombiner), was deficient. Specifically, the similarity analysis was inadequate in that it failed to adequately justify the acceptability of differences, such as insulation formulation, between the cable tested and installed cable.

These violations constitute an EQ category B violation.

Civil Penalty - \$75,000 (These EQ violations existed in excess of 100 days of plant operation).

## II. VIOLATION NOT ASSESSED A CIVIL PENALTY

10 CFR 50.49(d), (f), and (j), respectively, require, that (1) a list of electric equipment important to safety be prepared, and information concerning performance specifications, electrical characteristics and postulated environmental conditions for this equipment be maintained in a qualification file; (2) each item of electric equipment important to safety shall be qualified by testing and/or analysis of identical or similar equipment, and the qualification based on similarity shall include a supporting analysis to show that the equipment to be qualified is acceptable; and (3) a record of the qualification shall be maintained in an auditable form to permit verification that each item of electrical equipment important to safety is qualified and that the equipment meets the specified performance requirements under postulated environmental conditions.

Contrary to the above, examples of the violation include:

- a. From November 30, 1985 until September 25, 1987, thirteen items of electrical equipment important to safety were not included on the EQ master list of electric equipment important to safety. The specific items not properly incorporated onto the EQ Master List are those 13 items specifically not required by Regulatory Guide 1.97 which are listed in licensee memorandum No. EQ-IP-87-301, dated September 8, 1987.

- b. From November 30, 1985 until September 25, 1987, qualification for Silicon Rubber Insulated Cable was not established in that the cable had not been tested for submerged applications. A similarity analysis was performed based on test data for a cable with different insulating materials, but the effects of different chemical composition and the variation of the manufacturing process were not fully evaluated. However, the cable was considered qualifiable considering the large margin to failure.
- c. From November 30, 1985 until August 24, 1987, the qualification for 14 AWG single conductor Amerlink cables was not established in that the qualification documents supporting cable qualification were not complete. Specifically, the qualification test results, although available, had not been incorporated in the qualification file.

This is a Severity Level IV violation. (Supplement I)

Pursuant to the provisions of 10 CFR 2.201, Power Authority of the State of New York (Licensee) is hereby required to submit a written statement of explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further violations, and (5) the date when full compliance was or will be achieved. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, the licensee may pay the civil penalty by letter to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, or money order payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or the cumulative amount of the civil penalties if more than one civil penalty is proposed, or may protest imposition of the civil penalty in whole or in part by a written answer addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission. Should the licensee fail to answer within the time specified, an order imposing the civil penalty will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and may: (1) deny the violations listed in this Notice in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the mitigation factors in the "Modified Enforcement Policy Relating to 10 CFR 50.49, Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants," contained in Generic Letter 88-07, should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

Upon failure to pay any civil penalty due which subsequently has been determined in accordance with the applicable provisions of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The responses to the Director, Office of Enforcement, noted above (Reply to a Notice of Violation, letter with payment of civil penalty, and answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, U. S. Nuclear Regulatory Commission, 475 Allendale Road, King of Prussia, PA, 19406 and a copy to the NRC Resident Inspector, Indian Point 3.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By  
WILLIAM T. RUSSELL  
William T. Russell  
Regional Administrator

Dated at King of Prussia, Pennsylvania  
this 21<sup>st</sup> day of September 1988.



April 7, 1988

Enclosure 2

TO ALL POWER REACTOR LICENSEES AND APPLICANTS

SUBJECT: MODIFIED ENFORCEMENT POLICY RELATING TO 10 CFR 50.49, "ENVIRONMENTAL QUALIFICATION OF ELECTRICAL EQUIPMENT IMPORTANT TO SAFETY FOR NUCLEAR POWER PLANTS" (GENERIC LETTER 88-07)

Background:

Generic Letters, Bulletins, and Information Notices have been issued to provide guidance regarding the application and enforcement of 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants." Generic Letter 85-15, issued August 6, 1985, and Generic Letter 86-15, issued September 22, 1986, provided information related to the deadlines for compliance with 10 CFR 50.49 and possible civil penalties applicable to licensees who were not in compliance with the rule as of the November 30, 1985 deadline. Upon review, the Commission found that the EQ Enforcement Policy promulgated in Generic Letter 86-15, could result in imposition of civil penalties that did not properly reflect the safety significance of EQ violations with respect to civil penalties imposed in the past. In the interest of continuing a tough but fair enforcement policy, the Commission determined that the EQ Enforcement Policy should be revised. The purpose of this letter is to provide a modification to the NRC's enforcement policy, as approved by the Commission, for environmental qualification (EQ) violations. This letter replaces the guidance provided in Generic Letters 85-15 and 86-15.

Modified EQ Enforcement Policy

The details of the modified EQ enforcement policy are provided in the enclosure. Generally, the changes made to the policy are to: (1) aggregate significant EQ violations together, rather than consider each separate item of unqualified electrical equipment, for assessment of a civil penalty, (2) assess a base civil penalty according to the number of systems or components which are affected by the unqualified equipment in a graded approach by assignment of the aggregate EQ problem into one of three categories, (3) establish a maximum EQ civil penalty of \$750,000 for most cases, (4) maintain a minimum civil penalty of \$50,000 for a significant EQ violation in most cases, and (5) consider mitigation or escalation of the base civil penalty based on the factors of identification and reporting, best efforts to complete EQ within the deadline, corrective actions, and duration of the violation.

This modified policy should not be interpreted as a lessening of the NRC's intention to assure that all plants comply with EQ requirements. The modified policy is intended to give a significant civil penalty to those licensees with significant EQ violations. The NRC's view is that the modified policy more closely reflects the relative safety importance of EQ violations with other enforcement issues.

Safety Issues

When a potential deficiency has been identified by the NRC or licensee in the environmental qualification of equipment (i.e., a licensee does not have an

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adequate basis to establish qualification), the licensee is expected to make a prompt determination of operability (i.e., the system or component is capable of performing its intended design function), take immediate steps to establish a plan with a reasonable schedule to correct the deficiency, and have written justification for continued operation, which will be available for NRC review.

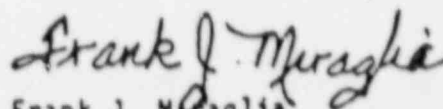
The licensee may be able to make a finding of operability using analysis and partial test data to provide reasonable assurance that the equipment will perform its safety function when called upon. In this connection, it must also be shown that subsequent failure of the equipment, if likely under accident conditions, will not result in significant degradation of any safety function or provide misleading information to the operator.

The following actions are to be taken if a licensee is unable to demonstrate equipment operability:

- a. For inoperable equipment which is in a system covered by plant technical specifications, the licensee shall follow the appropriate action statements. This could require the plant to shut down or remain shut down.
- b. For inoperable equipment not covered by the plant technical specifications, the licensee may continue reactor operation:
  1. If the safety function can be accomplished by other designated equipment that is qualified, or
  2. If limited administrative controls can be used to ensure the safety function is performed.

The licensee must also evaluate whether the findings are reportable under 10 CFR 50.72 and 50.73, 10 CFR Part 21, the Technical Specifications or any other pertinent reporting requirements, including 10 CFR 50.9(b), particularly if equipment is determined to be inoperable.

This letter does not require any response and therefore does not need approval of the Office of Management and Budget. Comments on burden and duplication may be directed to the Office of Management and Budget, Reports Management Room 3208, New Executive Office Building, Washington, DC 20503. Should you have questions on this letter, the staff contact is Howard Wong, Office of Enforcement. He can be reach on (301) 492-3281.



Frank J. Maglia  
Associate Director for Projects  
Office of Nuclear Reactor Regulation

Enclosure: As stated

## MODIFIED ENFORCEMENT POLICY FOR EQ REQUIREMENTS

This enclosure provides the details of the modified enforcement policy for EQ requirements for those licensees who were not in compliance with 10 CFR 50.49 as of the November 30, 1985 deadline.

I. Scope of the Enforcement Policy for EQ Requirements

If violations of the EQ rule identified at plants operating after November 30, 1985 existed before the deadline and the licensee "clearly knew or should have known" of the lack of proper environmental qualification, then enforcement action may be taken as described in Sections III and IV. If the licensee does not meet the "clearly knew or should have known" test, no enforcement action will be taken.

This enforcement policy applies to violations of the EQ rule identified after November 30, 1985 which relate back to action or lack of action before the deadline. Violations which occurred after November 30, 1985 (either as a result of plant modifications or because the plant was licensed after November 30, 1985) will be considered for enforcement action under the normal Enforcement Policy of 10 CFR Part 2, Appendix C. In addition, EQ violations which are identified after the NRC's last first-round inspection, <sup>1/</sup> approximately mid-1988, will also be considered under the normal Enforcement Policy.

II. Application of the "Clearly Knew, or Should Have Known" Test

Licensees who "clearly knew" they had equipment for which qualification could not be established may have committed a deliberate violation of NRC requirements. This situation will be evaluated on a case-by-case basis.

The NRC will examine the circumstances in each case to determine whether the licensee "clearly should have known" that its equipment was not qualified. The factors the NRC will examine include:

1. Did the licensee have vendor-supplied documentation that demonstrated that the equipment was qualified?
2. Did the licensee perform adequate receiving and/or field verification inspection to determine that the configuration of the installed equipment matched the configuration of the equipment that was qualified by the vendor?
3. Did the licensee have prior notice that equipment qualification deficiencies might exist?
4. Did other licensees identify similar problems and correct them before the deadline?

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<sup>1/</sup> First-round inspections are special team inspections to review licensees' compliance with 10 CFR 50.49.

In assessing whether the licensee clearly should have known of a deficiency, the information provided to the licensees by the NRC and the industry on specific deficiencies will be taken into consideration. This information, and the timeliness of it being provided to licensees prior to the EQ deadline are relevant factors. If one licensee determined that a specific EQ deficiency existed, it would not be assumed that all licensees should have also come to the same conclusion unless information about the specific deficiency had been widely disseminated within the industry or by the NRC. The staff will carefully consider these criteria when evaluating whether a licensee clearly should have known of a deficiency prior to the deadline.

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

Any failure to adequately list and demonstrate qualification of equipment required by 10 CFR 50.49 may constitute a violation of the rule. This does not require, however, that all violations of the rule be considered for escalated enforcement or be assessed a civil penalty. For example, if the qualification file presented to the inspector during an inspection did not demonstrate or support qualification of equipment, the equipment would be considered unqualified <sup>2/</sup> and 10 CFR 50.49 requirements would be violated. However, although not in the qualification file, if sufficient data exists or is developed during the inspection to demonstrate qualification of the equipment or, based on other information available to the inspector, the specific equipment is qualifiable for the application in question, the qualification deficiency is not considered sufficiently significant for assessment of civil penalties. These violations would be considered to be Severity Level IV or Severity Level V violations based on a violation of 10 CFR 50.49 requirements at the time of the inspection.

Programmatic violations or problems that are identified as a result of the EQ inspections that involve several EQ violations which themselves would not be considered sufficiently significant to merit a civil penalty under the modified EQ enforcement policy nonetheless may be aggregated and evaluated for escalated enforcement action (generally Severity Level III) for the failure to satisfy applicable requirements of 10 CFR 50.49 and/or 10 CFR Part 50, Appendix B. The civil penalties for these violations would be assessed under the normal Enforcement Policy of 10 CFR Part 2, Appendix C (Supplement I).

### IV. Basis for Determining Civil Penalties

#### A. Base Civil Penalty

Significant EQ violations, for which the licensee clearly should have known that they had equipment for which qualification had not been established,

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<sup>2/</sup> For purposes of enforcement, "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.



are to be considered together, in the aggregate, and the base civil penalty assessed in a graded approach based on the number of systems or components affected. 3/

The base civil penalty would be determined as described below.

<u>EQ Violation Category</u>	<u>Base Civil Penalty</u>
A. Extensive; EQ violations affecting many systems and many components.	\$300,000
B. Moderate; EQ violations affecting some systems and some components.	\$150,000
C. Isolated; EQ violations affecting a limited number of systems and components.	\$ 75,000

The three EQ violation categories reflect the overall pervasiveness and the general safety significance of significant EQ violations. The NRC considers violations of EQ requirements to be safety significant because the electrical equipment required to be qualified were those which have importance to safety. The violation categories do not include those EQ violations which have been determined to be not sufficiently significant standing alone to be considered for escalated enforcement and which will be normally considered as Severity Level IV or V violations, as described in Section III. As stated in Section III, however, programmatic problems may be the subject of escalated enforcement action under the NRC's normal Enforcement Policy.

The significance of the EQ violations is considered when the NRC evaluates the number of systems affected by the EQ violations and determines the EQ violation category. The NRC will assume, for escalated enforcement cases, that the unqualified equipment could affect operability of the associated system. The NRC will not consider refinements on the operability arguments such as the actual time the equipment is required to be operable, administrative measures or controls available to ensure the safety function is accomplished, the degree to which the operability of a system is affected, or, that through additional analyses or testing, the equipment may be demonstrated to be qualified or qualifiable. This assumption is made for enforcement purposes in order to reduce the resources anticipated to be spent by licensees and the NRC to evaluate in detail whether system operability was in question.

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3/ The EQ violation categories (A-C) will be used rather than the severity levels in the normal Enforcement Policy of 10 CFR Part 2, Appendix C. The base civil penalty for the violations will be applied consistent with the statutory limits on civil penalties under Section 234 of the Atomic Energy Act.

Because the NRC is considering enforcement action rather than a justification for continued operation and the EQ deficiencies have been corrected in most instances, the NRC will make a conservative judgment as to the overall safety significance of the EQ violations based on the number of safety systems affected. This approach has the benefits of a relatively quick, though conservative, view on the safety consequences of unqualified equipment and will focus on the underlying cause of the EQ violations.

Cases involving deliberate violations or very serious EQ violations (more safety significant than considered in this modified enforcement policy such as widespread breakdowns or clearly inoperable systems) will be evaluated on a case-by-case basis and may be subject to more severe sanctions than those described in this policy.

#### B. Mitigation/Escalation Factors

Mitigation and escalation of the base civil penalty determined in Section IV.A will be considered in the determination of the civil penalty amount. The NRC will consider the EQ violations in aggregate, not based on individual violations. Adjustment of the base civil penalty will be considered as described below:

<u>Mitigation/Escalation Factors</u>	<u>Maximum Mitigation/ Escalation Amount (from base civil penalty)</u>
1. Identification and prompt reporting, if required, of the EQ violations (including opportunities to identify and correct the deficiencies).	± 50%
2. Best efforts to complete EQ within the deadline.	± 50%
3. Corrective actions to result in full compliance (including the time taken to make an operability or qualification determination, the quality of any supporting analysis, and the nature and extent of the licensee's efforts to come into compliance).	± 50%
4. Duration of violation which is significantly below 100 days.	- 50%

In order to be fair and equitable to those licensees who took appropriate actions prior to November 30, 1985 or shut down prior to this date to be in compliance, civil penalties generally should not be less than \$50,000 to emphasize that a significant environmental qualification failure is unacceptable.

The NRC will, however, consider full mitigation (no civil penalty) for those EQ violations which satisfy all of the five following criteria: (1) violations which are isolated and affect a limited number of systems and components, (2) violations which are identified by the licensee, (3) violations which are promptly reported to the NRC, if required, (4) violations which are corrected and actions taken will result in full compliance within a reasonable time, and (5) violations for which the licensee has demonstrated best efforts to complete EQ within the deadline.

The intent of full mitigation of the civil penalty for EQ violations which meet all five criteria is to increase the incentive for self-identification of EQ deficiencies which might not otherwise be found by NRC. The NRC will generally issue only a Notice of Violation for violations which meet all these criteria.

If the licensee is able to convincingly demonstrate at the time of the inspection, or shortly thereafter, that an item is not required to be on the EQ list, then the item would not be considered for enforcement action. The NRC does not intend to consider for enforcement purposes the results of a licensee's after-the-fact testing for mitigation where the licensee clearly should have known that its documentation was not sufficient.

LIST OF RECENTLY ISSUED GENERIC LETTERS

Generic Letter No.	Subject	Date of Issuance	Issued To
GL 88-06	REMOVAL OF ORGANIZATION CHARTS FROM TECHNICAL SPECIFICATION ADMINISTRATIVE CONTROL REQUIREMENTS	03/22/88	ALL POWER REACTOR LICENSEES AND APPLICANTS
GL 88-05	BORIC ACID CORROSION OF CARBON STEEL REACTOR PRESSURE BOUNDARY COMPONENTS IN PWR PLANTS	03/17/88	ALL LICENSEES OF OPERATING PWRs AND HOLDERS OF CONSTRUCTION PERMITS FOR PWRs
GL 88-04	DISTRIBUTION OF GEMS IRRADIATED IN RESEARCH REACTORS	02/23/88	ALL NON-POWER REACTOR LICENSEES
GL 88-03	RESOLUTION OF A GENERIC SAFETY ISSUE 93, "REINFORCING BINDING OF AUXILIARY REACTOR PUMPS"	02/17/88	ALL LICENSEES, APPLICANTS FOR OPERATING LICENSES, AND HOLDERS OF CONSTRUCTION PERMITS FOR PRESSURIZED WATER REACTORS
GL 88-02	"INTEGRATED SAFETY ASSESSMENT PROGRAM II (ISAP II)"	01/20/88	ALL POWER REACTOR LICENSEES
GL 88-01	"NRC POSITION ON IGSCC IN BWR AUSTENITIC STAINLESS STEEL PIPING"	01/25/88	ALL LICENSEES OF OPERATING BOILING WATER REACTORS AND HOLDERS OF CONSTRUCTION PERMITS FOR BWRs
GL 87-16	NUREG-1262, "ANSWERS TO QUESTIONS AT PUBLIC MEETINGS RE IMPLEMENTATION OF 10 CFR 55 ON OPERATORS LICENSES"	11/12/87	ALL POWER AND NONPOWER REACTOR LICENSEES AND APPLICANTS FOR LICENSES
GL 87-15	POLICY STATEMENT ON DEFERRED PLANTS	11/04/87	ALL HOLDERS OF CONSTRUCTION PERMITS FOR A NUCLEAR POWER PLANT
GL 87-14	REQUEST FOR OPERATOR LICENSE SCHEDULES	08/04/87	ALL POWER REACTOR LICENSEES